BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Substation Facilities With Voltages Above 50 kV: Mesa 500 kV Substation Project	)))))	Application No. ________________

PROPONENT'S ENVIRONMENTAL ASSESSMENT

MESA 500 kV SUBSTATION PROJECT

VOLUME 2 of 4

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Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
3-D	Three-dimensional
A.B.	Assembly Bill
A.D.	Anno Domini
AB 32	California Global Warming Solutions Act of 2006 (Assembly Bill 32)
AC	Alternating Current
ACSR	aluminum-clad steel reinforced
af	Acre feed
AGL	Above Ground Level
amsl	Above mean sea level
ANF	Angeles National Forest
APLIC	Avian Power Line Interaction Committee
APM	Applicant-Proposed Measure
APN	Assessor’s Parcel Number
APSA	Aboveground Petroleum Storage Act
AQMP	Air Quality Management Plan
ARTS	Area Rapid Transit System
ASCE	American Society of Civil Engineers
AST	Aboveground Storage Tank
ATCM	Airborne Toxic Control Measure
B.P.	Before Present
Basin Plan	Water Quality Control Plan
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BLM	Bureau of Land Management
BMPs	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAISO	California Independent System Operator
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalRecycle	Caliofornia Department of Resources Recycling and Recovering
Caltrans	California Department of Transportation

Cal Water	California Water Service Company
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Act Information System
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
CJUTCM	California Joint Utility Traffic Control Manual
cm/sec	centimeters per second
cmils	circular mils
CMNWD	Central Basin Municipal Water District
CMP	Congestion Management Program
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
CORRACTS	Resource Conservation and Recovery Act Corrective Action Report
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSMD	Consolidated Sewer Maintenance District
CUPA	Certified Unified Program Agency
CWA	Clean Water Act (Federal Water Pollution Control Act)
CY	cubic yards
dB	decibel

dBA	A-weighted decibel
DC	Direct Current
DDT	dichlorodiphenyltrichloroethane
DOC	California Department of Conservation
DOGGR	DOC Division of Oil, Gas, and Geothermal Resources
DOT	Department of Transportation
DPM	diesel particulate matter
DPW	Los Angeles Department of Public Works
DR	Design Review
DSP	Distribution Substation Plan
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
EB	eastbound
EDD	California Employment Development Department
EDR	Environmental Data Resources, Inc.
EEC	Edison Electric Company
EECAP	Energy Efficient Climate Action Plan
EIR	Environmental Impact Report
ENA	Electrical Needs Area
EPA	United States Environmental Protection Agency
EPSP	East Pasadena Specific Plan
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FESA	Federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
g	gravity
G.O.	General Order
GCC	Grid Control Center
GHG	Greenhouse Gases
GIS	Geographic Information System
GIS	gas insulated switchgear
GPA	General Plan Amendment
gpcd	gallons per capita per day

GPS	Global Positioning System
GSWC	Golden State Water Company
GWP	global warming potential
GWR	Groundwater Recharge
H&SC	Health and Safety Code
HCP	Habitat Conservation Plan
HDD	Horizontal directional drilling
HHMD	Health Hazardous Materials Division
HHRA	Human Health Risk Assessment
HMBP	Hazardous Materials Business Plan
HMMP	Hazardous Materials Management Plan
HMTA	Hazardous Materials Transporatation Act
hp	Horsepower
HRI	Historical Resource Inventory
HVDC	High-voltage direct current
HWCL	California Hazardous Waste Control Law
I-	Interstate
ICF	ICF International
ICU	Intersection Capacity Utilization
IEEE	Institute of Electrical and Electronics Engineers
IID	Imperial Irrigation District
Insignia	Insignia Environmental
IPCC	Intergovernmental Panel on Climate Change
ISO	Independent System Operator
ITP	Incidental Take Permit
kcmil	1,000 circular mils
kg	kilogram
KOP	key observation point
kV	kilovolt
kW	kilowatt
LACSD	Sanitation Districts of Los Angeles County
LASD	Los Angeles County Sheriff’s Department
LAX	Los Angeles International Airport
L_{dn}	Day-Night Average Sound Level
LED	light-emitting diode
L_{eq}	Equivalent Noise Level
LOS	Level of Service
LQG	Large Quantity Generator
LSAA	Lake and Streambed Alteration Agreement

LST	lattice steel tower
LTP	leachate treatment plant
LTPP	Long Term Procurement Plan
LUST	leaking underground storage tank
LWS	light weight steel
Masin Basin	Main San Gabriel Valley Basin
MBTA	Migratory Bird Treaty Act
MCLs	Maximum Contaminant Level
MEER	Mechanical Electrical Equipment Room
Metro	Los Angeles County Metropolitan Transportation Authority
mgd	million gallons per day
MPFD	Monterey Park Fire Department
mph	miles per hour
MPPD	Monterey Park Police Department
MRZ	Mineral Resource Zones
MS4	Municipal Separate Storm Sewer System
MT	metric tons
$MTCO_2e$	metric tons carbon dioxide equivalent
MUN	Municipal and Domestic Supply
MVA	megavolt-ampere
MW	megawatt
MWD	Metropolitan Water District of Southern California
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	Northbound
NCCP	Natural Community Conservation Planning
NDMA	n-nitrosodimethamine
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NO	nitric oxide
NO_2	Nitrogen dioxide
NOAA Fisheries	National Oceanic and Atmospheric Administration’s National Marine Fisheries Service
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NPS	National Park Service

NRHP	National Register of Historic Plance
NWP	Clean Water Act Section 404 Nationwide Permit
O_3	ozone
O&M	Operation and Maintenance
OEM	Office of Emergency Management
OHGW	overhead ground wire
OII	Operating Industries Inc.
OMR	Office of Mine Reclamation
OPGW	overhead optical ground wire
OPLA-PRP	Omnibus Public Lands Act-Paleontological Resources Preservation
OSHA	Occupational Safety and Health Administration
OTC	Once Through Cooling
PCBs	polychlorinated biphenyls
PCE	tetrachloroethylene
PEA	Proponent’s Environmental Assessment
PERP	Portable Equipment Registration Program
PFD	City of Pasadena Fire Department
PFYC	Potential Fossil Yield Classification
pH	acidity level
PL	Planning Case
PLPC	Pacific Light & Power Company
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
Porter-Cologne	Porter-Cologne Water Quality Control Act
PPD	City of Pasadena Police Department
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
PSHA	Probabilistic Seismic Hazard Assessment
PVC	polyvinyl chloride
PWP	Pasadena Water and Power
Qw	Quaternary wash deposits
Qwf	Quarternary young alluvial
Qof	Quaternary older alluvium
RARE	Rare, Threatened, and Endangered Species
RBS	Rocks Biological Consulting
RCRA	Resource Conservation and Recovery Act of 1976
ROGs	reactive organic compounds

ROW	right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAC	stranded alumnium copper
SARA	Superfund Amendments and Reauthorization Act
SB	Southbound
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison Company
SCN	State Clearinghouse Number
SDC	seismic design category
SDG&E	San Diego Gas & Electric Company
SDWA	Safe Drinking Water Act
SEA	significant ecological area
SF_6	Sulfur hexifluoride
SGCWD	San Gabriel County Water District
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations, and Cleanups
SMARA	Californai Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SO	System Operator
SO2	Sulfur dioxide
SoCalGas	Southern California Gas Company
SONGS	San Onofre Nuclear Generation Station
SOS	Substation Operations Supervisor
SEIR	Supplemental Environmental Impact Report
SO_x	Sulfur Oxides
SPCC	Spill Prevention, Control, and Countermeasure
SQG	Small Quantity Generator
SR-	State Route
SSC	species of special concern
STEP	Strategic Trasmission Expansion Plan
SUSMP	Standard Urban Storm Water Mitigation Plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants

TCE	tricholorethylene
TDS	total dissolved solids
TE-VS	Talega-Escondido/Valley Serrano
TL	Transmission line
TMDL	Total maximum daily load
TPZ	Timberland Production Zone
TQs	Threshold quantities
TRTP	Tehachapi Renewable Transmission Project
TSP	tubular steel pole
TTM	Tentative Tract Map
U.S.	United States
U.S.C.	United States Code
UBC	Uniform Building Code
UFC	Uniform Fire Code
UIC	Underground injection control
Upper District	Upper San Gabriel Valley Municipal Water District
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plans
V/C	volume-to-capacity
VOC	volatile organic compounds
WARM	Warm Freshwater Habitat
WATCH	Work Area Traffic Control Handbook
WB	Westbound
WDR	waste discharge requirements
WEAP	Worker Environmental Awareness Program
WECC	Western Electricity Coordinating Council
WET	Wetland Habitat
WILD	Wildlife Habitat
Williamson Act	California Land Conservation Act of 1965
WNOU	Whittier Narrows Operable Unit
WRP	Wastewater Reclamation Plan
ZC	Zone Change

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Chapter 4
Environmental Impact Assessment Summary

4.0 Introduction

This section examines the potential environmental impacts of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]). The analysis of each resource category begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125[a] of the California Environmental Quality Act [CEQA] Guidelines) that may be affected by the Proposed Project. The effects of the Proposed Project are defined as changes to the environmental setting that are attributable to project construction and operation.[2]

Significance criteria are identified for each environmental issue area. The significance criteria serve as a benchmark for determining if a project would result in a significant adverse environmental impact when evaluated against the baseline. According to the CEQA Guidelines Section 15382, a significant effect on the environment means “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project.” If significant impacts are identified, feasible mitigation measures are formulated to eliminate or reduce the level of the impacts and focus on the protection of sensitive resources.

CEQA Guidelines Section 15126.4(a)(3) states that mitigation measures are not required for effects which are not found to be significant. Therefore, where an impact is less than significant, no mitigation measures have been proposed. In addition, compliance with laws, regulations, ordinances, and standards designed to reduce impacts to less-than-significant levels are not considered mitigation measures under CEQA. Where potentially adverse impacts may occur, Southern California Edison Company (SCE) has proposed applicant-proposed measures to minimize the environmental impacts.

[1] The term “Proposed Project” is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., “telecommunications line reroute between Mesa and Harding substations”).

[2] The California Public Utilities Commission’s Working Draft Proponent’s Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects, dated November 2008 (Checklist) provides two options for applicants for formatting PEAs. One option is to include a Chapter 4 entitled “Environmental Setting” along with a separate Chapter 5 entitled “Environmental Impact Assessment Summary.” The other option offered by the Checklist is for both sections to be combined into a single section. SCE has chosen to combine both the discussion of environmental setting and the discussion of environmental impacts into a single Chapter 4.

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4.1 Aesthetics

This section examines visual resources in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]) to determine how the Proposed Project could affect the aesthetic character of the landscape. Visual resources are generally defined as the natural and built features of the landscape that can be viewed. Landform, water, and vegetation patterns are among the natural landscape features that define an area's visual character, whereas buildings, roads, and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual resources that contribute to the public's experience and appreciation of the environment. This section analyzes whether the Proposed Project would alter the perceived visual character of the environment and cause visual impacts.

The visual analysis is based on a review of technical data, including Proposed Project maps and drawings provided by Southern California Edison Company (SCE), aerial and ground-level photographs of the Proposed Project area, and computer-generated visual simulations. Additionally, planning policy documents, regional atlases, and geographic information system (GIS) data were reviewed. Field observations were conducted in August and September 2014 and in January 2015 for the purposes of documenting existing visual conditions in the Proposed Project area, as well as photographing representative views toward the Proposed Project and from key potentially sensitive viewpoint locations. Section 4.1.1.3, Visual Setting and Representative Views includes a set of 24 representative photographs that document existing visual conditions in the Proposed Project area.

This visual assessment employs methods based in part on those developed by the United States (U.S.) Department of Transportation Federal Highway Administration (FHWA), as well as other accepted visual analysis techniques summarized by Smardon et al. (Smardon et al.1986). The analysis describes potential changes to existing visual resources and assesses potential viewer responses to those changes. Central to this assessment is an evaluation of representative views from which the Proposed Project would be visible to the public. To support the analysis of potential impacts and to document the visual changes that would occur, visual simulations show the Proposed Project from key observation points (KOPs). These KOPs are a subset of the viewpoints portrayed in the 24 representative photographs referenced previously, and are described in Section 4.1.1.3, Visual Setting and Representative Views. The visual changes were assessed, in part, by evaluating the computer-generated visual simulations and comparing them to the existing visual environment.

To capture the KOP images for simulation, a single-lens reflex camera with a 50-millimeter lens or equivalent (which represents a horizontal view angle of 40 degrees) was used for taking high-resolution digital site photography. Systematic documentation of photograph KOPs included recording Global Positioning System (GPS) data and annotating photograph log sheets and basemaps. Three-dimensional (3-D) computer modeling for proposed structures was developed using engineering design data supplied by SCE. This was combined with GIS data for Proposed

[1] The term "Proposed Project" is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

Project components and digital aerial photographs of the existing site to produce digital modeling for visual analysis and simulation. Simulation viewpoint locations were incorporated based on GPS field data, using 5 feet as the assumed eye level.

To verify scale and viewpoint locations, computer “wireframe” perspective plots were overlaid on the KOP photographs. Digital visual simulation images were then produced based on computer renderings of the 3-D modeling combined with selected photographs. The final hard-copy visual simulation images were printed from the digital image files and produced in color on 8.5 by 11-inch sheets. The visual simulations and the existing views are presented on two images per sheet, with the existing view on top and the simulation below that portrays the Proposed Project from the corresponding KOP.

The simulation images portray the location, scale, and appearance of the Proposed Project as seen from seven publicly accessible KOPs within the Proposed Project area. The KOP locations were selected to represent views seen by the largest number of viewers, primarily along public roadways or within residential areas. Taken together, the set of simulations illustrates the representative visual change associated with the Proposed Project.

4.1.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations’ existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by SCE; therefore, construction of these minor modifications would not result in changes to visual resources in the area. As a result, these components are not discussed further in this section.

4.1.1.1 Regional and Local Landscape Setting

The Proposed Project is located in Southern California, east of the City of Los Angeles and south of the San Gabriel Mountains. The main component of the Proposed Project would be the construction of the proposed Mesa Substation and demolition of the existing Mesa Substation near State Route (SR-) 60 and Potrero Grande Drive within the City of Monterey Park. The site is situated in a hilly area south of the San Gabriel Valley, where elevations range from 295 to 390 feet above mean sea level. Additional telecommunications lines would be rerouted and installed south and east of the proposed substation, in the cities of Monterey Park, Montebello, Rosemead, South El Monte, and unincorporated Los Angeles County. Approximately 2.6 miles south of Mesa Substation, an existing transmission tower would be replaced in the City of Commerce. In the City of Bell Gardens, approximately 4.9 miles south of Mesa Substation, an existing source line would be converted from overhead to underground between three street lights on Loveland Street. The sites in the cities of Commerce and Bell Gardens lie in relatively level areas of the Los Angeles Basin at approximately 170 feet and 130 feet above mean sea level, respectively. Approximately 7.2 miles north of Mesa Substation, a temporary 220 kV line loop-in would be installed at Goodrich Substation, located near Interstate (I-) 210 in the City of Pasadena. This site sits near the southern base of the San Gabriel Mountains, at an elevation of approximately 725 feet. To the south of the Proposed Project area, the flat, coastal plain of the Los Angeles Basin stretches more than 20 miles to the coast of the Pacific Ocean, and to the north, the peaks of the San Gabriel Mountains reach elevations of approximately 10,000 feet above mean sea level. These peaks form a vivid backdrop in the views from many locations within the Proposed Project vicinity.

The Proposed Project is situated in a developed part of Los Angeles County, in an area that includes a mixture of residential, commercial, and industrial uses, as well as a limited number of open space areas. A network of major freeways connects the Proposed Project area with the City of Los Angeles to the west, the City of San Diego to the south, and less-populated inland areas to the east and north. Much of the area's native vegetation—which originally included a mixture of annual grassland, coast live oak woodland, and scrub—has been replaced by non-native, ornamental species. The local landscape character is now mostly typical of that associated with urban development. Nighttime lighting in the area includes highway and local streetlight fixtures, as well as lighting at industrial and commercial facilities, public and recreational facility lighting associated with park and school sites, and localized lighting associated with residential development. Another source of light within the Proposed Project area is from the existing Mesa, Harding, Laguna Bell, and Goodrich substations, including interior and exterior lighting from buildings, lighting from switchracks, and sensor lights throughout the substation. Throughout the Proposed Project area, transmission structures (e.g., lattice steel towers [LSTs], light-weight steel poles, tubular steel poles [TSPs], and wood poles) and other vertical utility structures (e.g., traffic signals, street lights, and telecommunications poles) are characteristic built elements seen within the landscape.

4.1.1.2 Project Visibility and Viewshed

The Project viewshed is defined as the general area from which the Proposed Project would be visible. For purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be divided into distance zones of foreground, middleground, and background views. The foreground is defined as the distance between the viewer and 0.25 to 0.5 mile. Landscape detail is most noticeable and objects generally appear most prominent when seen in the foreground. The middleground is a zone 0.5 to 3 miles from the viewer, and the background extends beyond 3 to 5 miles from the viewer.

In the analysis of the Proposed Project, emphasis is placed on the potential effects on foreground viewshed conditions, although consideration is also given to the potential effects on the more distant views. Project visibility includes locations along nearby roads, as well as more distant locations. From many locations within the surrounding area, views of the Proposed Project are partially or fully screened by intervening topography, structures, and vegetation. Existing visual conditions are described in the following sections.

In addition to baseline visual conditions, several approved future developments are planned within the Proposed Project viewshed. These include a residential development along Potrero Grande Drive, northeast of Mesa Substation, and a commercial development to the southeast, directly adjacent to the substation. Discussion of potential future developments is included in Section 4.1.1.5, Potentially Affected Viewers and Section 4.1.5, Impact Analysis.

4.1.1.3 Visual Setting and Representative Views

The following subsections describe the visual character found within the Proposed Project area and include references to a set of 24 photographs that document representative views of the Proposed Project site. The locations of photograph viewpoints for Mesa Substation are shown in Figure 4.1-1: Photograph Viewpoint Locations – Mesa Substation.

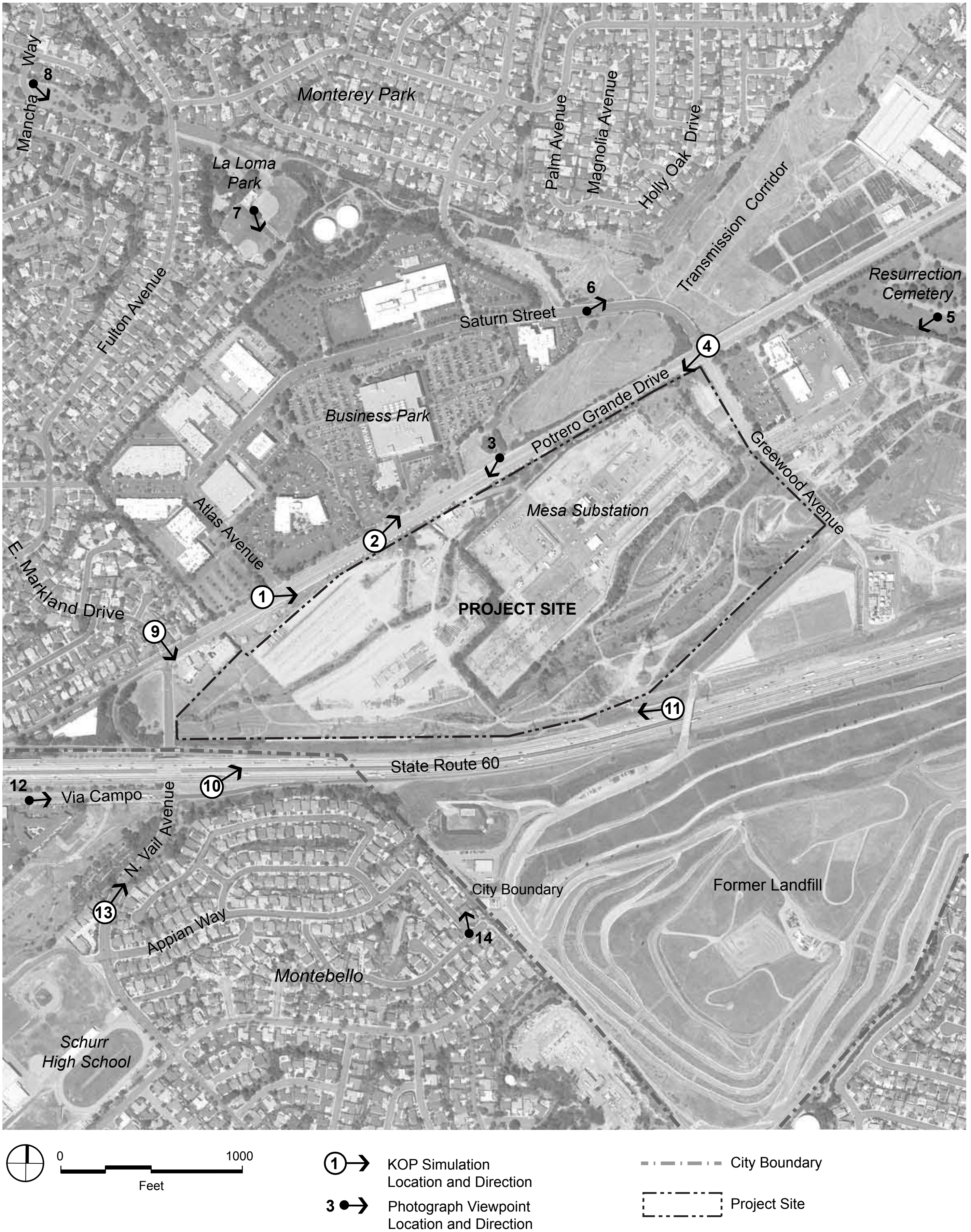

Figure 4.1-1
Photograph Viewpoint Locations - Mesa Substation
Mesa 500 kV Substation Project

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Mesa Substation

Located in the southern part of the City of Monterey Park, the existing Mesa Substation, which would be replaced by the proposed substation, lies on a relatively level site surrounded by low hills. The northwest side of the site is bordered by Potrero Grande Drive and an approximately 70-acre business park. The surrounding terrain slopes gently upward from this area into residential sections of the City of Monterey Park. An elevated section of SR-60 separates the existing Mesa Substation site from a hillside residential area within the City of Montebello and is located directly to the south, near Markland Avenue. To the southeast, a former landfill lies adjacent to the Mesa Substation site, with elevations of up to 300 feet higher than that of the substation. Elevation at the Mesa Substation site slopes gradually up toward the northeast, where a cemetery is located less than 1,000 feet from the substation across Greenwood Avenue and along Potrero Grande Drive. Existing transmission structures at the substation and within the transmission corridor range in height from approximately 130 to 150 feet. Existing subtransmission structures typically range in height from approximately 50 to 100 feet; telcommunications structures range in height from approximately 52 to 67 feet. The following subsections describe the views in each of the photographs provided in Figure 4.1-2: Representative Photographs – Mesa Substation. Photographs 1 through 9 depict views from areas north of Mesa Substation, including views from along Potrero Grande Drive and residential areas and open space areas in the City of Monterey Park. Photographs 10 through 14 depict views from the south, including views from SR-60 and residential areas in the City of Montebello.

Photograph 1

Potrero Grande Drive borders and provides access to Mesa Substation from the north. From this roadway, close-range, open views of the upper parts of transmission and substation components are available; however, from street-level views, the lower portions are screened, at least partially, by vegetation and existing fabric-lined perimeter fencing, as well as a concrete wall southwest of the substation site. Photograph 1—a view looking across Potrero Grande Drive from near Atlas Avenue and the neighboring business park—shows a concrete wall and substation fencing along the opposite side of the roadway. These elements, in conjunction with vegetation, screen lower portions of the substation; however, the upper portions of LSTs and substation equipment appear prominently against the sky.

Photograph 2

Photograph 2, from farther east on Potrero Grande Drive near the substation entrance, shows multiple LSTs in the transmission corridor north of Mesa Substation. On the left edge of this view is part of a building in the business park, a complex with two- to four-story office buildings, surface parking lots, and internal landscaped roadways.

Photograph 3

Photograph 3 shows a view looking southwest across Potrero Grande Drive toward the substation entrance. From this viewpoint, substation components are not visible, as they are located to the left of the view and are at least partially screened by vegetation. However, overhead conductors and transmission towers seen against the sky are prominent features. The substation entry sign, cobra-head streetlights, and perimeter fencing and landscaping are also visible along the far side of the street. On the right side of this view, mature trees are seen along the sidewalk between Potrero Grande Drive and the business park.

Photograph 4

Photograph 4 is another close-range view from Potrero Grande Drive at Saturn Street that looks southwest toward the Proposed Project site. Although a glimpse of substation structures is visible on the left, mature trees and opaque fencing screen much of the substation, as well as the lower portions of LSTs. Hillside residences are visible to the south, beyond the substation.

Photograph 5

The Resurrection Cemetery is located approximately 1,000 feet east of Mesa Substation. Photograph 5 demonstrates that mature trees generally screen views from the cemetery toward the site; however, LSTs and TSPs are prominent vertical features seen from this area.

Photograph 6

Photograph 6, taken from Saturn Street near Orange Avenue, shows an open view toward the existing transmission corridor running northeast from Mesa Substation. LSTs in the transmission corridor are visible against the sky, and overhead conductors can be seen crossing the road. At the top of the hill on the left is a residential area and, in the left foreground, subtransmission LSTs can be seen near the base of the slope. Existing roadside and hillside vegetation provides little screening of LSTs.

Photograph 7

La Loma Park—an approximately 7.5-acre city park with sports fields, picnic facilities, and a playground—is located on a hillside approximately 0.4 mile north of the substation site. This park is the nearest public recreation facility to Mesa Substation and, as shown in Photograph 7, mature trees screen most views of the substation site from this location.

Photograph 8

Photograph 8 represents a public trail view from Mancha Way near Whitehurst Drive, looking southeast toward Mesa Substation. The informal trail is situated within an approximately 150-foot-wide transmission corridor that runs generally southwest to northeast. LSTs are prominent in the foreground, along with residences and business park buildings located near the substation. The substation and towers, which are approximately 3,000 feet away, are visible against the backdrop of the landfill site.


1. Potrero Grande Drive at Atlas Avenue looking east*


2. Potrero Grande Drive near substation entrance looking northeast*

*Simulation KOP
Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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3. Potrero Grande Drive near substation entrance looking southwest

4. Potrero Grande Drive at Saturn Street looking southwest*

*Simulation KOP
Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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5. Resurrection Cemetery looking southwest

6. Saturn Street near Orange Avenue looking northeast

Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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7. La Loma Park looking south

8. Mancha Way near Whitehurst Drive looking southeast

Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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9. East Markland Drive near Woodland Way looking southeast*

10. Eastbound State Route 60 (Pomona Freeway) near East Markland Avenue*

*Simulation KOP
Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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11. Westbound State Route 60 (Pomona Freeway) near Greenwood Avenue*

12. Via Campo near North Vail Avenue looking east

*Simulation KOP
Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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13. North Vail Avenue near Appian Way looking northeast*

14. Appian Way at Via Roma looking north

*Simulation KOP
Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-2
Representative Photographs - Mesa Substation
Mesa 500 kV Substation Project

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Photograph 9

Views toward the Proposed Project site are also available from some locations in the residential area on the other side of Potrero Grande Drive, west of Mesa Substation. Photograph 9, which includes a view from East Markland Drive near Woodland Way, shows several pairs of LSTs prominently within view, although development and vegetation along Potrero Grande Drive partially screen the lower portions of the towers. In most views from farther east, residential buildings and vegetation generally screen views of the site.

Photograph 10

Views from the area located to the south of Mesa Substation are limited, as SR-60 borders the south side of the Mesa Substation site; however, relatively unobstructed views of LSTs and taller substation components are available from this elevated freeway corridor. Photograph 10 represents an open view from eastbound SR-60 looking across the freeway toward the substation site; mature vegetation near the East Markland Avenue underpass provides some screening from locations farther south.

Photograph 11

Photograph 11, taken from westbound SR-60, shows a relatively open view of the substation site with intermittent shrubs and trees in the foreground. Although vegetation screens the lower parts of most of the substation equipment, portions of the taller elements—including several LSTs—are visible against the sky, and the distant buildings of downtown Los Angeles are barely visible along the horizon from this location. A berm along the edge of the freeway screens views toward the substation site from farther east.

Photograph 12

Photograph 12 shows that intermittent views toward Mesa Substation are available from the residential areas located south of SR-60 in the City of Montebello; however, most views are at least partially screened by topography, development, and mature vegetation. Photograph 12, taken from a street approximately 0.5 mile southwest of the substation site, shows that roadside landscaping screens the substation site from this area, though parts of LSTs along the south side of the roadway are visible against the sky.

Photograph 13

Photograph 13 represents an elevated view from the hillside residential area south of SR-60. In this photograph, several transmission towers are visible near the center of the photograph, framed by mature vegetation along North Vail Avenue. The San Gabriel Mountains, located approximately 10 miles away, can be seen in the backdrop. Although LSTs are also visible from the nearby athletic fields of Schurr High School, Mesa Substation is obscured by topography and existing development from this area.

Photograph 14

Photograph 14, which represents views from Appian Way at Via Roma, is a view from another location in the City of Montebello's hillside residential area where only a small portion of the Proposed Project site is visible. The existing substation facility is screened by intervening structures and vegetation.

Telecommunications Line from Transmission Towers M38-T5 and M40-T3 to Mesa Substation

Three telecommunications lines would be installed as part of the Proposed Project within the cities of Monterey Park, Montebello, Rosemead, and South El Monte, and in unincorporated Los Angeles County, in a mixture of residential, commercial, and open space areas. The first line would connect Mesa Substation with an existing transmission tower, located east of the substation near the intersection of San Gabriel Boulevard and Darlington Avenue in the City of Rosemead. The second telecommunications line would run to the east between Mesa Substation and an existing transmission tower located off of Durfee Avenue in the Whittier Narrows Natural Area in unincorporated Los Angeles County. To the north, Durfee Avenue also bifurcates the Whittier Narrows Recreation Area. The third telecommunications line would connect Mesa Substation with Harding Substation in the City of Montebello. The new telecommunications lines would be installed overhead and in existing and new underground conduits and would utilize existing manholes and utility poles. Where necessary, up to 46 utility poles along these routes would be replaced. The following subsections describe the views in each of the photographs provided in Figure 4.1-3: Representative Photographs – Telecommunications Lines. Photographs 15 through 18 demonstrate that, throughout this portion of the Proposed Project area, wood and steel poles and overhead light fixtures are prominent vertical elements seen within the landscape.

Photograph 15

Photograph 15, taken from Potrero Grande Drive at Arroyo Drive, approximately 0.5 mile northeast of Mesa Substation, shows the view of the first telecommunications line as it travels north from the substation. Wood poles and overhead lighting are visible on both sides of the road, with overhead conductors following and crossing the roadway. The telecommunications line would be located on the existing wood distribution poles on the left (north) side of the roadway. Single-story commercial development is visible at the intersection of Potrero Grande Drive and Arroyo Drive, and residential areas are seen beyond. In the backdrop, the San Gabriel Mountains, located approximately 9 miles away, are visible.

Photograph 16

Photograph 16 represents a typical view of the second telecommunications line as it travels east along Avenida De La Merced in northern Montebello through a largely residential area located south of the Montebello Hills area. Residences lie to the left (north) of the street, and La Merced Intermediate School is on the right (south) side. The telecommunications line would be located on the wood distribution poles on the right (south) side of the street. Street trees and residential landscaping partially screen the poles.

15. Potrero Grande Drive at Arroyo Drive looking northeast

16. Avenida de la Merced at La Merced Intermediate School looking east

Figure 4.1-3
Representative Photographs - Telecommunications Lines
Mesa 500 kV Substation Project

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17. Durfee Avenue at Whittier Narrows Recreation Area looking northeast

18. West Lincoln Avenue looking east

Figure 4.1-3
Representative Photographs - Telecommunications Lines
Mesa 500 kV Substation Project

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Photograph 17

Views of the second telecommunications line are available from Whittier Narrows Recreation Area, an approximately 1,500-acre county park located primarily in unincorporated Los Angeles County between the cities of Montebello, Pico Rivera, and South El Monte. Whittier Narrows Recreation Area includes a nature center, sports fields, a lake, and recreation trails. Photograph 17 shows the existing wood distribution pole on the left (north) side of the street where the proposed telecommunications line would follow Durfee Avenue through the recreation area. On the left (north) side of the road is a landscaped parking area for Legg Lake. To the right (south), is a less developed portion of the recreation area with naturalistic vegetation and trails.

Photograph 18

In Photograph 18, which was taken from West Lincoln Avenue in a residential area in central Montebello, the location of the third telecommunications line is shown as it would run east toward Harding Substation. The telecommunications line would be installed overhead and in existing and new underground conduits, which would utilize existing manholes and utility poles, shown on the left (north) side of the street. Residences are visible on the left (north), and Acuna Park—an approximately 6-acre park with picnic facilities and a playground—is on the right (south). The Puente Hills, approximately 5 miles to the east, are visible in the background.

220 kV Lattice Steel Tower Replacement/Street Light Source Line Conversion

As part of the Proposed Project, an existing LST located within an existing transmission corridor in the City of Commerce would be replaced. Figure 4.1-4: Representative Photographs – 220 kV Lattice Steel Tower Replacement/Street Light Source Line Conversion includes a photograph of this location.

Photograph 19

Photograph 19 shows an open view toward the existing transmission corridor from Corvette Street. LSTs, wood poles, and steel poles located within the 300-foot-wide corridor are visible against the sky, with a glimpse of the San Gabriel Mountains in the background. Numerous overhead conductors cross the road. In this location, the transmission corridor is bordered by a relatively flat industrial area with one- and two-story buildings, and equipment storage and parking areas are located within the corridor. A residential area lies to the north, approximately 0.4 mile away. As part of the Proposed Project, the taller LST at the center of the view would be replaced.

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19. Corvette Street, City of Commerce, looking northeast

20. Loveland Street, Bell Gardens, looking north

Figure 4.1-4
Representative Photographs - 220 kV Lattice Steel Tower Replacement/Street Light Source Line Conversion
Mesa 500 kV Substation Project

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Street Light Source Line Conversion from Overhead to Underground within Loveland Street

The Proposed Project would include undergrounding a portion of a street light source line in the City of Bell Gardens, located south of the City of Commerce. The street light source line is situated within an existing transmission corridor in a relatively flat residential area. Nearby land uses include an SCE right-of-way (ROW) to the north and south, and residential uses to the east and west. Laguna Bell Substation is located approximately 0.2 mile to the north. Within the SCE ROW, a third-party landscape nursery is situated under the transmission lines. Figure 4.1-4: Representative Photographs – 220 kV Lattice Steel Tower Replacement/Street Light Source Line Conversion includes a photograph of this location.

Photograph 20

Photograph 20, taken from Loveland Street, shows existing LSTs and overhead conductors within the transmission corridor, as well as wood distribution poles and lines. Laguna Bell Substation is located approximately 1,000 feet north of this photograph viewpoint. The Proposed Project includes the removal of the distribution line supported by the two wood pole street lights in the center of this view; however, the poles and lighting would remain.

Temporary 220 kV Line Loop-In at Goodrich Substation

Goodrich Substation is located in a relatively flat, developed portion of the City of Pasadena, near the base of the San Gabriel Mountains. It is bordered to the east by an approximately 300-foot-wide transmission corridor that runs generally north to south, and to the west by the concrete channel of the Eaton Wash. The Goodrich Substation site is adjacent to the East Foothill Boulevard and the elevated I-210, which borders the site to the south. Single-family residential areas are located both to the west and to the northeast, and Pasadena City College Community Education Center is east of the substation. Existing transmission structures range in height from 130 to 175 feet. In this area, a temporary structure would be installed to accommodate a temporary 220 kV line loop-in during Proposed Project construction. The following subsections describe the views in each of the photographs provided in Figure 4.1-5: Representative Photographs – Temporary 220 kV Line Loop-In at Goodrich Substation.

Photographs 21 and 22

Photographs 21 and 22 show eastbound and westbound views, respectively, toward Goodrich Substation from I-210. In Photograph 21, taller substation components and towers can be seen across several lanes of traffic, silhouetted against the sky, with the San Gabriel Mountains visible in the backdrop. Although the upper sections of towers are visible in Photograph 22, a sound wall along the north side of the freeway generally blocks views of the substation from this portion of the freeway.

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21. Eastbound Interstate 210 (Foothill Freeway) near North Sunnyslope Avenue

22. Westbound Interstate 210 (Foothill Freeway) near South Kinneloa Avenue

Figure 4.1-5
Representative Photographs - Temporary
220 kV Line Loop-In at Goodrich Substation
Mesa 500 kV Substation Project

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23. Pasadena City College near East Foothill Boulevard looking west

24. Maple Street at Eaton Drive looking east

Figure 4.1-5
Representative Photographs - Temporary
220 kV Line Loop-In at Goodrich Substation
Mesa 500 kV Substation Project

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Photograph 23

Close-range views toward the Proposed Project site are available from the Pasadena City College Community Education Center. Photograph 23, taken from a campus courtyard near East Foothill Boulevard, indicates that campus buildings and landscaping provide screening, and that only the tops of the transmission towers are visible.

Photograph 24

Photograph 24 shows a close-range view taken from a single-family residential area bordering the transmission corridor. As shown in the photograph, portions of Goodrich Substation components and transmission towers are visible, though most are obstructed by intervening vegetation and buildings.

4.1.1.4 Scenic Resources

Scenic resources are defined as those landscape patterns and features, which are considered visually or aesthetically pleasing, and therefore contribute positively to the definition of a distinct community or region. Natural and built features that comprise landscape patterns are visual resources that can be viewed by the general public, thus contributing to the public’s experience and appreciation of the environment. Scenic resources may include trees or important vegetation; landform elements, such as hills, ridgelines or rock outcroppings; water features, such as rivers, bays, or reservoirs; and landmarks, important buildings, or historic structures. In the Proposed Project area, the San Gabriel Mountains are visible from a variety of locations, and are described as a scenic asset in the Scenic Highway Element of the County of Los Angeles General Plan. Additionally, the City of Pasadena General Plan mentions the importance of views of the mountains from the area. However, none of the Proposed Project components—including Mesa Substation, the transmission, subtransmission, distribution, or telecommunications elements, and installation of a temporary 220 kV line loop-in at Goodrich Substation—would be located in an area that has been designated at a federal, State, or local level as containing “scenic resources.”

For purposes of this analysis, scenic vistas are defined as distant public views, along or through an opening or corridor that is recognized and valued for its scenic quality. In the Proposed Project vicinity, no scenic vistas have been identified or designated in the County of Los Angeles General Plan or the general plans of the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena.

The Scenic Highway Element of the County of Los Angeles General Plan identifies I-210—which is located adjacent to Goodrich Substation—as a second-priority proposed county scenic route. The county is currently updating the General Plan, and the public review draft of Chapter 9: Conservation and Natural Resources Element references the Scenic Highway Element. The draft element also designates a portion of I-210 that is located approximately 3.9 miles west of Goodrich Substation as an “Eligible Scenic Highway.” General plans for the cities of Monterey Park, Montebello, Commerce, and Bell Gardens do not designate scenic routes or sensitive viewsheds within their respective cities.

The National Register of Historic Places lists over 100 California Historical Landmarks and sites in Los Angeles County; however, with the exception of the Mission Vieja site, none are located within 0.5 mile of the Proposed Project. A portion of the proposed telecommunications route passes alongside the site of Mission Vieja, a California historical landmark located at North San Gabriel Boulevard and North Lincoln Avenue in the City of Montebello. Given the minor modification to existing facilities, the Proposed Project would not have any visual impact on this historical landmark. In addition, the Montebello Woman's Club is situated approximately 1.6 miles south of Mesa Substation; however, the Proposed Project lies outside the viewshed of this registered historic site due to intervening topography and vegetation.

Section 4.1.2, Regulatory Setting provides additional detail on policies regarding scenic resources in the Proposed Project area.

4.1.1.5 Potentially Affected Viewers

The primary potentially affected viewer groups within the Proposed Project area are motorists and residents; additional viewer groups include pedestrians, recreationists, and office workers. As described in Section 4.1.1.3, Visual Setting and Representative Views and documented in Figure 4.1-2: Representative Photographs – Mesa Substation, Figure 4.1-3: Representative Photographs – Telecommunications Lines, Figure 4.1-4: Representative Photographs – 220 kV Lattice Steel Tower Replacement/Street Light Source Line Conversion, and Figure 4.1-5: Representative Photographs – Temporary 220 kV Line Loop-In at Goodrich Substation, these viewers experience the Proposed Project area within the context of a setting that includes existing substation and transmission facilities, as well as other surrounding development.

Motorists constitute the most substantial viewer group and include both local and regional travelers who are familiar with the visual setting, as well as those using the roads on a less regular basis. Most numerous are the motorists traveling on SR-60 who experience brief, elevated views of the Mesa Substation site, particularly from the westbound lanes. The Proposed Project site is within proximity to numerous other local and arterial roads. The sensitivity of this viewer group is considered low to moderate.

The second viewer group consists of nearby residents in the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena. The closest residences to Mesa Substation are approximately 280 feet to the northwest of the Proposed Substation, while the nearest residences to the temporary 220 kV line loop-in at Goodrich Substation are approximately 100 feet from the substation boundary. Proposed telecommunications lines and modifications south of the substation are also located near existing residences. Although the Proposed Project is potentially visible from residences, these views would be seen within the context of existing substations and overhead transmission lines supported by LSTs that are up to 200 feet tall. In the future, residential viewers could also include people who live in planned residential areas near the Proposed Project, including those in an approved residential development to the northeast of Mesa Substation. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

The third viewer group is composed of a limited number of pedestrians using sidewalks in the vicinity of the Proposed Project. Pedestrian views are relatively brief in duration, potentially lasting up to several minutes. Sensitivity of this viewer group is considered moderate.

A fourth viewer group is comprised of recreationists using parks and trails in the Proposed Project vicinity. This group includes visitors to the Whittier Narrows Natural Area and the Whittier Narrows Recreation Area, and cyclists along the Rio Hondo and San Gabriel River bike paths, as well as users of local parks, including Acuna Park in the City of Montebello or La Loma Park and the adjacent recreation trails. Recreationists' views range from relatively brief to longer in duration. Sensitivity of this viewer group is considered moderate to high.

Another viewer group is composed of office workers in the vicinity of the Proposed Project, and includes people who work at the business park located off of Potrero Grande Drive, near Mesa Substation. Views range from relatively brief to longer in duration. Sensitivity of this viewer group is considered moderate.

In addition to the viewer groups described previously, future viewers could include users of a planned retail shopping center that is proposed for the area directly southeast of Mesa Substation.

4.1.1.6 Light and Glare

Existing sources of light and glare within the Proposed Project area include light fixtures and traffic along SR-60, I-210, and other roadways; interior and exterior lighting from industrial and commercial facilities; lighting associated with park and school sites; and localized lighting associated with residential development. Another source of light and glare within the Proposed Project area is from the existing Mesa, Laguna Bell, and Goodrich substations, including interior and exterior lighting from buildings, lighting from switchracks, and sensor lights.

4.1.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.1.2.1 Federal

National Scenic Byways Program

The National Scenic Byways Program is part of the FHWA. Established under the Intermodal Surface Transportation Efficiency Act of 1991, the program is a collaborative effort established to help recognize, preserve, and enhance selected roads throughout the U.S. Located 6 miles northwest of Mesa Substation and 3.9 miles west of the temporary 220 kV line loop-in at Goodrich Substation, SR-110 is the closest designated National Scenic Byway to the Proposed Project. The Proposed Project is not visible from this roadway.

Code of Federal Regulations

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). Title 14, Part 77 of the Code of Federal Regulations (CFR) establishes the standards and required notification for objects affecting navigable airspace. This includes standards for marking and lighting structures to promote aviation safety, and such standards are applicable to any temporary or permanent structures exceeding an overall height of 200 feet above ground level (AGL) or exceeding any obstruction standard contained in Title 14 CFR, Part 77 of the CFR.

The approximate height for any of the Proposed Project transmission structures would be 200 feet. The approximate height for any of the subtransmission structures would be 100 feet, and construction cranes may reach heights of approximately 145 feet for short durations during temporary construction of the TSPs. SCE would file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA for Proposed Project structures, as required. With respect to Proposed Project structures, the FAA would conduct its own analysis and may recommend no changes to the design of the proposed structures, or the FAA may recommend marking the structures, including the addition of aviation lighting or the placement of marker balls on wire spans. SCE would evaluate the FAA recommendations for reasonableness and feasibility, and in accordance with Title 14, Part 77 of the CFR, SCE may petition the FAA for a discretionary review of its determination to address any concerns. FAA determinations for permanent structures are typically valid for 18 months; therefore, such notifications would be filed upon completion of final engineering and before construction commences.

4.1.2.2 State

California Department of Transportation Scenic Highway Program

The State Scenic Highway Program—a provision of Sections 260 through 263 of the Streets and Highways Code—was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a State Scenic Highway changes from “eligible” to “officially designated” when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (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.

The nearest Officially Designated State Scenic Highway is SR-2, which is approximately 7.9 miles north of the temporary 220 kV line loop-in at Goodrich Substation and approximately 15.1 miles northwest of Mesa Substation. The nearest Eligible Scenic Highway—I-210, north of Highway 134—is approximately 3.9 miles from the temporary 220 kV line loop-in at Goodrich Substation. The Proposed Project is not visible from either of these roadways.

4.1.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

County of Los Angeles

The Conservation and Open Space Element of the County of Los Angeles General Plan contains one policy related to protection of aesthetic resources, which calls for the protection of the visual quality of scenic views from public roads, trails, and key vantage points. As previously discussed, the Scenic Highway Element of the County of Los Angeles General Plan identifies I-210 as a second-priority proposed county scenic route. This roadway is adjacent to the temporary 220 kV line loop-in at Goodrich Substation. The county is currently updating the General Plan, and the public review draft of Chapter 9: Conservation and Natural Resources Element references the Scenic Highway Element. The draft element also designates a portion of I-210 that is located approximately 4 miles west of the temporary 220 kV line loop-in at Goodrich Substation as an "Eligible Scenic Highway."

City of Monterey Park

City of Monterey Park General Plan

The City of Monterey Park General Plan does not list scenic routes or sensitive viewsheds in the city. The Land Use Element contains policies regarding the Operating Industries, Inc. Landfill/Edison Focus Areas. The General Plan provides the following general direction regarding aesthetics for this area:

- The commercial development of this site offers a unique opportunity to enhance Monterey Park's image by improving the Caltrans right-of-way with a landscape palette that relates to the new development, provides denser plantings, and incorporates more mature plant material

The Urban Design Plan portion of the Land Use Element lists Potrero Grande Drive as a key arterial roadway and has the following recommendations for aesthetic improvements:

- Along these key arterials, community image can be readily enhanced and reinforced by the repetition of distinctive streetscape elements, including:
  - Street Trees – A well-formulated street tree master plan for all major arterials and attendant management policies to monitor, maintain, replace and augment the city's street tree inventory should be prepared
  - Underground Utilities – The existing overhead utility lines contribute to the visual clutter experienced along key arterial streets. The lines also limit tree species and pruning height. A program to place utilities underground along key streets would facilitate street tree planting and eliminate unsightly clutter

- Enhanced Paving – A distinctive enhanced paving style for selected crosswalks and median paving should be identified and specified as part of a phased program of right-of-way improvements

- Lighting – Distinctive nighttime illumination along major arterials to be considered include accent lighting for landscaping and key landmark buildings, decorative pedestrian lighting fixtures, and the use of high-pressure sodium bulbs to create warm illumination tones

City of Monterey Park Municipal Code

The City of Monterey Park Municipal Code contains the following provisions regarding tree removal and species recommended for street tree plantings:

- The recreation and parks commission shall designate the type and species of tree to be planted in or along every street within the city. Every tree hereafter planted in or along any street shall be of the type and species designated for such street or portion thereof by the recreation and parks commission

Section 6.31, Water Efficient Landscape requires that developments with landscape installations within the city submit plans that include provisions for water conservation. Section 9.63.060, Tree Removal Permit requires permits for the removal of trees on public property.

City of Montebello

City of Montebello General Plan

The Conservation Element of the City of Montebello's General Plan contains the following policy to protect trees and vegetation in the city's open space:

- Policy 2: Trees and vegetation should be preserved and provided to serve as animal habitats within parks, schools, and other landscaped open spaces

City of Montebello Municipal Code

The City of Montebello Municipal Code does not contain any applicable goals or policies related to visual resources.

City of Rosemead

City of Rosemead General Plan

The Resource Management Element of the General Plan contains the following policies regarding landscaping:

- Policy 2.1: Increase landscaping and tree plantings along all major arterials, including Valley Boulevard, Garvey Avenue, San Gabriel Boulevard, and Del Mar Avenue

- Policy 2.2: Continue to require all commercial and industrial property owners to maintain landscaping on their property

City of Rosemead Municipal Code

The City of Rosemead Municipal Code contains the following provisions regarding tree removal and street tree plantings:

- Any alteration of any city tree, including, but not limited to, any street tree, shall require a street tree permit and shall be subject to all applicable provisions of this chapter. For the purposes of this chapter, "alteration" includes filling, surfacing, grading, compacting, or changing the drainage pattern of the soil around any tree, in a manner that threatens the health of the tree

- The removal of any city tree, including, but not limited to, any street tree, shall require approval from the Director of Public Works and shall be subject to all applicable provisions of this chapter

- Native trees and prominent trees shall not be removed without first obtaining a street tree permit approved by the Director. The city shall issue such permits only after the presentation of evidence showing that the subject tree is a significant health or fire hazard

- Removal of desirable street trees. The Director shall authorize the removal of a desirable street tree subject to provisions of this chapter only if the removal is justified for one of the following reasons:

  - The location of the street tree and/or its drip line interferes with an allowed structure, sewage disposal area, paved area, or other approved improvement or ground disturbing activity

  - The location of a street tree and/or its drip line interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property

  - The location of the street tree is hazardous to pedestrian or vehicular travel or safety;

  - The street tree interferes with, or is causing extensive damage to, utility services or public facilities such as roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, building foundations of existing private and public structures, or any other municipal improvements

  - The condition or location of the street tree is adjacent to, and in such close proximity to, an existing or proposed structure that the tree has or will sustain significant damage

City of South El Monte

City of South El Monte General Plan

The City of South El Monte General Plan does not contain any applicable goals or policies related to visual resources.

City of South El Monte Tree Policy

The city has adopted a tree policy, which includes the following provisions related to tree removal and tree planting:

- Street trees shall be selected from the city's Approved Tree List
- All trees will be planted in a minimum 24-inch box
- All trees scheduled for planting must be coordinated with the city's Landscape Maintenance Supervisor
- Every effort should be made to keep tree removal at a minimum; if trees are removed, every effort should be made to replace them with a trees from the Approved Tree List
- No tree will be removed with prior approval of the General Services Director

City of Commerce

City of Commerce General Plan

The Resource Management Element of the General Plan contains the following policies regarding landscaping:

- Policy 4.1: The City of Commerce will encourage the preservation of the existing plant resources in the city

- Policy 4.3: The City of Commerce will implement a definitive street tree program that, at a minimum, calls for landscaping along major rights-of-way and within industrial and commercial developments

City of Commerce Municipal Code

The City of Commerce Municipal Code does not contain any applicable goals or policies related to visual resources.

City of Bell Gardens

The City of Bell Gardens General Plan and Municipal Code do not contain any applicable goals or policies related to visual resources.

City of Pasadena

City of Pasadena General Plan

The City of Pasadena General Plan includes a Scenic Highways Element, which calls for the development of a scenic road system and contains general policies about scenic highways; however, no specific routes are identified. Scenic routes listed in the Conservation and Natural Resources Element only include Officially Designated State Scenic Highways

City of Pasadena Municipal Code

The City of Pasadena Municipal Code includes a Tree Protection Ordinance (Municipal Code 8.52) that calls for the protection of all native, specimen, and landmark trees in the city. Construction projects that would affect native, specimen, landmark, landmark-eligible, or mature trees require the submittal of a tree protection plan for review and approval.

East Pasadena Specific Plan

The East Pasadena Specific Plan encompasses the area of the temporary 220 kV line loop-in at Goodrich Substation. Chapter 4, Public Realm Design Standards and Guidelines includes recommendations and diagrams for general streetscape improvements for East Foothill Avenue in the Proposed Project area, such as landscaped medians and street trees. It also designates street tree species along East Foothill Avenue.

4.1.3 Significance Criteria

The significance criteria for assessing the impacts to aesthetics come from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources within a State Scenic Highway, including, but not limited to: trees, rock outcroppings, and historic buildings
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

4.1.4 Impact Analysis

The evaluation of visual and aesthetic changes resulting from the Proposed Project focuses primarily on the Proposed Project's potential impact to public views, though potential effects on views from nearby private residences were also considered. Evaluation factors used in determining the extent and implications of the identified visual changes include the following:

- The specific changes to the affected visual environment's composition and character
- The context of the affected visual environment

- The extent to which the affected environment contains places or features that have been designated in plans and policies for protection or special consideration
- The relative number of viewers, viewer sensitivity, and duration of views

To accomplish the evaluation, a set of seven visual simulations of the Proposed Project were prepared from seven KOPs and are provided in Figure 4.1-6: Visual Simulations. These KOPs are a subset of the viewpoints portrayed in the 24 representative photographs described in Section 4.1.1.3, Visual Setting and Representative Views.

As described previously, computer-generated visual simulations were developed using engineering design data for the Proposed Project. This data was supplied by SCE and includes a range of possible heights for proposed transmission and subtransmission structures. These proposed structures are simulated at the tallest end of the height ranges in order to portray the Proposed Project's greatest potential visibility. Should the new transmission and subtransmission structures be lower than the greatest height in the range, these Proposed Project elements could be less visible than portrayed in the visual simulation images.

The visual simulations also include new street trees along the south side of Potrero Grande Drive at the Mesa Substation site. The new trees are shown in the area between the sidewalk and the new perimeter wall. The simulations portray the new trees approximately eight years after the trees are proposed to be planted, as shown in KOP 1 – Potrero Grande Drive at Atlas Avenue and KOP 4 – Potrero Grande Drive at Saturn Street in Figure 4.1-6: Visual Simulations. The selected tree species would be similar to those currently found in the immediate vicinity and would be appropriate for planting in proximity to utility structures. In addition, the visual simulation that shows the Mesa Substation entry includes ground cover and shrubs near the base of the perimeter wall, as depicted in KOP 4 – Potrero Grande Drive at Saturn Street.

The tree planting would conform to the Monterey Park General Plan, which identifies Potrero Grande Drive as a key arterial with recommended improvements including street trees. As part of the final design for the Proposed Project, a landscape plan for Mesa Substation would be developed to show the specific planting layout and plant list.

KOP 1 - Existing view from Potrero Grande Drive at Atlas Avenue looking east

KOP 1 - Visual simulation of Proposed Project

Figure 4.1-6
Visual Simulations
Potrero Grande Drive at Atlas Avenue
Mesa 500 kV Substation Project

Refer to Figure 4.1-1 for viewpoint locations

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KOP 2 - Existing view from Potrero Grande Drive near substation entrance looking northeast

KOP 2 - Visual simulation of Proposed Project

Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-6
Visual Simulations
Potrero Grande Drive looking northeast
Mesa 500 kV Substation Project

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KOP 4 - Existing view from Potrero Grande Drive at Saturn Street looking southwest

KOP 4 - Visual simulation of Proposed Project

Figure 4.1-6
Visual Simulations
Potrero Grande Drive at Saturn Street
Mesa 500 kV Substation Project

Refer to Figure 4.1-1 for viewpoint locations

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KOP 9 - Existing view from East Markland Drive near Woodland Way looking southeast

KOP 9 - Visual simulation of Proposed Project

Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-6
Visual Simulations
East Markland Drive
Mesa 500 kV Substation Project

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KOP 10 - Existing view from Eastbound State Route 60 near East Markland Avenue

KOP 10 - Visual simulation of Proposed Project

Refer to Figure 4.1-1 for viewpoint locations

Figure 4.1-6
Visual Simulations
Eastbound State Route 60
Mesa 500 kV Substation Project

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KOP 11 - Existing view from westbound State Route 60 near Greenwood Avenue

KOP 11 - Visual simulation of Proposed Project

Figure 4.1-6
Visual Simulations
Westbound State Route 60
Mesa 500 kV Substation Project

Refer to Figure 4.1-1 for viewpoint locations

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KOP 13 - Existing view from North Vail Avenue near Appian Way looking northeast

KOP 13- Visual simulation of Proposed Project

Figure 4.1-6
Visual Simulations
North Vail Avenue
Mesa 500 kV Substation Project

Refer to Figure 4.1-1 for viewpoint locations

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4.1.4.1 Would the project have a substantial adverse effect on a scenic vista?

Construction and Operation

No Impact. For the purposes of this evaluation, a scenic vista is defined as a distant public view, along or through an opening or corridor that is recognized and valued for its scenic quality. Using this definition, there are no scenic vistas in the Proposed Project viewshed; therefore, neither the construction nor the O&M of the Proposed Project would have a substantial effect on a scenic vista, and there would be no impact.

4.1.4.2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Construction and Operation

No Impact. The Proposed Project is not visible from a State Scenic Highway; the nearest Officially Designated State Scenic Highway is SR-2, which is located approximately 7.9 miles north of the temporary 220 kV line loop-in at Goodrich Substation and approximately 15.1 miles northwest of Mesa Substation, and is out of the Proposed Project viewshed. The nearest Eligible State Scenic Highway—I-210, north of SR-134—is located approximately 3.9 miles from the temporary 220 kV line loop-in at Goodrich Substation and is also outside of the Proposed Project viewshed. Therefore, the Proposed Project would not substantially damage scenic resources within a State Scenic Highway, and no impact would result.

4.1.4.3 Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Construction

Less-Than-Significant Impact. Construction-related visual impacts would result from the presence of equipment, materials, and work crews throughout the Proposed Project. Construction activities would be noticeable to varying degrees and would be seen primarily by motorists and residents. Construction activities would take place over a period of approximately 55 months. Proposed Project construction would require establishing temporary staging yards for vehicle and equipment parking, as well as material storage. Staging yard preparation would include the construction of temporary perimeter fencing, which would screen close-range views of the staging yards and obscure views from longer distances. These visual effects would be temporary, as SCE would restore any land that may be disturbed at the staging yards to near pre-construction conditions and remove the temporary perimeter fencing following the completion of Proposed Project construction.

Proposed Project construction would require the removal of some mature landscaping along Potrero Grande Drive and elsewhere around the Mesa Substation site, and effects of this vegetation removal could be noticeable. However, because the Proposed Project includes installing new landscaping at Mesa Substation, these effects would be short-term in nature and long-term effects would be reduced as the new landscaping matures. In addition, some tree trimming along the telecommunications routes may be required, particularly in the area between Via Campo and Wilcox Avenue; however, the effects of the trimming would be minor and temporary. As a result, the potential visual effects associated with vegetation removal would be less than significant.

Operation

Less-Than-Significant Impact. The Proposed Project involves construction of the proposed 500/220/66/16 kV Mesa Substation and demolition of the existing 220/66/16 kV Mesa Substation. The Proposed Project also includes removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures. In addition, the Proposed Project involves converting a short segment of an existing street light source line from overhead to underground between three wood pole-mounted street lights, and installation of a temporary 220 kV line loop-in at Goodrich Substation.

Other Proposed Project components—including the proposed telecommunications lines, tower replacement, distribution undergrounding, and temporary 220 kV line loop-in at Goodrich Substation—involve minor modifications to existing facilities. For example, the telecommunications lines would be installed overhead and in existing and new underground conduits, and would mostly utilize existing manholes and utility poles (some poles may be replaced as necessary). Because it is anticipated that these Proposed Project-related changes generally would not be noticeable to the public, including residential and recreational viewers in the area, the potential visual impacts are considered negligible; therefore, these effects are not addressed further in the aesthetics evaluation.

Utility structures and other tall vertical elements, including the existing Mesa Substation and several existing transmission and subtransmission corridors, are established landscape features that make up the existing visual setting within the vicinity of Mesa Substation. These visual conditions constitute the baseline for evaluating the Proposed Project's potential aesthetic impact. The majority of the Proposed Project changes would occur at or near the Mesa Substation site. The new structures would be gray in color and finished in a dulled, galvanized steel coating.[2] Within the substation, some structures would be painted a neutral gray color. The neutral gray color would tend to reduce visual contrast and the dulled finish would minimize potential glare.

[2] LST structures require a continuous electrical path through each steel element to ground for personnel safety and to mitigate the impact of short circuits or lighting strikes. This electrical path is achieved when the individual galvanized steel elements are securely bolted together. Coloring of LST elements prior to assembly will hamper or impede this continuous electric path because it creates an insulator between the elements. Color application to LST structures would need to be applied following assembly of the individual pieces. This would mean that a paint product would need to be used as finishing step in the field. However, painting in the field is undesirable for several reasons. The paint would have to be applied in open air, causing volatile organic compound emissions and possible paint spills. The paint’s lifecycle is also much shorter than that of the structure’s; therefore, the towers would have to be re-painted several times over the life of the Proposed Project. Each time the towers are painted, there would be additional impacts to access the tower sites, scrape off the loose paint, and apply new paint. In addition, SCE no longer proposes various shades of gray in the galvanizing dulling process because multiple steel suppliers could not repeat the process. SCE now only proposes natural gray galvanizing with dulling after finding that weathering causes the galvanized coating to become a natural light gray, which creates the best visual appearance.

In addition, non-specular conductor would be installed as the new transmission and subtransmission conductor for the Proposed Project. The term non-specular means that the conductor has been either mechanically or chemically treated to reduce reflectivity.

These physical changes would be most noticeable in close-range views from Potrero Grande Drive, which borders the site on the north. Brief-duration views would also be available from SR-60. Limited views of the Proposed Project would be available from the residential areas situated to the southwest and northwest, as well as from some places within the business park located directly north of Potrero Grande Drive. The Proposed Project would require removal of some mature vegetation and would also include installation of new street trees at the site frontage along Potrero Grande Drive. In addition, new landscaping may be installed along other portions of the substation perimeter.

A set of seven visual simulations were prepared to illustrate the Proposed Project's anticipated appearance, as seen from KOPs. The location of each simulation view is shown in Figure 4.1-1: Photograph Viewpoint Locations – Mesa Substation, and the visual simulations are contained in Figure 4.1-6: Visual Simulations. Table 4.1-1: Summary of Simulation Views describes the location of each KOP, the visual changes depicted, and the potential visual effects. As demonstrated in the visual simulations and as discussed in detail in the following paragraphs, Proposed Project-related changes would be visible to the public in varying degrees. However, with the introduction of new street trees and the presence of existing utility structures (e.g., substation facilities, transmission towers, and overhead conductors), these changes would represent an incremental visual effect that would not substantially degrade the existing visual character or quality of the site and surrounding area.

KOP 1 shows an existing view and a visual simulation of the Proposed Project looking east from Potrero Grande Drive at Atlas Avenue. This simulation view represents close-range views seen by eastbound motorists, as well as pedestrians along Potrero Grande Drive, and also approximates the view from the neighboring business park. In the existing view, portions of taller substation components are visible, and LSTs, TSPs, and overhead conductors are silhouetted against the sky, both in the foreground and beyond the substation. Vegetation and a masonry wall screen the lower portions of this equipment. Cobra-head street lights can be seen along the street, and vegetation, seen on the left (north) side of the photograph, indicates that mature trees on the north side of Potrero Grande Drive partially screen views from the adjacent industrial parcel.

The visual simulation shows the Proposed Project, including the removal of several trees located at the Mesa Substation site, and the removal and replacement of street trees along the site frontage. In the foreground, three LSTs and one TSP replace five existing towers that are somewhat shorter than the replacement structures. Additionally, beyond the substation, several replacement towers are visible. The new 220 kV substation elements—visible beyond the existing masonry wall on the right—are located closer to Potrero Grande Drive than the existing substation structures that have been replaced. To the south and beyond the new perimeter wall and street trees, taller portions of the proposed substation are also visible. From this area, the removal of existing vegetation could result in more open views toward the east and southeast. This effect, coupled with the increased structure heights, may cause more of the substation to be seen silhouetted against the sky. The proposed changes would be noticeable, as seen from this location along the roadway; however, due to the noticeable presence of existing vertical elements (e.g., transmission towers at Mesa Substation) and with the introduction of new street trees, the visual change associated with the Proposed Project would be incremental and would not substantially alter the existing visual character and quality seen from this general area.

KOP 2 is from Potrero Grande Drive, near the Mesa Substation entrance, looking toward the transmission corridor northeast of the substation. On the left (north) side of this view are an office building and cars in the parking lot of the business park situated north of Potrero Grande Drive. Transmission towers and overhead conductors appear prominently against the sky on the right (north). Mature vegetation screens the lower parts of these towers. Several subtransmission poles, as well as overhead conductors, are visible in the distance, on the right (northeast) side of the photograph. The visual simulation of the Proposed Project illustrates replacement LSTs within the transmission corridor northeast of the substation. These six new structures are somewhat taller than the existing towers, and the two located closest to this KOP are also being rebuilt in closer proximity to Potrero Grande Drive. In addition, several subtransmission poles—in the background along Potrero Grande Drive—are shown as being replaced with new riser poles. At this location, the lines are being placed underground where they cross Potrero Grande Drive. A comparison of the existing view and visual simulation indicates that the Proposed Project-related change along this transmission corridor would be a minor incremental visual effect that would not substantially alter public views from this area.

KOP 4 depicts a close-range existing view and visual simulation from the traffic signal at Saturn Street and Greenwood Avenue. This view is briefly experienced by westbound Potrero Grande Drive motorists and by pedestrians near this intersection. From this location, part of the existing substation equipment and hillside south of the substation are visible through a gap in the vegetation on the left, and overhead conductors and transmission structures are visible in the foreground on the right. Near the center of the view, overhead conductors and subtransmission structures are visible in the foreground; farther away, transmission LSTs can be seen against the sky, both beyond the substation and to the right along Potrero Grande Drive. Mature trees along the northern and eastern perimeter of the substation site partially screen the existing substation components.

Table 4.1-1: Summary of Simulation Views

KOP Number	KOP Location	Approximate Distance to Proposed Project (Feet)	Visible Proposed Project Change		Visual Effect
			Components to be Removed	Components to be Added	
1	Potrero Grande Drive at Atlas Avenue	200	▪ Existing 220/66/16 kV Mesa Substation ▪ Transmission LSTs ▪ Vegetation	▪ Proposed 500/220/66/16 kV Mesa Substation with new 500 kV and 220 kV switchyards and 500/220 kV transformer racks ▪ Replacement transmission LSTs and TSPs ▪ Perimeter wall ▪ Street trees	Incremental visual change would not substantially alter existing visual character
2	Potrero Grande Drive looking northeast	<100	▪ Transmission LSTs	▪ (Replacement) transmission LSTs	Minor incremental visual effect would not substantially alter existing public views
4	Potrero Grande Drive at Saturn Street	350	▪ Existing 220/66/16 kV Mesa Substation ▪ Transmission LSTs ▪ Subtransmission LSTs and TSPs ▪ Vegetation	▪ Proposed 500/220/66/16 kV Mesa Substation, new operations building, new test and maintenance building, new 500 kV and 220 kV switchyards, and 500/220 kV transformer racks ▪ Replacement transmission LSTs and TSPs ▪ Replacement riser TSP ▪ Perimeter wall with substation entrance ▪ Street trees	Incremental visual effect would not substantially alter existing visual character
9	East Markland Drive	500	▪ Transmission LSTs ▪ Subtransmission LSTs	▪ Replacement transmission LSTs ▪ Replacement subtransmission poles	Minor incremental visual change would not substantially alter existing view
10	Eastbound SR-60	250	▪ Existing 220/66/16 kV Mesa Substation ▪ Transmission LSTs ▪ Subtransmission LSTs and TSPs ▪ Distribution wood pole ▪ Vegetation	▪ Proposed 500/220/66/16 kV Mesa Substation ▪ Replacement transmission LSTs and TSPs ▪ Replacement subtransmission TSPs ▪ Distribution riser TSP	Incremental visual change would not substantially degrade existing character of a motorist's brief view
11	Westbound SR-60	500	▪ Removal of the existing 220/66/16 kV Mesa Substation ▪ Removal of transmission LSTs ▪ Removal of subtransmission LSTs and TSPs ▪ Removal of distribution wood pole ▪ Vegetation	▪ Proposed 500/220/66/16 kV Mesa Substation and new 220 kV and 66 kV switchracks ▪ Replacement transmission LSTs and TSPs ▪ Replacement subtransmission TSPs ▪ Distribution riser TSP ▪ Substation pad, perimeter wall, and access roads	Incremental effect would not substantially alter brief-duration roadway views

KOP Number	KOP Location	Approximate Distance to Proposed Project (Feet)	Visible Proposed Project Change		Visual Effect
			Components to be Removed	Components to be Added	
13	North Vail Avenue	1,000	▪ Transmission LSTs ▪ Subtransmission LSTs	▪ Replacement transmission LSTs and TSPs ▪ Replacement subtransmission TSPs ▪ Substation pad with retaining wall and perimeter wall	Incremental changes would not substantially affect the existing views or visual character

The visual simulation shows Proposed Project-related visual changes, including the introduction of the new, gray, 500 kV switchrack in the foreground, against the sky on the left. From this location, removal of existing vegetation and the introduction of new street trees along Potrero Grande Drive are noticeable, and the new operations building and test and maintenance building can be seen in the foreground near the center of the view, behind the new perimeter wall. In this area, three subtransmission LSTs and three subtransmission TSPs have been removed and replaced with a single TSP riser. Near the center and left side of the view, taller portions of the 220 kV switchrack and the 500/220 kV transformer racks are silhouetted against the sky, beyond the new perimeter wall and street tree planting. Two existing LSTs along Potrero Grande Drive have been replaced with taller LSTs, and several other replacement towers and poles are visible along the street frontage and beyond the substation. A comparison between the existing view and visual simulation image shows Proposed Project-related changes would result in the increased visibility of the substation. However, due to the noticeable presence of existing vertical transmission elements in the vicinity of Mesa Substation and the screening provided by the proposed street trees, the incremental visual effect would not substantially alter the existing visual character seen from this location.

KOP 9 displays a view of the western portion of the Proposed Project site, as seen from East Markland Drive and north of Potrero Grande Drive. East Markland Drive provides access to the residential area located northwest of Mesa Substation. From this location, the elevated SR-60 roadway and residences on a hillside south of the Proposed Project are visible in the background. Portions of several transmission and subtransmission LSTs, as well as overhead conductors, can be seen against the hillside and the sky. Development along Potrero Grande Drive provides minimal screening of lower sections of the towers. The view is framed by a residence and residential landscaping.

The visual simulation of the Proposed Project shows two new taller transmission LSTs replacing three transmission structures and two new lower subtransmission TSPs replacing two subtransmission LSTs. Toward the right (west) side of the view, removal of some low-growing vegetation can be seen, where clearing would be needed for a new access road into the substation. Grading required for this access road is also visible beyond the fence, near the right side of the simulation, and the new perimeter wall and access gate can be seen at the top of this graded slope. The change portrayed in the visual simulation from this location represents a minor incremental visual effect that includes a decreased number of structures, as well as the more streamlined form of two replacement structures.

KOP 10 represents a motorist’s brief view toward the Mesa Substation site from eastbound SR-60. Although mature trees along the southern edge of the substation site partially screen the lower portions, LSTs and substation equipment can be seen beyond the foreground, which includes the concrete freeway median divider, roadway signage and lighting, and eight lanes of freeway traffic.

The visual simulation of the Proposed Project portrays upper portions of the new Mesa Substation as well as several taller rebuilt transmission structures, including two TSPs and an LST adjacent to SR-60. The simulation also portrays the removal of the existing substation and numerous LSTs, as well as the removal of on-site vegetation. The new substation elements are somewhat prominent due in part to the removal of existing vegetation, and partially because the 220 kV and 66 kV switchracks have been relocated closer to the freeway. Additionally, some of the new components are taller than the existing substation structures. Several subtransmission LSTs would be removed and replaced with TSPs. Additionally, one wood distribution pole would be removed and replaced with a somewhat taller TSP. Although some LSTs, TSPs, and substation components are taller than existing structures and could appear more prominent against the sky, a comparison of the existing view and the visual simulation indicates that the overall number of visible towers would decrease. Additionally, given the established presence of existing vertical transmission structures within the landscape and the foreground freeway elements, as well as the brief duration of the motorist’s view, the change would be incremental and would not significantly degrade the visual character seen from this roadway.

KOP 11 includes a view toward Mesa Substation from westbound SR-60 near the Greenwood Avenue overcrossing. This close-range view represents a motorist’s brief view from the heavily traveled SR-60 and also approximates views that could be seen by visitors from the planned shopping center to the east of Mesa Substation. From this vantage point, substation components are visible on the right side of the view. While vegetation screens some of this equipment, taller portions are clearly visible and, because the roadway is set at a higher elevation than the substation, the asphalt pad and lower portions of some elements are visible where breaks in the vegetation allow clear views. In this view, a number of utility structures are silhouetted against the sky, including a line of paired subtransmission TSPs—which follow the base of the freeway embankment—along the right side of the roadway, as well as taller transmission towers, particularly near the right and center of the view. Two transmission LSTs are also visible in the distance to the left, on the far side of the freeway. Low-growing shrubs partially screen lower portions of a few of the towers, and informal access roads, fencing, and industrial equipment (e.g., a water storage tank) are seen amid the sparse vegetation in the foreground. Taller buildings in downtown Los Angeles are visible on the skyline in the distance.

In the visual simulation of the Proposed Project, a new, neutral-colored perimeter wall is visible in the foreground, near the top of a graded slope. Beyond this, elements of the new 220 kV and 66 kV switchracks and transformer areas can be seen on an expanded pad. Several taller replacement LSTs and TSPs are visible both within the pad area and within the transmission corridor, on the left side of the view. Subtransmission LSTs and a wood distribution pole are replaced with several new TSPs that can be seen near the far end of the pad, where the newly undergrounded subtransmission line would come above ground and cross the freeway. A new access road and substation entrance are partially screened by the existing water tank and low-growing vegetation, seen respectively near the center and right side. The removal of existing vegetation required for construction would create more open views across the site and beyond the substation, toward the distant Los Angeles skyline. Although not shown in the visual simulation, the Proposed Project may include new landscaping that would partially screen the new perimeter wall seen near the center of this view. A comparison of the existing view and the visual simulation shows that the enlarged substation pad and new perimeter wall would introduce a prominent horizontal element into the landscape. In addition, the Proposed Project would result in the increased height of many elements; however, the total number of LSTs seen from this view would decrease. Given the presence of existing substation structures and the decreased number of towers, as well as the brief duration of a motorist’s view, the Proposed Project-related visual change for westbound motorists is considered an incremental effect that would not substantially alter views from this roadway.

KOP 13 from North Vail Avenue, near Appian Way, is an elevated view from the hillside residential area south of SR-60 looking northeast, toward the Proposed Project. Mature vegetation and residences along the roadway enclose both sides of this view, allowing for an opening along the roadway toward SR-60 and the SCE yard beyond. LSTs are visible on both sides of the freeway and the North Vail Avenue underpass can be seen in the lower left. On the right, mature trees in the foreground screen views of Mesa Substation components. Office buildings and residences on the hillside beyond are seen against the backdrop of the San Gabriel Mountains, which are approximately 10 miles away.

In the visual simulation, several Proposed Project-related changes can be seen within this enclosed view corridor. The new graded pad and seven taller replacement towers and TSPs—located within the new footprint of the substation—are visible beyond the I-60 freeway, against the San Gabriel Mountains and the sky. The new perimeter wall is also evident where it is mounted on top of a new retaining wall situated at the far end of the substation pad. In the distance, one replacement LST within the transmission corridor northeast of the substation can be seen against the sky. The upper portions of two subtransmission TSPs are visible beyond the freeway sign, near the center of the simulation; lines from these poles cross the freeway and connect to a pair of existing towers, one of which can be seen on the left side of the image. From this vantage point, most new substation components are screened by the vegetation on the right side of the view. A comparison of the existing view and visual simulation indicates that the taller replacement LST structures would be visible on the skyline, and the new pad and walls could be more visible than the current pad and slope. However, given the presence of existing utility structures, and in light of the viewing distance, these changes would not substantially affect the existing character or composition of existing views, as seen from the vicinity of North Vail Avenue.

Following construction of the Proposed Project, O&M activities associated with the substation and transmission, subtransmission, distribution, and telecommunications lines would be conducted in the same manner as current O&M activities at existing facilities. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner that is consistent with CPUC G.O. 165, which requires that ground observation inspections occur at least once per year, but inspections usually occur more frequently based on system reliability. O&M activities are typically short-term in nature and do not alter the visual environment. The visual character of the existing substation and its surrounding ROWs would not degrade as a result of O&M activities. Therefore, no impacts would result from O&M activities associated with the Proposed Project.

4.1.4.4 Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Construction

Less-Than-Significant Impact. Construction of the Proposed Project would generally occur during daytime hours. However, for some construction activities, work may be required at night. Construction activities conducted at night would require the use of floodlights, which have the potential to illuminate properties in the vicinity of construction areas. In order to reduce the impact of nighttime lighting on neighboring residences, lighting would be directed on site and away from potentially sensitive receptors during construction. The Proposed Project area's existing nighttime visual setting includes overhead lighting at Mesa Substation, as well as along the freeway and adjacent streets and at nearby commercial areas. Therefore, the Proposed Project changes to nighttime lighting conditions during construction would be short-term and incremental, and, as a result, any impacts from construction lighting would be less than significant.

Operation

Less-Than-Significant Impact. The Proposed Project would require minimal new lighting and O&M activities associated with the substations and transmission, subtransmission, distribution, and telecommunications lines would continue in the same manner as current O&M activities at the existing facilities. The existing Mesa Substation utilizes on-site lighting to illuminate areas of the substation where needed. Following construction of the Proposed Project, lighting would be provided at the substation to ensure adequate illumination levels for O&M activities. Fixtures would illuminate roadways, parking areas, and walkways within the substation. Lighting fixtures would utilize light-emitting diode floodlights to reduce glare in these areas. Some of these fixtures, including lighting at the substation entry gates, would be automatically controlled according to ambient light levels and would operate only when needed to provide sufficient lighting for personnel safety and security. Where possible, lighting fixtures would be directed downward to avoid spillover onto adjacent properties, except in areas where sufficient lighting is necessary for personnel safety and security. No additional sources of permanent lighting or modifications to substation lighting would be required during O&M activities. In addition, non-specular conductor would be installed as the new transmission and subtransmission conductor for the Proposed Project. As previously described, the term non-specular means that the conductor has been either mechanically or chemically treated to reduce reflectivity. In addition, dulled galvanized steel would also be used for LSTs and TSPs to reduce reflectivity on those structures. As a result, the Proposed Project would not result in a new source of substantial light or glare when compared to the existing substation.

If nighttime work is required during O&M activities within the ROWs, temporary lighting may be used, as is typical of current O&M activities. This lighting will be short-term in duration and focused on the individual work area. In addition, structures greater than 200 feet AGL generally require FAA notification and marking or lighting can be incorporated on a case-by-case basis. However, the area around Mesa Substation is highly urbanized with a variety of nighttime light sources in the area, including SR-60. Lighting of towers and the substation would result in a minimal change to lighting in the vicinity as compared to existing lighting. As a result, the impacts associated with O&M activities would be less than significant.

4.1.5 Applicant-Proposed Measures

Because no significant impacts to aesthetics would occur as a result of the Proposed Project, no avoidance or minimization measures are proposed.

4.1.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

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4.2 Agriculture and Forestry Resources

This section describes the agriculture and forestry resources in the area of the proposed Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]).

Research involved a review of the California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) Important Farmland maps, the California Department of Forestry and Fire Protection's (CAL FIRE's) Fire and Resources Assessment Program maps and publications, local agency planning documents, and aerial photographs.

4.2.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to agricultural and forestry resources in the area. As a result, these components are not discussed further in this section.

[1] The term "Proposed Project" is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

4.2.1.1 Agriculture

For purposes of evaluating the Proposed Project under the California Environmental Quality Act (CEQA), agricultural land includes Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as defined by the United States (U.S.) Department of Agriculture (USDA) land inventory and monitoring criteria and modified for California. For the purposes of this section, "Important Farmland" include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

The DOC Division of Land Resource Protection generates maps depicting Important Farmlands. These farmlands are categorized according to specific criteria, including soil quality and irrigation conditions. Approximately 94 percent of the FMMP study area is based on the USDA Natural Resource Conservation Service soil classification system, which evaluates both physical and chemical conditions, including soil temperature, moisture regime, acidity level (pH), flooding, groundwater depth, erodibility, permeability, and sodium content. FMMP maps are updated every two years using an aerial imagery review, field reconnaissance, computer mapping analyses, and public input. The minimum land use mapping unit is 10 acres, and smaller units of land are generally incorporated into surrounding map classifications.

The DOC has established the following eight land use classifications:

- **Prime Farmland:** Prime Farmlands have the optimum combination of physical and chemical conditions that are able to sustain long-term agricultural production. The soil quality, growing season, and moisture supply on Prime Farmlands provide conditions to produce sustained high yields. Prime Farmlands must have been used for irrigated production within four years of the mapping date.

- **Farmland of Statewide Importance:** Farmlands of Statewide Importance are similar to Prime Farmlands; however, these farmlands have minor shortcomings, such as a higher slope or decreased ability to store soil moisture. Similar to Prime Farmlands, Farmlands of Statewide Importance must have been used for irrigated production within four years of the mapping date.

- **Unique Farmland:** Unique Farmlands have lower-quality soils and are used for the production of California's leading agricultural products. Unique Farmlands are typically irrigated, but may also include non-irrigated vineyards or orchards found in certain climatic zones. Unique Farmlands must have been cropped within four years of the mapping date.

- **Farmland of Local Importance:** Farmlands of Local Importance are considered vital to the local agricultural economy, as identified by each county's local advisory committee and board of supervisors.

- **Grazing Land:** Grazing Lands are lands on which existing vegetation is suitable for livestock grazing.

- **Urban and Built-Up Land:** These lands are occupied by buildings or other structures at a minimum density of one structure to 1.5 acres (or approximately six structures to 10 acres). Urban and Built-Up Lands are used for development purposes, including residential, commercial, industrial, construction, public administration, institutional, transportation yards, airports, cemeteries, golf courses, sewage treatment, sanitary landfills, and water control structures.

- **Other Land:** Other Lands include those that are not in any other map category, such as waterbodies smaller than 40 acres; low-density rural developments; confined livestock, poultry, or aquaculture facilities; and brush, timber, wetland, and riparian areas not suitable for livestock grazing.

- **Water:** Water includes all perennial waterbodies that measure at least 40 acres.

The DOC's FMMP has not designated any farmland within 3 miles of the Proposed Project. Within the vicinity of the Proposed Project, there is no land zoned for agricultural use, or designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance.

Agricultural Uses within the Proposed Project Area

A summary of the existing agricultural uses within Los Angeles County and the Proposed Project area is discussed in the following subsections.

County of Los Angeles

The annual Los Angeles County Crop and Livestock Report estimated that agriculture commodities were valued at approximately $200,849,910 for 2013. Los Angeles County's primary agricultural products include nursery products, such as ornamentals, bedding plants, ground covers, and vegetable plants. Much of the agricultural land in Los Angeles County has been developed. According to the 2012 Census of Agriculture, Los Angeles County has approximately 91,689 acres of agricultural land.

According to Important Farmland data from the DOC FMMP, Los Angeles County had approximately 39,812 acres of Important Farmland in 2013. Table 4.2-1: Summary of Important Farmland in Los Angeles County provides a summary of existing inventoried Important Farmland in Los Angeles County. As shown, Important Farmland makes up less than four percent of Los Angeles County's total inventoried area.

Table 4.2-1: Summary of Important Farmland in Los Angeles County

Important Farmland	Approximate Inventoried Area (Acres)	Important Farmland within Inventoried Area (Percent)
Prime Farmland	30,876	2.7
Farmland of Statewide Importance	952	0.1
Unique Farmland	1,129	0.1
Farmland of Local Importance	6,855	0.6
Important Farmland Total	**39,812**	**3.5**

Source: DOC (2013)

In the Proposed Project area, there are lands adjacent to the proposed telecommunications routes that are zoned Light Agricultural (A1), which allows for low-density residential land uses and limited agricultural pursuits.

City of Monterey Park

The City of Monterey Park does not contain any lands designated or zoned for agricultural uses. In addition, there is no land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, or Grazing Land within the Proposed Project vicinity.

City of Montebello

There is no land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance within the Proposed Project vicinity. However, within the City of Montebello, the Residential Agricultural (R-A) zone allows for single-family residential development. The R-A zone allows accessory uses (e.g., non-commercial horticulture and agriculture crops) on the same lot as residential development. In addition, the R-A zone is also used as a transitional classification for open or agricultural land pending classification for a more permanent use. Portions of the work areas associated with Mesa Substation are located within the City of Montebello and are zoned R-A.

City of Rosemead

The City of Rosemead does not contain any lands designated or zoned for agricultural uses. In addition, there is no land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, or Grazing Land within the Proposed Project vicinity.

City of South El Monte

The City of South El Monte does not contain any lands designated or zoned for agricultural uses. In addition, there is no land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance within the Proposed Project vicinity.

City of Commerce

The City of Commerce does not contain any lands designated or zoned for agricultural uses. In addition, there is no land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, or Grazing Land within the Proposed Project vicinity.

City of Bell Gardens

The City of Bell Gardens does not contain any lands designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, or Grazing Land within the Proposed Project vicinity. Lands adjacent to the street light source line conversion from overhead to underground within Loveland Street are zoned Light Agricultural (A1), which provides for the maintenance of limited agricultural pursuits.

City of Pasadena

The City of Pasadena does not contain any lands designated or zoned for agricultural uses, nor are there any lands designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, or Grazing Land within the vicinity of Goodrich Substation.

4.2.1.2 Forestry

Forest land is defined by Section 12220(g) of the California Public Resources Code (PRC) 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.” PRC Section 4526 defines timberland as “land, other than land owned by the federal government and land designated by the State Board of Forestry as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.” There is currently no designated or zoned forest land or timberland located within or adjacent to the Proposed Project area. Angeles National Forest (ANF), which is managed by the U.S. Forest Service (USFS), is located approximately 2 miles north of Goodrich Substation. ANF covers approximately 655,387 acres and consists of dense chaparral shrub forests with oak woodlands, as well as pine- and fir-covered habitat in the higher elevations.

4.2.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.2.2.1 Federal

A review of the USDA website, the Code of Federal Regulations, and the USFS website revealed that no federal agricultural or forestry policies or guidelines are applicable to the Proposed Project area.

4.2.2.2 State

Agriculture

Williamson Act

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

The Williamson Act also allows local governments to establish agricultural preserves, which are parcels of land set aside for agricultural uses. They must include a minimum of 100 acres, and they typically avoid areas where public utility improvements and associated land acquisitions may be necessary (CGC §51230). Although the Williamson Act does not specify compatible land uses for property located adjacent to contract lands or agricultural preserves, it does state that cities and counties must determine compatible land use types while recognizing that temporary or permanent population increases frequently impair or hamper agricultural operations (CGC §51220.5). There are no Williamson Act contracts on or near the Proposed Project.

California Government Code Section 51238

CGC Section 51238 includes the provisions related to the Williamson Act that state, "notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve." This section does not apply because there are no Williamson Act contracts on or near the Proposed Project.

Forestry

California Public Resources Code Section 12220(g)

The PRC governs forestry, forests, and forest resources, as well as range and forage lands, within the State. No forest, range, or forage lands or timberland is located within or adjacent to the Proposed Project area.

California Government Code Sections 51100 to 51155

Chapter 6.7 of the CGC (§51100-51155) regulates timberlands within the State. “Timberland production zone” (TPZ) is defined in Section 51104(g) as an area that has been zoned pursuant to CGC Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. In this context, “compatible uses” include any use that “does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber” (CGC §51104[h]). Examples of compatible uses are watershed management; grazing; and the erection, construction, alteration, or maintenance of electric transmission facilities. There are no TPZs within or adjacent to the Proposed Project area.

Forest Taxation Reform Act

Commercial timberlands are afforded protection through the State’s Forest Taxation Reform Act of 1976, which mandates the creation of TPZs to restrict and protect commercial timber resources. The Proposed Project would not cross any TPZ land.

4.2.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order 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 county and cities’ regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

Southern California Association of Governments

The Southern California Association of Governments’ (SCAG’s) Regional Comprehensive Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. The Open Space and Habitat Chapter includes goals and policies for maintaining adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations in the SCAG region. However, there is no farmland located on or adjacent to the Proposed Project. Therefore, there are no policies relevant to the Proposed Project.

County of Los Angeles

County of Los Angeles General Plan

The Conservation and Open Space Element of the County of Los Angeles General Plan includes one policy related to agricultural resources:

- Preserve significant agricultural resource areas and encourage the expansion of agricultural activities into under-utilized lands such as utility rights-of-way and flood prone areas

County of Los Angeles Municipal Code

Portions of the work areas adjacent to the proposed telecommunications routes are surrounded by lands that are zoned Light Agriculture (A-1), which may be used for single-family residences situated on 1- to 5-acre properties on which crops are grown, greenhouses are maintained, or typical farm animals are raised.

City of Monterey Park General Plan

The City of Monterey Park's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

City of Montebello

City of Montebello General Plan

The City of Montebello's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

City of Montebello Zoning Code

Portions of the work areas associated with Mesa Substation that are located within the City of Montebello are zoned R-A. According to the City of Montebello's Municipal Code, the purpose of the R-A zone is to provide for single-family residential development and ensure the proper use of lands best suited for agriculture.

City of Rosemead General Plan

The City of Rosemead's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

City of South El Monte General Plan

The City of South El Monte's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

City of Commerce General Plan

The City of Commerce's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

City of Bell Gardens

City of Bell Gardens General Plan

The City of Bell Garden's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

City of Bell Gardens Municipal Code

Lands adjacent to the street light source line conversion from an overhead to underground configuration within Loveland Street are zoned A1, which allows for the maintenance of limited agricultural pursuits.

City of Pasadena General Plan

The City of Pasadena's General Plan was reviewed for agriculture and forestry resources policies that are relevant to the Proposed Project. None were identified within this plan.

4.2.3 Significance Criteria

The significance criteria for assessing the impacts to agriculture and forestry resources come from the Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance—as shown on the maps prepared pursuant to the FMMP of the California Resources Agency—to nonagricultural use
- Conflict with existing zoning for agricultural use, or a Williamson Act contract
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or TPZs (as defined by CGC Section 51104[g])
- Result in the loss of forest land or conversion of forest land to non-forest use
- Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use

4.2.4 Impact Analysis

4.2.4.1 Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to non-agricultural use?

Construction

No Impact. The Proposed Project would not be located on, nor would it span any land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance in any of the jurisdictions. As a result, no impact would occur.

Operation

No Impact. Following construction of the Proposed Project, O&M activities would continue in the same manner as they do for the existing lines. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC General Order 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. Therefore, no impacts would result from the Proposed Project.

4.2.4.2 Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Construction

No Impact. The Proposed Project would not be located on nor would it span any land under a Williamson Act contract. Construction of the Proposed Project would require the use of temporary work areas located within an R-A zone in the City of Montebello. These properties where the temporary work areas are located are existing SCE fee-owned and/or properties to be acquired. A third-party commercial landscape nursery, currently operating on one of the subject properties, would vacate temporary work areas as needed during construction of the Proposed Project and would resume operation in this location after the Proposed Project is complete. CEQA does not consider commercial uses to meet the definition of agriculture; therefore, there would be no conflicts with agricultural zoning or Williamson Act contracts, and no impact would occur.

Operation

No Impact. Following construction of the Proposed Project, O&M activities associated with the substation and the transmission, subtransmission, distribution, and telecommunications lines would continue in the same manner as they do for the existing lines. Therefore, there would be no change in O&M activities, and no impacts would result from the Proposed Project.

4.2.4.3 Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or TPZs (as defined by CGC Section 51104[g])?

Construction

No Impact. The Proposed Project would not be located on nor would it span any forest land, timberland, or any TPZ land. Therefore, no impact would occur.

Operation

No Impact. Following construction of the Proposed Project, O&M activities associated with the substation and the transmission, subtransmission, distribution, and telecommunications lines would continue in the same manner as they do for the existing lines. Therefore, there would be no change in O&M activities, and no impacts would result from the Proposed Project.

4.2.4.4 Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Construction

No Impact. The Proposed Project would not be located on nor would it span any forest land. Therefore, there would be no conversion of forest land to a non-forest use as a result of the Proposed Project, and no impact would occur.

Operation

No Impact. Following construction of the Proposed Project, O&M activities associated with the substation and the transmission, subtransmission, distribution, and telecommunications lines would continue in the same manner as they do for the existing lines. Therefore, there would be no change in O&M activities, and no impacts would result from the Proposed Project.

4.2.4.5 Would the project 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?

Construction

No Impact. No farmland or forest land are located in the Proposed Project area. The Proposed Project would not involve changes to the existing environment that would have the potential to convert any other farmland or forest land to a non-agricultural or non-forest use. Therefore, there would be no impact.

Operation

No Impact. Following construction of the Proposed Project, O&M activities associated with the substation and the transmission, subtransmission, distribution, and telecommunications lines would continue in the same manner as they do for the existing lines. Therefore, there would be no change in O&M activities, and no impacts would result from the Proposed Project.

4.2.5 Applicant-Proposed Measures

Because no impacts to agriculture or forestry would occur as a result of the Proposed Project, no avoidance or minimization measures are proposed.

4.2.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

4.2.7 References

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4.3 Air Quality

This section describes the air quality in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]).

The existing air quality within the Proposed Project area was researched using data obtained from the South Coast Air Quality Management District's (SCAQMD's) network of air quality monitoring stations. Recent regulations and guidance documents from the California Air Resources Board (CARB), the California Public Utilities Commission, the California Energy Commission, and the SCAQMD were also reviewed. SCAQMD's California Emissions Estimator Model (CalEEMod) was used to simulate the anticipated emissions during construction by using site-specific information to generate emission rates based on the Proposed Project's anticipated size, schedule, land use, and construction methods. Using this data, CalEEMod calculated the peak daily emissions for a range of pollutants. Calculated emissions are compared to federal and State pollutant thresholds to determine impacts.

4.3.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern

[1] The term "Proposed Project" is inclusive of all components of the Mesa Substation 500 kV Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to the air quality in the area. As a result, these components are not discussed further in this section.

4.3.1.1 Air Quality Environmental Setting

The Proposed Project is located within the South Coast Air Basin (SCAB). The SCAB district covers approximately 6,745 square miles and includes all of Orange County and the non-desert regions of Los Angeles, Riverside, and San Bernardino Counties. The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The SCAB is one of three regional air basins within the SCAQMD. The SCAQMD, which encompasses approximately 10,473 square miles, manages the SCAB, as well as portions of the Salton Sea Air Basin in Riverside County and the Mojave Desert Air Basin in Los Angeles, Kern, and San Bernardino Counties.

Air quality in the region is primarily affected by the type and amount of contaminants emitted into the atmosphere. However, the topography and climate of Southern California combine to make the SCAB an area of high air pollution potential. Within the SCAB, the frequent formation of inversion layers traps the air pollutants in the basin, leading to increased pollution episodes. The SCAB has low mixing heights and light winds, which are conducive to the accumulation of air pollutants. In addition, abundant sunlight triggers the photochemical reactions that produce ozone (O_3) and the majority of particulate matter (PM). The region experiences more days of sunlight than any other major urban area in the nation, except Phoenix.

4.3.1.2 Criteria Air Pollutants

O_3, PM less than 10 microns in diameter (PM_{10}), PM less than 2.5 microns in diameter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are all criteria air pollutants that are regulated in California. Non-methane ethane volatile organic compounds (VOCs), also referred to as reactive organic compounds (ROGs), are also regulated as precursors to the formation of O_3. These criteria air pollutants and their effects on humans are discussed in the subsections that follow.

Ozone

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

Particulate Matter

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

PM causes irritation to the human respiratory system when inhaled. The extent of the health risks due to PM exposure can be determined by the size of the particles, as the smaller particles (e.g., $PM_{2.5}$) are able to become more deeply deposited in the lungs.

Carbon Monoxide

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

Nitrogen Oxides

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

NO_x form when fuel is burned at high temperatures. Typical man-made sources of NO_x include motor vehicles; fossil-fueled electricity generation; and other industrial, commercial, and residential sources that burn fossil fuels. With sufficient exposure, NO_x can harm humans by affecting the respiratory system. Small particles can penetrate the sensitive parts of the lungs, causing or worsening respiratory disease and aggravating existing heart conditions.

Sulfur Oxides

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

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

Volatile Organic Compounds

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

4.3.1.3 Sensitive Receptors

Some exposed population groups—including children, and people who are elderly or ill—can be especially vulnerable to airborne chemicals and irritants, and are termed “sensitive receptors.” In addition, due to sustained exposure durations, all persons located within residential areas are considered sensitive receptors. In general, sensitive receptors could include, but are not limited to: schools, hospitals, convalescence homes, residential uses, places of worship, libraries, offices, city and county buildings, and outdoor recreational areas. Sensitive receptors in the vicinity of the Proposed Project include the following:

- Occupied residential dwellings located approximately 280 feet from the Mesa Substation site (Monterey Park)
- Occupied residential dwellings located adjacent to transmission line rights-of-way (ROWs) near Mesa Substation (Monterey Park and Montebello)
- Schurr High School located adjacent to the 220 kV transmission line ROW and telecommunications line reroute between Mesa and Harding substations approximately southwest of the Mesa Substation site (Montebello)
- Occupied residential dwellings located adjacent to the new telecommunications line from transmission tower M38-T5 to Mesa Substation (Montebello)
- La Merced Intermediate School located adjacent to the new telecommunications line from transmission tower M38-T5 to Mesa Substation (Montebello)
- Occupied residential dwellings located adjacent to the telecommunications line reroute between Mesa and Harding substations (Montebello)
- Occupied residential dwellings located adjacent to the new telecommunications line from transmission tower M40-T3 to Mesa Substation (unincorporated Los Angeles County and Rosemead)
- Whittier Narrows Recreation Area crossed by the new telecommunications line from transmission tower M38-T5 to Mesa Substation (unincorporated Los Angeles County)
- Bosque del Rio Hondo (Park) located adjacent to the new telecommunications line from transmission tower M40-T3 to Mesa Substation and the new telecommunications line from transmission tower M38-T5 to Mesa Substation (unincorporated Los Angeles County)
- Triangle Park located approximately 100 feet from the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead)
- Don Bosco Technical Institute located adjacent to the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead)

- Three convalescent homes located approximately 150, 180, and 270 feet from the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead)
- Occupied residential dwellings located approximately 1,000 feet from the proposed replacement of an existing Lattice Steel Tower on the Goodrich-Laguna Bell 220 kV Transmission Line (Commerce)
- Occupied residential dwellings located approximately 75 feet from the street light source line conversion from overhead to underground configuration within Loveland Street (Bell Gardens)
- Occupied residential dwellings located approximately 350 feet from construction areas at Goodrich Substation (Pasadena)
- Pasadena City College Community Education Center located approximately 300 feet east of the edge of Goodrich Substation (Pasadena)
- Vina Vieja Park and Alice Frost Kennedy Off-Leash Dog Area located are approximately 1,200 feet north of Goodrich Substation (Pasadena)

Section 4.12, Noise provides more detailed descriptions of the locations of residential areas and other sensitive receptors in the vicinity of the Proposed Project.

4.3.1.4 Ambient Air Quality

SCAQMD monitors levels of various pollutants by using a network of monitoring stations throughout the SCAB. Ambient air quality data was obtained from the five monitoring stations nearest to the Proposed Project area. The closest ambient air monitoring station to Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications structures is the Pico Rivera monitoring station, located at 4144 San Gabriel River Parkway in the City of Pico Rivera, approximately 2.7 miles south of the Proposed Project. The next closest ambient air monitoring station to Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications structures is the Los Angeles-North Main Street monitoring station, located at 1630 North Main Street in the City of Los Angeles and approximately 6.9 miles northwest of the Proposed Project. The closest monitoring station to the proposed transmission line tower replacement and streetlight conversion is also the Pico Rivera monitoring station, approximately 4.2 miles east and 5.4 miles south east of the Proposed Project component respectively. The next closest monitoring station is the Compton monitoring station, located at 700 North Bullis Road in the City of Compton (approximately 6.7 and 4.6 miles south of the Proposed Project component, respectively). The nearest monitoring station to the Goodrich Substation site is the Pasadena monitoring station, located at 752 South Wilson Avenue in the City of Pasadena and approximately 2.7 miles from Goodrich Substation. The next closest ambient air quality monitoring station is the Azusa monitoring station, located at 803 North Loren Avenue in the City of Azusa and approximately 9.5 miles east of Goodrich Substation. The most recently available data on the peak concentrations and number of exceedances of applicable air quality standards for O_3, PM_{10}, and

$PM_{2.5}$ at these locations are summarized in Table 4.3-1: Recent Ambient Air Quality Concentrations and Table 4.3-2: Frequency of Air Quality Standard Exceedances in the Proposed Project Area. As reflected in Table 4.3-2: Frequency of Air Quality Standard Exceedances in the Proposed Project Area, records at the Pico Rivera, Los Angeles-North Main Street, Pasadena, Compton, and Azusa monitoring stations indicated multiple violations of either the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) for O_3, PM_{10}, or $PM_{2.5}$ between 2011 and 2013.

Table 4.3-1: Recent Ambient Air Quality Concentrations

Nearest Proposed Project Component	Pollutant	Maximum Concentration			Monitoring Station
		2013	2012	2011	
Mesa Substation, telecommunications line reroute between Mesa and Harding substations, and new telecommunications lines from transmission towers M38-T5 and M40-T3 to Mesa Substation	O_3 Maximum one-hour (ppm)	0.101	0.106	0.096	Pico Rivera
	PM_{10} National Maximum 24-hour ($\mu g/m^3$)	57.0	80.0	53.0	Los Angeles-North Main Street
	$PM_{2.5}$ National Maximum 24-hour ($\mu g/m^3$)	29.1	45.3	41.2	Pico Rivera
Replacement of an existing lattice steel tower (LST) on the Goodrich-Laguna Bell 220 kV Transmission Line and street light source line conversion from overhead to underground within Loveland Street	O_3 Maximum one-hour (ppm)	0.090	0.086	0.082	Compton
	PM_{10} National Maximum 24-hour ($\mu g/m^3$)	57.0	80.0	53.0	Los Angeles-North Main Street
	$PM_{2.5}$ National Maximum 24-hour ($\mu g/m^3$)	52.1	51.2	35.3	Compton
Temporary 220 kV line loop-in at Goodrich Substation	O_3 Maximum one-hour (ppm)	0.099	0.111	0.107	Pasadena
	PM_{10} National Maximum 24-hour ($\mu g/m^3$)	65.0	78.0	76.0	Azusa
	$PM_{2.5}$ National Maximum 24-hour ($\mu g/m^3$)	25.7	30.5	43.8	Pasadena

Source: CARB (2014a)
Key: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

Table 4.3-2: Frequency of Air Quality Standard Exceedances in the Proposed Project Area

Proposed Project Component	Pollutant	Days Above Standard			Monitoring Station
		2013	2012	2011	
Mesa Substation, telecommunications line reroute between Mesa and Harding substations, and new telecommunications lines from transmission towers M38-T5 and M40-T3 to Mesa Substation	State one-hour O_3	2	5	1	Pico Rivera
	State 24-hour PM_{10}	21.4	24.2	6.5	Los Angeles-North Main Street
	National 24-hour PM_{10}	0	0	0	Los Angeles-North Main Street
	National 24-hour $PM_{2.5}$	0	3.1	3.3	Pico Rivera
Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line and street light source line conversion from overhead to underground within Loveland Street	State one-hour O_3	2	5	1	Pico Rivera
	State 24-hour PM_{10}	21.4	24.2	6.5	Los Angeles-North Main Street
	National 24-hour PM_{10}	0	0	0	Los Angeles-North Main Street
	National 24-hour $PM_{2.5}$	3.1	3.3	0	Compton
Temporary 220 kV line loop-in at Goodrich Substation	State one-hour O_3	2	8	5	Pasadena
	State 24-hour PM_{10}	35.6	35.5	47.1	Azusa
	National 24-hour PM_{10}	0	0	0	Azusa
	National 24-hour $PM_{2.5}$	0	3.0	6.1	Azusa

Source: CARB (2014a)

4.3.1.5 Air Quality Designations

As described in Section 4.3.2, Regulatory Setting, the following three air quality designations can be assigned to an area for a particular pollutant:

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

The current NAAQS and CAAQS attainment statuses for the Proposed Project area are provided in Table 4.3-3: Attainment Status for the Proposed Project Area. The Proposed Project area is currently designated as a nonattainment area under the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. Under the NAAQS, the area is also designated as a nonattainment area for O_3 and $PM_{2.5}$.

Table 4.3-3: Attainment Status for the Proposed Project Area

Pollutant	California Standards	National Standards
O_3	Nonattainment (one-hour) Nonattainment (eight-hour)	Nonattainment (one-hour)* Nonattainment (eight-hour)*
PM_{10}	Nonattainment	Attainment†
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment†
SO_2	Attainment	Attainment

Source: CARB (2014b)
Notes:
* Federal nonattainment designations for O_3 are categorized into six classifications: marginal, moderate, serious, severe-15, severe-17, or extreme. The federal designation classification within the SCAB is extreme nonattainment for one-hour O_3 (concentration values of 0.280 ppm and above) and extreme nonattainment for eight-hour O_3 (concentration values of 0.175 ppm and above).
† Areas designated as nonattainment areas for one of the NAAQS, but that later met the standard, are redesignated to attainment and described as "maintenance" areas. To ensure the air quality in the area continues to meet the NAAQS, local air districts are required to develop and implement maintenance plans.

4.3.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.3.2.1 Federal

The 1970 federal Clean Air Act (CAA) established ambient air quality standards for six pollutants—O_3, PM_{10}, CO, NO_2, SO_2, and lead—that are known to have adverse impacts on human health and the environment. To protect human health and the environment, the U.S. EPA set primary and secondary maximum ambient thresholds for criteria air pollutants. The primary thresholds were set to protect human health, particularly for children and the elderly, as well as for individuals who suffer from chronic lung conditions (e.g., asthma and emphysema). The secondary standards were set to protect the natural environment and prevent further adverse effects on animals, crops, vegetation, and buildings. The combined primary and secondary standards set by the EPA are termed the NAAQS. The 1977 CAA Amendments required each state to develop and maintain a State Implementation Plan (SIP) for each criteria air pollutant that exceeds the NAAQS for that pollutant. The SIP serves as a tool to reduce levels of pollutants known to cause impacts if they exceed ambient thresholds and to achieve compliance with the NAAQS. In 1990, the CAA was further amended to strengthen regulation of both stationary and mobile emission sources for the criteria air pollutants.

In July 1997, the EPA developed new health-based NAAQS for O_3 and PM_{10}. However, these standards were not fully implemented until 2001, after the resolution of several lawsuits. The new federal O_3 standard of 0.080 ppm, established in 1997, was based on a longer averaging period (eight hours versus one hour), recognizing that prolonged exposure to O_3 is more damaging. In March 2008, the EPA further lowered the eight-hour O_3 standard from 0.080 ppm to 0.075 ppm. The new federal standard for PM is based on finer particles ($PM_{2.5}$ versus PM_{10}), recognizing that $PM_{2.5}$ may remain in the lungs longer and contribute to greater respiratory illness. In February 2007, the NAAQS for NO_2 was amended to lower the existing one-hour standard of 0.25 ppm to 0.18 ppm not to be exceeded, and established a new annual standard of 0.030 ppm not to be exceeded. Table 4.3-4: State and Federal Ambient Air Quality Standards contains a list of the NAAQS and CAAQS.

4.3.2.1 State

The California Clean Air Act of 1988 (CCAA) provided the framework for the management of air quality throughout the State. The CCAA requires local air quality management districts to develop and implement strategies to attain the CAAQS. For some pollutants, the CAAQS are more stringent than the NAAQS, and the CCAA mandated that the air quality management districts prepare air quality management plans (AQMPs) specifying how both the federal and State standards would be met. The CAAQS are listed in Table 4.3-4: State and Federal Ambient Air Quality Standards.

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

Table 4.3-4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
			Primary	Secondary
O_3	one-hour	0.09 ppm (180 μg/m^3)	N/A	N/A
	eight-hour	0.070 ppm (137 μg/m^3)	0.075 ppm (147 μg/m^3)	0.075 ppm (147 μg/m^3)
PM_{10}	24-hour	50 μg/m^3	150 μg/m^3	150 μg/m^3
	Annual arithmetic mean	20 μg/m^3	N/A	N/A
$PM_{2.5}$	24-hour	N/A	35 μg/m^3	35 μg/m^3
	Annual arithmetic mean	12 μg/m^3	12 μg/m^3	15 μg/m^3
CO	one-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	N/A
	eight-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	N/A
	eight-hour (Lake Tahoe)	6 ppm (7 mg/m^3)	N/A	N/A
NO_2	one-hour	0.18 ppm (339 μg/m^3)	100 ppb (188 μg/m^3)	N/A
	Annual arithmetic mean	0.030 ppm (57 μg/m^3)	0.053 ppm (100 μg/m^3)	0.053 ppm (100 μg/m^3)
SO_2	one-hour	0.25 ppm (655 μg/m^3)	75 ppb (196 μg/m^3)	N/A
	three-hour	N/A	N/A	0.5 ppm (1,300 μg/m^3)
	24-hour	0.04 ppm (105 μg/m^3)	0.14 ppm (for certain areas)	N/A
Lead	30-day	1.5 μg/m^3	N/A	N/A
	Rolling three-month	N/A	0.15 μg/m^3	0.15 μg/m^3
	Quarterly	N/A	1.5 μg/m^3	1.5 μg/m^3

Source: CARB (2013)

Key: mg/m^3 = milligrams per cubic meter, $\mu g/m^3$ = micrograms per cubic meter, ppb = parts per billion, N/A = "not applicable"
Table Notes:
1. The CAAQS for O_3, PM_{10}, $PM_{2.5}$, CO (except Lake Tahoe), NO_2, SO_2 (one- and 24-hour), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Title 17, Section 70200 of the California Code of Regulations.
2. The NAAQS (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentrations are expressed first in the units in which they were promulgated. Equivalent units given in parentheses are based on a reference temperature of 25° Celsius (°C) and a reference pressure of 760 torr (1 torr is the pressure approximately exerted by 1 millimeter of mercury). Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure that can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality deemed necessary, with an adequate margin of safety, to protect the public health.
6. National Secondary Standards: The levels of air quality deemed necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used, but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ were also retained. The form of the annual primary and secondary standards is the annual mean, averaged over three years.
9. To attain this standard, the three-year average of the 98th percentile of the daily maximum one-hour average at each monitoring station within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the EPA standards are in units of ppb, and California standards are in units of ppm. To directly compare the NAAQS to the CAAQS, the units can be converted from ppb to ppm. In this case, the NAAQS of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
10. On June 2, 2010, the EPA established a new one-hour SO_2 standard, effective August 23, 2010, which is based on the three-year average of the annual 99th percentile of one-hour daily maximum concentrations. The EPA also proposed a new automated Federal Reference Method using ultraviolet technology, but will retain the older pararosaniline methods until the new Federal Reference Method has adequately permeated state monitoring networks. The EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by the EPA. Note that the new national standard is in units of ppb, and CAAQS are in units of ppm. To directly compare the new national primary standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
11. The CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects established. These actions allow for implementation of control measures at levels below the ambient concentrations specified for these pollutants.
12. The national lead standard is a rolling three-month average, and the final rule was signed on October 15, 2008.

The CARB also regulates mobile emission sources in California (e.g., construction equipment, trucks, and automobiles) and oversees the air districts. Relevant programs related to the oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Programs, the Statewide Portable Equipment Registration Program (PERP), and the Portable Diesel Engine Airborne Toxic Control Measure (ATCM). The Mobile Sources Programs are aimed at reducing PM_{10}, CO, NO_x, and VOCs.

The CARB has also adopted specific control measures for the reduction of Diesel Particulate Matter (DPM) from off-road (and in-use) diesel vehicles (rated at 25 horsepower [hp] or higher) used in construction projects, such as backhoes, bulldozers, and other earthmovers. Additional DPM control measures are also in place for heavy-duty, on-road diesel trucks operated by public utilities and municipalities. The PERP and ATCM for DPM (for portable engines) provide for statewide registration and control of DPM from portable engines rated 50 hp and higher.

4.3.2.2 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities’ regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

South Coast Air Quality Management District

The air districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their respective geographic areas, and for preparing the AQMPs required under the CAA and CCAA. The Proposed Project area is located within the SCAB, and the SCAQMD has jurisdictional control over the entire basin. The SCAQMD stipulates rules and regulations with which all projects must comply. In addition, the SCAQMD provides methodologies for analyzing a project’s impacts under the California Environmental Quality Act (CEQA). The following plans, rules, and regulations apply to all sources within the SCAQMD’s jurisdiction.

2012 Air Quality Management Plan

The SCAQMD is required to prepare an AQMP that outlines policies and practices intended to achieve attainment levels for criteria air pollutants and avoid future levels that exceed applicable standards. The AQMP is updated periodically to meet the federal requirements and/or to incorporate the latest technical planning information. Each iteration of the plan is an update of the previous plan.

The SCAQMD has developed the 2012 AQMP, which is a regional and multi-agency effort to develop control methods, demonstrate attainment progress, and establish maintenance strategies.

The 2012 AQMP builds on the 2007 AQMP by incorporating the latest scientific and technical information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and the latest growth forecasts by the Southern California Association of Governments.

South Coast Air Quality Management District Rules and Regulations

Rule 403 – Fugitive Dust of the SCAQMD Rules and Regulations prohibits construction activities from generating visible dust beyond the property line. To minimize fugitive dust emissions, the rule requires construction activities to use the best available control measures, which may include the following:

- Stabilizing disturbed areas with water or a chemical stabilizer, or by covering the areas with a tarp or other suitable cover
- Covering materials transported off site or stabilizing the transported materials while maintaining at least 6 inches of freeboard space from the top of the container
- Limiting traffic speeds on unpaved roads to 15 miles per hour (mph)

These actions are required for all projects within the SCAB that are capable of generating fugitive dust.

County of Los Angeles General Plan

The Conservation and Open Space Element of the County of Los Angeles General Plan contains policies related to improving air quality at the local level. Specifically, these goals include implementing strict air quality regulations for mobile and stationary sources and promoting carpooling and improved public transportation.

City of Monterey Park General Plan

The Resources Element of the City of Montebello General Plan contains goals and policies for improving air quality within the city. The city has the following goals addressing air quality:

- Improve traffic flow through and with the city
- Encourage the use of alternative-fuel vehicles
- Enhance pedestrian and bicycle circulation within the city
- Promote energy conservation and recycling
- Integrate air quality planning with land use and transportation planning

City of Montebello General Plan

The Conservation Element of the City of Montebello General Plan includes goals and policies for improving air quality within the city. Specific policies include compliance with established emission and air quality standards and the use of public transportation.

City of Rosemead General Plan

The Resources Management Element of the City of Rosemead General Plan includes goals and policies for improving air quality and conserving energy. Specific policies include:

- Integrate air quality planning with city land use, economic development, and transportation planning efforts
- Support programs to reduce air quality emissions related to vehicular traffic
- Support alternative transportation modes and technologies
- Encourage energy conservation efforts and the incorporation of energy-saving designs into new developments

City of South El Monte General Plan

The Resources Element of the City of South El Monte General Plan includes the goal to improve air quality for future residents of South El Monte. Specific policies include the following:

- Continue to improve traffic flow through and within the city
- Review zoning regulations annually to identify whether revisions are required to accommodate and encourage the use of alternative-fuel vehicles

City of Commerce General Plan

The Air Quality Element of the City of Commerce General Plan includes policies to improve air quality within the region. Specific policies include the following:

- Ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location from the health effects of air pollution

- Promote and support mixed-use land patterns that allow the integration of retail, office, institutional, and residential uses

- Consider all feasible alternatives to minimize emissions from diesel equipment (e.g., trucks, construction equipment, and generators)

- Cooperate with federal and State agencies and the AQMD in their efforts to reduce exposure from railroad and truck emissions

- Encourage businesses to schedule deliveries at off-peak traffic periods through the land use entitlement or business regulation process

- Ensure that all future public facilities and improvements do not have a significant adverse air quality impact on the community and that any such impacts must be mitigated to the fullest extent possible

- Enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other State laws on energy conservation design, insulation, and appliances

- Evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by CEQA

City of Bell Gardens General Plan

The Conservation Element of the City of Bell Gardens General Plan includes goals and policies for the conservation of resources, including air quality. Specific policies include the following:

- Enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other State laws on energy conservation design, insulation, and appliances

- Evaluate energy needs and conservation measures for new development in accordance with CEQA

City of Pasadena General Plan

The City of Pasadena General Plan does not contain any specific goals or policies related to air quality.

4.3.3 Significance Criteria

The significance criteria for assessing the impacts to air quality come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation

- Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)

- Expose sensitive receptors to substantial pollutant concentrations

- Create objectionable odors affecting a substantial number of people

4.3.3.1 Thresholds for Construction Emissions

The SCAQMD adopted the CEQA Air Quality Handbook in 1993, and the handbook's purpose is to provide a framework for preparing air quality evaluations for environmental documents. The handbook recommends specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact. The SCAQMD is in the process of revising this handbook, but provides supplemental and updated information on its webpage while the new handbook is being prepared. Although these are only guidelines, and their use is not required or mandated by the SCAQMD, they are considered appropriate for evaluating potential air quality impacts from construction and operation of the Proposed Project.

CEQA significance thresholds that have been adopted by the SCAQMD are listed in Table 4.3-5: SCAQMD Construction Air Quality Thresholds of Significance. Although ambient air quality standards have not been established for NO_x or VOCs, they have air quality significance thresholds because they react in the atmosphere to form O_3.

Table 4.3-5: SCAQMD Construction Air Quality Thresholds of Significance

Pollutant	Mass Daily Threshold for Construction (Pounds per Day)
PM_{10}	150
$PM_{2.5}$	55
CO	550
NO_x	100
SO_x	150
VOC	75

Source: SCAQMD (2011)

4.3.3.2 Thresholds for Operational Emissions

As shown in Table 4.3-6: SCAQMD Operational Air Quality Thresholds of Significance, the SCAQMD has also established quantitative thresholds that are used to evaluate a project's operational impacts.

Table 4.3-6: SCAQMD Operational Air Quality Thresholds of Significance

Pollutant	Mass Daily Threshold for Operation (Pounds per Day)
PM_{10}	150
$PM_{2.5}$	55
CO	550
NO_x	55
SO_x	150
VOC	55

Source: SCAQMD (2011)

4.3.3.3 Thresholds for Localized Significance

SCAQMD has developed Localized Significance Threshold lookup tables that utilize the allowable concentrations of pollutants combined with distances from the construction or operational areas to calculate allowable emission rates. The lookup tables are specific for the source/receptor area in the SCAB because they also include pollutant background and meteorological data specific to the area.

4.3.4 Impact Analysis

4.3.4.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

Construction

No Impact. Growth projections from local general plans adopted by cities in the SCAB and vehicle-miles-traveled projections developed by the Southern California Association of Governments are some of the inputs used to develop the AQMP. A project's conformity with the AQMP can be assessed by comparing the scope of the Proposed Project with the general plan designation for where it would be located. A project that results in an increase in population above the forecasted population would be inconsistent with the AQMP. Because construction of the Proposed Project would not result in a population increase, the Proposed Project would not conflict with the growth projections used to develop the 2012 AQMP. Section 4.13, Population and Housing presents a discussion of economic and population growth.

Furthermore, the emissions associated with Proposed Project construction would be temporary and would represent a very small fraction of the regional emission inventories included in the 2012 SCAQMD AQMP. Construction equipment would be operated in compliance with all applicable SCAQMD requirements, including the fugitive dust control measures set forth in SCAQMD Rule 403.

The Proposed Project's construction emissions are not expected to substantially contribute to the regional emissions and would not conflict with the growth projections in the AQMP. Therefore, the Proposed Project would not conflict with or obstruct implementation of the AQMP, and there would be no impact.

Operation

No Impact. The Proposed Project is not a trip-generating project, such as a residential or commercial development, nor would it result in population growth. Once construction of the Proposed Project has been completed, scheduled O&M activities would continue to be conducted at a similar frequency and intensity as they are for the existing facilities in the Proposed Project area. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. After construction, Mesa Substation would continue to be a manned facility, and employees would continue to travel to the site daily as they do currently. Therefore, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan; thus, it would have no impact with regard to plan consistency.

4.3.4.2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Significant and Unavoidable Impact. Construction of the Proposed Project would generate short-term air quality impacts during construction activities. CalEEMod was used to simulate the anticipated emissions during construction using site-specific information to generate emission rates based on the Proposed Project's anticipated size, schedule, land use, and construction methods. Using this data, the model calculated the peak daily emissions for a range of pollutants. The peak daily emissions represent the day with the highest estimated emissions anticipated during concurrent construction activities and are compared to the SCAQMD daily thresholds in order to determine significance. The CalEEMod results are provided in Appendix E: Air Quality Calculations.

The simulated PM emissions are the composite of two types of sources: fugitive dust and tailpipe emissions. Typical fugitive dust sources include earth-moving activities (e.g., grading of the substation pad and excavation of the underground duct bank trenches), the loading and unloading of fill and spoil materials, and vehicle travel across unpaved areas. Tailpipe emissions result from the combustion of fossil fuels in both off-road construction equipment and on-road vehicles. The results of the CalEEMod simulations included in Appendix E: Air Quality Calculations indicate that the peak uncontrolled emissions would exceed the applicable SCAQMD thresholds, as indicated in Table 4.3-7: Regional Peak Daily Uncontrolled Construction Emissions.

Table 4.3-7: Regional Peak Daily Uncontrolled Construction Emissions

Year	Regional Peak Daily Emissions (Pounds per Day)					
	$PM_{2.5}$	PM_{10}	NO_x	SO_x	CO	VOC
2016	54.39	157.40	1,119.94	1.19	641.66	101.89
2017	48.62	79.98	974.63	1.10	587.00	88.78
2018	25.13	61.28	490.30	0.70	322.67	44.87
2019	23.80	57.44	479.11	0.75	349.06	44.11
2020	9.04	20.64	188.30	0.28	139.93	18.00
2021	2.71	12.84	32.76	0.08	32.87	3.49
Threshold	55	150	100	150	550	75
Threshold Exceeded?	No	**Yes**	**Yes**	No	**Yes**	**Yes**

Note: Shaded cells indicate emissions that exceed the threshold

To reduce emissions to the maximum extent feasible, SCE would implement applicant-proposed measure (APM-) AIR-01 and APM-AIR-02. APM-AIR-01 includes dust control measures that would require the application of water or another dust suppressant to unpaved access roads and other surfaces disturbed by construction activities, and also requires the restriction of crew vehicle speeds on unpaved roadways to 15 mph. APM-AIR-02 would require that all construction equipment with a rating between 100 and 750 hp is equipped with engines compliant with the U.S. EPA Tier 3 non-road engine standards. In the event that equipment meeting the Tier 3 standards is not available, an engine meeting Tier 2 or Tier 1 standards would be used. These APMs were evaluated using CalEEMod, as appropriate, and the resulting controlled emissions are presented in Table 4.3-8: Regional Peak Daily Controlled Construction Emissions.

Table 4.3-8: Regional Peak Daily Controlled Construction Emissions

Year	Regional Peak Daily Emissions (Pounds per Day)					
	$PM_{2.5}$	PM_{10}	NO_x	SO_x	CO	VOC
2016	28.23	56.67	874.91	1.19	696.05	36.83
2017	27.11	38.63	855.74	1.10	651.95	34.93
2018	16.20	28.19	513.93	0.70	388.33	20.78
2019	17.50	28.54	562.66	0.75	425.18	22.50
2020	7.33	10.33	220.70	0.28	170.61	9.26
2021	2.04	5.38	49.15	0.08	41.05	2.31
Threshold	55	150	100	150	550	75
Threshold Exceeded?	No	No	**Yes**	No	**Yes**	No

Note: Shaded cells indicate emissions that exceed the threshold.

A detailed discussion of the Proposed Project's potential to impact air quality from construction equipment, as well as worker vehicle exhaust and toxic air contaminants, is provided in the subsections that follow.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with transporting machinery and supplies to and from the Proposed Project area, emissions produced on site as the equipment is used, and emissions from trucks transporting fill material to the Mesa Substation site. Emitted pollutants would include PM_{10}, $PM_{2.5}$, CO, NO_x, SO_x, and VOCs. As presented in Table 4.3-7: Regional Peak Daily Uncontrolled Construction Emissions, the maximum daily uncontrolled emissions for construction of the Proposed Project during certain years would exceed the SCAQMD's standards for all pollutants, except $PM_{2.5}$ and SO_x. Table 4.3-8: Regional Peak Daily Controlled Construction Emissions provides the simulated emissions with the implementation of APM-AIR-01 and APM-AIR-02. With the implementation of these measures, PM_{10} and VOC emissions would be reduced to below the SCAQMD thresholds. However, NO_x and CO emissions would continue to exceed SCAQMD thresholds even with the implementation of these APMs. As a result, air quality impacts would be significant and unavoidable.

Toxic Air Contaminants

DPM would be emitted during the construction phase of the Proposed Project from on- and off-road vehicles that use diesel as fuel. Potential health effects associated with exposure to DPM are long-term and are evaluated on the basis of a lifetime of exposure (70 years). Because the basis for DPM exposures is approximately 70 years, and the Proposed Project emissions would be short-term, lasting approximately five years, a more detailed DPM analysis is not required. As a result, the Proposed Project would not contribute to adverse health effects from DPM.

The CARB has adopted ATCMs applicable to off-road diesel equipment and portable diesel engines with a rating of 50 brake hp or greater. The purpose of these ATCMs is to reduce emissions of PM from engines subject to the rule. The ATCMs require diesel engines to comply with PM emissions limitations on a fleet-averaged basis. The CARB has also adopted an ATCM that limits diesel-fueled commercial motor vehicle idling. The rule applies to motor vehicles with gross vehicular weight ratings greater than 10,000 pounds that are licensed for on-road use. The rule restricts vehicles from idling for more than five minutes at any location, with exceptions for idling that may be necessary in the operation of the vehicle.

All off-road diesel equipment, on-road heavy-duty diesel trucks, and portable diesel equipment used for the Proposed Project would meet the State's applicable ATCMs for control of DPM or NO_x in the exhaust (e.g., ATCMs for portable diesel engines, off-road vehicles, and heavy-duty on-road diesel trucks, and five-minute diesel engine idling limits) that are in effect during implementation of the Proposed Project. The mobile fleets used in the Proposed Project are expected to be in full compliance with these ATCMs. This would ensure that pollutant emissions in diesel engine exhaust do not exceed applicable NAAQS or CAAQS. As a result, impacts would be less than significant. Although impacts relating to toxic air contaminants would be less than significant, impacts related to construction equipment and worker vehicle emissions would remain significant and unavoidable after implementation of APM-AIR-01 and APM-AIR-02.

Operation

No Impact. As described previously, O&M of the Proposed Project and surrounding facilities would continue to be conducted at the same frequency and intensity as they are for the existing facilities in the Proposed Project area. As a result, there would be no increase in emissions due to O&M activities, and there would be no impact.

4.3.4.3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)?

Construction

Less-Than-Significant Impact. As described in Section 4.3.1, Environmental Setting, the Proposed Project site is currently listed as nonattainment for the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. This location is also classified as nonattainment for the NAAQS for O_3 and $PM_{2.5}$. As shown previously in Table 4.3-8: Regional Peak Daily Controlled Construction Emissions, the construction of the Proposed Project would lead to a temporary increase in these O_3 and PM precursors. SCE would implement APM-AIR-01 and APM-AIR-02 to reduce these emissions. As a result, the temporary criteria air pollutants emissions would not exceed the applicable SCAQMD thresholds, and impacts would be less than significant.

Operation

No Impact. As described previously, O&M of the Proposed Project and surrounding facilities would continue to be conducted at the same frequency and intensity as they are for the existing facilities in the Proposed Project area. As a result, there would be no increase in emissions due to O&M activities, and there would be no impact.

4.3.4.4 Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction

Significant and Unavoidable Impact. The SCAQMD's Localized Significance Threshold methodology was used to analyze localized impacts associated PM_{10}, $PM_{2.5}$, CO, and NO_x during construction. For construction activities, the equipment exhaust and fugitive dust emissions included in the Localized Significance Threshold analysis were limited to those generated on site (i.e., emissions from off-site travel were not included as they occur at a different location), in accordance with methodologies provided by the SCAQMD. The Mesa Substation site is surrounded by industrial and office land uses to the north, State Route 60 to the south, and low-density residential uses to the northwest. A large retail shopping center—Monterey Park Market Place—is proposed directly to the east. As described previously, some sensitive receptors have been identified within approximately 280 feet of Mesa Substation and 100 feet from transmission right-of-ways.

Because multiple construction activities for the Proposed Project would be occurring at the same time, the anticipated period of peak construction was analyzed. This period includes grading and civil engineering activities; construction of the mechanical and electric equipment room, the test and maintenance building, and the control building; and block wall installation. Additionally, this anticipated peak period considers simultaneous activities associated with the transmission, subtransmission, distribution, and telecommunications work. The results of the Localized Significance Threshold analysis are presented in Table 4.3-9: Localized Significance Threshold Analysis Results.

With the exception of NO_x, the estimated maximum daily emissions during construction activities at Mesa Substation are predicted to be below the corresponding Localized Significance Thresholds. Emissions associated with the construction of all other components are also expected to be below the appropriate Localized Significance Thresholds. However, because the NO_x emissions associated with Mesa Substation are anticipated to exceed the corresponding Localized Significance Thresholds, impacts would be significant and unavoidable even with the implementation of APM-AIR-01 and APM-AIR-02.

Table 4.3-9: Localized Significance Threshold Analysis Results

Activity	Approximate Construction Emissions (Pounds per Day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Mesa Substation	408.81[1]	297.95	13.61	13.39
SCAQMD Localized Significance Threshold[2]	181.27	2,325.52	54.15	16.73
Exceeds Threshold?	**Yes**	**No**	**No**	**No**
Transmission/Subtransmission				
LST Foundations	56.37	40.29	1.47	1.47
Tubular Steel Pole (TSP) Foundations	40.84	31.62	1.18	1.18
LST Erection	45.76	36.50	1.39	1.39
TSP Erection	22.10	17.64	0.66	0.66
TSP Foundation Removal	33.72	25.70	1.09	1.09
Duct Bank Installation	31.79	23.58	1.07	1.07
SCAQMD Localized Significance Threshold	181.52	1,850.06	20.15	9.64
Exceeds Threshold?	**No**	**No**	**No**	**No**

Notes: 1. Shaded cell indicates emissions that exceed the threshold.
2. SCAQMD's Localized Significance Thresholds are based on a 5-acre site. A distance of 280 feet to the receptor was used for Mesa Substation, and a distance of 100 feet to the receptor was used for the transmission and subtransmission lines. Linear interpolation was used to develop site-specific thresholds.

Operation

No Impact. The Proposed Project would be constructed primarily within SCE's existing rights-of-way or within SCE fee-owned property or properties to be acquired. In addition, O&M activities that are currently conducted on the existing facilities in the area would continue to be conducted at the same frequency and intensity as they are for the existing facilities in the Proposed Project area. As a result, there would be no increase in emissions due to O&M activities, and no new receptors would be exposed to additional pollutant concentrations. Therefore, there would be no impact.

4.3.4.5 Would the project create objectionable odors affecting a substantial number of people?

Construction

Less-Than-Significant Impact. Due to the nature of the Proposed Project, odor impacts are unlikely. Typical odor nuisances include hydrogen sulfide, ammonia, chlorine, and other sulfide-related emissions. No significant sources of these pollutants would exist during construction. An additional potential source of Proposed Project-related odor is diesel engine emissions. These emissions would be temporary in nature, would disperse quickly, and would be limited by the relatively small number of vehicles on site. In addition, most sensitive receptors would be located far enough away from the Proposed Project to be affected by any odors caused by construction from the site. Therefore, construction would not create objectionable odors that would affect a substantial number of people, and the impact would be less than significant.

Operation

No Impact. O&M activities associated with the Proposed Project would not result in detectable odors. As a result, there would be no impact.

4.3.5 Applicant-Proposed Measures

In addition to compliance with SCAQMD Rule 403, Fugitive Dust, the following APMs would be implemented to reduce air quality impacts associated with the Proposed Project:

- **APM-AIR-01: Fugitive Dust.** During construction, surfaces disturbed by construction activities would be covered or treated with a dust suppressant until completion of activities at each site of disturbance. On-site unpaved roads and off-site unpaved access roads utilized during construction within the Proposed Project area would be effectively stabilized to control dust emissions (e.g., using water or chemical stabilizer/suppressant). On-road vehicle speeds on unpaved roadways would be restricted to 15 mph.

- **APM-AIR-02: Tier 3 Engines.** Off-road diesel construction equipment with a rating between 100 and 750 hp would be required to use engines compliant with U.S. EPA Tier 3 non-road engine standards. In the event that a Tier 3 engine is not available, the equipment would be equipped with a Tier 2 engine and documentation would be provided from a local rental company stating that the rental company does not currently have the required diesel-fueled off-road construction equipment, or that the vehicle is specialized and is not available to rent. Similarly, if a Tier 2 engine is not available, that equipment would be equipped with a Tier 1 engine and documentation of unavailability would be provided.

4.3.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California

Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

4.3.7 References

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4.4 Biological Resources

This section describes the biological resources in the area of Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]).

Biological resources data for the Proposed Project area were obtained through a literature review of reference materials, including manuals and guides of California plants, California birds, and mammals. In addition, field visits were conducted to assess biological resources in the Proposed Project area, including a reconnaissance-level general biological survey and a verification of previous wetland delineations conducted in accordance with all pertinent regulatory guidelines. A literature and database search, including a geographic information system review of the California Natural Diversity Database (CNDDB) maintained by the California Department of Fish and Wildlife (CDFW) was conducted for all United States (U.S.) Geological Survey 7.5-minute quadrangles surrounding or spanned by the Proposed Project.[2] The California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants was accessed online to obtain additional information regarding sensitive plant species. The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System was queried for a list of threatened and endangered species known to occur within or near the Proposed Project. Records for all known special-status plants and animals within 0.25 mile, 1 mile, and 5 miles of the Proposed Project were compiled and reviewed.

Local government plans and ordinances were reviewed for the County of Los Angeles, and the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena.

4.4.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park

- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County

[1] The term “Proposed Project” is inclusive of all components of the Mesa Substation 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., “telecommunications line reroute between Mesa and Harding substations”).
[2] The 7.5-minute quadrangle search was conducted for the Azusa, Mt. Wilson, Pasadena, Baldwin Park, El Monte, Los Angeles, La Habra, Whittier, and South Gate quadrangles.

- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to biological resources in the area. As a result, these components are not discussed further in this section.

4.4.1.1 Biological Setting

The Proposed Project is located within the northwestern portion of the Peninsular Ranges Geomorphic Province in the foothills of the San Gabriel Mountains in the Los Angeles Basin, where the Peninsular and Transverse Ranges meet. The Proposed Project is within the Los Angeles River Hydrological Unit. Streams are generally dry in the summer months, but it is common for perennial flows to be present, especially in the larger streams fed by the San Gabriel Mountains or urban runoff. Many of the drainages in this region have been lined with concrete to serve as flood control channels, or have otherwise been altered to conform to the urban landscape. Flood control and debris control dams have been built on many of the larger channels, especially at the interface between the mountains and the urban area, including the Whittier Narrows Flood Control Basin and the Santa Fe Flood Control Basin. With the exception of several smaller or headwater drainages in undeveloped areas, few streams remain in a natural state. Major drainages in the region include Alhambra Wash, Avocado Creek, Chino Creek, Eaton Wash, La Canada Verde Creek, Mission Creek, Rio Hondo, Rubio Wash, and the San Gabriel River. In the vicinity of the Mesa Substation site, and the associated transmission, subtransmission, distribution, and telecommunications work sites, storm water generally flows from the northeast to the southwest and is collected in storm drains that connect to the Rio Hondo or the San Gabriel River. In the vicinity of the temporary 220 kV line loop-in at Goodrich Substation, storm water generally flows from the east to the west toward the Eaton Wash, which also flows to the Rio Hondo. The Rio Hondo empties into the Los Angeles River. Both the San Gabriel River and the Los Angeles River flow from north to south and eventually empty into the San Pedro Bay in Seal Beach and Long Beach, respectively. The elevation of the Proposed Project ranges from 130 feet to 750 feet above mean sea level. Between the years of 1981 and 2010, rainfall records from the nearest climatological station (which is located in the City of Montebello) to the Mesa Substation site show an average annual rainfall of approximately 15.3 inches. Between 1981 and 2010, the average annual temperature for this area was approximately 67.4 degrees Fahrenheit.

All habitats and vegetation communities that are located within the Proposed Project area are described in the sections that follow. Plant community descriptions and their locations within the TRTP survey boundaries were taken from the TRTP analysis provided in the *Revised Biological*

Specialist Report for the Tehachapi Renewable Transmission Project. Vegetation communities were added or revised by Insignia after surveys were conducted. The majority of the plant communities were characterized according to R.F. Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). The remaining plant communities were characterized by TRTP or by Insignia, as further detailed in the vegetation community descriptions that follow.

4.4.1.2 Background

SCE is currently constructing the Tehachapi Renewable Transmission Project (TRTP) to provide the electrical facilities necessary to interconnect new wind turbine-based electrical generation from the Tehachapi Wind Resource Area. The TRTP consists of a series of new and upgraded high-voltage transmission lines and substation facilities that would deliver electricity from renewable wind energy generators in eastern Kern County to the Los Angeles Basin. Segments 7, 8, and 11 of the TRTP study area overlap with the Proposed Project boundaries.[3]

The following biological documents produced for the TRTP were reviewed:

- *Jurisdictional Delineation Report for the Tehachapi Renewable Transmission Project: Segments 7 and 8*
- *Jurisdictional Delineation Report for the Tehachapi Renewable Transmission Project: Segments 6 and 11*
- *Tehachapi Renewable Transmission Project Segment 11A Goodrich to Mesa Transmission Line Jurisdictional Delineation and Impact Analysis Report*
- *Tehachapi Renewable Transmission Project Biological Assessment*
- *Formal Section 7 Consultation on the Tehachapi Renewable Transmission Project, Angeles National Forest, California*
- *Revised Biological Specialist Report for the Tehachapi Renewable Transmission Project*
- *Biological Technical Report for the Southern California Edison Tehachapi Renewable Transmission Project Segments 6, 7, 8, and 11: Volume I of II*
- *Biological Resources section of the Proponent's Environmental Assessment for the Tehachapi Renewables Transmission Project*

[3] Segment 7 of the TRTP overlaps with the southern part of the Mesa Substation site, the telecommunications line from transmission tower M40-T3 at South San Gabriel Boulevard, and the new telecommunications line from transmission tower M38-T5 on the eastern end of Durfee Avenue. Segment 8A of the TRTP overlaps with the new telecommunications line from transmission tower M38-T5, on the western end of Durfee Avenue. Segment 11 overlaps with the northeastern portion of the Mesa Substation study area.

- *Final Environmental Impact Report, Southern California Edison's Application for the Tehachapi Renewables Transmission Project*;
- *Final Environmental Impact Statement, Southern California Edison's Application for the Tehachapi Renewables Transmission Project*
- *Southern California Edison's Tehachapi Renewables Transmission Project Supplemental Final Environmental Impact Report/Environmental Impact Statement*
- *2009 Final Special-Status Plant Species Survey Report for the Southern California Edison Tehachapi Renewables Transmission Project Segments 7 and 8*
- *2010 Focused Survey Report for Special-Status Plants Segments 7 and 8*
- *Preconstruction Biological Survey and Clearance Sweep Report for Southern California Edison's WP3 Transmission Line Work Segment 7 Transmission Line (M40-T1, M42-T6, WSS 7-7.62, WSS 7-7.63, WSS 7-7.64, WSS 7-7.75), and 66 kV Relocation (4774404E to 4774410E, M7-T1) Los Angeles County, California*
- *Tree Inventory Report for Segments 7 and 8*
- *2010 Focused Survey Report for Coastal California Gnatcatcher Segments 7 and 8*
- *2011 Focused Survey Report for Coastal California Gnatcatcher Segments 7 and 8*
- *Southern California Edison Tehachapi Renewable Transmission Project, Segments 6 and 11 Protocol Level Surveys for the Southwestern Willow Flycatcher and Least Bell's Vireo in 2009*
- *2009 Focused Survey Report for Burrowing Owl, Segments 6 and 11*
- *2009 Focused Survey Report for Burrowing Owl, Segments 7 and 8*
- *2010 Focused Survey Report for Burrowing Owl, Segments 6 and 11*
- *2010 Focused Survey Report for Burrowing Owl, Segments 7 and 8*

A jurisdictional waters and wetlands delineation survey was conducted for Segment 7 and Segment 8 of the TRTP from September to November 2009 by ICF International (ICF). In addition, ICF conducted jurisdictional waters and wetlands delineation surveys for Segment 11 of the TRTP from November 2009 to July 2010, and also on April 4 and 5, 2011. During these surveys, all wetlands and waters were delineated that potentially met the U.S. Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), and CDFW guidance criteria for jurisdictional waters. An in-depth discussion of the survey methods and results, as well as field data forms and photographs, were previously submitted to the USACE in 2010 with the *Jurisdictional Delineation Report for the Tehachapi Renewable Transmission Project: Segments 7 and 8* and the *Jurisdictional Delineation Report for the Tehachapi Renewable Transmission Project: Segments 6 and 11*. In addition, based on changes to the final engineering design for the TRTP, ICF prepared the *Tehachapi Renewable Transmission Project Segment 11A Goodrich to Mesa Transmission Line Jurisdictional Delineation and Impact Analysis Report*, which documented additional waters and wetlands on Segment 11 of the TRTP.

Focused surveys for coastal California gnatcatcher (*Polioptila californica californica*) were conducted for Segments 7 and 8 of the TRTP in 2010 and 2011. Focused surveys for least Bell's vireo were conducted for Segments 7 and 8 of the TRTP in 2009, 2011, 2012, 2013 and 2014. Focused surveys for burrowing owl (*Athene cunicularia*) were conducted for Segments 6, 7, 8, and 11 of the TRTP in 2009 and 2010. Reconnaissance-level special-status bat surveys were conducted for the TRTP in 2007 and 2008. Focused surveys for special-status plants were conducted for Segments 7 and 8 of the TRTP in 2007, 2008, 2009, and 2010. The methodology for each of the TRTP surveys is further described in the Biological Resources Technical Report (BRTR), which is contained Appendix F: Biological Resources Reports.

4.4.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.4.2.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries). The FESA prohibits take of endangered wildlife, where "take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (16 U.S. Code [U.S.C.] §§ 1532[19], 1538). 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 State law (16 U.S.C. § 1538[c]).

Under Section 7 of the FESA, federal agencies are required to consult with the USFWS and/or NOAA Fisheries if their actions, including permit approvals or funding, could adversely affect a listed species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS and/or NOAA Fisheries may issue an incidental take statement, allowing take of the species that is incidental to another authorized activity, provided that the action would not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits (ITPs) to private parties with the development of a habitat conservation plan (HCP).

Bald and Golden Eagle Protection Act

The bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are federally protected under the Bald and Golden Eagle Protection Act (BGEPA), which was passed in 1940 to protect the bald eagle and amended in 1962 to include the golden eagle (16 U.S.C. § 668a-d). The BGEPA (16 U.S.C. § 668-668d) prohibits the take, possession, sale, purchase, barter, offering to sell or purchase, export or import, or transport of bald eagles and golden eagles and their parts, eggs, or nests without a permit issued by the USFWS. The definition of "take" includes pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing. The BGEPA prohibits any form of possession or take of either eagle species, and imposes criminal and civil sanctions, as well as an enhanced penalty provision for subsequent offenses. Further, the BGEPA provides for the forfeiture of anything used to acquire eagles in violation of the statute. Regarding its prohibitions on possession, the statute exempts the use of eagles or eagle parts for exhibition, scientific, and Native American religious uses.

Migratory Bird Treaty Act

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

- Falconry
- Raptor propagation
- Scientific collecting
- Special purposes (e.g., rehabilitation, education, migratory game bird propagation, and salvage)
- Take of depredating birds, taxidermy, and waterfowl sale and disposal

The regulations governing migratory bird permits can be found in Title 50 of the Code of Federal Regulations (CFR) in Part 13 (General Permit Procedures) and Part 21 (Migratory Bird Permits).

Clean Water Act

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

Under the current USACE-administered Nationwide Permit (NWP) Program, substation expansion may be authorized under NWP 12 (Utility Line Activities) if the project does not result in a loss of more than 0.5 acre of waters of the U.S. Permanent impacts to waters of the U.S. that exceed 0.5 acre may require an Individual Permit.

CWA Section 401 requires that applications for a Section 404 permit—or any other federal permit or license for activities resulting in a discharge in jurisdictional waters of the U.S.—must obtain a water quality certification from the State, to ensure project compliance with the State's water quality standards. Within California, the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs) are given the primary responsibility to control water quality. A Water Quality Certification or waiver pursuant to Section 401 of the CWA, issued by the Los Angeles RWQCB, would be required for the issuance of a Section 404 permit.

4.4.2.2 State

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code § 2050) generally parallels the main provisions of the FESA. Section 2080 of the California Fish and Game Code prohibits the take, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful projects. State lead agencies are required to consult with the CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

California Fish and Game Code

Sections 1600 through 1616

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration Agreement Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a Draft Lake or Streambed Alteration Agreement that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and applicant is a Lake or Streambed Alteration Agreement.

Sections 3503, 3503.5, 3513, and 3800

Sections 3503, 3503.5, 3513, and 3800 of the California Fish and Game Code affords protection over the destruction of nests or eggs of native bird species, and it states that no birds in the orders of *Falconiformes* or *Strigiformes* (i.e., birds of prey) can be taken, possessed, or destroyed.

Sections 3511 and 4700

According to Sections 3511 and 4700 of the California Fish and Game Code—which regulate birds and mammals, respectively—a Fully Protected species may not be taken or possessed, and incidental take of these species is not authorized. The State of California first began to designate species as "fully protected" prior to the creation of the CESA and the FESA. Lists of fully protected species were initially developed to provide protection to animals that were rare or faced possible extinction, including fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the CESA and/or the FESA. Fully protected species may not be taken or possessed at any time, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (California Fish and Game Code § 3511).

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by the CDFW. The California Fish and Game Commission has the authority to designate native plants as "endangered" or "rare" and to protect them from take. When the CESA was passed in 1984, it expanded on the original NPPA and enhanced legal protection for plants and created the categories of "threatened" and "endangered" species to parallel the FESA. The CESA converted all rare animals to threatened species under the NPPA, but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The NPPA remains part of the California Fish and Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between the CDFW and a project proponent.

CDFW generally regards as rare many plant species included in the California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B of the CNPS Inventory of Rare and Endangered Vascular Plants of California. In addition, sometimes CRPR 3 and 4 plants are considered if the population has local significance in the area and is impacted by the project. Section 1913(b) includes a specific provision to allow for the incidental removal of endangered or rare plant species, if not otherwise salvaged by CDFW, within a right-of-way (ROW) to allow a public utility to fulfill its obligation to protect the species.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a permit by local public agencies. In addition to federally or State-listed species, special-status plants and animals receive consideration under CEQA. Special-status species include wildlife species of special concern (SSC), which are listed by the CDFW. Pursuant to the CEQA Guidelines (14 California Code of Regulations § 15380), some SSCs could be considered "rare." Any unmitigated impacts to rare species could be considered a "significant effect on the environment" (14 CFR Part 15382). Thus, SSCs must be considered in any project that would undergo, or is currently undergoing, CEQA review, and/or that must obtain an environmental permit(s) from a public agency.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act (Porter-Cologne) is to protect water quality and the beneficial uses of water, and it applies to both surface and groundwater. Under this law, the SWRCB develops statewide water quality plans, and the RWQCBs develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as "waters of the State," are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" and include isolated waters that are no longer regulated by the USACE. Any person discharging, or proposing to discharge, waste into waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver of WDRs before beginning the discharge.

4.4.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of applicable local regulations is provided for informational purposes only.

County of Los Angeles

County of Los Angeles General Plan

The County of Los Angeles General Plan was reviewed for relevant goals and policies related to biological resources. The following objectives and policies are contained in the Conservation and Open Space Element of the plan:

- Goals
  - To conserve energy resources and develop alternative energy sources
  - To conserve water and protect water quality
  - To preserve and protect prime agricultural lands, forests, fisheries, significant ecological areas and other biotic resources
  - To preserve and protect sites of historical, archaeological, scenic and scientific value
- Policies
  - Policy 7: Preserve significant ecological areas and habitat management areas by appropriate measures, including preservation, mitigation and enhancement
  - Policy 12: Protect watershed, streams, and riparian vegetation to minimize water pollution, soil erosion and sedimentation, maintain natural habitats, and aid in ground water recharge
- Significant Ecological Areas - The County of Los Angeles General Plan describes significant ecological areas (SEAs) as lands having important biological resources. This classification includes habitats of rare and endangered species, sites with critical fish and

wildlife, relatively undisturbed areas of typical natural habitat, and regionally scarce biotic resources.

County of Los Angeles Municipal Code

Chapter 22.56, Oak Tree Permit (Ord. 88-0157 § 1), of the County of Los Angeles Municipal Code was designed to preserve and maintain healthy oak trees in the development process. The Oak Tree Ordinance prohibits the cutting, destruction, removal, relocation, damage, or encroachment on (i.e., into the protected zone) of any oak tree more than 8 inches in diameter or 25 inches or greater in circumference. Oak trees with one or more trunks with a combined diameter of 12 inches or a circumference measuring 38 inches or greater are also protected under this ordinance. Damage is defined by the Oak Tree Ordinance as any act with the potential to cause injury to any parts of a tree, including, but not limited to, burning, the application of toxic substances, the operation of equipment or machinery, changing the natural grade, or trenching or excavating within the protected zone of an oak tree. The protected zone refers to the area within the dripline of a tree and extending to a point at least 5 feet outside of the dripline, or 15 feet from the trunks of the tree, whichever distance is greater. A county permit with an accompanying oak tree report is required in order to remove or relocate oak trees protected under the Oak Tree Ordinance. Removed oak trees must be replaced at a ratio of at least two to one with native oak trees of at least a 15-gallon size and measuring at least 1 inch in diameter at 1 foot above the base. Replacement trees must be maintained for two years and replaced if mortality occurs.

Chapter 12.28, the Brushing Ordinance (Ord. 9106 § 1), of the County of Los Angeles Municipal Code protects natural vegetation—which includes native plants, grasses, shrubs, and trees and roots—with the ability to intercept, hold, and more slowly release rainfall than bare earth surfaces. The Brushing Ordinance requires a permit for the removal or destruction of natural vegetation on any ground surface with a grade of eight percent or higher. To obtain a permit for the removal or destruction of natural vegetation within Los Angeles County, a written request is required and must include a description of the property; a map of the topography of the land and location of any drainage courses; the location and extent of proposed work; and details of the erosion, flood hazards, and drainage plans. The county engineer may include conditions for the permit, including seasonal limitations on vegetation removal or destruction, requirements for protective structures or erosion control devices, and restoration of native vegetation in impacted areas.

City of Monterey Park General Plan

The City of Monterey Park General Plan and the Addendum to City of Monterey Park General Plan Final Environmental Impact Report (FEIR) were both reviewed for relevant goals and policies related to biological resources. The documents did not list goals or policies related to biological resources, and the Addendum to the City of Monterey Park General Plan FEIR states that no biological resources or habitat areas occur within the City of Monterey Park. Therefore, no local regulations relating to biological resources apply in the City of Monterey Park.

City of Montebello General Plan

The Conservation Element of the City of Montebello General Plan was reviewed for relevant goals and policies related to biological resources. The General Plan stated that the purpose of the conservation element is to comply with California law. Goals listed in the plan include the preservation of habitat for desirable or non-objectionable birds and mammals, as well as the preservation of outstanding and unique plant life in the community.

City of Rosemead General Plan

The Resource Management Element of the City of Rosemead General Plan addresses the protection of the limited natural resource within the city limits, including recreation areas, water supply resources, air quality improvement, and energy conservation.

City of South El Monte

South El Monte General Plan

The Resources Element of the City of South El Monte General Plan addresses resource conservation within the city, including the provision of park space, water conservation, protection of drinking water, and improvement of air quality.

City of South El Monte Tree Policy

The city has adopted a tree policy includes the following provisions related to tree removal and tree planting:

- Street trees shall be selected from the city’s Approved Tree List
- All trees will be planted in a minimum 24-inch box
- All trees scheduled for planting must be coordinated with the city’s Landscape Maintenance Supervisor
- Every effort should be made to keep tree removal at a minimum; if trees are removed, every effort should be made to replace them with trees from the Approved Tree List
- No tree will be removed without prior approval of the General Services Director

City of Commerce General Plan

The Resource Management Element of the City of Commerce General Plan addresses the protection of natural resources within the city limits. The plan contains the following objective and policies:

- Objective
  - To preserve those resources and amenities that enhance Commerce’s living and working environment

- Policies
  - Policy 1.1 – The City of Commerce will do its part in the conservation and protection of air, water, energy, and land in the Southern California region
  - Policy 4.1 – The City of Commerce will encourage the preservation of the existing plant resources in the city
  - Policy 6.3 – The City of Commerce will continue to monitor development efforts that could affect the resources that are of importance to the community

City of Bell Gardens General Plan

The Conservation Element of the City of Bell Gardens General Plan addresses the protection of natural resources within the city limits. The plan contains policies that protect groundwater and other ecological resources through programs listed in other sections of the plan.

City of Pasadena

City of Pasadena General Plan

The City of Pasadena General Plan was reviewed for relevant goals and policies related to biological resources. The following goals and policies are contained in the Open Space and Conservation Element and the Green Space, Parks, and Recreation Element of the General Plan:

- Goals
  - Preserve, acquire, and create open space
  - Protect and conserve natural open spaces, critical habitats, and natural resources
  - Protect, restore, and maintain native wildlife and areas containing important native vegetation resources in the city
  - Protect important open space and habitat linkages
  - Protect and enhance Pasadena's trees on public and privately owned land
  - Establish Pasadena as a national and international leader on energy and water conservation and environmental stewardship efforts
  - Encourage and promote the stewardship of Pasadena's natural environment, including water conservation, clean air, natural open space protection, and recycling

- Policies
  - Policy 1.2: Protect natural open areas, watersheds, and environmentally sensitive areas such as Hahamongna, Eaton Canyon, riparian areas, and other open spaces

  - Policy 1.5: Restore, protect, and enhance wildlife habitat within critical open space areas and any wildlife corridors and/or linkages

  - Policy 1.6: Continue to protect the city's legacy of a lush and varied urban forest. Continue to plant street trees as per the city's Master Street Tree Plan and continue to maintain and protect the urban forest as a vital local resource

- Policy 1.8: Conserve and protect water resources in parks and open spaces; maximize the quality and quantity of groundwater recharge to minimize the dependence on imported water

City of Pasadena Municipal Code

Chapter 8.52 City Tree and Tree Protection Ordinance (Ordinance 6896 §2) of the City of Pasadena Municipal Code contains measures to accomplish the following:

- Preserve and grow the City of Pasadena's canopy cover by protecting landmark, native, and specimen trees on specified areas of private property
- Expand the protection of street trees and trees on public property
- Safeguard the City of Pasadena's urban forest by providing for the regulation of the protection, planting, maintenance, and removal of trees in the city
- Protect the visual and aesthetic character of the many areas of the City of Pasadena
- Protect and maintain healthy trees in the land use planning processes
- Create favorable conditions for the protection of designated landmark, native, and specimen trees for the benefit of current and future residents of the City of Pasadena
- Improve the quality of life for residents, visitors, and wildlife

The City Tree and Tree Protection Ordinance protects all native, specimen, landmark, landmark-eligible, or mature trees in the City of Pasadena. Specifically, the ordinance seeks to avoid mechanical injury to tree roots, trunks, or branches; the compaction of soil; and changes to the existing grade, which may expose or suffocate roots. Construction projects that would affect native, specimen, landmark, landmark-eligible, or mature trees require the submittal of a tree protection plan for review and approval.

The term "native tree," as defined by this ordinance, means any tree native to the area with a trunk more than 8 inches in diameter at a height of 4.5 feet above natural grade. Native trees include coast live oak (*Quercus agrifolia*), Engelmann oak (*Quercus engelmannii*), canyon live oak (*Quercus chrysolepis*), California sycamore (*Platanus racemosa*), California black walnut (*Juglans californica*), scrub oak (*Quercus berberidifolia*), valley oak (*Quercus lobata*), Fremont's cottonwood (*Populus fremontii*), California alder (*Alnus rhombifolia*), black cottonwood (*Populus trichocarpa*), arroyo willow (*Salix lasiolepis*), and California buckeye (*Aesculus californica*).

The term "specimen" is defined as a tree that meets the criteria established by resolution of the Pasadena City Council for a specific species and size of tree, which is thereby presumed to possess a distinctive form, size, or age and to be an outstanding specimen of a desirable species. A "landmark tree" is defined as a tree of historic or cultural significance and of importance to the community, as it is one of the largest or oldest trees of the species in the city; it has historical significance due to an association with a historic building, site, street, person, or event; or it is a defining landmark or significant outstanding feature of a neighborhood. A "landmark-eligible" tree is defined as a tree that meets the criteria for designation as a landmark tree, as determined by the review authority. A mature tree is defined as an otherwise non-protected tree with a diameter at breast height of 19 inches or greater.

Requests for a permit to remove a landmark, native and specimen tree will be denied unless one of the following findings is made:

- There is a public benefit, or a public health, safety, or welfare benefit, to the injury or removal that outweighs the protection of the specific tree (public benefit means a public purpose, service, or use which affects residents as a community and not merely as particular individuals) or
- The present condition of the tree is such that it is not reasonably likely to survive or
- There is an objective feature of the tree that makes the tree not suitable for protection or
- There would be a substantial hardship to a private property owner in the enjoyment and use of real property if the injury or removal is not permitted or
- To not permit the injury or removal would constitute a taking of the underlying real property or
- The project includes a landscape design plan that will result in a tree canopy coverage of greater significance than the tree canopy coverage being removed, within a reasonable time after completion of the project

No permit is required to prune non-protected trees, specimen trees or native trees on private property. Pruning of a designated landmark tree requires a permit and the pruning work must be done according to the most recent standards of the International Society of Arboriculture.

4.4.3 Existing Biological Resources

This section describes the biological resources that occur or potentially occur in the study area of the Proposed Project. Vegetation types, wildlife populations and movement patterns, special-status vegetation types, and special-status plant and wildlife species that are either known to occur or have the potential to occur are discussed in the following subsections.

4.4.3.1 Vegetation Communities

The Proposed Project area consists of urbanized development and natural areas. Urbanized development includes the existing SCE fee-owned and/or properties to be acquired and SCE ROWs. Other uses in the vicinity include public roads and residential, commercial, and industrial properties. In addition, several nurseries are located within or near the Proposed Project area. Natural areas are concentrated in four sections of the Proposed Project area: the Mesa Substation site and adjacent ROWs; the Montebello Hills; the Rio Hondo corridor; and the San Gabriel River corridor, as shown in Figure 1: Project Overview Map of the BRTR, which is included in Appendix F: Biological Resources Reports. The following 14 vegetation communities occur in the Proposed Project area:

- California annual grassland
- California walnut woodland
- Coast live oak woodland

- Coastal sage scrub
- Disturbed/developed areas
- Mulefat scrub
- Non-native giant reed
- Non-native woodland
- Riparian woodland
- Ruderal grassland
- Southern sycamore-alder riparian woodland
- Ephemeral drainages
- Intermittent drainage
- Man-induced wetlands

The BRTR provides detailed descriptions of each vegetation community and the associated and observed wildlife species of each community within the Proposed Project area. Vegetation communities mapped within the Mesa Substation study area are provided in Figure 4.4-1: Mesa Substation Study Area Vegetation Communities Map.[4] Vegetation communities mapped within the Mesa Substation study area and the other main components of the Proposed Project are provided in Figure 2: Vegetation Communities Map in the BRTR.

Table 4.4-1: Vegetation Communities Within the Proposed Project Area provides a summary of the vegetation communities that were mapped.

[4] The "Mesa Substation Study Area" shown on Figure 4.4-1: Mesa Substation Study Area Vegetation Communities Map represents the potential disturbance area associated with work at Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines in adjacent ROWs.

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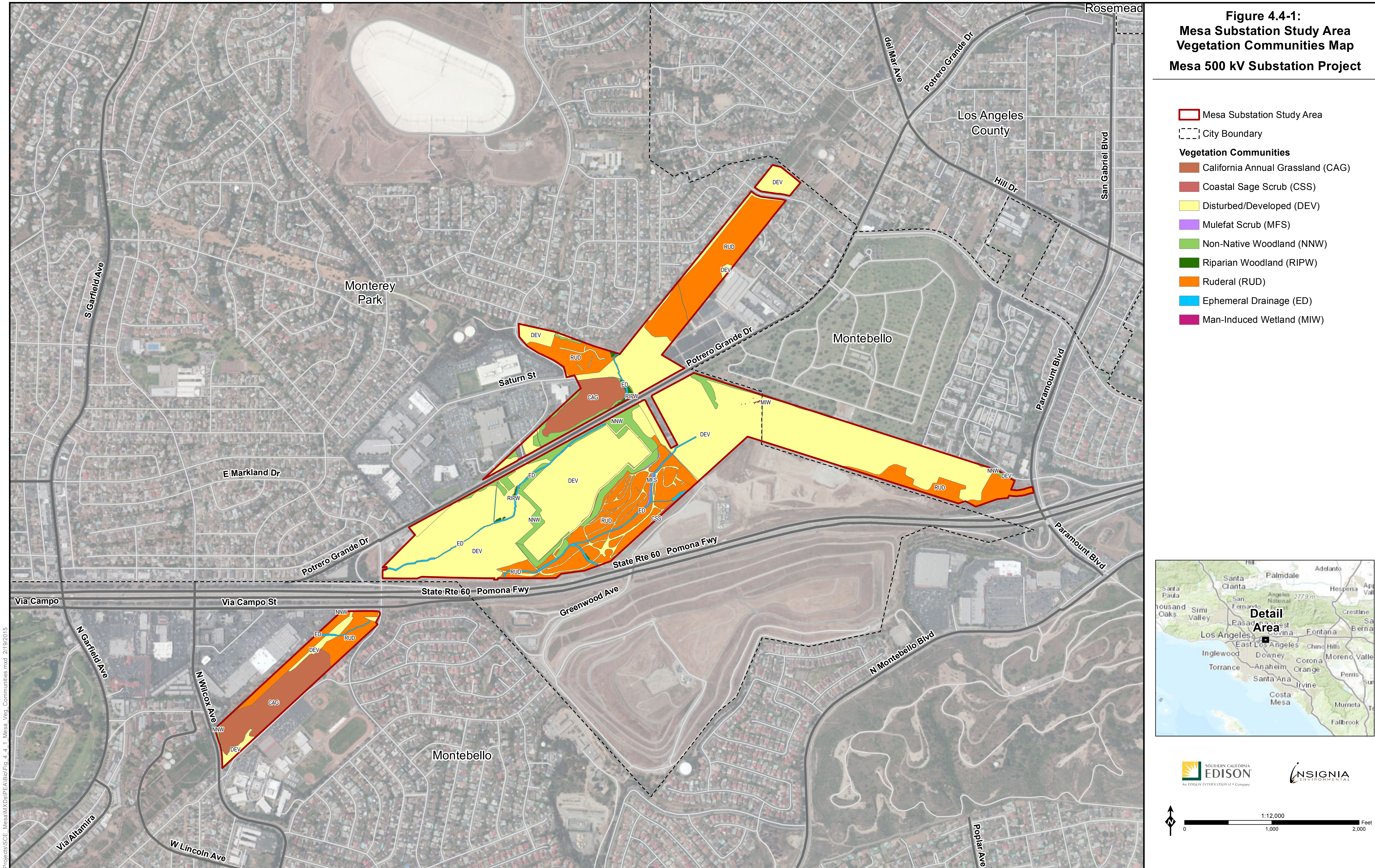
Figure 4.4-1:
Mesa Substation Study Area
Vegetation Communities Map
Mesa 500 kV Substation Project
Mesa Substation Study Area
City Boundary
Vegetation Communities
California Annual Grassland (CAG)
Coastal Sage Scrub (CSS)
Disturbed/Developed (DEV)
Mulefat Scrub (MFS)
Non-Native Woodland (NNW)
Riparian Woodland (RIPW)
Ruderal (RUD)
Ephemeral Drainage (ED)
Man-Induced Wetland (MIW)
Monterey Park
Montebello
Los Angeles County
Rosemead
Potrero Grande Dr
Saturn St
E Markland Dr
S Garfield Ave
N Garfield Ave
N Wilcox Ave
Via Campo
Via Campo St
State Rte 60 Pomona Fwy
Greenwood Ave
N Montebello Blvd
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Table 4.4-1: Vegetation Communities Within the Proposed Project Area

Vegetation Community[5]	Proposed Project Component					Approximate Total (Acres)
	Replacement of an existing Lattice Steel Tower on the Goodrich – Laguna Bell 220 kV Transmission Line (Acres[6])	Temporary 220 kV Line Loop-in at Goodrich Substation (Acres)	Mesa Substation (Acres)	Street Light Source Line Conversion from Overhead to Underground within Loveland Street (Acres)	Telecommunications Reroute Between Mesa and Harding Substations and New Telecommunications Routes (Acres)	
California annual grassland	0.00	0.00	0.00	0.00	17.32	**17.32**
California walnut woodland	0.00	0.00	0.00	0.00	1.87	**1.87**
Coast live oak woodland	0.00	0.26	0.00	0.00	0.00	**0.26**
Coastal sage scrub	0.00	0.00	0.16	0.00	3.06	**3.22**
Disturbed/ developed areas	0.00	8.80	54.63	1.22	240.22	**304.87**
Mulefat scrub	0.00	0.00	0.33	0.00	13.86	**14.19**

[5]This table includes vegetation for all main Proposed Project components, which are fully described and mapped in the BRTR. The figures in this section show only the resources within the Mesa Substation study area.

[6] Disturbance acreages in this section refer to specific impact areas associated with vegetation, habitat, and jurisdictional waters. Refer to Chapter 3, Project Description for total disturbance areas.

Vegetation Community[5]	Proposed Project Component					Approximate Total (Acres)
	Replacement of an existing Lattice Steel Tower on the Goodrich – Laguna Bell 220 kV Transmission Line (Acres[6])	Temporary 220 kV Line Loop-in at Goodrich Substation (Acres)	Mesa Substation (Acres)	Street Light Source Line Conversion from Overhead to Underground within Loveland Street (Acres)	Telecommuni-cations Reroute Between Mesa and Harding Substations and New Telecommuni-cations Routes (Acres)	
Non-native giant reed	0.00	0.00	0.00	0.00	0.15	**0.15**
Non-native woodland	0.00	0.00	9.17	0.00	34.24	**43.41**
Riparian woodland	0.00	0.00	0.18	0.00	1.19	**1.37**
Ruderal	5.40	0.00	19.24	0.00	47.26	**71.90**
Southern sycamore-alder riparian woodland	0.00	0.00	0.00	0.00	2.79	**2.79**
Ephemeral drainages	0.00	0.00	2.50	0.00	0.64	**3.14**
Intermittent drainage	0.00	0.00	0.00	0.00	1.98	**1.98**
Man-induced wetland	0.00	0.00	0.00	0.00	0.04	**0.04**
Total (Acres)	**5.40**	**9.06**	**86.21**	**1.22**	**364.62**	**466.51**

4.4.3.2 Special-Status Vegetation Communities

Special-status natural communities are defined as communities that are of limited distribution statewide or within a county or region, and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status species or their habitats. The most current version of the CDFW's California Terrestrial Natural Communities indicates which natural communities are of special status. Communities with a State ranking of 1 to 3 are considered special-status. The rankings are defined as follows:

- S1, Critically Imperiled: Critically imperiled in the State because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province

- S2, Imperiled: Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province

- S3, Vulnerable: Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation

Many riparian communities are considered sensitive natural communities in California because of the habitat they provide for special-status plant and wildlife species and their limited distribution in California. Riparian vegetation communities are regulated by the CDFW through Section 1600 *et seq.* of the California Fish and Game Code. Riparian vegetation occurs along perennial or intermittent drainages that typically are subject to seasonal flooding. Most natural riparian vegetation in Southern California has been lost or degraded by the following:

- Land use conversions to agricultural, urban, and recreational uses
- Channelization for flood control
- Sand and gravel mining
- Groundwater pumping
- Water impoundments

Disturbed riparian woodland was documented along ephemeral drainages in the vicinity of Mesa Substation and East Markland Drive. This vegetation community is highly disturbed and consists of a preponderance of non-native species, including Brazilian pepper tree (*Schinus terebenthifolius*), date palm (*Phoenix dactylifera*), and Mexican fan palm (*Washingtonia robusta*). Only a few native species were present, including willow (*Salix* spp.) and mulefat (*Baccharis salicifolia*). As a result of its disturbed nature, this vegetation community would not be considered a sensitive habitat.

Several stands of southern sycamore-alder riparian woodland occur within the Rio Hondo and San Gabriel River corridors within the Proposed Project area. The southern sycamore-alder riparian woodland association is currently designated by the CDFW as S3 or rarer.

4.4.3.3 Special-Status Plant Species

Special-status plant species include those species listed by the CDFW and USFWS as endangered, threatened, proposed, or candidate species, and those listed as sensitive or rare. In addition, sensitive plant species include those occurring on the CNPS Inventory of Rare and Endangered Plants of California.

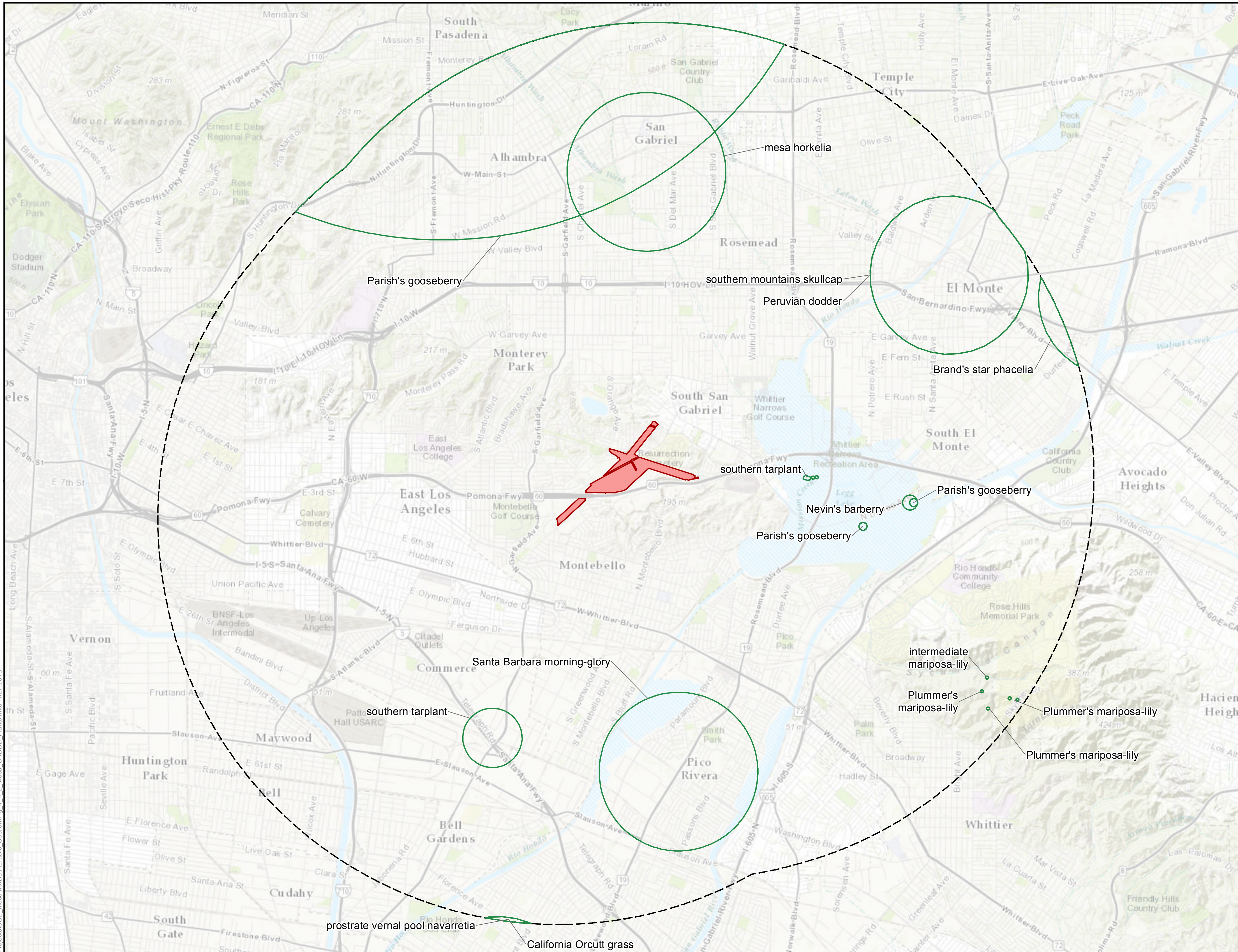
A total of 29 special-status plant species were identified as having a potential to occur within the Proposed Project. Of these, nine occur in specialized habitats (e.g., marshes, swamps, meadows, and vernal pools) that do not occur within the Proposed Project area. Thus, these species are not expected to occur on the Proposed Project site. Two CNDDB queries were performed; one query centered on Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications work, and the other query centered on the temporary 220 kV line loop-in at Goodrich Substation. Figure 4.4-2: Mesa Substation Study Area CNDDB Plant Occurrences Map provides an overview of CNDDB occurrences within 5 miles of Mesa Substation. Figure 3: Mesa Substation CNDDB Plant Occurrences Map in the BRTR, included in Appendix F: Biological Resources Repots provides an overview of CNDDB occurrences within 5 miles of the Mesa Substation site and associated transmission, subtransmission, distribution, and telecommunications lines.

Of the 20 special-status plant species, the following determinations were made:

- Two species—California black walnut and Nevin's barberry (*Berberis nevinii*)—were found to be present in the Proposed Project area
- No species were determined to have a high potential to occur within the Proposed Project area
- Three species— southern tarplant (*Centromadia parryi* ssp. *australis*), Plummer's mariposa- lily (*Calochortus plummerae*) and intermediate mariposa-lily (*Calochortus weedii* var. *intermedius*)—were determined to have a moderate potential to occur within the Proposed Project area
- 15 species were determined to have a low potential to occur within the Proposed Project area

Descriptions of the special-status plant species that are present or have a potential to occur within the Proposed Project area are detailed in Table 4.4-2: Sensitive Plant Species with the Potential to Occur Within the Proposed Project Area. A detailed discussion regarding local populations, habitat requirements, and the life history of species that are present or have a moderate potential to occur within the Proposed Project area is provided in the following subsections.

Figure 4.4-2:
Mesa Substation Study Area CNDDB Plant Occurrences Map
Mesa 500 kV Substation Project



Mesa Substation Study Area

5-Mile Buffer

CNDDB Plant Occurence

Detail Area

SOUTHERN CALIFORNIA EDISON

INSIGNIA ENVIRONMENTAL

1:76,000

0 1 2 Miles

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Table 4.4-2: Sensitive Plant Species with the Potential to Occur Within the Proposed Project Area

Species Name	Federal, State, and CNPS Status[7]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology/ Life Form	Known Locations	Potential to Occur
Asteraceae (Compositae) – Sunflower Family					
Southern tarplant (*Centromadia parryi* ssp. *australis*)	1B.1	Southern tarplant is an annual herb that occurs in the margins of marshes and swamps, vernally mesic valley and foothill grasslands, and vernal pool habitats. It is typically found at elevations from sea level to approximately 650 feet.	June through October	Two CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site,[8] both of which are presumed extant. One CNDDB occurrence of this species is documented within 5 miles of the Goodrich Substation site; however, this occurrence is possibly extirpated	Suitable habitat for this species occurs along the banks of the Rio Hondo. As a CNDDB occurrence for this species is located upstream of the Proposed Project area within the Rio Hondo corridor, this species has a moderate potential to occur. **Moderate Potential**
White rabbit-tobacco (*Pseudognaphalium leucocephalum*)	2B.2	White rabbit-tobacco is a perennial herb that occurs in sandy or gravelly substrate in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. It typically occurs at elevations from sea level to approximately 7,000 feet.	July through October	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. Two CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site. While both records are presumed extant, these occurrences were recorded before 1930.	Suitable habitat for this species occurs in the Proposed Project area in the Montebello Hills area, south of Mesa Substation, and in the Rio Hondo and San Gabriel River corridors. However, no documented occurrences are within 5 miles of this portion of the Proposed Project area. **Low Potential**
San Bernardino aster (*Symphyotrichum defoliatum*)	1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows, seeps, marshes, swamps, and valley and foothill grassland, below 6,700 feet in elevation.	July through November	One CNDDB occurrence of this species is documented within 5 miles of the Mesa Substation site; however, this occurrence was recorded in 1930 and is extirpated. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. The only CNDDB occurrence of this species was recorded in 1930 and is presumed extirpated. **Low Potential**

[7] Explanation of federal and State listing codes:

Federal listing codes:

-FE: Federally listed as Endangered
-FT: Federally listed as Threatened

California listing codes:

-CE: State-listed as Endangered
-CT: State-listed as Threatened
-CR: State-listed as Rare

Rare Plant Ranks:

-1A: Presumed extirpated because they have not been seen or collected in the wild in California for many years
-1B.1: Rare, threatened or endangered in California or elsewhere; seriously threatened in California
-1B.2: Rare, threatened or endangered in California or elsewhere; fairly threatened in California
-1B.3: Rare, threatened or endangered in California or elsewhere; not very threatened in California
-2.1: Rare, threatened or endangered in California only; seriously threatened in California
-2.2: Rare, threatened or endangered in California only; fairly threatened in California
-3: More information is needed regarding this species; taxonomically uncertain
-4.1: Limited in distribution or infrequent throughout California; seriously threatened in California
-4.2: Limited in distribution or infrequent in California; fairly threatened in California
-4.3: Limited in distribution or infrequent in California; not very threatened in California

[8] The Mesa Substation site includes Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications work.

Species Name	Federal, State, and CNPS Status[7]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology/ Life Form	Known Locations	Potential to Occur
Greata's aster (*Symphyotrichum greatae*)	1B.3	Greata's aster is a perennial rhizomatous herb that occurs in mesic areas in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland habitats. It is typically found at elevations from approximately 1,000 to 6,500 feet.	August through October	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. Two CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site; however, both occurrences were recorded before 1920 and one is possibly extirpated.	Suitable habitat for this species occurs in the Rio Hondo and San Gabriel River corridors. However, the Proposed Project is outside of this species' elevation range. **Low Potential**
Berberidaceae – Barberry Family					
Nevin's barberry (*Berberis nevinii*)	FE CE 1B.1	Nevin's barberry is a perennial evergreen shrub that occurs in sandy or gravelly substrate in chaparral, cismontane woodland, coastal scrub, and riparian habitats. It is typically found at elevations from approximately 900 to 2,700 feet.	March through June	One CNDDB occurrence of this species is documented within 0.25 mile of the Mesa Substation site. This record is presumed extant. Three CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site. All three records are presumed extant.	This species was observed in the San Gabriel River corridor during field surveys conducted by Insignia Environmental (Insignia) biologists in December 2014. **Present**
Boraginaceae – Borage Family					
Brand's star phacelia (*Phacelia stellaris*)	1B.1	Brand's star phacelia is an annual herb that occurs in coastal dunes and coastal scrub habitats. It is typically found at elevations from sea level to approximately 1,300 feet.	March through May	Two CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site; however, these occurrences were documented before 1936 and are possibly extirpated. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	Suitable habitat for this species occurs within the Proposed Project area south of Mesa Substation and in the Montebello Hills area. The closest record for this species was last seen near the Proposed Project area in 1936. **Low Potential**
Brassicaceae (Cruciferae) – Mustard Family					
Poor-man's peppergrass (*Lepidium virginicum* ssp. *menziesii*), (previously Robinson's pepper-grass [*Lepidium virginicum* ssp. *robinsonii*])	4.3	Robinson's pepper-grass is an annual herb that occurs in chaparral and coastal scrub habitat. It is typically found at elevations from sea level to approximately 2,900 feet.	March through June	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. Two CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site. Both records are presumed extant.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. However, there are no recorded occurrences in this area. **Low Potential**

Species Name	Federal, State, and CNPS Status[7]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology/ Life Form	Known Locations	Potential to Occur
Convolvulaceae – Morning-Glory Family					
Lucky morning-glory (*Calystegia felix*)	3.1	This species is historically associated with wetlands and marshy habitats, but also can occur in drier locales. Potential habitats include sometimes alkaline meadows and seeps, and alluvial riparian scrub.	March through September	One CNDDB occurrence of this species is documented within 5 miles of the Mesa Substation site. This record is presumed extant. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	Marginally suitable habitat for this species occurs in the Proposed Project area in the Rio Hondo and San Gabriel River corridors. **Low Potential**
Fabaceae (Leguminosae) – Legume Family					
Braunton's milk-vetch (*Astragalus brauntonii*)	FE 1B.1	Braunton's milk-vetch is a perennial herb that occurs in sandstone or carbonite layers in chaparral, coastal scrub, and valley and foothill grassland habitats. It usually occurs in areas that have been recently burned or disturbed. It is typically found at elevations from near sea level to approximately 2,100 feet.	March through July	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. Two CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site. Both records are presumed extant.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation and in the Montebello Hills area. However, no occurrences have been documented within 5 miles of the site. Two extant occurrences are near the Goodrich Substation site; however, there is no suitable habitat in this location. **Low Potential**
Geraniaceae – Geranium Family					
Round-leaved filaree (*California macrophylla*)	1B.1	Round-leaved filaree is an annual herb that occurs in clay substrates in cismontane woodland and valley and foothill grassland habitat. It is typically found at elevations from approximately 50 to 3,900 feet.	March through May	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. One CNDDB occurrence of this species is documented within 5 miles of the Goodrich Substation site; however, this record is possibly extirpated.	Marginally suitable habitat for this species occurs within the Proposed Project area south of the Mesa Substation site. **Low Potential**
Grossulariaceae – Gooseberry Family					
Parish's gooseberry (*Ribes divaricatum* var. *parishii*)	1A	Parish's gooseberry is a perennial deciduous shrub that occurs in riparian woodland habitat. It is typically found at elevations from approximately 200 to 1,000 feet.	February through April	Two CNDDB occurrences of this species are documented within 0.25 mile of the Mesa Substation site, both of which are presumed extant. There is one occurrence within 5 miles of the Proposed Project area and the Goodrich Substation; however this occurrence was recorded in 1882 and is possibly extirpated.	Suitable habitat for this species occurs in the Proposed Project area along the Rio Hondo and San Gabriel River corridors. However, this species is thought to be extirpated from California and was last seen near the Proposed Project area in 1980. **Low Potential**

Species Name	Federal, State, and CNPS Status[7]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology/ Life Form	Known Locations	Potential to Occur
Juglandaceae – Walnut Family					
California black walnut (*Juglans californica*)	4.2	California black walnut is a perennial deciduous tree that occurs in alluvial chaparral, cismontane woodland, and coastal scrub habitats. It is typically found at elevations from approximately 150 to 3,000 feet.	March through May	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	This species was observed on the Mesa Substation site during botanical surveys conducted for the TRTP in 2009 and 2010. In addition, Insignia biologists observed this species during December 2014 field surveys along Lincoln Boulevard in the Montebello Hills area, and along Durfee Avenue in the San Gabriel River corridor. **Present**
Lamiaceae (Labiatae) – Mint Family					
Southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*)	1B.2	Southern mountains skullcap is a perennial rhizomatous herb that occurs in mesic areas in chaparral, cismontane woodland, and lower montane coniferous forests. It is typically found at elevations from approximately 2,000 to 6,600 feet.	June through July	One CNDDB occurrence of this species is documented within 5 miles of the Mesa Substation site; however, this occurrence is possibly extirpated. This occurrence is also located within 1 mile of the Goodrich Substation site.	No suitable habitat for this species occurs in the Proposed Project area. The Proposed Project area is located outside of this species' elevation range. **Low Potential**
Liliaceae – Lily Family					
Plummer's mariposa-lily (*Calochortus plummerae*)	4.2	Plummer's mariposa-lily is a perennial bulbiferous herb that occurs in granitic or rocky substrate in chaparral, cismontane woodland, coastal scrub, lower montane forest, and valley and foothill grassland habitats. It is typically found at elevations from approximately 330 to 5,600 feet.	May through July	Four CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. All four records are presumed extant. Eight CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site. Seven of these occurrences are presumed extant, and one is possibly extirpated.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. Extant occurrences of this species are located in close proximity to the Proposed Project area. **Moderate Potential**
Intermediate mariposa-lily (*Calochortus weedii* var. *intermedius*)	1B.2	Intermediate mariposa-lily is a perennial bulbiferous herb that occurs in rocky and calcareous substrate in chaparral, coastal scrub, and valley and foothill grassland habitats. It is typically found at elevations from approximately 350 to 2,800 feet.	May through July	Four CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. All four occurrences are presumed extant. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. In addition, extant occurrences are within close proximity to the Mesa Substation site. **Moderate Potential**

Species Name	Federal, State, and CNPS Status[7]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology/ Life Form	Known Locations	Potential to Occur
Poaceae (Gramineae) – Grass Family					
California muhly (*Muhlenbergia californica*)	4.3	California muhly is a perennial rhizomatous herb that occurs in mesic seeps and streambeds in chaparral, coastal scrub, lower montane coniferous forest, and meadow habitat. It is typically found at elevations from approximately 250 to 6,500 feet.	June through September	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. One CNDDB occurrence of this species is documented within 5 miles of the Goodrich Substation site. While this record is presumed extant, this occurrence was recorded in 1899.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the Rio Hondo and San Gabriel River corridors. However, no occurrences have been documented within 5 miles of these locations. The occurrence near the Goodrich Substation site has not been documented since 1899, and no suitable habitat exists in this location. **Low Potential**
Polygonaceae – Buckwheat Family					
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	1B.1	Parry's spineflower is an annual herb that occurs in sandy or rocky substrates in openings of chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. It is typically found at elevations from approximately 900 to 4,000 feet.	May through June	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. One CNDDB occurrence of this species is documented within 5 miles of the Goodrich Substation site. While this occurrence is presumed extant, it was recorded in 1902.	Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. However, the only occurrence near the Proposed Project area was observed in 1902. In addition, the Proposed Project area is located outside of this species' elevation range. **Low Potential**
Slender-horned spineflower (*Dodecahema leptoceras*)	FE 1B.1	Slender-horned spineflower is an annual herb that occurs in sandy substrates in chaparral, cismontane woodland, and alluvial fan coastal scrub habitats. It is typically found at elevations from approximately 650 to 2,500 feet.	May through June	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. Two CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site; however, both occurrences were recorded in 1920 and are extirpated.	Suitable habitat for this species occurs in the Proposed Project area in the Rio Hondo and San Gabriel River corridors. No documented occurrences are within 5 miles of this portion of the Proposed Project area. **Low Potential**
Rosaceae – Rose Family					
Mesa horkelia (*Horkelia cuneata* var. *puberula*)	1B.1	Mesa horkelia is a perennial herb that occurs in sandy or gravelly substrate in maritime chaparral, cismontane woodland, and coastal scrub habitats. It is typically found at elevations from approximately 200 to 2,300 feet.	March through July	One CNDDB occurrence is documented within 5 miles of the Mesa Substation site; however, this occurrence was recorded in 1911 and is extirpated. In addition to the occurrence listed previously, seven CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site; however, these occurrences were recorded before 1940 and are either extirpated or possibly extirpated.	Suitable habitat for this species occurs in the Proposed Project area in south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. Although there are recorded occurrences in close proximity to the Proposed Project area, all are from 1940 or earlier and are presumed extirpated. **Low Potential**

Species Name	Federal, State, and CNPS Status[7]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology/ Life Form	Known Locations	Potential to Occur
Themidaceae – Brodiaea Family					
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT CE 1B.1	Thread-leaved brodiaea is a perennial bulbiferous herb that occurs in herbaceous plant communities, such as valley needlegrass grassland, valley sacaton grassland, non-native grassland, alkali playa, and vernal pool habitats. These herbaceous communities occur in open areas on clay soils at elevations from 100 to 2,500 feet	March through June	No CNDDB occurrences of this species are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	Marginally suitable habitat for this species occurs in the Proposed Project area. **Low Potential**

Special-status species information sources: CNDDB (2014), USFWS (2014), CNPS (2014)

While focused special-status plant surveys were conducted for the TRTP between 2007 and 2010, these surveys were limited to the sections of the Proposed Project site that are included in the TRTP; therefore, no special-status plant surveys have been conducted in areas of the Proposed Project that do not overlap with the TRTP. In addition, current environmental conditions on the Proposed Project site could differ from conditions present at the time special-status plant surveys were conducted in 2010. Furthermore, California Department of Fish and Game[9] (CDFG) (2009), USFWS (1996), and CNPS (2001) guidelines state that focused surveys for special-status plants must be conducted when any natural vegetation occurs on a project site and the activity has the potential for direct or indirect effects on vegetation. As such, the presence of rare plant species with the potential to occur cannot be dismissed from the Proposed Project site until special-status plant surveys are conducted prior to the start of construction.

Species Present in the Proposed Project Area

California Black Walnut

California black walnut is a CNPS CRPR 4.2 perennial deciduous tree that is endemic to Southern California. It typically occurs in alluvial chaparral, cismontane woodland, and coastal scrub habitats at elevations between 150 and 3,000 feet. This species has also been found across a wide range of habitats, including riparian woodland, cliffs, sage scrub, and grassland habitat. The blooming period for California black walnuts is from March to August. Five California black walnut individuals were observed in ruderal habitat on the Mesa Substation site during the TRTP rare plant surveys in 2009 and 2010. Seven California black walnut individuals were observed along Lincoln Boulevard in the Montebello Hills area during Insignia's December 2014 survey. The locations of the California black walnut trees that were observed on the Mesa Substation site are depicted in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. The location of the California black walnut trees in associated transmission, subtransmission, distribution, and telecommunications lines are depicted in Figure 5: Biological Resources Observations Map of included in the BRTR, which is found in Appendix F: Biological Resources Reports.

The California black walnut tree is not protected by the FESA or CESA, nor does it have any special federal or State protected status. Because this plant is a CNPS CRPR 4.2 species, it is of limited distribution or infrequent throughout a broader area in California. Although the CNPS recommends that this species be evaluated for CEQA consideration, this is not required under CEQA. California black walnut occurs or has the potential to occur in the cities of Monterey Park and Montebello, and in unincorporated areas of Los Angeles County; however, mitigation or compensation for the removal of California black walnut trees is not required by these jurisdictions.

Nevin's Barberry

Nevin's barberry is a federal and State-listed endangered species and a CNPS California Rare Plant Rank 1.2 species. This evergreen shrub typically occurs in chaparral, cismontane

[9] CDFW was formerly known as the CDFG

woodland, coastal sage scrub, and riparian scrub, on steep, north-facing slopes or in low-grade sandy washes on gravelly soils. It blooms between March and June. This species is threatened by habitat loss associated with development and road maintenance. Within the Proposed Project area, one individual Nevin's barberry was observed during Insignia's December field surveys, in the Whittier Narrows Natural Area along the San Gabriel River corridor. The location of the Nevin's barberry is depicted in Figure 5: Biological Resources Observations Map in the BRTR, which is included in Appendix F: Biological Resources Reports. A photograph of this species is included in Attachment A within the BRTR.

Species with a Moderate Potential to Occur in the Proposed Project Area

Southern Tarplant

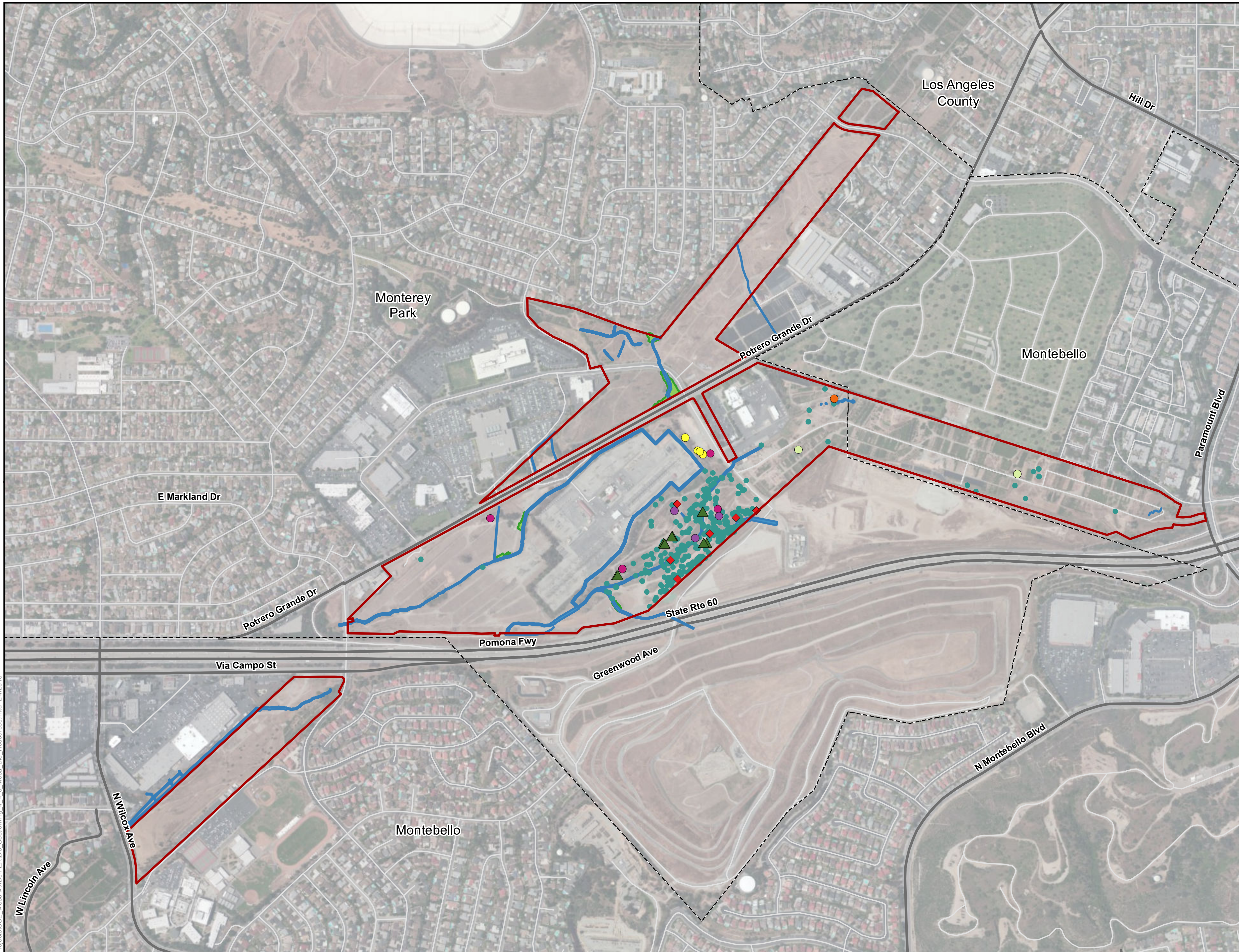
Southern tarplant (*Centromadia parryi* ssp. *australis*) is a CNPS 1B.1 species that occurs on the margins of marshes and swamps, seasonally moist valley and foothill grasslands, coastal scrub, and vernal pools at elevations less than 656 feet. It is an annual herb in the sunflower family (Asteraceae) that is endemic to Los Angeles, Orange, Santa Barbara, San Diego, and Ventura counties, and Baja California. This species blooms from May to November. Southern tarplant populations have been significantly reduced by habitat fragmentation due to development, grazing, and foot traffic. Three CNDDB occurrences of this species are documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines; and two records are presumed extant. Both extant records are located within 0.5 mile of Mesa substation, within the Rio Hondo corridor. One CNDDB occurrence of this species is documented within 5 miles of the temporary 220 kV line loop-in at Goodrich Substation. However, this occurrence has not been documented since 1931 and is presumed extirpated. Suitable habitat for this species occurs in the Proposed Project area in the Rio Hondo Corridor.

Plummer's Mariposa-Lily

Plummer's mariposa-lily is a CNPS CRPR 4.2 species that occurs on seasonally moist ground, in granitic or rocky substrate in chaparral, cismontane woodland, coastal scrub, lower montane forest, and valley and foothill grassland habitats at elevations between 330 and 5,600 feet. It is an uncommon bulbiferous herb in the lily family (Liliaceae) that is endemic to California and only occurs in Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. This species blooms from June to July. Plummer's mariposa-lily populations have been significantly reduced by development, and continue to decline. Four CNDDB occurrences of this species are documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines; and all four records are presumed extant. Eight CNDDB occurrences of this species are documented within 5 miles of the temporary 220 kV line loop-in at Goodrich Substation, and seven of these occurrences are presumed extant; one is possibly extirpated. Suitable habitat for this species occurs in the Proposed Project site south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor.

Figure 4.4-3:
Mesa Substation Study Area
Biological Resources Observation Map

Mesa 500 kV Substation Project



Mesa Substation Study Area
City Boundary
Hydrologic Feature
Disturbed Riparian Woodland

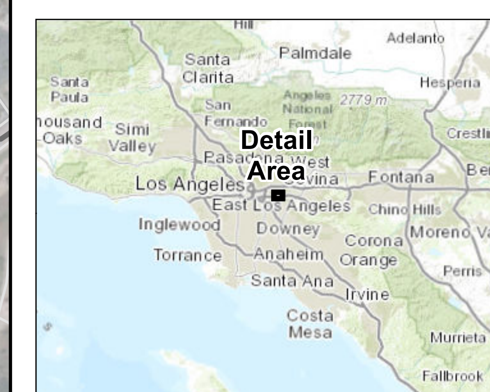
Special-Status Species Observations*

- California Gnatcatcher *(Polioptila californica)*
- Least Bell's Vireo *(Vireo bellii pusillus)*
- Loggerhead Shrike *(Lanius ludovicianus)*
- Peregrine Falcon *(Falco peregrinus)*
- Swainson's Hawk *(Buteo swainsoni)*
- Yellow Warbler *(Dendroica petechia)*
- California black walnut *(Juglans californica)*

Special-Status Species Nest Location*

- Coastal California Gnatcatcher *(Polioptila californica)*

* Special-status species were observed during surveys conducted for the Tehachapi Renewable Transmission Project. Surveys included protocol surveys and construction monitoring surveys during 2010, 2011, 2013, and 2014



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Intermediate Mariposa-Lily

Intermediate mariposa-lily is a CNPS List 1B.2 herbaceous bulbiferous perennial in the lily family (Liliaceae). It occurs in rocky and calcareous substrate in chaparral, coastal scrub, and valley and foothill grassland habitat at elevations from 350 to 2,800 feet and blooms from May to July. Four CNDDB occurrences of this species are documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines, and all four occurrences are presumed extant. Suitable habitat for this species occurs in the Proposed Project area south of Mesa Substation, in the Montebello Hills area, and in the San Gabriel River corridor. No CNDDB occurrences of this species are documented within 5 miles of the 220 kV line loop-in at Goodrich Substation.

Special-Status Wildlife Species

Special-status wildlife species include those species listed by the USFWS or CDFW as endangered, threatened, or proposed for listing, and those listed by the CDFW as Fully Protected or SSC. Potential special-status wildlife species are listed in Table 4.4-3: Special-Status Wildlife Species with the Potential to Occur Within the Proposed Project Area. Species observations within the Mesa Substation site are depicted in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. Species observations within the Mesa Substation site and associated transmission, subtransmission, distribution, and telecommunications lines are depicted in Figure 5: Biological Resources Observations Map in the BRTR included in Appendix F: Biological Resources Reports. CNDDB wildlife occurrences within the Mesa Substation site are provided in Figure 4.4-4: Mesa Substation Study Area CNDDB Wildlife Occurrences Map. CNDDB wildlife occurrences within the Mesa Substation site and associated transmission, subtransmission, distribution, and telecommunications lines are depicted in Figure 6: Mesa Substation CNDDB Wildlife Occurrences Map in the BRTR included in Appendix F: Biological Resources Reports.

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Table 4.4-3: Special-Status Wildlife Species with the Potential to Occur Within the Proposed Project Area

Species Name	Listing Status[10]	Life History	Known Locations	Potential to Occur
Amphibians				
Western spadefoot (*Spea hammondii*)	SSC	This species prefers areas of open vegetation and short grasses with sandy or gravelly soils. The western spadefoot frequents washes, floodplains of rivers, and alkali flats, but can range into foothills and mountains. Throughout most of the year, this species resides in underground burrows. Breeding occurs in shallow, temporary pools formed by heavy winter rains.	One CNDDB occurrence of this species is documented within 5 miles of the Mesa Substation site. This record is presumed extant. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	Suitable habitat for this species occurs along the floodplains of the Rio Hondo and San Gabriel River corridors within the Proposed Project area. Suitable habitat also exists in the Montebello Hills within the Proposed Project area. **Moderate Potential**
Reptiles				
Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*)	SSC	This species inhabits washes, streams, and sandy areas with rocks, patches of brush, and dry, often rocky hillsides. These lizards can also be found along ridges and valleys that support coastal sage scrub, open chaparral, dry washes, and sparse grasslands mixed with sage scrub species.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences are documented within 5 miles of the Goodrich Substation site.	This species was observed in the Montebello Hills area within the Proposed Project area during a December 2014 habitat assessment survey. **Present**
Blainville's horned lizard (*Phrynosoma blainvillii*)	SSC	Blainville's horned lizard is found in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast. It occurs in valley-foothill hardwood, conifer woodland, riparian woodland, pine-cypress woodland, juniper woodland, and annual grassland habitats. This species inhabits open country, especially sandy areas, washes, floodplains, and wind-blown deposits. It typically forages on the ground in open areas, usually between shrubs. It is typically found at elevations up to approximately 6,000 feet.	Three CNDDB records of this species are documented within 1 mile of the Mesa Substation site; however, these records are possibly extirpated. Two CNDDB occurrences are documented within 5 miles of the Proposed Project area and both records are presumed extant. Four CNDDB occurrences have been documented within 5 miles of the Goodrich Substation site. All four occurrences are presumed extant.	Suitable habitat for this species occurs in the Proposed Project area, but is fragmented and limited. Records listing this species as extant within the Proposed Project area are over 30 years old or include specimens housed in a museum with no data collection information. Much of the habitat located along the San Gabriel River corridor has since been lost to channelization. **Low Potential**

[10] Explanation of federal and State listing codes:

Federal listing codes:

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

California listing codes:

-CE: State-listed as Endangered
-CT: State-listed as Threatened
-FP: Fully protected species
-SSC: Species of Special Concern

Species Name	Listing Status[10]	Life History	Known Locations	Potential to Occur
Western pond turtle (*Emys marmorata*)	SSC	This species is found throughout California west of the Sierra-Cascade crest. It is absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. It occurs in aquatic habitat with permanent or nearly permanent water in a wide variety of habitat types. Western pond turtle requires basking sites within aquatic habitat, such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. This species is typically found at elevations below 4,700 feet.	Two CNDDB occurrences of this species are documented within 0.25 mile, one of which is presumed extirpated and one of which is presumed extant. Two CNDDB records are documented within 5 miles of the Mesa Substation site; however, both records are possibly extirpated. No CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site.	The Proposed Project area contains suitable aquatic and nesting habitat for this species along the San Gabriel River corridor, which has direct connectivity to known CNDDB locations. Habitat also exists along the Rio Hondo corridor. Some CNDDB occurrences may have been extirpated due to loss of aquatic habitat in other locations. **Moderate Potential**
Birds				
American peregrine falcon (*Falco peregrinus anatum*)	FP	This species is a year-round resident in California and is found in a variety of habitats. This species nests on vertical structures, such as niches in cliffs, steep banks, and ledges in close proximity to water. This species prefers to nest on coastal cliffs and bluffs; however, American peregrine falcon is also found nesting in urban areas on tall buildings and bridges. This species generally occurs in areas where an abundant food source is present, such as seabird colonies, waterfowl concentrations, or urban pigeons. This species typically forages in open habitats. Transient and wintering birds occur most frequently at lower elevations, but they have occurred from sea level to over 8,000 feet. Breeding generally occurs in mountainous and coastal areas, and egg-laying generally occurs from February to March.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. One CNDDB occurrence of this species is documented within 5 miles of the Goodrich Substation site. This record is presumed extant.	Because tall vertical structures and open water habitats are limited near the Proposed Project area, only marginal nesting habitat for American peregrine falcon occurs. However, this species was observed on the Mesa Substation site and east of the Rio Hondo corridor during surveys conducted for the TRTP. No nest was associated with this observation and these observations; this species was likely foraging in or flying through the Proposed Project area. **Nesting: Low Potential** **Foraging: Present**
Coastal California gnatcatcher (*Polioptila californica californica*)	FT SSC	Coastal California gnatcatcher is an obligate, permanent resident of coastal sage scrub vegetation. It makes limited use of adjacent habitats outside of the breeding season. The species typically occurs in areas dominated by California sagebrush and California buckwheat. Other shrubs in the coastal sage scrub vegetation communities occupied by coastal California gnatcatcher include brittlebush (*Encelia californica*), deerweed (*Acmispon glaber*), black sage (*Salvia mellifera*), and white sage (*Salvia apiana*). The species is restricted to elevations from sea level to approximately 2,000 feet. Coastal California gnatcatcher breeds from February to late August, but most of the breeding occurs between mid-March and mid-May.	Two CNDDB occurrences of this species are documented within 0.25 mile of the Mesa Substation site, and three CNDDB occurrences are documented within 5 miles of the Mesa Substation site. All five records are presumed extant. One CNDDB occurrence is documented within 5 miles of the Goodrich Substation site; however, this occurrence was recorded in 1928 and is extirpated.	Critical habitat for this species occurs in the Montebello Hills and San Gabriel River corridor within the Proposed Project area. Coastal California gnatcatchers were observed foraging and nesting within marginal habitat at the Mesa Substation site during the TRTP 2010 and 2011 focused coastal California gnatcatcher surveys. In addition, this species was observed foraging at multiple locations in the Montebello Hills, the Rio Hondo corridor, and the San Gabriel River corridor. **Nesting: Present** **Foraging: Present**

Species Name	Listing Status[10]	Life History	Known Locations	Potential to Occur
Least Bell's vireo (*Vireo bellii pusillus*)	FE CE	Least Bell's vireo is a rare and local summer visitor from mid-March to the end of August, and ranges from sea level in coastal areas to approximately 1,500 feet in the interior areas. Least Bell's vireo breeds locally in willow riparian thickets with good overstory and understory vegetation, preferably where flowing water is present. This species typically inhabits structurally diverse woodlands along watercourses, including oak woodlands, mulefat scrub, and cottonwood-willow forests. During the breeding season, this species may forage in adjacent upland habitats. Little is known about this species' winter habitat, but it is not exclusively dependent on riparian woodland during winter. In winter, least Bell's vireos primarily occur in mesquite scrub vegetation in arroyos, but some also use palm groves and hedgerows associated with agricultural fields and rural residential areas. Breeding typically occurs from late March to late September.	One CNDDB occurrence of this species is documented within 0.25 mile of the Mesa Substation site. This record is presumed extant. Five CNDDB occurrences are documented within 5 miles of the Mesa Substation site, three of which are possibly extirpated and two of which are presumed extant. Observations of this species, including one pair, were recorded by Whittier Narrows Nature Center staff at three locations within the Whittier Narrows Natural Area between April and July 2014. Three CNDDB occurrences are documented within 5 miles of the Goodrich Substation site. However, two occurrences were recorded in 1923 and 1895 and are possibly extirpated. The third was recorded in 1924 and is presumed extant.	Suitable habitat for least Bell's vireo nesting and foraging occurs in the Montebello Hills, and along the San Gabriel River corridor within the Proposed Project area, where this species is known to occur. This species was observed nesting and foraging in the Mesa Substation site, the Montebello Hills, the Rio Hondo corridor and the San Gabriel River corridor during surveys conducted for the TRTP. **Nesting: Present** **Foraging: Present**
Loggerhead shrike (*Lanius ludovicianus*)	SSC	Loggerhead shrike is present year-round throughout California. This species typically breeds in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. They require tall shrubs, trees, fences, or powerlines for hunting perches, nest placement, territorial advertisement, and pair maintenance. They also require open areas of short grasses, forbs, or bare ground for hunting. Impaling sites—such as sharp, thorny plants, or barbed wire fences—are important for this species to manipulate or store prey. Breeding in Southern California typically occurs from as early as January to July.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences are documented within 5 miles of the Goodrich Substation site.	Suitable habitat for this species occurs in the Montebello Hills and the San Gabriel River corridor within the Proposed Project area. Breeding pairs have declined extensively within Los Angeles County and are now rare. This species was observed within the Mesa Substation site during surveys conducted for the TRTP. No nest was associated with this species observation; therefore, this species was likely foraging in or flying through the Proposed Project area. **Nesting: Low Potential** **Foraging: Present**

Species Name	Listing Status[10]	Life History	Known Locations	Potential to Occur
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE CE	Southwestern willow flycatcher winters in Mexico, Central America, and northern South America. It usually breeds in patchy to dense riparian habitats along streams or other wetlands, near or adjacent to surface water or underlain by saturated soil. Common tree and shrub species comprising nesting habitat includes willows, mulefat, box elder (*Acer negundo*), stinging nettle (*Urtica* spp.), blackberry (*Rubus* spp.), cottonwood (*Populus* spp.), arroweed (*Tessaria sericea*), tamarisk (*Tamarix ramosissima*), and Russian olive (*Eleagnus angustifolia*). Breeding sites for this species usually consist of dense vegetation with small openings, open water, or shorter/sparser vegetation, creating a mosaic that is not uniformly dense. In almost all cases, slow-moving or still surface water and/or saturated soil is present at or near the breeding sites during wet years. This species has been found at elevations from sea level to over 8,500 feet, but is primarily found in lower-elevation riparian habitats. This species breeds from mid-May to late August.	There are two CNDDB occurrences of this species within 5 miles of the Mesa Substation site. Both records are presumed extant. One of these occurrences is also documented within 0.25 mile of the Goodrich Substation site.	Suitable breeding or foraging habitat for this species occurs in the Proposed Project area; however, the occurrences near these areas were recorded in 1894 and 1906 when more riparian habitat would have been present. **Low Potential**
Swainson's hawk (*Buteo swainsoni*)	CT	Swainson's hawk breeds in the western U.S. and Canada and winters in South America. This species breeds in trees within mature riparian forests, oak groves, and in mature roadside trees in close proximity to large, open expanses of suitable foraging habitat. Over 85 percent of documented Swainson's hawk nests trees are often found in riparian systems; therefore, this habitat type is likely very important. Suitable foraging habitat includes native grassland or lightly grazed dryland pasture, alfalfa and other hay crops, and row crops. Swainson's hawk does not forage in vineyards, orchards, or cotton fields because prey is not available in these areas during most of the breeding season.	There is one CNDDB occurrence of this species documented within 5 miles of the Mesa Substation site; however, this occurrence was recorded in 1880 and is possibly extirpated. This occurrence is also documented within 5 miles of the Goodrich Substation site.	Marginal habitat for nesting Swainson's hawk occurs in the Proposed Project area primarily within non-native woodland; however, nesting populations in the Los Angeles Basin are now considered extremely rare. This species was observed within the Mesa Substation site during surveys conducted for the TRTP. No nest was associated with this species observation; this species was likely foraging in or flying through the Proposed Project area during migration. **Nesting: No Potential** **Foraging: Present**
Western burrowing owl (*Athene cunicularia*)	SSC	Western burrowing owl lives in dry, open areas with no trees and short grass. The species is found in golf courses, cemeteries, airports, vacant lots, university campuses, pastures, and prairie dog (*Cynomys* spp.) towns. It nests in burrows that are often dug by a small mammal, especially the California ground squirrel (*Spermophilus beecheyi*). Western burrowing owl is generally found at elevations from approximately 200 to 5,000 feet. This species breeds from March to August.	There are two CNDDB occurrences of this species within 5 miles of the Mesa Substation site. Both records are presumed extant. One CNDDB occurrence is documented within 5 miles of the Goodrich Substation site. This occurrence was recorded in 1895 and is presumed extant.	Suitable habitat for this species occurs in grassland vegetation where burrows are present within the Proposed Project area. No western burrowing owls or western burrowing owl sign (i.e., feathers, pellets, or whitewash) were observed during the 2009 and 2010 focused burrowing owl surveys conducted for the TRTP, or during the 2014 habitat assessment surveys. **Moderate Potential**

Species Name	Listing Status[10]	Life History	Known Locations	Potential to Occur
Yellow warbler (*Setophaga petechia*)	SSC	Yellow warbler occurs as a migrant and summer resident in California. This species generally occupies riparian vegetation in close proximity to water along streams and wet meadows. They are often associated with willow and cottonwood trees in riparian areas. Breeding generally occurs from April to late July.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences are documented within 5 miles of the Goodrich Substation site.	Suitable nesting habitat for yellow warbler occurs in the Rio Hondo and San Gabriel River corridors within the Proposed Project area; however, the habitat is fragmented. This species was observed within the Mesa Substation site, in the Montebello Hills, and in Rio Hondo and San Gabriel River corridors during surveys conducted for the TRTP. No nest was associated with these observations. **Nesting: Low Potential** **Foraging: Present**
Mammals				
American badger (*Taxidea taxus*)	SSC	American badger occurs primarily in grasslands, parklands, farms, and other treeless areas with friable soil and a supply of rodent prey. The species is also found in forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows. It is sometimes found at elevations up to 12,000 feet, but is usually found in the Sonoran and Transition life zones (elevations lower and warmer than those characterized by coniferous forests). American badgers are occasionally found in open chaparral (with less than 50-percent plant cover) and riparian zones. American badgers create burrows for sleeping and concealment, protection from weather, and natal dens. Burrows typically range from 4 feet to 10 feet in depth and 4 feet to 6 feet in width. Breeding generally occurs between December and February, and cubs are born between March and April.	There is one CNDDB occurrence of this species within 5 miles of the Mesa Substation site. This record is presumed extant. No CNDDB occurrences are documented within 5 miles of the Goodrich Substation site.	Suitable habitat for American badger occurs within the Proposed Project area; however, no burrows or dens of suitable size for American badger were observed during field surveys conducted by Insignia in June 2014 or December 2014. **Low Potential**
Pallid bat (*Antrozous pallidus*)	SSC	Pallid bat inhabits deserts, grasslands, shrublands, woodlands, and forests. It is generally found in the Sonoran life zone, at elevations from 100 to 7,000 feet. It is most commonly found in open, dry habitats with rocky areas for roosting. The species roosts in rocky outcrops, snags, and abandoned man-made structures. Pallid bat mating may occur as early as October and continues through February.	There are two CNDDB occurrences of this species within 5 miles of the Mesa Substation site. Both occurrences were recorded before 1932 and are presumed extant. These two occurrences, along with three other CNDDB occurrences of this species, are also documented within 5 miles of the Goodrich Substation site. All five occurrences were recorded before 1932.	Marginally suitable habitat for foraging pallid bats and man-made structures for roosting pallid bats are present within the Proposed Project area. **Low Potential**

Species Name	Listing Status[10]	Life History	Known Locations	Potential to Occur
San Diego black-tailed jackrabbit (*Lepus Californicus bennettii)*	SSC	San Diego black-tailed jackrabbit generally occurs in open areas or semi-open country with scattered low shrubs. It typically occurs in grasslands, agricultural fields, or sparse coastal sage scrub, at elevations ranging from sea level to 6,000 feet. It is generally not found in chaparral or woodland habitats. The length of the breeding season depends on the duration and severity of winter. In California, this species can breed throughout the year.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences are documented within 5 miles of the Goodrich Substation site.	The Proposed Project area falls within the range of this species. Suitable habitat for this species occurs throughout the natural areas of the Proposed Project area. **Low Potential**
Southern grasshopper mouse (*Onychomys torridus ramona*)	SSC	Southern grasshopper mouse occurs in desert areas, especially in scrub habitats with friable soils for digging. This species' preferred habitat consists of alkali desert scrub and desert scrub habitat; however, it can also be found in succulent shrub, wash, riparian, coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitat. This species is uncommon in valley foothill and montane riparian habitats. The peak breeding season for this species is from May to July, but it may start breeding as early as January under ideal conditions.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. One CNDDB occurrence is documented within 5 miles of the Goodrich Substation site. This occurrence was recorded in 1904 and is presumed extant.	Suitable habitat for this species occurs in the Proposed Project area. **Moderate Potential**
Western mastiff bat (*Eumops perotis californicus*)	SSC	Western mastiff bat inhabits arid and semi-arid lowlands in the Lower Sonoran life zone of California at elevations from 100 to 4,000 feet. This species occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodland, coastal scrub, annual and perennial grassland, palm oases, chaparral, desert scrub, and urban habitats. The species primarily roosts in crevices in vertical cliffs—usually granite or consolidated sandstone—and in broken terrain with exposed rock faces. It is also found occasionally in high buildings, trees, and tunnels. Western mastiff bat roost sites may change from season to season. Due to its large size, it needs vertical faces to drop from in order to take flight. Western mastiff bat nursery roosts can be found in tight rock crevices. Breeding likely occurs from April through September.	One CNDDB occurrence of this species is documented within 5 miles of the Mesa Substation site. This record is presumed extant. Four CNDDB occurrences of this species are documented within 5 miles of the Goodrich Substation site. All four occurrences were recorded before 1958 and are presumed extant.	Marginally suitable habitat for western mastiff bat occurs within palms and buildings in the Proposed Project area. **Low Potential**
Western yellow bat (*Lasiurus xanthinus*)	SSC	Western yellow bat occur in palm oases, but may also use ornamental palms in landscaping. In California, this species appears to roost exclusively in skirts of palm trees and is limited in its distribution by the availability of palm habitat. Yellow bats likely do not hibernate, as activity has been observed year-round. Breeding likely occurs from late April through July.	No CNDDB occurrences are documented within 5 miles of the Mesa Substation site. No CNDDB occurrences are documented within 5 miles of the Goodrich Substation site.	Marginally suitable habitat for western yellow bat occurs within ornamental palms in the Proposed Project area. **Low Potential**

Sources: CNDDB (2014), CDFW (2011), USFWS (2014)

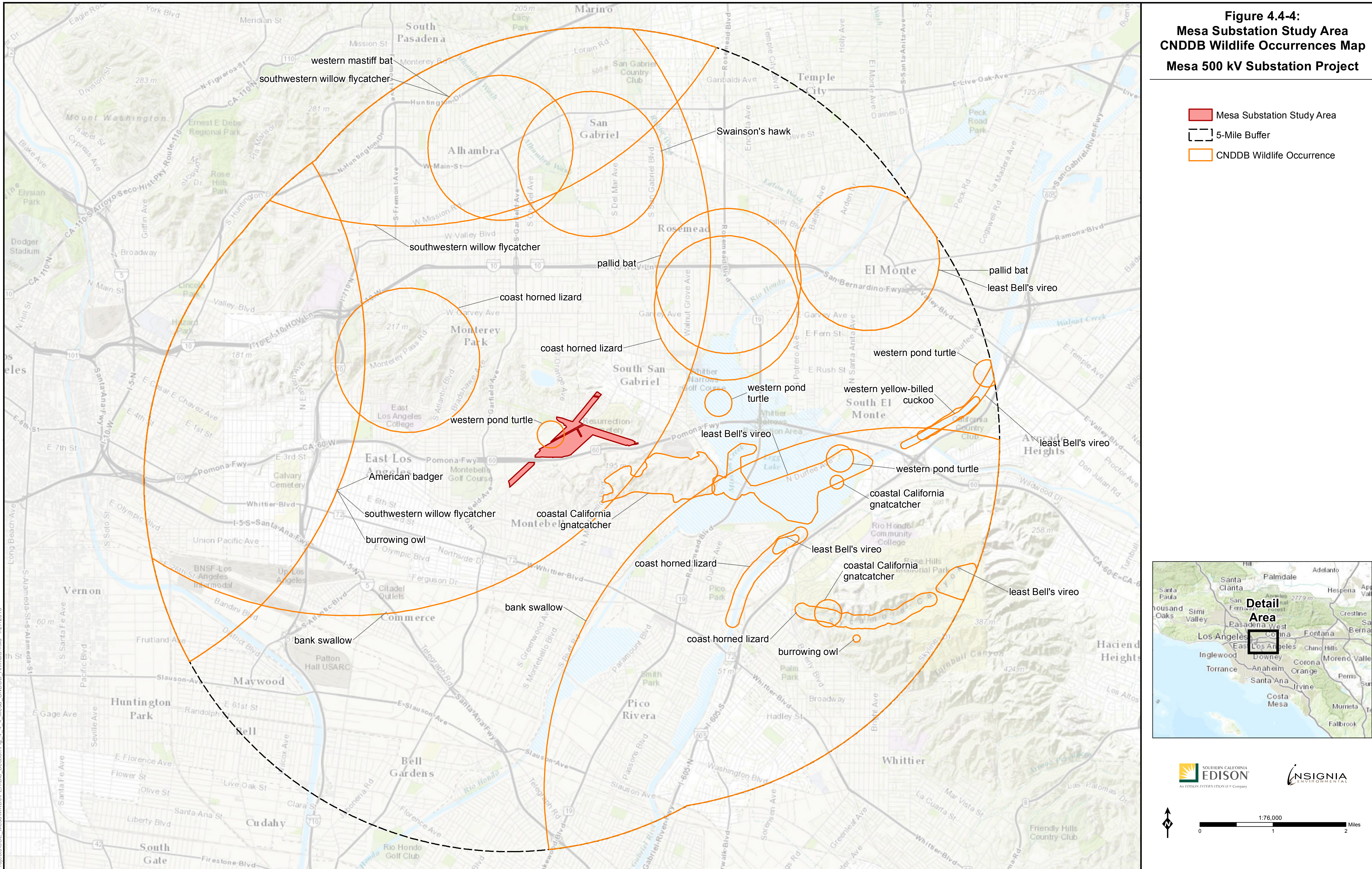

Figure 4.4-4: Mesa Substation Study Area CNDDB Wildlife Occurrences Map

Mesa 500 kV Substation Project

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A total of 18 special-status wildlife species were originally identified on the target survey list as having potential to occur within the Proposed Project area. Of the 18 sensitive wildlife species, one species occurs in specialized habitat (e.g., aquatic environments above a 1,000-foot elevation) that does not occur within the Proposed Project area. Two species have undergone drastic declines and are extirpated in much of Southern California. Thus, these three wildlife species are not expected to occur in the Proposed Project area. CNDDB occurrences for the 15 remaining special-status wildlife species were identified within 5 miles of the Proposed Project area. Three additional special-status wildlife species—Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and western yellow bat (*Lasiurus xanthinus*) are included in Table 4.4-3: Special-Status Wildlife Species with the Potential to Occur Within the Proposed Project Area due to the presence of suitable habitat or the fact that they were observed in the Proposed Project area during surveys. Of the 21 special-status wildlife species included in Table 4.4-3: Special-Status Wildlife Species with the Potential to Occur Within the Proposed Project Area, the following determinations were made:

- Seven species—Belding's orange-throated whiptail, American peregrine falcon (*Falco peregrinus anatum*), coastal California gnatcatcher, least Bell's vireo (*Vireo bellii pusillus*), loggerhead shrike (*Lanius ludovicianus*), Swainson's hawk (*Buteo swainsoni*), and yellow warbler (*Setophaga petechia*)—were present

- Four species—western spadefoot (*Spea hammondii*), western pond turtle (*Emys marmorata*), western burrowing owl (*Athene cunicularia*), and southern grasshopper mouse (*Onychomys torridus ramona*)—were determined to have a moderate potential to occur

- Seven species—coast horned lizard (*Phrynosoma blainvillii*), southwestern willow flycatcher (*Empidonax traillii extimus*), American badger (*Taxidea taxus*), pallid bat (*Antrozous pallidus*), San Diego black-tailed jackrabbit, western mastiff bat (*Eumops perotis californicus*), and western yellow bat—were determined to have a low potential to occur

- Three species—southern mountain yellow-legged frog (*Rana muscosa*), bank swallow (*Riparia riparia*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)—were determined to have no potential to occur

Descriptions of the four special-status species with moderate potential to occur, the seven species with low potential to occur, and the seven species that were present within the Proposed Project site are detailed in Table 4.4-3: Special-Status Wildlife Species with the Potential to Occur Within the Proposed Project Area. A detailed discussion regarding local populations, habitat requirements, and life history is provided in the following subsections for the wildlife species that are present or have a moderate potential to occur in the Proposed Project area.

Species Present in the Proposed Project Area

Belding's Orange-Throated Whiptail

Belding's orange-throated whiptail is a State SSC and frequents dry, often rocky hillsides, ridges and valleys that support coastal sage scrub, open chaparral, dry washes, and sparse grasslands mixed with sage scrub species. It is found an elevation range that extends from near sea level to approximately 3,430 feet. Breeding usually takes place in May, although it has occasionally been observed in July. This species was observed in the Montebello Hills section along North Lincoln Avenue during Insignia's December 2014 survey, as depicted in Figure 5: Biological Resources Observations Map in the BRTR, which is included in Appendix F: Biological Resources Reports. This species was observed basking near a shrub along the roadside, when the weather was clear and sunny. No CNDDB occurrences were recorded within 5 miles of the Proposed Project area.

American Peregrine Falcon

The American peregrine falcon is a California Fully Protected species. This species is found on all continents but Antarctica. Historically, the American peregrine falcon occurred throughout most of California. Brought to near-extinction by the widespread use of the pesticide dichlorodiphenyltrichloroethane (DDT), the peregrine falcon was listed as endangered under the FESA. This species has slowly been recovering in California and elsewhere due to legislation that banned the use of DDT in the U.S. By 1990, the population in California had increased to over 100 breeding pairs. In 1999, the American peregrine falcon was delisted from the FESA. The American peregrine falcon has since reoccupied much of its historic breeding range in California, which now includes the central and southern California coast, inland northern Coast Ranges, Klamath Mountains, Cascade Ranges, and the Sierra Nevada. Its migration and winter range includes the West Coast from the Oregon border to the Mexican border and into the adjacent mountains.

American peregrine falcon is adapted to open habitat in all seasons. This species shows a preference for breeding and nesting in sites such as niches in cliffs, steep banks, and ledges. Nest sites usually provide a panoramic view of open country, are near water, and are associated with local abundance of passerine, waterfowl, shorebird, or seabird prey. Coastal cliffs and bluffs are favored nesting sites in California. This species is also found in urban areas and uses tall buildings, bridges, and other structures for resting and breeding sites and has been known to nest at elevations as high as 10,000 feet, but most occupied nest sites are below 4,000 feet. The breeding season for this species occurs from February through June. The American peregrine falcon was observed at four locations within developed/disturbed habitat and ruderal habitat on the Mesa Substation site during surveys conducted for the TRTP, as shown in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. In addition, this species was observed along Durfee Avenue, just east of the Rio Hondo corridor. No nest was associated with these species observations and only limited nesting habitat is present within the Proposed Project area, primarily in the form of buildings or other man-made structures. Therefore, this species was likely foraging in or flying through the Proposed Project area. One CNDDB occurrence has been documented within 5 miles of the Goodrich Substation site.

Coastal California Gnatcatcher

The coastal California gnatcatcher is a federally threatened species and a State SSC. This species is a non-migratory songbird. In the U.S., coastal California gnatcatcher is found west of the Peninsular and Transverse Ranges in coastal Southern California. This species is primarily found at elevations below 800 feet along the coast and up to 1,600 feet inland. The largest populations of this species are located in San Diego, Orange, and Riverside counties, with smaller populations located in Los Angeles County, southwestern San Bernardino County, and southern Ventura County. As of 1990, the coastal California gnatcatcher population in California was estimated at 2,000 or fewer pairs. The coastal California gnatcatcher occurs in the coastal sage scrub vegetation communities of Southern California, especially in locations dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Other shrubs in coastal sage scrub vegetation communities occupied by coastal California gnatcatcher include California bush sunflower (*Encelia californica*), brittlebush (*Encelia californica*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and deerweed (*Acmispon glaber*).

The breeding season for coastal California gnatcatcher extends from approximately February through August, with peak nesting activity occurring from mid-March through mid-May. Incubation takes 14 days. The young fledge at eight to 13 days of age and are dependent on their parents for up to three or four weeks; however, fledglings may associate with their parents for several months (USFWS 1997). Foraging by coastal California gnatcatcher primarily consists of gleaning sessile prey from foliage while quickly moving through branches of shrubs. Larger prey items are beaten against a branch before being swallowed whole or fed to juveniles (Atwood and Bontrager 2001).

Critical habitat for coastal California gnatcatcher occurs within the Proposed Project area, along a 1.1 mile length of the proposed telecommunications line route that traverses the Montebello Hills and the Rio Hondo and San Gabriel River corridors, as depicted in Figure 8: Mesa Substation Critical Habitat and Significant Ecological Areas Map in the BRTR, included in Appendix F: Biological Resources Reports. Two CNDDB occurrences have been documented within 0.25 mile of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines; and one CNDDB occurrence has been documented within 5 miles of the 220 kV line loop-in at Goodrich Substation.

During the 2010 and 2011 focused coastal California gnatcatcher surveys conducted for the TRTP, this species was observed foraging and nesting within the Mesa Substation site, as shown in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. At this location, coastal California gnatcatcher was observed in ruderal vegetation that would be considered marginal for this species, and in a small patch of coastal sage scrub on the southeastern margin of the Mesa Substation site.. Coastal California gnatcatcher was also observed foraging in and east of the Montebello Hills, and in the Rio Hondo and San Gabriel River corridors, specifically in coastal sage scrub, mulefat scrub, ruderal, non-native woodland,

and southern sycamore-alder riparian woodland.[11] Figure 5: Biological Resources Observations Map in the BRTR, which is included in Appendix F: Biological Resources Reports, depicts observations of coastal California gnatcatchers at these locations.

In October and December 2014, Rocks Biological Consulting (RBC) biologists with a 10(A)(1)(a) permit for coastal California gnatcatchers conducted a habitat assessment for coastal California gnatcatcher for the entire Proposed Project area. Suitable coastal California gnatcatcher habitat contained the following constituent elements:

- Coastal sage scrub with greater than 50-percent cover, consisting of species such as California sagebrush and/or California buckwheat

- Areas consisting of a matrix of sparse, scattered coastal sage scrub shrubs and annual/biennial vegetation with sufficient morphological structure and density to support coastal California gnatcatcher nesting and provide foraging opportunities

RBC biologists mapped suitable nesting and foraging habitat within the Proposed Project area. A complete report documenting RBC's findings is provided in the Coastal California Gnatcatcher Habitat Assessment included in Appendix F: Biological Resources Reports.

Least Bell's Vireo

Least Bell's vireo is a federally and State endangered migratory songbird species. The current breeding distribution for this species is restricted to Monterey, San Benito, and Inyo counties, as well as numerous small populations south of the Tehachapi Mountains in California and portions of northern Baja California in Mexico. Least Bell's vireo is an obligate riparian species during the breeding season and prefers early successional habitat. This species typically inhabits structurally diverse woodlands along watercourses, including cottonwood and willow forests, oak woodlands, and mulefat scrub. The presence of dense cover within 3 to 6 feet of the ground is where nests are typically placed, and a dense, stratified canopy for foraging also appears to be an important factor for least Bell's vireo breeding. Least Bell's vireo nest placement tends to occur in openings within the riparian woodland and along the riparian edge. Nests are placed in a variety of plant species, including willows, mulefat, Fremont's cottonwood, California sycamore, coast live oak, and several herbaceous species. Although least Bell's vireos use riparian habitat for nesting, they have been observed foraging within adjacent upland habitats up to 200 feet away. This species typically breeds from late March to late September.

This species was observed at multiple locations within the Proposed Project area. Two least Bell's vireo nests were identified within the Rio Hondo corridor during surveys conducted for the TRTP, as shown in Figure 5: Biological Resources Observations Map in the BRTR, which is included in Appendix F: Biological Resources Reports. In addition, this species was observed foraging in the Mesa Substation site, the Montebello Hills, and the Rio Hondo corridor and the San Gabriel River corridor. This species has also been documented as nesting in the Whittier

[11] Additional records of coastal California gnatcatcher observations from 2014 were provided to Insignia biologists by Whittier Narrows Nature Center staff.

Narrows Natural Area in the San Gabriel River corridor.[12] Six CNDDB occurrences have been documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines. One CNDDB occurrence is documented within 5 miles of Goodrich Substation.

Loggerhead Shrike

The loggerhead shrike is a State SSC that is present year-round throughout most of the California range. Loggerhead shrike breeds mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. This species requires tall shrubs or trees, as well as fences or power lines, for hunting perches, territorial advertisement, and pair maintenance. Loggerhead shrike requires open areas of short grasses, forbs, or bare ground for hunting. Nests are placed in large shrubs or trees. This species also requires impaling sites (e.g., barbed wire fences or sharp, thorny plants) to manipulate or store prey. In Southern California, this species typically breeds from as early as January to July.

This species was observed within the developed/disturbed habitat and ruderal habitat on the Mesa Substation site during surveys conducted for the TRTP, as shown in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. No nest was associated with this species observation; therefore, this species was likely foraging in or flying through the Proposed Project area. Although suitable habitat exists for this species within the Proposed Project area, it has been documented that breeding pairs within Los Angeles County have declined drastically (CDFG 2008). Thus, this habitat likely would only be used for foraging. No CNDDB occurrences have been documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines; or within 5 miles of the 220 kV line loop-in at Goodrich Substation.

Swainson's Hawk

Swainson's hawk is a State-listed threatened, large, broad-winged buteo that frequents open country. It occurs in California during the breeding season from March through September. Swainson's hawk winters in South America and Mexico. This species primarily consumes insects and small rodents while foraging in large, open plains, fields, pastures, and grasslands. Hay, grain, and most row crops also provide suitable foraging habitat during at least part of the breeding season. Vineyards and orchards are unsuitable because prey is scarce or unavailable due to vegetation density (Estep 1989). Swainson's hawk usually nests in large trees, preferring native species, such as valley oak, Fremont's cottonwood, willow, sycamore (*Platanus* sp.), and walnuts. Most nest sites are found in riparian habitats, but the species may also use mature roadside trees, isolated individual trees in agricultural fields, small groves of oaks, and trees around farmhouses. Nest sites are generally adjacent to or within easy flying distance to suitable foraging habitat.

This species was observed on two separate occasions within developed/disturbed nursery habitat on the Mesa Substation site during surveys conducted for the TRTP, as shown in Figure 4.4-3:

[12] Additional records of least Bell's vireo observations from 2014 were provided to Insignia biologists by Whittier Narrows Nature Center staff.

Mesa Substation Study Area Biological Resources Observation Map. No nests were associated with these species observations. The observations occurred in February and April, when this species is known to migrate. The site is located along a known migration route for Swainson’s hawks; therefore, this species was likely foraging or flying through the Mesa substation site. There is one CNDDB occurrence of this species nesting within 5 miles of the Mesa Substation site; however, this occurrence was recorded in 1880. Marginally suitable habitat for nesting exists in non-native woodland within the Proposed Project area; however, this species has long been considered extirpated from breeding within southern California. The CDFG conducted a statewide inventory project for Swainson’s hawk breeding pairs in 2005 and 2006 (CDFG 2007) and although they include a current breeding range that extends into southern California, they did not detect any pairs south of Madera County. The inventory classifies the southern portion of the range as “sparse,” indicating that some pairs may exist but are too rare to effectively sample. Due to the rarity of breeding Swainson’s hawks in the Los Angeles area and the marginal breeding habitat quality, this species is considered to have no potential to breed within or near the Proposed Project site.

Yellow Warbler

Yellow warbler is a State SSC. This species occurs in California as a migrant and summer resident from late March through early October. This species may be found at elevations up to 9,000 feet. Yellow warbler generally occupies riparian vegetation in close proximity to water along streams and in wet meadows (Lowther et al. 1999). This species is often found in willows and cottonwoods; however, in California, the yellow warbler is also found in numerous other species of riparian shrubs or trees. The yellow warbler is a generalist forager and appears to adapt its foraging to the variation in local vegetation structure (Petit et al. 1990). In California, the yellow warbler will make several nesting attempts throughout the breeding season and will typically produce only one brood per year. This species typically breeds from April to late July.

This species was observed within the non-native woodland habitat on the Mesa Substation site, and ruderal, scrub and woodland habitat in the Montebello Hills and Rio Hondo and San Gabriel River corridors during surveys conducted for the TRTP, as shown in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. No nest was associated with these species observations. No suitable nesting habitat is present in the Mesa Substation site. Suitable nesting habitat is present in the Rio Hondo and San Gabriel River corridors within the Proposed Project area. No CNDDB occurrences for this species have been documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines, or within 5 miles of the 220 kV line loop-in at Goodrich Substation.

Species with a Moderate Potential to Occur in the Proposed Project Area

Western Spadefoot

Western spadefoot is a State SSC and occurs in a variety of vegetation communities, including open grasslands and woodlands in areas of seasonally ponded water. This species prefers open areas with sandy or gravel-laden soils. Vernal pools, rain pools, or ponds that do not contain bullfrogs, fish, or crayfish are essential for breeding and egg-laying. This species spends most of its time underground, but often emerges during the rainy season.

Habitat for this species can be found along the Rio Hondo and San Gabriel River corridors within the Proposed Project area. Open areas of scrub habitat within the Montebello Hills where water may puddle during the rainy season may also provide habitat. One CNDDB occurrence of this species has been documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines. One occurrence has been documented within 5 miles of the 220 kV line loop-in at Goodrich Substation.

Western Pond Turtle

The western pond turtle is a State SSC and usually occurs in areas of calm freshwater environments, but can also occur in brackish and saltwater for short periods of time. It occupies a wide variety of aquatic habitats, including ponds, lakes, rivers, streams, marshes, sloughs, and wetlands. This species digs nests and occupies upland habitats in woodlands and grasslands, usually close to water. Sexual maturity is reached at a minimum of six years old. Approximately five to 13 eggs are typically laid from April through August, up to 0.5 mile from water. Eggs are generally laid once per year, but can be laid twice per year in some instances.

The Proposed Project area contains suitable aquatic and nesting habitat for this species along the San Gabriel River corridor, which has direct connectivity to known CNDDB locations. Habitat also exists along the Rio Hondo corridor. Two CNDDB occurrences of this species have been documented within 0.25 mile of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines, and two CNDDB occurrences have been documented within 5 miles. No CNDDB occurrences were documented within 5 miles of the 220 kV line loop-in at Goodrich Substation.

Western Burrowing Owl

The western burrowing owl is a State SSC and is found in dry, open habitats such as grasslands and prairies with low-growing or no vegetation, where it occupies underground burrows, typically those of the California ground squirrel. It can also occur in open areas of farmland, levee banks, and other disturbed or managed habitats where burrows or burrow-like refuges, such as small-diameter pipes, rock piles with voids, or similar hollow spaces, are present. The species breeds from February 1 through August 30. Young are capable of full flight at six weeks of age and are fed by parents for approximately one year.

Suitable habitat for this species exists within the Proposed Project area in grassland vegetation where burrows are present. Focused burrowing owl surveys were conducted for the TRTP during 2009 and 2010. Although the surveys did not find any burrowing owls or sign of burrowing owls, they were limited to a small portion of the Proposed Project area. Two CNDDB occurrences of this species are documented within 5 miles of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines. One CNDDB occurrence is documented within 5 miles of the 220 kV line loop-in at Goodrich Substation site.

Southern Grasshopper Mouse

The southern grasshopper mouse is a State SSC and inhabits desert areas, especially scrub habitats with friable soils for digging. This species can be found in a variety of habitats, including desert scrub, alkali desert scrub, and succulent shrub, wash, riparian, coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitat. Breeding for this species peaks from May to July, but it may breed as early as January under ideal conditions.

Suitable habitat for this species occurs in the Proposed Project area within the Montebello Hills, and along the Rio Hondo and San Gabriel River corridors. No CNDDB occurrences are documented within 5 miles of Mesa Substation and the associated transmission, distribution, and telecommunications and distribution lines, and one CNDDB occurrence is documented within 5 miles of the 220 kV line loop-in at Goodrich Substation.

4.4.3.4 Wildlife Populations and Movement Patterns

Critical Habitat

Under the FESA, to the extent prudent and determinable, the USFWS is required to designate critical habitat for endangered and threatened species (16 U.S.C. § 1533 [a][3]). Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter. Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. The critical habitat designation delineates all suitable habitat, occupied or not, that is essential to the survival and recovery of the species.

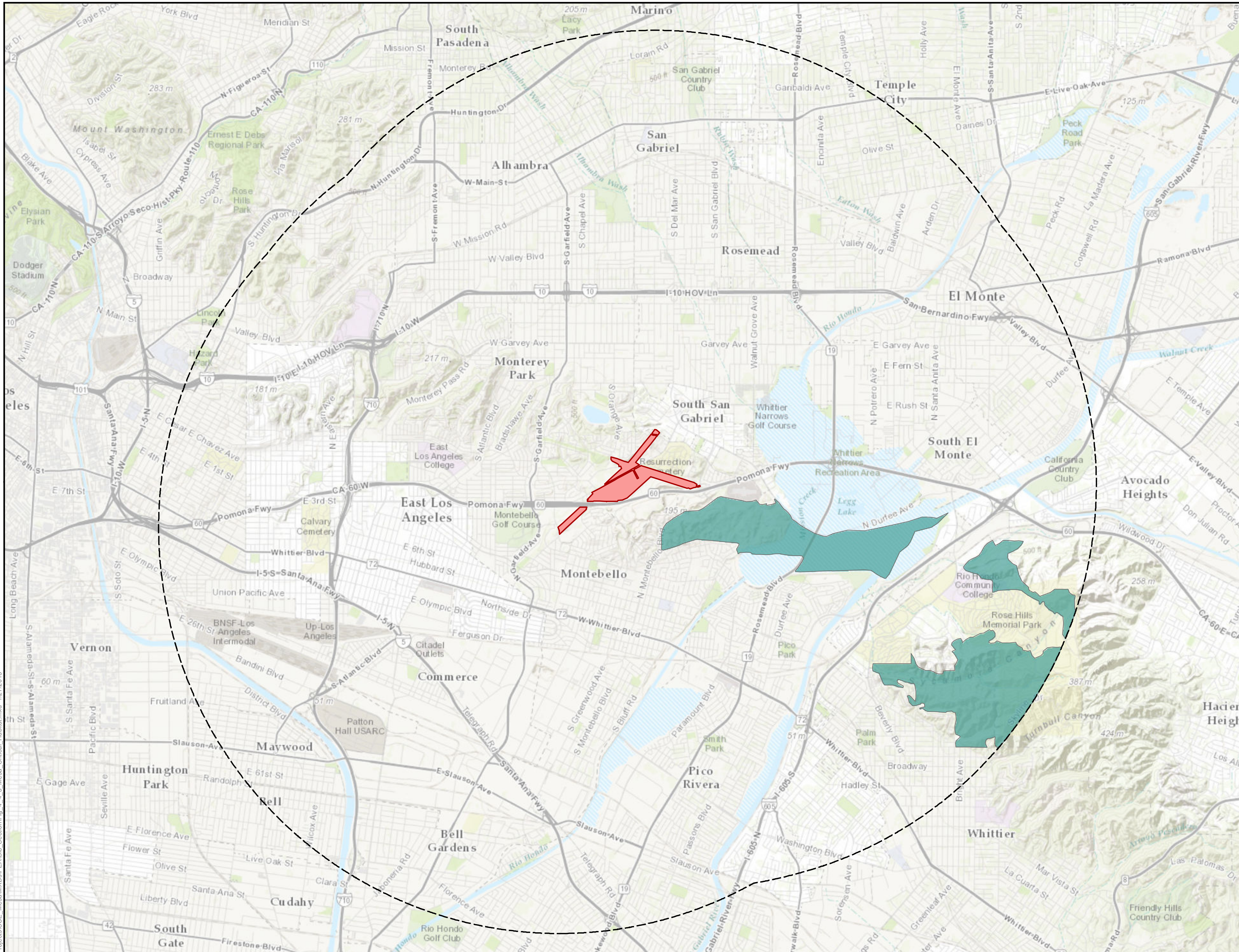
Critical habitat within 5 miles of Mesa Substation is depicted in Figure 4.4-5: Mesa Substation Study Area Critical Habitat Map. Critical habitat within 5 miles of the Proposed Project area is depicted in Figure 9: Mesa Substation Critical Habitat and Significant Ecological Areas Map and Figure 9: Goodrich Substation Critical Habitat Map in the BRTR, which is included in Appendix F: Biological Resources Reports. Critical habitat for coastal California gnatcatcher is present within the Proposed Project area in the Montebello Hills and in the Rio Hondo and San Gabriel River corridors. Critical habitat for Braunton's milk-vetch (*Astragalus brauntonii*) is present within 5 miles of the 220 kV line loop-in at Goodrich Substation.

Wildlife Migration Corridors

Wildlife corridors are defined as areas that connect suitable habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g., canyon drainages, ridgelines, or areas with vegetation cover) provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high-population-density areas; and facilitate gene flow between populations. Wildlife corridors are considered sensitive by resource and conservation agencies.

Figure 4.4-5:
Mesa Substation Study Area
Critical Habitat Map

Mesa 500 kV Substation Project



Mesa Substation Study Area

5-Mile Buffer

Coastal California Gnatcatcher Critical Habitat

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

INSIGNIA ENVIRONMENTAL

1:76,000

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Terrestrial wildlife species tend to travel along natural drainages or stretches of land that simultaneously provide protective cover from predators and a foraging source. The Proposed Project area contains one drainage supporting riparian habitat that could provide cover for migrating wildlife. In addition, designated critical habitat and scrub vegetation communities are located within the Proposed Project area, which have direct connectivity to larger stretches of similar habitat. This could provide local migration corridors for birds, mammals, and reptiles while providing foraging opportunities.

The Proposed Project is located in the Pacific Flyway, a major north-south avian migratory corridor that extends along the West Coast from Alaska to Patagonia and provides suitable foraging habitat for many resident and migratory avian species. The Pacific Flyway links breeding grounds in the north to more southerly wintering areas and, therefore, is utilized by an abundance of bird species during migration. The Rio Hondo and San Gabriel River corridors and the Montebello Hills would support a number of avian species utilizing the Pacific Flyway.

Habitat Conservation Plans/Natural Community Conservation Plans

The USFWS Conservation Plans and Agreements Database was reviewed to determine whether any active HCPs are crossed by the Proposed Project. The CDFW Natural Community Conservation Planning (NCCP) program was also reviewed to determine whether the Proposed Project crosses any active NCCPs. Based on the previously listed reviews, the Proposed Project was determined to not be located in areas with HCP or NCCP coverage.

County of Los Angeles Significant Environmental Areas

As depicted in Figure 8: Mesa Substation Critical Habitat and Significant Ecological Areas Map in the BRTR, included in Appendix F: Biological Resources Reports, the Puente Hills SEA is located in the Puente Hills in the southeastern portion of Los Angeles County, a portion of which overlaps with the Proposed Project area. The SEA includes portions of the Whittier Narrows Dam Recreation Area and Flood Control Basin, and much of the undeveloped land throughout the Puente Hills. A portion of the SEA also overlaps with coastal California gnatcatcher critical habitat.

4.4.3.5 Jurisdictional Resources

The Proposed Project area contains a total of 9 water features—one intermittent drainage and 8 ephemeral drainages—that may be subject to regulation by the USACE, RWQCB, and CDFW. In addition to the 9 potentially jurisdictional features, 18 non-jurisdictional features were identified, including five man-induced wetlands, 11 man-made ditches, and two erosional channels. Table 4.4-4: Potentially Jurisdictional Waters Within the Proposed Project Area provides the location and approximate size of the potentially jurisdictional water features in the Proposed Project area. These features are described in detail in Section 4.9, Hydrology and Water Quality and in the BRTR included in Appendix F: Biological Resources Reports.

Table 4.4-4: Potentially Jurisdictional Waters Within the Proposed Project Area

Feature Number[13]	Feature Location	Mapbook Page(s)[14]	Feature Type	Approximate Size (Acres)[15]
7-38-S-1	Within and east of Mesa Substation	4, 5, 7	Ephemeral Drainage	0.13
7-39-S-1				0.81
11-138-S-100				0.17
7-39-S-2	Within Mesa Substation site	4, 5	Ephemeral Drainage	0.35
7-39-S-3	Southeast of Mesa Substation	5, 7	Ephemeral Drainage	0.35
7-39-S-5	Southwest of Mesa Substation	2	Ephemeral Drainage	0.24
7-39-S-6	Within Mesa Substation site	4	Ephemeral Drainage	0.04
11-94-S-2	Within Mesa Substation site	4, 6	Ephemeral Drainage	0.05
11-94-S-5	Within Mesa Substation site	3	Ephemeral Drainage	1.16
11-136-S-100	North of Mesa Substation	11	Ephemeral Drainage	0.107
11-136-S-101				0.118
7-39-S-11 (Rio Hondo)	East of Mesa Substation site	15	Intermittent Drainage	1.036

[13] Feature locations are depicted in Attachment A: Wetlands and Waters Map of the Supplemental Jurisdictional Delineation Report, included in Attachment D: Supplemental Jurisdictional Delineation Report in the BRTR, which is found in Appendix F: Biological Resources Reports.

[14] Mapbook page numbers refer to map numbers in Attachment A: Wetlands and Waters Map of the Supplemental Jurisdictional Delineation Report, included in Attachment D: Supplemental Jurisdictional Delineation Report in the BRTR, which is found in Appendix F: Biological Resources Reports.

[15] Drainage size was calculated using the width between tops of bank.

The hydrological features within the limits of the Mesa Substation site are depicted in Figure 4.4-3: Mesa Substation Study Area Biological Resources Observation Map. The hydrological features within the limits of the Proposed Project area are provided in Figure 5: Biological Resources Observations Map in the BRTR, which is included in Appendix F: Biological Resources Reports. More detailed information on the hydrological features within the Proposed Project area is provided in the Supplemental Jurisdictional Delineation Report, which is included in Attachment D: Supplemental Jurisdictional Delineation Report in the BRTR, which is found in Appendix F: Biological Resources Reports.

4.4.4 Significance Criteria

The significance criteria for assessing the impacts to biological resources are derived from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State HCP

4.4.5 Impact Analysis

4.4.5.1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Construction

Less-Than-Significant Impact. The following subsections detail the impact analyses for special-status plant and wildlife species.

Special-Status Plant Species

Implementation of the Proposed Project would result in potential impacts to special-status plant species in the Proposed Project area. Two special-status plant species—California black walnut and Nevin's barberry—have been identified as present in the Proposed Project area. However, California black walnut is a CNPS CRPR 4.2 species that does not require CEQA review. California black walnut occurs or has the potential to occur in the cities of Monterey Park and Montebello, and in unincorporated areas of Los Angeles County; however, mitigation or compensation for the removal of California black walnut trees is not required by these jurisdictions. As such, impacts to California black walnut would not be considered significant.

Nevin's barberry is a federal and State-listed endangered species and a CNPS CRPR 1.2 species. As described in applicant-proposed measure (APM)-BIO-01, Nevin's barberry would be marked or flagged, and impacts to this species would be avoided during all construction activities. As such, there would be no impacts to Nevin's barberry.

Three special-status plant species—southern tarplant, Plummer's mariposa-lily and intermediate mariposa-lily—have a moderate potential to occur on within the Proposed Project area. Fifteen special-status plant species have a low potential to occur on the Proposed Project area, as listed in Table 4.4-2: Sensitive Plant Species with the Potential to Occur Within the Proposed Project Area. If present, special-status plant species could be impacted during vegetation clearing and construction of Mesa Substation. Grading or other heavy disturbances also have the potential to bury or otherwise remove topsoil, which may contain viable seeds of special-status plant species. Grading or other disturbances may also introduce invasive species into an area where special-status plant species occur. To ensure that special-status plant species are not impacted as a result of the Proposed Project, SCE would implement APM-BIO-01, by conducting pre-construction special-status plant surveys in accordance with CDFG (2009), USFWS (1996), and CNPS (2001) guidelines. In addition, as described in APM-BIO-02, SCE would develop and implement a Revegetation Plan, if necessary, for native vegetation that may be impacted by construction activities. The Revegetation Plan would include post-construction invasive weed management measures. As such, implementation of APM-BIO-01 and APM-BIO-02 would reduce impacts to special-status plant species to a less-than-significant level.

Special-Status Wildlife Species

<u>Invertebrate Species</u>

No special-status invertebrate species are anticipated to occur in the Proposed Project area. Therefore, no impacts to special-status invertebrate species are anticipated.

<u>Fish Species</u>

No special-status fish species are anticipated to occur in the Proposed Project area. Therefore, no impacts to special-status fish species are anticipated.

<u>Amphibian Species</u>

One special-status amphibian species—western spadefoot—has a moderate potential to occur within the Montebello Hills, and the Rio Hondo and San Gabriel River corridors. This species could be crushed by construction vehicles or by vegetation removal. To ensure western spadefoot is not impacted as a result of the Proposed Project, SCE would implement APM-BIO-03, which requires that biological monitors are present to ensure avoidance of special-status species during construction in areas where this species may occur. SCE would also implement additional protection for wildlife species that would require that open trenches and excavations are covered or secured, and that construction materials are inspected for local wildlife. Implementation of APM-BIO-03 and the additional protection would reduce the impacts to special-status amphibian species to a less-than-significant level.

<u>Reptile Species</u>

One special-status reptile species—Belding’s orange-throated whiptail—was observed in the Proposed Project area. In addition, western pond turtle has a moderate potential to occur within the Rio Hondo and San Gabriel River corridors. These species could be crushed by construction vehicles or by vegetation removal. To ensure special-status reptile species are not impacted as a result of the Proposed Project, SCE would implement APM-BIO-03, which requires that biological monitors are present to ensure avoidance of special-status species during construction in areas where they may occur. SCE would also implement additional protection for wildlife species that would require that open trenches and excavations are covered or secured, and that construction materials are inspected for local wildlife. Implementation of APM-BIO-03 and the additional protection would reduce the impacts to special-status reptile species to a less-than-significant level.

<u>Avian Species</u>

Six special-status avian species were observed during surveys conducted for the TRTP, and by Insignia and RBC in 2014. The coastal California gnatcatcher was observed foraging and nesting in disturbed ruderal habitat in the Proposed Project area to the south of the existing Mesa Substation, within the proposed substation expansion area. In addition, the coastal California gnatcatcher was also observed foraging in the Montebello Hills and the Rio Hondo and San Gabriel River corridors. During TRTP surveys, the least Bell’s vireo was observed nesting along the Rio Hondo and San Gabriel River corridors within the Proposed Project area. The least Bell’s vireo has also been observed foraging in the Montebello Hills and the San Gabriel River corridor. Records of least Bell’s vireo and coastal California gnatcatcher nesting observations in the Whittier Narrows Natural Area from 2014 were also provided to Insignia biologists by the Whittier Narrows Nature Center. The remaining four species—American peregrine falcon, Swainson’s hawk, loggerhead shrike, and yellow warbler—were observed foraging in the Proposed Project area. In addition, western burrowing owl has a moderate potential to occur in grassland vegetation within the Proposed Project area. Impacts to coastal California gnatcatcher, listed as threatened under the FESA; least Bell’s vireo, listed as endangered under the FESA and the CESA; and other nesting birds protected by the MBTA and the California Fish and Game Code may occur as a result of construction of the Proposed Project. In addition, construction could impact foraging habitat for coastal California gnatcatcher and least Bell’s vireo. These impacts are described as follows:

- **Coastal California Gnatcatcher:** Permanent and direct impacts to coastal California gnatcatcher would include the removal of nesting or foraging habitat and/or the removal of some food sources. No direct take of individual birds is anticipated. Direct permanent impacts to approximately 14.21 acres of coastal California gnatcatcher nesting and foraging habitat are anticipated due to the construction of the Proposed Project, as shown in Table 4.4-5: Potential Impacts to Coastal California Gnatcatcher Habitat. Permanent impacts to coastal California gnatcatcher habitat would be to ruderal vegetation and a small area of coastal sage scrub in the Mesa Substation site. Temporary impacts of up to 12.09 acres of coastal California gnatcatcher nesting and foraging habitat are anticipated due to the construction of the Proposed Project. Temporary impacts would occur primarily along one of the proposed telecommunication line routes which traverses through designated critical habitat for this species. Temporary impacts of up to 1.69 acres of coastal California gnatcatcher critical habitat are anticipated. At this location, work would be conducted on existing subtransmission or distribution lines along an existing paved road. The location of the temporary and permanent impacts that would occur is shown in Figure 4.4-6: Mesa Substation Study Area Anticipated Impacts to Coastal California Gnatcatcher Habitat Map.

Table 4.4-5: Potential Impacts to Coastal California Gnatcatcher Habitat

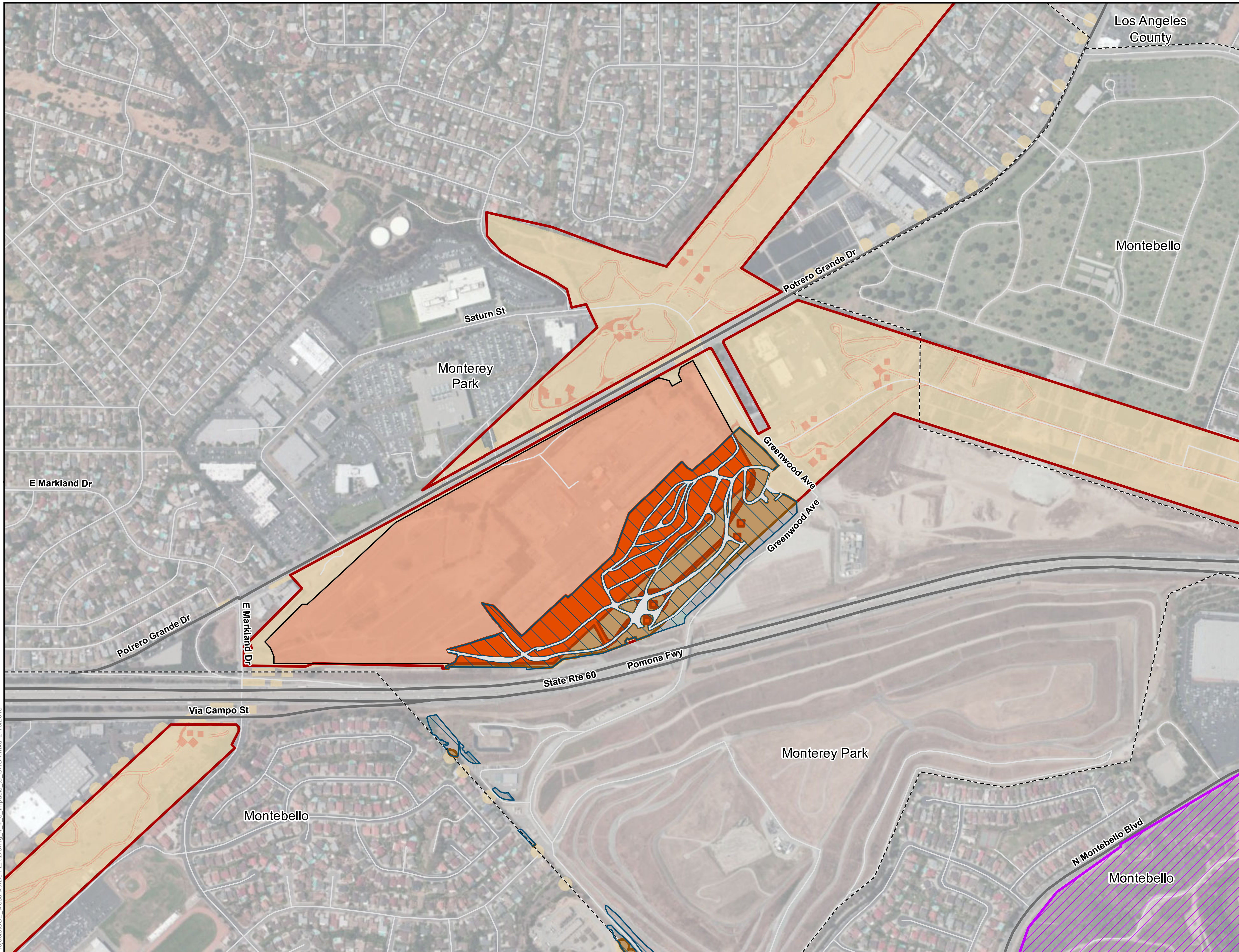
Location	Approximate Impact Area (Acres)	Approximate Temporary Impacts[16] (Acres)	Approximate Permanent Impacts (Acres)
Mesa Substation site	23.45	9.24	14.21
Associated transmission, subtransmission, distribution, and telecommunications lines	2.85	2.85	0.00
Total	**26.30**	**12.09**	**14.21**
Impacts within Coastal California Gnatcatcher Critical Habitat	**1.69**	**1.69**	**0.00**

The location of the temporary and permanent impacts that would occur within the Mesa Substation and associated transmission, subtransmission, distribution, and telecommunications lines is shown in Figure 10: Potential Impacts to Suitable Coastal California Gnatcatcher Habitat Map in the BRTR, which is included in Appendix F: Biological Resources Reports.

[16] A portion of SCE's temporary impact acreage located north and west of Greenwood Avenue is located within areas analyzed by the Monterey Park Market Place Final Environmental Impact Report and found to have permanent impacts. Consequently, SCE's temporary impact acreage is estimated. This area has been condemned by the City of Monterey Park, resulting in limited use by SCE. Therefore, once the Monterey Park Market Place is developed, SCE would modify the temporary impact acreage accordingly.

Figure: 4.4-6:
Mesa Substation Study Area Anticipated Impacts to Coastal California Gnatcatcher Habitat Map

Mesa 500 kV Substation Project



- Mesa Substation Study
- Proposed Substation Perimeter Wall
- City Boundary
- Coastal California Gnatcatcher Habitat
- Coastal California Gnatcatcher Critical Habitat
- Existing Access Road (Non-Suitable Habitat)

Project Impacts
- Temporary
- Permanent

Anticipated Impacts to Coastal California Gnatcatcher Habitat
- Temporary
- Permanent

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0 250 500 Feet

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Indirect temporary impacts would include the disruption of nesting behavior due to a temporary increase in the presence of humans, dust, and noise from construction equipment and vehicles. Impacts would be most significant during the nesting season, which is generally March through August, for this particular species. In accordance with APM-BIO-04, SCE would coordinate with USFWS to obtain necessary permits under the FESA, and would reduce impacts to coastal California gnatcatcher by implementing the following measures:

- Conducting protocol-level surveys prior to the start of construction
- Implementing no-work buffers as appropriate if nesting birds are found
- Ensuring that a USFWS-approved biological monitor is present
- Limiting work in close proximity to active nests until after the chicks have fledged
- Mitigating for permanent loss of occupied coastal California gnatcatcher habitat

In addition, SCE would implement APM-AIR-01 as described in Section 4.3, Air Quality, which would reduce fugitive dust in the construction areas. Implementation of APMs would reduce impacts to coastal California gnatcatcher to a less-than-significant level.

- **Least Bell's Vireo:** Indirect temporary impacts to least Bell's vireo would include the disruption of nesting behavior due to a temporary increase in the presence of humans, dust, and noise from construction equipment and vehicles. Impacts would be most significant during the nesting season, which is generally March through September for this particular species. In accordance with APM-BIO-05, SCE would coordinate with USFWS and CDFW to obtain necessary permits under the FESA and CESA, and would reduce impacts to least Bell's vireo by implementing the following measures:

  - Avoiding activities during the nesting season to the extent feasible
  - Conducting protocol-level surveys prior to the start of construction
  - Implementing no-work buffers as appropriate if nesting birds are found
  - Ensuring that a USFWS-approved biological monitor is present
  - Limiting work in close proximity to active nests until after the chicks have fledged
  - Mitigating for the permanent loss of occupied least Bell's vireo habitat

  In addition, SCE would implement APM-AIR-01 as described in Section 4.3, Air Quality, which would reduce fugitive dust in the construction areas. Implementation of APMs would reduce impacts to least Bell's vireo to a less-than-significant level.

- **Other Avian Species:** Direct impacts are expected to occur to unoccupied nesting bird habitat through vegetation clearing and grading of suitable ground-nesting bird habitat. Indirect temporary impacts may include the disruption of nesting behavior due to human presence and a temporary increase in noise and dust from construction equipment and vehicles. As described in APM-BIO-06, SCE would reduce impacts to nesting bird species by implementing the following measures:

- Avoiding activities during the nesting season to the extent feasible
- Conducting pre-construction nesting bird surveys
- Implementing no-work buffers as appropriate if nesting birds are found
- Limiting work in close proximity to active nests until after the chicks have fledged

In addition, SCE would implement APM-AIR-01, which would reduce fugitive dust in the construction areas. Implementation of APMs would reduce the impacts to nesting avian species to a less-than-significant level.

Permanent impacts to foraging habitat for all avian species would be limited because the majority of habitat where permanent impacts are anticipated has been previously disturbed and is in a degraded state. Therefore, permanent construction impacts to foraging avian species would be less than significant.

SCE plans to incorporate avian protection measures into the Proposed Project's engineering design through the implementation of APM-BIO-07, which ensures that SCE's facilities are in compliance with the Avian Power Line Interaction Committee's (APLIC's) *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) to the extent feasible. Implementation of these measures would reduce the impacts to avian species to a less-than-significant level.

Power lines and other structures also provide potential perching opportunities for raptor species, which can increase the potential for predation of special-status avian species by raptors. Special-status species that could be affected by increased predation in the Proposed Project area include coastal California gnatcatcher, least Bell's vireo, loggerhead shrike, and yellow warbler. There will be a net decrease in the number of perching structures as a result of the Proposed Project, including the undergrounding of the 66 kV circuits at Mesa Substation. Thus, construction of the Proposed Project is anticipated to have a less-than-significant impact on the potentially increased predation of smaller wildlife species.

<u>Mammal Species</u>

One special-status mammal species—southern grasshopper mouse—has a moderate potential to occur within the Montebello Hills, and the Rio Hondo and San Gabriel River corridors. This species could be crushed by construction vehicles or by vegetation removal. To ensure southern grasshopper mouse is not impacted as a result of the Proposed Project, SCE would implement APM-BIO-03, which requires that biological monitors are present during construction in areas where this species may occur. SCE would also implement additional protection for wildlife species that would require that open trenches and excavations are covered or secured, and that construction materials are inspected for local wildlife. Implementation of the additional protection and APM-BIO-03, which requires that biological monitors are present to ensure avoidance of special-status species during construction in areas where they species may occur, would reduce impacts to special-status mammal species to a less-than-significant level.

Additional Protection for Special-Status Wildlife Species

In addition to the APMs described previously, SCE would implement the following additional practices to minimize impacts to special-status species.

- **Worker Environmental Awareness Program Training:** Prior to construction, a qualified biologist or other qualified resource specialist would develop an environmental training for all Proposed Project personnel. The training would cover all pertinent Proposed Project APMs, permit conditions, and any other required environmental compliance measures. In addition, the environmental training would familiarize all Proposed Project personnel with special-status species that may occur within the construction areas. All Proposed Project personnel would attend the training prior to starting work on the Proposed Project. Upon completion of the training, each attendee would sign a form stating that he/she participated in the training and understood the material presented.

- **Special-Status Wildlife Species:** If a special-status wildlife species is identified on site, crews would immediately stop work and contact an on-site biological monitor and SCE. Work would not proceed in the immediate area until the animal has traveled off site on its own or has been relocated by an approved biologist. If the identified special-status wildlife species is a federally and/or State-listed species, the USFWS and/or CDFW (depending upon the listing status) would be notified.

- **Holes, Trenches, and Escape Routes for Wildlife:** All excavated, steep-walled holes or trenches more than 6 inches deep would either be covered at the end of each workday, or a ramp would be built to provide a means of escape for trapped animals. Before the holes or trenches are filled, they would be thoroughly inspected. If an animal is discovered, filling will not begin until the animal has left voluntarily or is relocated by an authorized biologist.

Critical Habitat

As depicted in Figure 8: Mesa Substation Critical Habitat and Significant Ecological Areas Map in the BRTR, which is included in Appendix F: Biological Resources Reports, approximately 3.80 acres of the Proposed Project area are designated as coastal California gnatcatcher critical habitat along a 1.1 mile length of the proposed telecommunication line route that traverses the Montebello Hills and the Rio Hondo and San Gabriel River corridors. The Proposed Project activities would result in approximately 1.69 acres of temporary impacts to coastal California gnatcatcher critical habitat, as shown in Table 4.4-5: Potential Impacts to Coastal California Gnatcatcher Habitat. At this location, work would be conducted on existing subtransmission or distribution lines along an existing paved road. The temporary disturbance of this critical habitat due to ground-disturbing activities could result in direct impacts to coastal California gnatcatcher. Shrubs and other vegetation used by coastal California gnatcatcher may be removed in these areas, resulting in the loss of foraging and nesting habitat. In order to minimize impacts to coastal California gnatcatcher critical habitat, a Revegetation Plan would be prepared and implemented to ensure that construction areas would be restored, in accordance with APM-BIO-02. Demarcating the boundaries of construction areas along the telecommunications routes would minimize the potential for impacts to critical habitat to occur outside of approved work areas. Avoiding impacts to vegetation, when feasible, would preserve nesting and foraging habitat within critical habitat. Restoring temporarily impacted construction areas, as appropriate, would minimize the duration of impacts to critical habitat and would more quickly return these areas to their near pre-construction conditions. With the implementation of these APMs, impacts to coastal California gnatcatcher critical habitat would be less than significant.

Operation

Less-Than-Significant Impact. Following construction of the Proposed Project, O&M activities associated with the substation and transmission, subtransmission, distribution, and telecommunications lines would continue in essentially the same manner as the existing facilities. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires that ground observation occurs at least once per year, but inspections usually occur more frequently based on system reliability. Further modifications of habitats or impacts to species are not anticipated to occur due to O&M. Minimal dust or air pollutants would be expected during O&M of the substations and transmission corridors. Minor increases in ambient noise would be associated with the operation of Mesa Substation. As a result, impacts associated with O&M would be less than significant.

4.4.5.2 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Construction

Less-Than-Significant Impact. The following subsections detail the impact analyses for riparian and other sensitive natural communities.

Sensitive Natural Vegetation Communities

Two sensitive vegetation communities occur within the Proposed Project area, including southern sycamore-alder riparian woodland and California walnut woodland. Southern sycamore-alder riparian woodland association is currently designated by the CDFW as S3 or rarer. California walnut woodland is regarded by CDFW as S3. These sensitive vegetation communities could be impacted during vegetation clearing. SCE would implement APM-BIO-02, which requires flagging native vegetation for avoidance. Implementation of this APM would minimize impacts and permanent loss to sensitive vegetation communities. If impacts are unavoidable, APM-BIO-02 also requires that SCE implement a Revegetation Plan to restore vegetation to its pre-construction condition. Implementation of APM-BIO-02 would reduce impacts to sensitive vegetation communities to a less-than-significant level.

Riparian Habitat

Construction of the Proposed Project would result in direct permanent and temporary impacts to riparian habitat under the jurisdiction of the CDFW. Proposed Project activities that could adversely affect riparian habitat include earth-moving and grading, tree trimming, and tree removal. SCE would avoid riparian habitat to the extent feasible, as described in APM-BIO-02. If riparian habitat cannot be avoided, SCE would mitigate for impacts, as described in APM-BIO-08, which stipulates that authorizations must be obtained from the appropriate regulatory agencies, and compensatory mitigation for permanent impacts to riparian habitat would be a requirement of such authorization. With the implementation of these APMs, impacts to riparian vegetation would be reduced to a less-than-significant level.

Operation

Less-Than-Significant Impact. Following construction of the Proposed Project, O&M activities associated with the substation and transmission, subtransmission, distribution, and telecommunications lines would continue in essentially the same manner as the existing facilities. In addition, the substations are not associated with special-status vegetation types, including riparian communities. Maintenance of structures within the transmission ROW could involve minor clearing of vegetation and grading in previously disturbed areas. During these activities, waterbodies would be protected to the extent practical. Therefore, impacts would be less than significant.

4.4.5.3 Would the project have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?

Construction

Less-Than-Significant Impact. The construction of the Proposed Project would result in direct temporary impacts of approximately 0.09 acre, and direct permanent impacts of 0.54 acre to waters potentially under the jurisdiction of the USACE and RWQCB. Construction of the Proposed Project would also result in direct temporary impacts of approximately 1.56 acres, and direct permanent impacts of approximately 2.76 acres to waters and riparian habitat potentially under the jurisdiction of the CDFW. Only ephemeral, non-wetland waters would be impacted by the Proposed Project. SCE would obtain necessary authorizations, including CWA Sections 404 and 401 and California Fish and Game Code Section 1600 from the USACE, RWQCB and CDFW, respectively. SCE would mitigate for permanent impacts to all jurisdictional water resources at a 1-to-1 ratio, or as required by the USACE, CDFW, and RWQCB, as described in APM-BIO-08. With the implementation of this APM, impacts to jurisdictional water features would be reduced to a less-than-significant level.

A summary of temporary and permanent impact areas by water type is shown in Table 4.4-6: Potential Water Features to be Impacted by the Proposed Project. An overview of the impacts to wetland and non-wetland water features are shown in Figure 4.4-7: Mesa Substation Study Area Anticipated Impacts to Waters. More information is provided within Attachment A: Wetland and Waters Map and Table 1: Wetlands and Waters in the Supplemental Jurisdictional Delineation Report, which is included in Attachment D: Supplemental Jurisdictional Delineation Report in the BRTR, which is found Appendix F: Biological Resources Reports. SCE would avoid on-site wetlands to the extent practicable.

Table 4.4-6: Potential Water Features to be Impacted by the Proposed Project

Water Feature Type	Approximate Temporary Impact Area (Acres)			Approximate Permanent Impact Area (Acres)		
	USACE and RWQCB	CDFW	Non-Jurisdictional	USACE and RWQCB	CDFW	Non-Jurisdictional
Jurisdictional Water Features						
Ephemeral Drainage	0.09	1.05	N/A	0.54	2.56	N/A
Intermittent Drainage	0.00	0.00	N/A	0.00	0.00	N/A
Riparian Canopy	N/A	0.51	N/A	N/A	0.20	N/A
Total	**0.09**	**1.56**	**N/A**	**0.54**	**2.76**	**N/A**
Non-Jurisdictional Water Features						
Erosional Feature	N/A	N/A	<0.01	N/A	N/A	0.01
Man-Made Ephemeral Ditch	N/A	N/A	0.26	N/A	N/A	0.98
Man-Induced Wetland	N/A	N/A	0.04	N/A	N/A	<0.01
Total	**N/A**	**N/A**	**0.30**	**N/A**	**N/A**	**0.99**

Notes: "N/A" = Not Applicable. Waters that are potentially jurisdictional for USACE and SWRCB/RWQCB are a subset of waters that are jurisdictional for CDFW.

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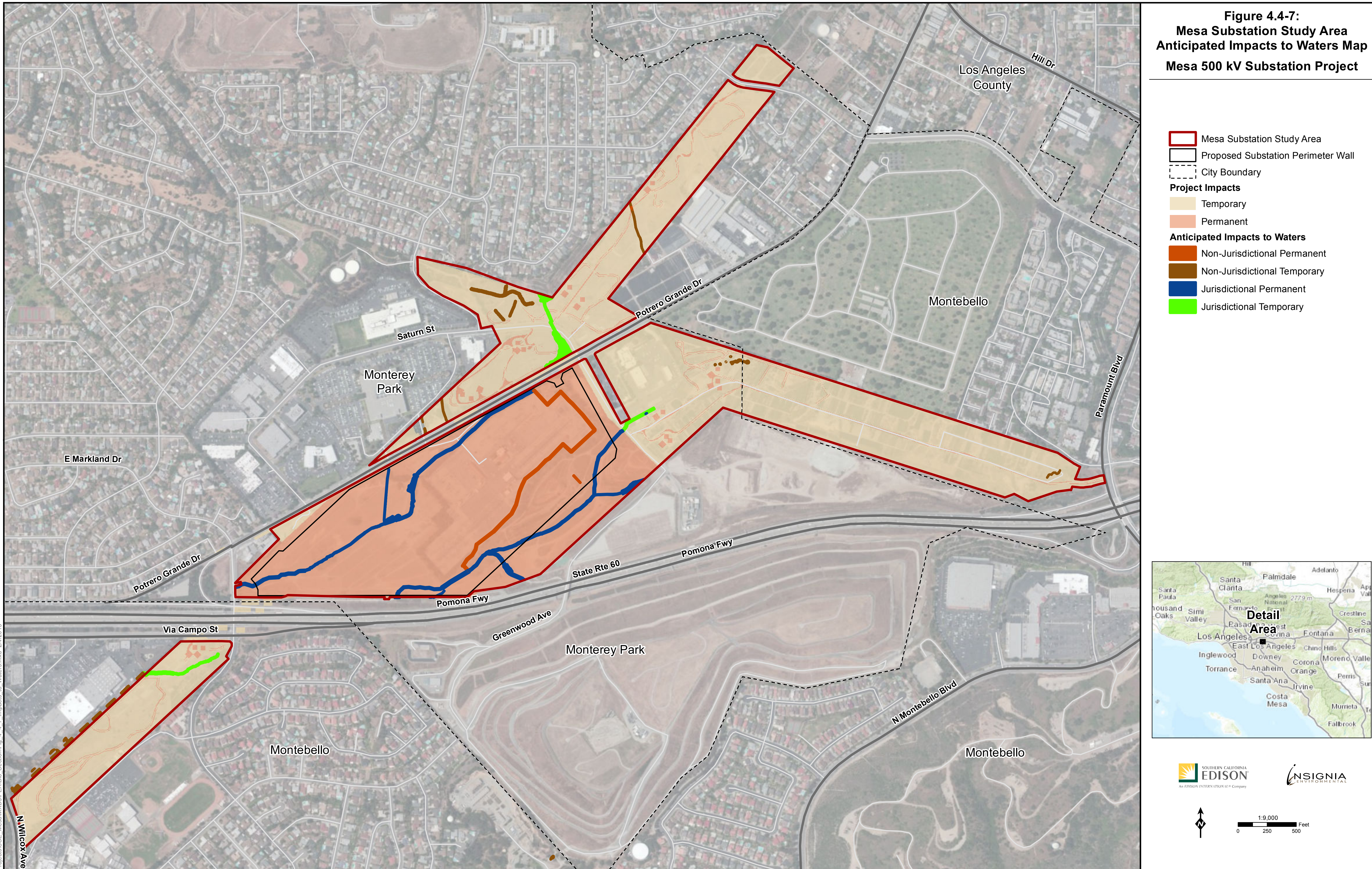

Figure 4.4-7: Mesa Substation Study Area Anticipated Impacts to Waters Map

Mesa 500 kV Substation Project

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Indirect impacts to wetlands and waters could also result from spillage of construction materials, as well as from erosion and sedimentation. These potential impacts would be avoided and minimized through implementation of the Proposed Project's Storm Water Pollution Prevention Plan (SWPPP), which is required by law. The Proposed Project SWPPP would require that vehicles be checked daily and maintained in accordance with manufacturer's specifications to minimize the potential for leaks, and refueling and maintenance of vehicles would occur at least 50 feet from the edge of any aquatic feature. In addition, SCE would implement APM-BIO-02 to minimize impacts to riparian vegetation and APM-BIO-08 to further minimize indirect impacts to wetlands and waters. With the implementation of these APMs and with adherence to applicable regulations, impacts to jurisdictional water features would be less than significant.

Operation

Less-Than-Significant Impact. As previously described, after construction, O&M activities would be conducted in a similar manner as current O&M. In addition, potential impacts to wetlands and waters as a result of spilling hazardous materials into wetlands or other waters would be avoided and minimized through the recertification and implementation of the Proposed Project's Spill Prevention, Control, and Countermeasure Plan, which is required by Title 40, Part 112 of the CFR. Storm water design features—such as the proposed retention basin and other best management practices (BMPs)—would control runoff during O&M, which would avoid impacts to on-site drainages. Maintenance of structures within the transmission ROW could involve minor clearing of vegetation and grading. During these activities, wetlands would be protected to the extent practicable. If it is necessary to conduct any work within a channel or to remove riparian vegetation, the work would require approval from the USACE and CDFW, as well as adherence to any permit conditions associated with that approval. Therefore, impacts would be less than significant.

4.4.5.4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites?

Construction

No Impact. The Proposed Project would involve construction activities within an existing transmission corridor, and the proposed Mesa Substation would be the only large, permanent structure. The proposed Mesa Substation would be constructed in an area that is disturbed and does not have potential to be used as a wildlife migration corridor. As previously discussed, up to approximately 46 wood poles would be replaced. As these activities involve the replacement of existing wood poles, they would not create a barrier to wildlife migration corridors. The remaining Proposed Project activities would occur within small, discontinuous areas and, therefore, would not create a barrier for terrestrial species. As a result, no impacts to wildlife migration corridors are anticipated.

Operation

No Impact. The Proposed Project, including the transmission ROWs, currently has a low potential for use as a wildlife migration corridor, and would operate in a similar manner as it currently operates. Therefore, no impacts would result from O&M.

4.4.5.5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction

Less-Than-Significant Impact. The following subsections detail the impact analyses for areas that are subject to applicable local policies or ordinances.

Significant Ecological Areas

A portion of construction activities associated with the Proposed Project would occur within an area designated as an SEA by the County of Los Angeles. However, these activities would occur within an existing transmission corridor and do not involve the construction of large facilities. Within the SEA, up to approximately 46 existing wood poles could be replaced as part of the Proposed Project, depending on the results of wind-load testing. As these activities would replace existing wood poles, no permanent impacts to the SEA are anticipated. The remaining Proposed Project activities would occur within small, discontinuous areas and therefore are not anticipated to impact the SEA. In addition, APM-BIO-02 would be implemented, which requires flagging native vegetation for avoidance and preparation of a Revegetation Plan for areas where vegetation is impacted. As a result, no impacts to the County of Los Angeles SEA are anticipated.

City of Pasadena Tree Protection Ordinance

Chapter 8.52 City Tree and Tree Protection Ordinance (Ordinance 6896§ 2) of the City of Pasadena Municipal Code protects all native, specimen, landmark, landmark-eligible, or mature trees in the City of Pasadena. This ordinance is further described in Section 4.4.2.3, Local. Coast live oak trees are present on the northwest portion of the 220 kV line loop-in at Goodrich Substation in the City of Pasadena, approximately 220 feet from potential work areas. Removal of the coast live oak trees is not anticipated. The Oak Tree Ordinance for the County of Los Angeles is designed to preserve and maintain healthy oak trees in unincorporated portions of the county. A discretionary tree permit is required by the City of Pasadena for the removal of trees protected under the ordinance. The removal of any oak trees within unincorporated portions of Los Angeles County would also require a discretionary tree permit, and removed oak trees would be replaced at a 2-to-1 ratio. However, local discretionary permits are preempted by the CPUC for projects under its jurisdiction. In accordance with APM-BIO-02, impacts to native trees would be minimized to the extent possible. Should the removal of oak trees be unavoidable within the City of Pasadena or the unincorporated portions of the County of Los Angeles, a Revegetation Plan would be prepared that incorporates the mitigation requirements of the City of Pasadena and/or the County of Los Angeles, as applicable.

California black walnut trees are present within the Proposed Project area in the cities of Monterey Park and Montebello, and in unincorporated Los Angeles County; however, mitigation or compensation for the removal of California black walnut trees is not required by these jurisdictions. Mitigation or compensation for the trimming or removal of any trees at the Mesa Substation site and along the associated transmission, subtransmission, distribution, and telecommunications lines is not required by the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, and Bell Gardens. As a result, the removal of trees would not conflict with the goals or policies of these jurisdictions.

As described in the preceding sections, with the implementation of APM-BIO-02 and adherence to applicable permit requirements including BMPs, such as erosion and sedimentation controls would reduce impacts consistent with cities and county plans and policies; therefore, impacts to biological resources would be less than significant.

Operation

No Impact. After construction of the Proposed Project, O&M activities as previously described would continue in essentially the same manner as they do for the existing facilities. O&M would occur in a manner that is consistent with local ordinances. Thus, there would be no impact.

4.4.5.6 Would the project conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan?

Construction and Operation

No Impact. Construction of the Proposed Project would not occur within an area with HCP or NCCP coverage. As a result, no conflicts with an HCP or NCCP would occur as a result of the Proposed Project, and there would be no impact.

4.4.6 Applicant-Proposed Measures

The following APM(s) would be implemented to reduce biological resources impacts associated with the Proposed Project:

- **APM-BIO-01: Special-Status Plant Species.** During the appropriate phenological periods, formal pre-construction surveys for rare plants would be conducted in areas where special-status plants have the potential to occur within the construction areas. Prior to construction, the locations of any special-status plants identified during the surveys would be marked or flagged for avoidance. This boundary would be maintained during work at these locations and would be avoided during all construction activities to the extent possible. Impacts to Nevin's barberry would be avoided. Where disturbance to these areas cannot be avoided, SCE would develop and implement a Revegetation Plan. The Revegetation Plan would include measures for transplanting and replacing special-status plant species that may be impacted by construction of the Proposed Project. This plan would also include general measures in the event that special-status plant species are encountered prior to construction of the Proposed Project, as well as post-construction invasive weed management measures, where necessary, to ensure successful revegetation back to pre-construction conditions or to equivalent conditions of representative habitat immediately adjacent to the affected area.

- **APM-BIO-02: Revegetation Plan.** To the extent feasible, SCE would minimize impacts and permanent loss to riparian habitat, native trees, and other vegetation that is regulated by federal, State, or local agencies, and/or that provides suitable habitat for special-status species. Impacts would be minimized at construction sites by flagging native vegetation to be avoided. If unable to avoid impacts to protected vegetation, a Revegetation Plan would be prepared in coordination with the appropriate agencies for areas of native habitat temporarily and/or permanently impacted during construction. The Revegetation Plan would describe, at a minimum, which vegetation restoration method (e.g., natural revegetation, planting, or reseeding with native seed stock in compliance with the Proposed Project's SWPPP) would be implemented in the Proposed Project area. The Revegetation Plan would also include the species or habitats that could be impacted, the replacement or restoration ratios (as appropriate), the restoration methods and techniques, and the monitoring periods and success criteria, as identified in each measure.

- **APM-BIO-03: Biological Monitoring.** To the extent feasible, biological monitors would monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided.

- **APM-BIO-04: Coastal California Gnatcatcher Protection.** A USFWS-approved biologist would conduct pre-construction surveys for coastal California gnatcatcher no more than seven days prior to the start of ground-disturbing activities, if this work would commence between February 1 and August 30. Surveys for coastal California gnatcatcher would be conducted in suitable nesting habitat within approximately 500 feet of the Proposed Project area. If a breeding territory or nest is confirmed, the USFWS would be notified, and in coordination with the USFWS an exclusion buffer would be established around the nest. Construction activities in occupied coastal California gnatcatcher habitat would be monitored by a full-time USFWS-approved biologist. Unless otherwise authorized by the USFWS, no Proposed Project activities would occur within the established buffer until it is determined by the biologist that the young have left the nest. Temporary and permanent impacts to coastal California gnatcatcher and their habitat would be mitigated as required by the USFWS.

- **APM-BIO-05: Least Bell's Vireo Protection.** SCE would avoid ground-disturbing activities within suitable habitat for least Bell's vireo during the nesting season to the extent possible. In the event that activities within least Bell's vireo nesting habitat are unavoidable, a USFWS-approved biologist would conduct pre-construction surveys for least Bell's vireo no more than seven days prior to the start of ground-disturbing activities, if this work would commence between March 15 and September 30. Surveys for least Bell's vireo would be conducted in suitable nesting habitat within approximately 500 feet of the Proposed Project area. If a breeding territory or nest is confirmed, the USFWS and CDFW would be notified, and in coordination with the USFWS and CDFW, an exclusion buffer would be established around the nest. Construction activities in occupied least Bell's vireo habitat would be monitored by a full-time USFWS- and

CDFW-approved biologist. Unless otherwise authorized by the USFWS and CDFW, no Proposed Project activities would occur within the established buffer until it is determined by the biologist that the young have left the nest. Temporary and permanent impacts to least Bell's vireo, and their habitat would be mitigated as required by the USFWS and CDFW.

- **APM-BIO-06: Nesting Birds.** SCE would conduct pre-construction clearance surveys no more than seven days prior to construction to determine the location of nesting birds and territories during the nesting bird season (typically February 1 to August 31, earlier for species such as raptors). An avian biologist would establish a buffer area around active nest(s) and would monitor the effects of construction activities to prevent failure of the active nest. The buffer would be established based on construction activities, potential noise disturbance levels, and behavior of the species. Monitoring of construction activities that have the potential to affect active nest(s) would continue until the adjacent construction activities are completed or until the nest is no longer active.

- **APM-BIO-07: Avian Protection.** Electrical facilities would be designed in accordance with APLIC's *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006).

- **APM-BIO-08**: **Compensation for Permanent Impacts.** Permanent impacts to all jurisdictional water resources would be compensated at a 1-to-1 ratio, or as required by the USACE, CDFW, and RWQCB.

4.4.7 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

4.4.8 References

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4.5 Cultural and Paleontological Resources

This section describes the cultural and paleontological resources in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]). Potential impacts to cultural resources (i.e., archaeological and historical) are discussed first, followed by a discussion of paleontological resources.

A cultural resource is defined as any object or specific location of past human activity, occupation, or use that is identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into three categories: archaeological, building and structural, and traditional resources.

Archaeological resources include both historic and prehistoric remains of human activity. Historic resources can consist of structures (e.g., cement foundations), historic objects (e.g., bottles and cans), and sites (e.g., trash deposits or scatters). Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails. Historic-era resources are typically those that are 50 years or older.

Building and structural sites (hereafter referred to as “built environment”) can vary from historic buildings to canals, historic roads and trails, bridges, ditches, cemeteries, and electrical infrastructure, such as transmission lines, substations, and generating facilities, etc.

A traditional cultural resource or traditional cultural property can include Native American sacred sites (e.g., rock art sites) and traditional resources or ethnic communities that are important for maintaining the cultural traditions of any group.

Paleontology is the study of life in past geologic time based on fossil plants and animals, and includes phylogeny; their relationships to existing plants, animals, and environments; and the chronology of the earth’s history. A paleontological resource is a locality containing vertebrate, invertebrate, or plant fossils (e.g., fossil location, fossil-bearing formation, or a formation with the potential to bear fossils). Paleontological resources are considered a fragile and nonrenewable scientific record of the history of life on earth and, therefore, they represent an important and critical component of the natural heritage of the United States (U.S.).

The cultural resources analysis involved a review of Proposed Project maps, engineering drawings, technical data, aerial and ground-level photographs, mapped geological units, and title reports. Archaeological and built environment surveys conducted for the Tehachapi Renewable Transmission Project (TRTP) were reviewed. Field surveys of the Proposed Project areas were performed for archaeological, historical, and paleontological resources. Cultural resources records and literature searches were conducted at the South Central Coastal Information Center (SCCIC) and in the California Historical Resources Information System (CHRIS) geographic information system (GIS) inventory.

[1] The term “Proposed Project” is inclusive of all components of the Mesa Substation 500 kV Project. Where the discussion in this chapter focuses on a particular component, that component is called out by its individual work area (e.g., “telecommunications line reroute between Mesa and Harding substations”).

A paleontological records search was conducted at the Natural History Museum of Los Angeles County—which included a review of mapped resources known to exist in the area and analyzing Proposed Project maps, engineering drawings, and technical data. Geologic units were classified according to the Potential Fossil Yield Classification (PFYC) System, a predictive resource management tool that was originally developed and refined by federal agencies.

4.5.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the Proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations’ existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to cultural or paleontological resources in the area. Therefore, these substations are not discussed further with the exception of those that are considered historic-era (50 years or older). As most of the Proposed Project modifications would occur at Mesa Substation, more in-depth historic background information for the Mesa Substation and vicinity is discussed in the following sections.

4.5.2 Cultural Resources Environmental Setting

The Proposed Project is located within Los Angeles County in the greater Los Angeles Basin, which consists of several fault-bounded blocks. The Los Angeles Basin is bordered on the north by the Santa Monica Mountains and the San Gabriel Mountains, on the east by the Santa Ana Mountains, and on the south by the Pacific Ocean and the Palos Verdes Hills. The center of the Los Angeles Basin is the confluence of the Los Angeles River and Rio Hondo. The adjacent mountains are within the Peninsular Range zone, which is characterized by elongated mountain ranges and intervening basins and valleys oriented in a northwest-southeast direction. Elevations in the Proposed Project area range from 150 to 800 feet above mean sea level (amsl), 295 to 390 feet amsl in the vicinity of Mesa Substation, and the elevation is approximately 725 feet amsl in the vicinity of Goodrich Substation.

4.5.2.1 Ethnographic Background

Most scholars would place the Proposed Project area within the ethnographic territory of the Takic-speaking Gabrielino (also known as Tongva). The term “Gabrielino” is of Spanish derivation, resulting from the standard missionary practice of naming indigenous peoples after the mission to which they were attached; in this case, it was Mission San Gabriel Arcángel. True indigenous names included Kij or Kizh (Johnston 1962; Reid 1968), the etymology of which is unknown; Kumivit, meaning “easterner”; and Tobikhar, the etymology of which is also unknown (Bean and Smith 1978). However, it is not clear that any of these terms were actually employed by the Gabrielino/Tongva as self-referents.

What historically has been referred to as Gabrielino/Tongva territory extended from Orange County north through the Los Angeles Basin to the crest of the San Gabriel Mountains, including the headwaters and watershed of the San Gabriel River; and from the coast of the Pacific Ocean eastward to include Mount San Antonio (Mount Baldy) and western Riverside and San Bernardino counties. To the west, Gabrielino/Tongva territory extended to Topanga Canyon, and included the San Fernando Valley (Bean and Smith 1978; Johnston 1962; Kroeber 1925).

Based on these ethnographic sources and early Spanish accounts, it is probable that the inhabitants of the region were hunter-gatherers, with subsistence was based on acorns, yucca, juniper berries, sage seeds, mesquite, pinyon, islay (chia), and other plant resources. Following a sexual division of labor that was common throughout native California, women were primarily responsible for the acquisition and preparation of plant foods. Game was also hunted, with small animals (e.g., rabbits/hares and rodents) likely representing more significant contributions of meat protein than larger game. Women and children contributed to the hunting of smaller game, and often with nets and drives. However, large game was exclusively hunted by the adult males. Additionally, and as was consistent with practices common throughout the State, specific resources exploited at any given time were a function of what was seasonally available. Because this was somewhat a function of the time of year and the elevation, a pattern of transhumance was followed, and only a few of the local villages (with the exception of those on the coast) would have been inhabited year-round. Instead, inhabitation followed a pattern of population aggregation into large villages, usually during the fall and winter when stored resources like acorns and pinyon nuts were eaten, as well as a dispersal into single-family units, typically during the spring and summer when resources were more widely distributed.

4.5.2.2 Archaeological Background

The Proposed Project area—located in north-central Los Angeles County, California—is situated in a zone known prehistorically to have comprised a portion of the prehistoric Canaliño culture area (Rogers 1929; Wallace 1955), and historically to have been located within the territory of the Gabrielino/Tongva ethnolinguistic group (Bean and Smith 1978; Johnston 1962; Kroeber 1925). A summary of the Canaliño prehistory follows.

Late Pleistocene Period (Pre-10000 Before Present)

Wallace's chronology for Southern California includes four time periods, the earliest of which (Early Man/Big Game Hunting Period) was considered speculative and was correlated with the end of the Pleistocene, or Ice Age. This would represent an occupation prior to approximately 10,000 years before present (B.P.). Although it is likely that inhabitation of the Southern California coastal region occurred during this early time period, evidence for such is currently limited. To date, Late Pleistocene archaeological remains in Southern California comprise two kinds of evidence. First, in the inland Mojave Desert region, petroglyphs (i.e., rock engravings) and surface stone tools have been dated back to 20,000 and 30,000 B.P., respectively (Whitley and Dorn 1993). The contexts of these dated finds provide only limited kinds of archaeological information and, while there is much more to be discovered about this earliest prehistoric culture, existing data nonetheless suggest that these earliest inland Californians may have dwelled along the shores of Pleistocene lakes.

Uncertainty concerning these early prehistoric cultures results from the characteristic geomorphological instability of the California coastline and the general youthfulness of the Southern California interior, combined with the major change in erosional/degradational regimes that occurred at the end of the Pleistocene (Whitley and Dorn 1993). None of these factors favors the preservation of remains from this period. Therefore, it is likely that Late Pleistocene human occupation of Los Angeles is under-represented in the local prehistoric record, simply due to problems in site preservation.

Early Millingstone Period (10000 to 3500 Before Present)

With the transition toward a modern environment (starting 9,000 to 10,000 years ago), an adaptation referred to as the Early Millingstone Period or Horizon began. This is particularly evident along the coast, where many such sites are found, though few examples are known from the inland region. Most sites of this stage date between 8,500 and 3,500 years in age.

Studies by Erlandson (Erlandson 1988; Erlandson and Colton 1991) provide evidence of a significant, if small, population of coastal hunter-gatherers in the region before 7,000 years ago, or essentially at the beginning of this Early Millingstone Period.[2] Erlandson showed that these were neither big game hunters, nor specialized, hard-seed gatherers; instead, they were generalized foragers who relied on a variety of different kinds of terrestrial, coastal, and marine resources, and they were adapted to estuarine embayments that have long since disappeared from the local environment. Further, his evidence indicates that their primary protein sources were shellfish and other marine resources. By building upon a pattern first identified by Meighan (1959) on the Channel Islands, this suggests that the adaptation to the seashore is a very ancient and long-lived tradition in local prehistory.

Although Early Millingstone Period sites are relatively common along the coast, there is little evidence for the occupation of the inland region during this early time period. Although the Millingstone adaptation to seeds and plants—as well as toolkits dominated by plant-processing

[2] *An Archaeological Context for Early Holocene Studies on the California Coast* provides additional information (Erlandson and Colten 1991).

tools—are present in the inland zone, they appear to date to a later time period, with true Early Millingstone Period occupation apparently restricted to the coastal strip (Whitley and Beaudry 1991; Leonard 1977; McIntyre 1990).

Intermediate Period (3500 to 800 Before Present)

A transitional stage followed the Early Millingstone Period, which is referred to as the Intermediate Period (Wallace 1955). It is believed to have begun about 3,500 years ago and to have lasted until approximately Anno Domini (A.D.) 1200 (Arnold 1987). It is marked on the coast by a growing exploitation of marine resources, the appearance of the hopper mortar and stone bowl/mortar, and a diversification and an increase in the number of chipped stone tools. Projectile points, in particular, are more common at sites than previously, while artifacts, such as fish hooks and bone gorges, also appear.

Late Prehistoric/Canaliño (800 to 200 Before Present)

With the transition to the Canaliño or Late Prehistoric Period at A.D. 1200, local prehistory can be correlated with the ethnographic societies described (even if in abbreviated form) by early chroniclers and missionaries. However, this is not to suggest that local societies and cultures were in any way static, for the transition to the Canaliño Period was marked by the evolution and eventual dominance of a sophisticated maritime economy. Among the Chumash people in the west, a rise in social complexity has been associated with the development of craft specialization, involving the use of standardized micro-drills to mass produce shell beads on Santa Cruz Island (Arnold 1987), which occurred during this period. This apparently contributed to—if not caused—the appearance of a simple chiefdom in the southern Chumash region (Whitley and Clewlow 1979; Whitley and Beaudry 1991).

Although there is no evidence that the Gabrielino/Tongva developed into a chiefdom like the neighboring Chumash, the Canaliño Period nonetheless witnessed a florescence of local aboriginal culture that paralleled the Chumash. This included substantial growth in population, the establishment of permanent settlements on the coast (and probably at favored locales in the inland), a high degree of sociopolitical complexity, and the development of a very sophisticated maritime economy. It was during the Canaliño Period that the occupants of the Santa Barbara Channel and Los Angeles County region achieved levels of cultural and social sophistication perhaps unrivaled by hunter-gatherer-fisher groups anywhere else in the world (Brown 1967; Johnston 1962; Landberg 1965; Wallace 1955).

Historic Background

The first records about Native American culture in Alta California came from Spanish and other European explorers, who left behind accounts about the natives they encountered (Cook 1960). In September 1542, Juan Rodríguez Cabrillo sailed up the coast from Baja California and stopped in San Diego, reaching the Ventura area by October 1542.

In 1769, a Spanish expedition headed by Gaspar de Portolà and Junípero Serra traveled north from San Diego. The aim of the expedition was to seek out locations for a chain of presidios and missions in order to extend the Spanish Empire from Baja California into Alta California. The

Presidio of San Diego and Mission San Diego de Alcalá were established in San Diego in July 1769, followed by the Presidio of Monterey and Mission San Carlos Borroméo de Carmelo in 1770 in Northern California. Missions that were established close to the Proposed Project area include San Gabriel Arcángel, San Juan Capistrano, and San Luis Rey de Francia, which were founded in 1771, 1776, and 1798, respectively.

The Mexican Period in Alta California began in 1822 and lasted until the Mexican-American War from 1846 to 1847. Under the Mexican government, the missions were secularized and turned into private ranches through government land grants.[3] Native populations did not fare much better under Mexican control, and continued to be used for labor on the private ranches. Although California's governor, José Maria Echeandía, suggested in the 1820s that the former mission lands should be used for Indian village settlement, the Secularization Act passed by the Mexican government in 1833 gave way for successive governors to disperse the land as they wanted (Lech 2004). Thus, the lands previously held by the missions became divided into land grants, or ranchos, and granted to private Mexican citizens. In order to obtain a rancho, an applicant submitted a petition containing personal information and a land description and map (i.e., a diseño).

In 1848, the U.S. acquired California through the Treaty of Guadalupe Hidalgo. Although California had begun to see the arrival of Americans from the east in the 1830s and 1840s, it was after acquisition by the U.S. that the growth of the American population in California began to increase. Southern California was increasingly developed and occupied as more Americans migrated to the region in pursuit of land, gold, and other mining pursuits, agriculture, and speculation interests (Lech 2004).

Initially, Southern California was divided into only two counties—Los Angeles and San Diego. In 1853, San Bernardino County was added, and what is now Riverside County was primarily within San Diego County and partially within San Bernardino County. In the early era of the American period, the U.S. government quickly went to work surveying its newly acquired land in order to facilitate settlement; however, the Treaty of Guadalupe Hidalgo bound the U.S. to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government (Lech 2004; California State Archives 2007). The Land Act of 1851 ("Act to Ascertain and Settle the Private Land Claims in the State of California") established a board of commissioners to review land grant claims.

Monterey Park and Montebello

Spanish explorer Juan Rodríguez Cabrillo first encountered California in 1542, claiming it for the King of Spain. More than two centuries later, Christian missionaries and soldiers made port and founded Mission San Gabriel Arcángel in 1771, making it the fourth of 21 Spanish missions developed between 1769 and 1823. The area that now comprises Monterey Park was part of the southern portion of the Mission San Gabriel Arcángel lands, and was used for cattle, horses, and sheep grazing. Prior to secularization of the mission lands by the Mexican government, Spain

[3] More information is provided in *José Panto, Capitan of the Indian Pueblo of San Pascual, San Diego County* (Farris 1994) and *Indians and California Missions* (Meighan 1987).

had granted approximately 30,000 acres, including most of the lands that now comprise Monterey Park, to Don Antonio Maria Lugo in 1810, which became known as Rancho San Antonio. Thereafter, Lugo built the first adobe house in Monterey Park in 1840 on South Garfield Avenue near Keller Street, approximately 0.5 mile north of what is now Highway 60. In 1866, Alessandro Repetto, an Italian immigrant, purchased approximately 5,000 acres surrounding what is now Monterey Park, including Jose Lugo's adobe where he lived and managed a sheep ranch until 1885. One of the most influential early settlers of the area was Richard Garvey, who purchased approximately 5,000 acres in the flat area of Monterey Park. In 1906, the former rancho lands were subdivided into an area that became known as Ramona Acres, and were divided into 0.5-acre and 1-acre lots. By 1944, Monterey Park had grown to have a population of 10,000, although half of the land within the city boundaries (primarily the southern portion of the city) was largely undeveloped. After World War II, Monterey Park experienced a building boom, and the population grew to more than 20,000 by 1950, and was approximately 40,000 by 1960. By the late 1970s, the city was fully supported by utility services and growth had slowed considerably. Today, the city supports a population of approximately 61,000.

Urbana Preservation & Planning, LLC (Urbana) previously prepared an in-depth historical background for the cities of Monterey Park and Montebello (Becker and Bassett 2010). Initially platted as the Town of Newmark (after Harris Newmark, one of the early land syndicate owners responsible for the speculative land plat recorded in 1899), Montebello's Italian-language name translates to "beautiful hill." The original town site, located at the south edge of Monterey Park, was centered on an approximately 40-acre land area divided into a standard grid form and surrounded by larger 5-acre plots to support agricultural activities. In the first two decades of the 20th century, Montebello thrived as an agricultural community with an ideal climate, productive soil, and abundant water, as well as a reliable water supply system established in 1900 by William Mulholland's Montebello Land and Water Company. By 1914, the town was serviced by electricity from Henry Huntington's Pacific Light & Power Company (PLPC), and after a merger between PLPC and SCE in 1916, the town's electricity was provided by SCE. Shortly after redefining its boundaries outside of Monterey Park, Montebello incorporated as a city in 1920. Three years prior, in 1917, the Standard Oil Company discovered oil in a privately owned plot of land in the Montebello Hills. By the time of incorporation, the Montebello oil field produced one-eighth of the State's crude oil supply (City of Montebello 2010). The oil field extended in all directions around Montebello. By 1925, the city maintained an extensive gravity- and steam-powered water system with two reservoirs, employed a 16-man fire department, had mostly level grades with macadamized streets, and public lights powered by electricity. By 1930, Montebello's population was 5,498, and the population increased substantially to 21,735 by 1950. This population spike is likely attributed to wartime industry and increased housing opportunities in Montebello during World War II. Steady population increases occurred through the historic period and there were 42,807 residents in 1970. Today, the approximately 8.25-square-mile city maintains a population of approximately 61,085.

Rosemead

The San Gabriel Mission was first established in 1771 between what is now Montebello and Rosemead. However, flooding between 1775 and 1776 caused the mission to be relocated. The area encompassing Rosemead continued to be administered by the Mission San Gabriel and was used primarily for ranching until 1834, at which time Mexico gained its independence from Spain and the land was distributed to private citizens.

After the Mexican-American War ended in 1848, the area became part of the U.S. The first American settlers in Rosemead were John and Harriet Guess, who moved from Conway County, Arkansas into the San Gabriel Valley in 1852. By 1855, they were living in what is now Rosemead and in 1867 they purchased 100 acres within the city boundaries between Valley Boulevard and Marshall Street and from Rosemont Boulevard to the Eaton Wash. Leonard J. and Amanda Rose also settled in what is now Rosemead, and by 1861 they had purchased 600 acres of land located between present Rosemead Boulevard and Walnut Grove. The Roses named their ranch Rosemead. Over the next several decades the area was primarily used for ranching and agriculture. The City of Rosemead was incorporated in 1959.

South El Monte

The area encompassing South El Monte was originally administered by the Mission San Gabriel and was used primarily for ranching until 1834, at which time Mexico gained its independence from Spain and the land was distributed to private citizens. The area was then part of the Spanish land grant Rancho La Puente.

After the Mexican-American War ended in 1848, the area became part of the U.S., and American settlers entered the region in 1849. Farms and ranches were established, and the area was primarily rural until after the 1950s. While the neighboring city of El Monte was established in 1912, South El Monte was not incorporated into a city until 1958.

Commerce

The area making up the present day City of Commerce was originally part of the Rancho San Antonio, owned by Antonio Maria Lugo. In 1887 the Atchison, Topeka & Santa Fe Railway built its main line through the area. However, the majority of the land remained in use as ranch land for the next several decades.

By the 1920s, factories had been built along the railroad and industrial uses of the land quickly expanded. Prior to incorporation, Commerce consisted of the communities of Bandini, Rosewood, and Laguna. In the 1940s, the community leaders banded together with the intent of further industrializing the area. Commerce was incorporated in 1960.

Bell Gardens

The area making up the present day Bell Gardens was originally part of the Rancho San Antonio, owned by Antonio Maria Lugo. The land was primarily used for ranching and held by the Lugo family until after the Mexican-American War ended in 1848, and the area became part of the U.S. The land continued to be used for ranching and agriculture through the 1930s. The first school in Bell Gardens was constructed in 1867.

In 1900, the area now known as Bell Gardens was subdivided. In 1927, the Firestone Tire Company bought land in the area, which signified the first industrialization of the community. In 1930, O.C. Beck purchased many of the subdivisions and initiated the construction of affordable housing. Further industrialization took place during World War II. Bell Gardens was incorporated in 1961.

Pasadena

The land now encompassing the City of Pasadena was administered by the Mission San Gabriel and was used primarily for ranching until 1834, at which time Mexico gained its independence from Spain and the land was distributed to private citizens. The land then became part of the Rancho el Rincon de San Pascual, which was granted to Don Juan Mariné in 1835. The land changed hands several times and in 1843 it was granted to Colonel Manuel Garfias. Garfias built a large hacienda on the land; however, it again changed hands to Dr. John S. Griffin and Benjamin "Don Benito" Wilson, who eventually sold off portions of the rancho.

Pasadena incorporated as a city in 1886, and in 1890 the Valley Hunt Club began a mid-winter festival, which eventually transformed into the Tournament of Roses Parade. The population of Pasadena grew quickly, and the city annexed several areas to increase the acreage of the city. Pasadena became known for its wealth, its architecture, and as a winter resort town. During World War II, industry moved into Pasadena. The first freeway, Arroyo Seco Parkway, was built in 1940 between Pasadena and Los Angeles. Pasadena continued to grow as additional post-war housing was constructed.

Mesa Substation Property

Urbana previously prepared an in-depth historical background for Mesa Substation (Becker and Bassett 2010). Drawings of the Mesa Substation property indicate that initial construction occurred in 1947 or 1948. In addition, historic aerial photographs of the property (dating to 1948, 1953, 1980, and 2003/2004) reveal the substation’s construction history and help to illustrate expansions in the property boundaries and equipment capacity.

In 1948, the Mesa Substation property contained seven original buildings identified as the Maintenance Shop Building (constructed in 1947-1948), Storage Building No. 1 (1947-1948), Storage Building No. 2/Fire Pump House (1947-1948), Storage Building No. 3/Oil Pump House (1947-1948), Main Control Building (1947-1948), No. 1 Condenser Auxiliary House (1947-1948), and the 16 kV Switchrack Relay House (1947-1948). Original electrical equipment included 16 kV switchracks and transformer banks located at the southwest and southeast corners of the substation property. Water tanks, circuit breakers, and oil tanks are among the additional equipment originally incorporated on the property, while dirt pathways allowed for access to equipment throughout the property. At the time of construction, the property was surrounded by open desert space with little to no infrastructure surrounding the site.

By 1953, the Mesa Substation property had been improved with an addition of a 66 kV switchrack and associated transformers at the southwest corner of the property, along with the installation of oil-blast circuit breakers located on the 66 kV switchrack. In 1953, the property was still in its original square plan and mostly surrounded by open desert space with little infrastructure located near the site.

In the subsequent available historic aerial photograph from circa 1980, Mesa Substation experienced modifications and upgrades to both buildings and electrical equipment at the site. Portions of the 66 kV switchracks were improved to an electrical output of 220 kV, while additions of entirely new 220 kV switchracks were also installed. By 1980, the Maintenance Shop Building and the Main Control Building had been modified in the form of square-footage additions. In order to accommodate switchrack and building expansion, the substation was also expanded westerly at the southwest side and southerly at the southeast side. Likewise, the area surrounding the substation property had experienced significant growth by this time, and numerous dwellings and commercial and industrial buildings were erected around the property.

By 2003/2004, the substation experienced further expansion of electrical equipment and capacities, as well as the addition of a garage. The 2003/2004 photograph shows that the substation maintained operating levels at 220 kV, 66 kV, and 16 kV, while the density of switchracks suggests the addition of switchrack equipment at current or previous capacities. The garage was constructed south of the complex to store substation equipment. The substation property boundaries were maintained from the 1980s expansion, while the area surrounding the property had grown for residential, commercial, and industrial uses. With the exception of the addition of the Computer Storage Operations Building in the early 2000s, the present-day substation property is reflective of the 2003/2004 building and electrical equipment.

4.5.2.3 Historic-Era Electrical Conveyance Systems

Williams (Williams 2014) previously compiled an in-depth background on historic-era electrical conveyance systems. A typical electrical conveyance system, also referred to as a power grid, consists of four components that deliver electricity to individual properties. Electrical power originates at the generating power plant (component 1), which houses a spinning electrical generator powered by a steam turbine, a diesel engine, a gas turbine, or water from a hydroelectric dam. The power is conveyed from the generator to a transmission substation (component 2) that uses large transformers to intensify the original voltage to a higher level before distributing the electricity out through the grid. High-voltage transmission lines typically mounted to large steel towers (component 3) carry the electricity great distances to the power substation (also referred to as the step-down or sub-transmission station), wherein the high voltage is reduced and split for distribution via low-voltage power lines (component 4) that are typically mounted to wooden poles. The electricity distributed via these low-voltage lines carries power between 4 kV (distribution lines) and 161 kV (subtransmission lines), depending on the customer. Though it is referred to as a static “system,” a power grid—including the grid that comprises SCE’s present-day approximately 50,000-square-mile service territory—is constantly evolving and changing via expansion and upgrades to respond to energy demands, and through renewable interconnections to meet regulatory requirements for a “greener” grid. The grid is typically expanded in a piecemeal and incremental fashion with individual subtransmission lines, distribution lines, and substations installed separately as independently operating facilities to accommodate customer demand.

Generation Plants

Steam and hydroelectric plants were the first generating facilities built to create power. In the mid-1700s, the modern steam engine was developed, which made for significant industrial advancements in the electrical field. In the U.S., the first great hydroelectric developments occurred in the New England region, where the textile industry rapidly expanded after small 10,000- to 12,000-horsepower facilities were installed on the Merrimac River in 1822 near present-day Lowell and Lawrence, Massachusetts, and near Manchester, New Hampshire. Similar water-powered textile processing facilities opened on the Mohawk River at Cohoes, New York in 1828, and on the Androscoggin River at Lewiston, Maine in 1849. The world's first hydroelectric power plant was put in-service in 1882 on the Fox River in Appleton, Wisconsin. Seven years later, in 1889, the first alternate-current hydroelectric plant in the U.S. was installed in Oregon City, Oregon. Built by the Willamette Falls Electric Company, the facility consisted of two 300-horsepower Victor wheels belted to 4,000-volt single-phase generators, and carried power for approximately 13 miles to nearby Portland, Oregon.

Transmission Lines

The General Electric Company (a colleague company to SCE) reported voltage capacities from 1891 to 1933. The reported voltage levels provide a threshold for determining significant technological innovations in voltage capacity of transmission lines. Based on the voltage capacities reported by the General Electric Company, voltages were upward of 100 kV by 1907. By 1920, voltages were reported at 220 kV, and capacities increased to 280 kV by 1933. Between 1937 and 1940, transmission line capacities reportedly increased to 300 kV. However, most transmission line operators in California were not installing facilities at what was then considered high voltages until the early 1910s. The San Bernardino Light and Power Company constructed early high-voltage transmission lines spanning Pomona and San Bernardino (10 kV over approximately 28 miles in 1891), the San Antonio Light and Power Company constructed the Mill Creek line to Riverside (10 kV over approximately 42 miles in 1893), and at the Folsom Hydroelectric Project (11 kV over approximately 22 miles in 1895). In 1898, Edison Electric Company (EEC) introduced a new high-voltage electric power conveyance system with its Santa Ana No. 1 Transmission Line that spanned approximately 82 miles over wooden poles at a capacity of 33 kV to the EEC's Los Angeles 2nd Street Substation.

The lattice steel tower (LST) is the most enduring electric power support structure, and is still employed today in various sizes and forms for transmission and subtransmission lines throughout the country. Predecessor forms of the modern-day LST were first executed in the design of windmills. Similar structures were later erected for use in electric trolley systems, and telegraph and telephone lines. Since the mid- to late 19th century, iron and then steel lattice construction was utilized for electrical transmission and distribution lines. Prior to the use of iron and steel structures, early electrical transmission lines built in the U.S. conveyed low voltages and were supported by wooden poles. As voltage capacity increased and transmission spans were lengthened, utility providers recognized the need to install stronger support structures to carry the increased weight load for heavier wires, multiple circuits, larger insulators, and associated structure-bracing components.

By 1895, the use of iron and steel poles in the construction of overhead transmission circuits was considered common, having been made of "successive lengths of wrought-iron pipe shrunk together at the joints, or of some of the various forms of structural iron" (Abbott 1895). The three typical designs employed were the lattice pole, tubular steel pole, and iron pipe pole, with the iron pipe pole cited as the earliest type introduced to the market and most preferred due to the flexibility in the pipe-pole specifications with respect to desired weight and strength. The use of iron was preferred over wood because of the material's durability; however, iron structures also served as excellent conductors, thus attracting lightning and the opportunity for damage to the wires and connecting systems reliant on the electricity within. At the turn of the century, a shift in structure typology occurred as signaled by use of the word "tower" rather than "pole" in some electrical engineering periodicals of the day. Simultaneously occurring was the change in material from iron to steel.

Throughout the first half of the 20th century, utility providers designed larger, sturdier tower types to accommodate increasing voltage capacities, the weight of thicker and heavier wires, glass and porcelain insulators, and increased spans between tower locations. In the early modern-period, high-voltage towers nearly doubled in size, reaching heights of 200 feet as observed at the towers of the Boulder Dam to Los Angeles Transmission Line built by the Los Angeles Department of Water and Power. Into the early 1960s, massive towers were erected to support 500 kV transmission lines.

Substations

SCE substations (and other facilities, such as hydroelectric plants, steam plants, and ice houses), which developed in the early service-area expansion period (circa 1909 through the 1930s), often incorporated a historicist architectural aesthetic into the substation complex by housing the utilitarian activities and engineering equipment inside an ornately decorated building modeled after popular architectural styles of the time. These early facilities were developed in the Classical Revival, Mission Revival, Spanish Revival, and Stripped Classical styles, and were typically constructed as stand-alone structures throughout the SCE service territory. Notable examples include Beverly Hills Substation, built in 1912 in a Mission Revival style; Delano Substation, built in 1920 in a Classical Revival style with a Chicago School influence; and Vestal Substation, built in 1920 in a Classical Revival and Beaux Arts style. The substation properties were expanded as necessary based on customer demand, usually in the form of additional buildings or structures and the requisite electrical engineering equipment (e.g., transformers and switches). In some instances, SCE designed substation buildings to resemble housing to complement the surrounding residential neighborhood. Known examples include the Spanish Revival-style Ramona Substation built in 1926 in Alhambra, and the Mediterranean Revival-style Fairfax Substation built in 1930 in Fairfax.

Prior to 1950, SCE and its predecessor companies had installed approximately 150 substation facilities within the service territory. In 1950, SCE acquired or put in service approximately 402 additional substation facilities. Currently, there are approximately 1,300 substation facilities within SCE's portfolio. With the construction of bulk power stations after World War II, SCE no longer incorporated stylistic elements or a clear architectural aesthetic into its substation properties. Through its bulk power station ideology, SCE promoted a more efficient program of consolidating existing substation facilities through remodeling and expansion, and through the construction of new utilitarian electrical engineering complexes with less architectural intervention. In most instances, monumental substation buildings were no longer erected; rather, the properties were improved with basic electrical engineering structures (e.g., transformer racks, cable trenches, and water towers). The structures built to house traditional uses (e.g., switching rooms, oil houses, and other functions) were of utilitarian design, constructed of corrugated aluminum or transite siding, and void of stylistic details and ornamentation.

4.5.3 Cultural Resources Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.5.3.1 Federal

A small portion of the Proposed Project is located on U.S. Army Corps of Engineers (USACE) lands and may require federal permitting. The following federal regulations for cultural resources apply to the Proposed Project.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires federal agencies to consult with the Advisory Council on Historic Preservation to take into account the effects of their undertakings on historic properties, and the procedures in Title 36, Part 800 of the Code of Federal Regulations (CFR) define how federal agencies must meet these responsibilities. As defined in Title 36, Part 800.16(y) of the CFR, a federal undertaking is a project, activity, or program either funded, permitted, licensed, or approved by a federal agency. Per Title 36, Part 800.3(a) of the CFR, the federal agency will determine whether a proposed federal action is an undertaking.

Title 36, Part 800.5(a) of the CFR describes procedures for evaluating a project’s adverse effects on cultural resources. An adverse effect is found when a federal undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register of Historic Places (NRHP) in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Examples of adverse effects are provided in Title 36, Part 800(a)(2) of the CFR and include, but are not limited to, the following:

- Physical destruction of or damage to all or part of the property
- Alteration of a property—including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access—that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property’s use, or of physical features within the property’s setting, that contribute to its historic significance

- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or native Hawaiian organization
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

National Register of Historic Places Eligibility Criteria

The National Park Service (NPS) regulation provided in Title 36, Part 60 of the CFR is the primary reference for determining the historical significance of a cultural resource. The regulation defines the criteria by which a property is determined to be eligible for listing in the NRHP as follows:

> "The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that
>
> (A) are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (B) that are associated with the lives of persons significant in our past; or
>
> (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or
>
> (D) that have yielded or may be likely to yield information important in history or prehistory."

4.5.3.2 State

State regulations affecting cultural resources include Public Resources Code (PRC) Sections 21083.2 and 21084.1, and California Environmental Quality Act (CEQA) Environmental Guidelines Section 15064.5 and Appendix G.

Cultural resources, as defined in CEQA, include prehistoric- and historic-era archaeological sites, districts, and objects; historic buildings, structures, objects, and districts; and traditional/cultural sites or the locations of important historic events. CEQA Guidelines Section 15064.5 states that a project may have a significant environmental effect if it causes a substantial adverse change in the significance of a historical resource. Additionally, the Lead Agency must consider properties eligible for listing on the California Register of Historical Resources (CRHR) or that are defined as a unique archaeological resource in PRC Section 21083.2.

A site meets the criteria for inclusion in the CRHR if the following occurs:

1) It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

2) It is associated with the life or lives of a person or people important to California's past

3) It 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

4) It has yielded, or may be likely to yield, information important to prehistory or history

Additional information regarding the CRHR is discussed in Section 4.5.5, Cultural Resources Significance Criteria.

4.5.3.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

County of Los Angeles

A portion of the proposed telecommunications routes from transmission towers M38-T5 and M40-T3 to Mesa Substation is located within unincorporated Los Angeles County. The Conservation and Open Space Element of the County of Los Angeles General Plan sets policy direction for cultural resources within Los Angeles County. The following objective and policies are relevant to cultural resources:

Objective

- To preserve and protect sites of historical, archaeological, scenic, and scientific value

Policies

- Protect cultural heritage resources, including historical, archaeological, paleontological and geological sites, and significant architectural structures
- Encourage public use of cultural heritage sites consistent with the protection of those resources
- Promote public awareness of cultural resources

- Encourage private owners to protect cultural heritage resources

City of Monterey Park

The following goal and policies from the City of Monterey Park General Plan are relevant to cultural resources:

Goal

- Goal 3 – Preserve the historical resources in Monterey Park

Policies

- Policy 3.1 – Continue to support the efforts of the Historical Society, Historical Heritage Commission, and the Arts and Cultural Commission
- Policy 3.2 – Raise public awareness about Monterey Park's history and cultural resources

City of Montebello

The following objective, policy, and program from the City of Montebello General Plan are relevant to cultural resources:

Objective

- Preserve and display the history and cultural background of the community in order to foster community identity, pride, and an appreciation of its cultural heritage

Policy

- The Juan Matias Sanchez Adobe, the Rio Hondo monument, the Viejo Mission, Taylor Ranch, and El Camino Real should be preserved and restored as necessary

Program

- Support additional research and publication concerning the history of Montebello

City of Rosemead

The City of Rosemead General Plan does not contain any goals, policies, or programs pertaining to cultural resources.

City of South El Monte

The City of South El Monte General Plan does not contain any goals, policies, or programs pertaining to cultural resources.

City of Commerce

The following policy and programs from the Resource Management Element of the City of Commerce General Plan are relevant to cultural resources:

Policy

- To foster a better understanding of the city's history and heritage

Programs

- Compliance with the Cultural Resource Management program, which requires that should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established
- Implementation of Design Guidelines and Review procedures that ensure that building design, architecture, and site layouts are compatible with surrounding development

City of Bell Gardens

The following policy and programs from the Conservation Element of the City of Bell Gardens General Plan are relevant to cultural resources:

Policy

- To identify and preserve appropriate structures and sites which have historical significance

Programs

- Implementation of archaeological and paleontological monitoring for all major projects which would include a stipulation that should archaeological or paleontological resources be uncovered during excavation or grading activities, all work would cease until appropriate mitigation measures were established
- Develop programs for increasing cultural awareness in the community

City of Pasadena

The following goal, objectives, strategy, policies, and programs from the City of Pasadena General Plan are relevant to cultural resources:

Goal

- Preservation and enhancement of the city's cultural and historic buildings, streets, and districts, not merely as gentle reminders of a pleasant past, but also as relevant and unique alternatives for the present and future—a source of community identity, social, ecological, and economic vitality

Objectives

- Identification, maintenance, and protection of buildings, streets, or districts having historic and cultural significance
- A program of public awareness and support for historic and cultural preservation as a key to Pasadena's uniqueness and future economic vitality
- A positive philosophy of preservation as a valid and necessary component at every phase of governmental decision making
- Relating new development to existing environment in scale, material, and character so that Pasadena's inherent human scale, visual, and functional diversity may be maintained and enhanced

Strategy

- Establishment of an equitable process for maintaining and perpetuating historical and cultural landmarks through a combination of public and private efforts

Policies

- Private preservation and restoration efforts shall be encouraged and facilitated, and incentive programs to further such efforts shall be studied and developed
- Cultural and historic preservation at the neighborhood level shall ensure the opportunity for the full range of citizen participation and relate the intent of preservation activities to local cultural diversity
- The city will act as a resource of last resort when all other options and opportunities for preservation have been exhausted, if the landmark in question is deemed to have sufficient historic or cultural significance to warrant city intervention
- Where restrictions on permitted uses make it unlikely that worthy structures can be preserved, such restrictions may be relaxed, particularly if the proposed use would not adversely affect surrounding properties

Programs

- Adoption of a strong Cultural Heritage Ordinance
- Identification of significant buildings, streets, and districts
- Development of an educational program in cultural heritage, drawing on and supplementing school programs, expanding contact with historical experience throughout the community and region

- Establishment of an information exchange network coordinated by the Historic Preservation Officer
- Development of historic preservation overlay zone
- Utilization of the redevelopment agency as a vehicle for preservation activity; the agency is currently empowered to acquire, hold, restore, and resell buildings
- Creation of a rehabilitation loan program
- Development of programs in the areas of tax relief, transfer of development rights, and building code relaxation, as these apply to historic buildings and districts
- Establishment of a program to relocate reusable older buildings from or into redevelopment projects as a means of historic preservation

4.5.4 Cultural Resources Records Search and Survey Results

4.5.4.1 Record Searches

Records and literature searches were conducted at the SCCIC and in the CHRIS GIS inventory. The SCCIC reported that 78 cultural resource studies have been previously conducted within a 0.5-mile radius of the Proposed Project area that would require ground-disturbing activities or that would otherwise alter the existing setting. Thirty-four of these previous studies are within the Proposed Project area. The SCCIC records search indicated there are 43 previously recorded resources within a 0.5-mile radius of the Proposed Project area. Of these, one is prehistoric, three are multi-component, and 39 are historic-era resources. There are a total of 12 previously recorded cultural resources within the Proposed Project area, all of which are historic-era resources. Six previously recorded transmission and subtransmission line resources are located within the Proposed Project area, and include the following:

- Antelope-Mesa 220 kV Transmission Line (P-19-186876)
- Mesa-Anita-Eaton 66 kV Subtransmission Line (P-19-190502)
- Mesa-Ravendale-Rush 66 kV Subtransmission Line (P-19-190503)
- Rio Hondo-Amador-Jose-Mesa-Narrows 66 kV Subtransmission Line (P-19-190504)
- Mesa-Walnut 220 kV Transmission Line (P-19-190505)
- Walnut-Hillgen-Industry-Mesa-Reno 66 kV Subtransmission Line (P-10-190508)

These six subtransmission and transmission lines were previously determined ineligible for the NRHP and CRHR. The Antelope-Mesa 220 kV Transmission Line was removed during the construction of the TRTP and no longer exists; therefore, it will not be discussed further. Additionally, the Mesa Substation complex has been previously documented within the Proposed Project area and determined ineligible for the NRHP and CRHR.

Six additional historical resources were identified within the Proposed Project area associated with the telecommunications line from transmission tower M38-T5 to Mesa Substation, and include the following:

- Montebello Oil Field (P-19-003813)
- Juan Matias Sanchez Adobe (P-19-178617)
- Mission Vieja Plaque (P-19-186540)
- Whittier Narrows Dam Recreation Area (P-19-186889)
- Temple School (P-19-190334)
- SCE Siphon Road Towers (P-19-190507)

The Juan Matias Sanchez Adobe and Mission Vieja Plaque were previously listed on the CRHR as Historical Landmarks. The Montebello Oil Field and Whittier Narrows Dam Recreation Area have not been previously evaluated, and the Temple School was previously recommended as eligible for the NRHP as a Local Landmark.

4.5.4.2 Native American Consultation

Native American Heritage Commission

Section 5097.91 of the PRC established the Native American Heritage Commission (NAHC), the duties of which include taking inventory of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC is notified of a discovery of Native American human remains from a county coroner.

Consultation with the NAHC was initiated on September 25, 2014, requesting a search of its Sacred Lands File within a 1-mile radius of the Proposed Project area that would require ground-disturbing activities or that would otherwise alter the existing setting. The NAHC responded, stating that no Native American cultural resources are present in the immediate project area. SCE contacted nine Native American individuals and organizations that were identified by the NAHC to possibly have knowledge of cultural resources within the Proposed Project area. As of January 29, 2015, responses were received from Chairman Andrew Salas of the Gabrieleño Band of Mission Indians/Kizh (Kit'c) Nation and Tribal Administrator John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation. Documentation of Native American correspondence is on file at SCE’s office in Monrovia, California.

4.5.4.3 Cultural Resource Survey and Archival Research Results

Archaeological Survey Area

On June 19, 2014, an archaeological field survey was conducted within the Proposed Project area in the vicinity of Mesa and Goodrich substations (Williams et al. 2014). On December 30, 2014 and January 5 and 6, 2015, additional archaeological field surveys were conducted in the vicinity of Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications work (Williams and Davis 2015). A search for historic properties and historical resources was conducted within Proposed Project areas that would potentially require ground-disturbing activities or that would otherwise alter the existing setting. Proposed Project work areas within Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications work are depicted in Chapter 3, Project Description in Figure 3-1: Proposed Project Overview Map, Figure 3-2: Proposed Project Overview (Transmission), Figure 3-3: Proposed Project Overview (Subtransmission), Figure 3-4: Proposed Project Overview (Telecommunications); and Figure 3-5: Proposed Project Overview (Distribution). The Proposed Project area that had not been included recently in the cultural resources inventories conducted for the TRTP was intensively surveyed in transects measuring 33 feet wide (10 meters) or less. For surveys of property parcels and SCE right-of-way (ROW), no buffers were added to the survey areas as proposed work generally would not extend beyond confined parcel and ROW boundaries. A 25-foot buffer was surveyed on either side of the centerline (i.e., 50-foot-wide corridor) of proposed telecommunication routes and existing unpaved proposed access roads.

Archaeological Sites and Isolates

No prehistoric or historic-era archaeological sites or isolated finds were identified within the Proposed Project area.

Built Environment Resources

Built environment surveys and archival research were conducted in 2014 and 2015 to revisit previously recorded resources and to identify and evaluate previously undocumented building and structural sites within the Proposed Project area. The following is a discussion of the resources identified within the Proposed Project area.

Montebello Oil Field (P-19-003813)

This previously recorded resource consists of well pads, oil wells, house pads, associated refuse, and access roads associated with the Montebello Oil Field, which is currently in operation (Fulton and Fulton 2008). The resource has not been previously evaluated for the NRHP or CRHR. The resource was revisited during a survey of the proposed overhead telecommunications line from transmission tower M38-T5 to Mesa Substation; however, no cultural constituents were identified within the Proposed Project area. Because proposed work involves the installation of overhead telecommunications line on existing overhead facilities and the resource boundary extends well outside of the Proposed Project area, the resource was not evaluated for the NRHP or CRHR.

Juan Matias Sanchez Adobe (P-19-178617)

The Juan Matias Sanchez Adobe is listed on the CRHR as a Historical Landmark (Historical Resources Inventory 090180). This adobe was constructed in 1845 by Casilda Soto de Lobo and her three sons on lands that were part of the Rancho La Merced land grant. The resource was revisited during a survey of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation, and no changes to the adobe were noted since its previous documentation.

Mission Vieja Plaque (P-19-186540)

This resource consists of a plaque erected in 1921 to mark the original site of Mission Vieja, which was founded in 1771. The plaque is listed on the CRHR as a Historical Landmark (Historical Resources Inventory 089715). The plaque was revisited during a survey of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation, and no changes to the Mission Vieja plaque were noted since its previous documentation.

Whittier Narrows Dam Recreation Area (P-19-186889)

This previously recorded resource consists of remains of concrete floors, concrete foundations, brick and mortar foundations, swimming/wading pools, and associated refuse (Messick 2008; Tsunoda 2008). The resource has not been previously evaluated for the NRHP or CRHR. The resource was revisited during a survey of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation. A single concrete enclosure and sparse refuse mixed with modern and historic-era debris (e.g., cobalt glass fragment, amethyst glass fragment, and ceramic transfer ware fragment) were noted within the Proposed Project area. Because the proposed work involves the installation of overhead telecommunications line on existing overhead facilities, potential ground disturbance would be minor (if any), and the resource boundary extends well outside of the Proposed Project area, the resource was not evaluated for the NRHP or CRHR.

Temple School (P-19-190334)

The Temple School was previously recommended eligible as a Local Landmark and eligible for the NRHP (Roberts and Brock 1987; PAR Environmental Services 2012). This resource consists of 18 buildings and structures built by the Temple School Board (1937–1948) and the USACE. The USACE used the property as its Base Yard Facility from 1955 to present. The resource was revisited during a survey of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation, and no changes to the resource were noted since its previous documentation.

SCE Siphon Road Towers (P-19-190507)

This resource consists of the remnant grouping of five 66 kV steel lattice obelisk towers (Tinsley Becker 2010a). The resource has been previously determined ineligible for the NRHP and CRHR. Only one tower is located in the area of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation.

440 Potrero Grande Drive Residential Structures

Three previously unrecorded residential structures were identified within the proposed Mesa Substation expansion area. The structures included two single-family residences and one garage building located at 440 Potrero Grande Drive (Williams et al. 2014). Building A at 440 Potrero Grande Drive was constructed as a residence circa 1942 in a vernacular style. The building also has a detached one-vehicle garage building located northwest of the residence. Building B at 440 Potrero Grande Drive was constructed as a residence circa 1949 in a vernacular style. All three buildings are currently vacant and in disrepair. Building plans, aerial photographs, architectural features, documentation at public libraries, building permits, chain-of-title documentation, city directories, census records, and other available resources were examined to determine eligibility for listing under the NRHP and CRHR. Based on the absence of a contribution to local/regional history or cultural heritage, historically significant owners, and the condition of the existing structures, the three buildings at 440 Potrero Grande Drive were recommended to be ineligible for listing under the NRHP or CRHR. In addition, the buildings did not fulfill the definition of a historical resource under the criteria set forth by CEQA.

Electrical Infrastructure

Electrical infrastructure with Proposed Project modifications underwent archival research and evaluations (Williams 2014). Three substations (Goodrich, Jose, and Mira Loma) and six distribution lines (Arboles 16 kV, Cerveza 16 kV, Coronado 16 kV, Lomas 16 kV, Peck 16 kV, Picador 16 kV) were determined to be less than 50 years old and thus do not meet the age threshold for evaluation; therefore, they do not require additional review. Relevant electrical infrastructure and associated transmission and subtransmission lines are discussed in the following subsections.

<u>Transmission, Subtransmission, and Distribution Lines</u>

Eight 220 kV transmission lines, 15 overhead 66 kV subtranmission lines, and three 16 kV distribution lines are located within the Proposed Project area. Table 4.5-1: Evaluation of Transmission, Subtransmission, and Distribution Lines Located within the Proposed Project Area, describes the NRHP/CRHR-eligibility of the existing transmission and subtransmission lines within the Proposed Project area. Of these, six 66 kV and three 220 kV lines and six 66 kV lines were previously evaluated under other SCE projects and were determined to be not eligible for the NRHP/CRHR, or recommended ineligible in the case of Eagle Rock-Mesa 220 kV Transmission Line. The remaining lines located within the Proposed Project area, including five 220 kV, nine 66 kV, and three 16 kV circuits, were evaluated for the Proposed Project and recommended not eligible for listing in the NRHP/CRHR.

Table 4.5-1: Evaluation of Transmission, Subtransmission, and Distribution Lines Located within the Proposed Project Area

Infrastructure	Date	Comments	NRHP/CRHR Eligibility
Mesa-Anita-Eaton 66 kV Subtransmission Line	1951, 2012	Portions rebuilt under TRTP	Not Eligible, U.S. Forest Service (USFS) 101206A December 10, 2010
Mesa-Ravendale-Rush 66 kV Subtransmission Line	1948, 1951, 2012	Portions rebuilt under TRTP	Not Eligible, USFS101129A December 20, 2010
Mesa-Rush No. 2 66 kV Subtransmission Line	1948, 1951, 1967-1972, 2012	Portions rebuilt under TRTP	Not Eligible, USFS101129A December 20, 2010
Mesa-Narrows 66 kV Subtransmission Line	1951, 2012	Portions rebuilt under TRTP	Not Eligible USFS101112A December 20, 2010
Rio Hondo-Amador-Jose-Mesa 66 kV Subtransmission Line	1951, 2012	Portions rebuilt under TRTP	Not Eligible USFS101112A December 20, 2010
Walnut-Hillgen-Industry-Mesa-Reno 66 kV Subtransmission Line	1954	Portions rebuilt under TRTP	Not Eligible, USFS101209D February 1, 2011
Center-Mesa 220 kV Transmission Line	1962	Double-circuit tower with Walnut-Mesa 220 kV Transmission Line	Not Eligible, USFS101209C January 18, 2011
Eagle Rock-Mesa 220 kV Transmission Line	1922-1923/1961	Rebuilt on double-circuit towers	Recommended Not Eligible, Tinsley Becker. 2014[4]
Mesa-Walnut 220 kV Transmission Line	1956	Double-circuit Tower with Center-Mesa 220 kV Transmission Line	Not Eligible, USFS101209C January 18, 2011
Brookline 16 kV	1968	No additional comments	Recommended Not Eligible

[4] P-19-186870 Update

Infrastructure	Date	Comments	NRHP/CRHR Eligibility
Highcliff 16 kV	1965	No additional comments	Recommended Not Eligible
Malden 16 kV	1957	No additional comments	Recommended Not Eligible
Mesa-Laguna Bell-Narrows 66 kV Subtransmission Line	1948	Double-circuit LST	Recommended Not Eligible
Mesa-Newmark-Ramona 66 kV Subtransmission Line	1948	Double-circuit towers with Mesa-Repetto-Wabash 66 kV Subtransmission Line	Recommended Not Eligible
Mesa-Repetto-Wabash 66 kV Subtransmission Line	1948, 1970, 1973, 2007	Double-circuit towers with Mesa-Newmark-Ramona 66 kV Subtransmission Line	Recommended Not Eligible
Mesa-Newmark No. 1 66 kV Subtransmission Line	1957	Double-circuit tower with Mesa-Newmark No. 2 66 kV Subtransmission Line	Recommended Not Eligible
Mesa-Newmark No. 2 66 kV Subtransmission Line	1957	Double-circuit tower with Mesa-Newmark No. 1 66 kV Subtransmission Line	Recommended Not Eligible
Mesa-Rosemead No. 1 66 kV Subtransmission Line	1948, 1958	Double-circuit towers with No. 2 line; at the third structure, lines split and the No. 1 line moves southeast on wood poles	Recommended Not Eligible
Mesa-Rosemead No. 2 66 kV Subtransmission Line	1948, 1958	Double-circuit towers with No. 1 line; at the third structure, lines split and the No. 2 line moves southwest on double-circuit towers	Recommended Not Eligible

Infrastructure	Date	Comments	NRHP/CRHR Eligibility
Mesa-Rush No. 3 66 kV Subtransmission Line	1964, 1971	Double-circuit tower with Mesa-San Gabriel 66 kV Subtransmission Line	Recommended Not Eligible
Mesa-San Gabriel 66 kV Subtransmission Line	1964, 1971	Double-circuit tower with Mesa-Rush No. 3 66 kV Subtransmission Line	Recommended Not Eligible
Goodrich-Laguna Bell 220 kV Transmission Line	1960	Double-circuit tower with Mesa-Redondo 220 kV Transmission Line	Recommended Not Eligible
Laguna Bell-Rio Hondo 220 kV Transmission Line	1955, 1966	Double-circuit tower with Lighthipe-Mesa 220 kV Transmission Line	Recommended Not Eligible
Lighthipe-Mesa 220 kV Transmission Line	1955, 1966	Double-circuit tower with Laguna Bell-Rio Hondo 220 kV Transmission Line	Recommended Not Eligible
Mesa-Redondo 220 kV Transmission Line	1962	Double-circuit tower with Goodrich-Laguna Bell 220 kV Transmission Line	Recommended Not Eligible
Mesa-Vincent 220 kV Transmission Line	1960, 1971	Double-circuit tower with Goodrich-Laguna Bell 220 kV Transmission Line	Recommended Not Eligible

Sources: Tinsley Becker (2010b, c, d, e, f); Williams (2014)

Substations

Table 4.5-2: NRHP/CRHR Eligibility for Components of the Proposed Project summarizes NRHP/CRHR eligibility for Mesa Substation and additional substations where minor modifications would occur. Goodrich, Jose, and Mira Loma substations were constructed in 1971, 1989, and 1970, respectively; therefore, these substations are not of historic age and do not require further evaluation. Mesa Substation was previously evaluated and determined not eligible for the NRHP/CRHR. The Eagle Rock, Laguna Bell, Lighthipe, and San Gabriel substations have been evaluated and recommended eligible for the NRHP/CRHR. The Anita, Fairfax, Garfield, La Fresa and Newmark substations have not been evaluated (analysis results are pending); however, buildings are present within each substation that exhibit potential architectural significance and may be eligible for the NRHP/CRHR.

Table 4.5-2: NRHP/CRHR Eligibility for Components of the Proposed Project

Infrastructure	Date	NRHP/CRHR Eligibility
Anita Substation	1928	Potentially Eligible (substation more than 50 years old and building exhibits potential architectural significance)
Center Substation	1951	Recommended Not Eligible
Eagle Rock Substation	1913	Recommended Eligible
Eaton Substation	1958	Recommend Not Eligible
Fairfax Substation	1928	Potentially Eligible (substation more than 50 years old and building exhibits potential architectural significance)
Garfield Substation	1928	Potentially Eligible (substation more than 50 years old and building exhibits potential architectural significance)
La Fresa Substation	1930	Potentially Eligible (substation more than 50 years old and building exhibits potential architectural significance)
Laguna Bell Substation	1923	Recommended Eligible
Lighthipe Substation	1927	Recommended Eligible
Mesa Substation	1948	Not Eligible, USFS101129B November 20, 2010
Narrows Substation	1958	Recommended Not Eligible
Newmark Substation	1912	Potentially Eligible (substation more than 50 years old and building exhibits potential architectural significance)

Infrastructure	Date	NRHP/CRHR Eligibility
Pardee Substation	1969	Recommended Not Eligible
Ravendale Substation	1958	Recommended Not Eligible
Redondo Beach Substation No. 2	1954	Recommended Not Eligible
Repetto Substation	1949	Recommended Not Eligible
Rio Hondo Substation	1963	Recommended Not Eligible
Rosemead Substation	1958	Recommended Not Eligible
Rush Substation	1965	Recommended Not Eligible
San Gabriel Substation	1923	Recommended Eligible
Vail Substation	1956	Recommended Not Eligible
Vincent Substation	1967	Recommended Not Eligible
Wabash Substation	1928, 1967	Recommended Not Eligible
Walnut Substation	1966	Recommended Not Eligible

Sources: Basset and Tinsley Becker (2010); Chiang and Tinsley Becker (2014a, b); DeBiase and Tinsely Becker (2014); Williams (2014)

4.5.4.4 National Register of Historic Places and California Register of Historical Resources Eligibility

The NRHP and CRHR eligibility criteria identified in Section 4.5.3, Cultural Resources Regulatory Setting and the criteria listed in Section 4.5.5, Cultural Resources Significance Criteria were used to evaluate the historic-era resources in the Proposed Project area. Table 4.5-3: Historical Resources and Properties within the Proposed Project Area summarizes historical resources and properties within the Proposed Project area. A total of 14 resources are eligible, recommended eligible, or have not been evaluated for inclusion in the NRHP/CRHR: the Anita, Eagle Rock, Fairfax, Garfield, La Fresa, Laguna Bell, Lighthipe, Newmark, and San Gabriel substations; Montebello Oil Field; Juan Matias Sanchez Adobe; Mission Vieja Plaque; Whittier Narrows Dam Recreation Area; and Temple School.

Table 4.5-3: Historical Resources and Properties within the Proposed Project Area

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Anita Substation	Potentially NRHP/CRHR eligible (substation has not been evaluated but contains a building that exhibits potential architectural significance). Analysis in progress; results to be provided.	Replace 66 kV relays inside existing mechanical and electrical equipment rooms (MEERs). Install/upgrade fiber optic cable and telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** No impacts are anticipated as proposed work would occur inside existing buildings and no material or physical changes are proposed that would alter historic elements, as demonstrated at other substations with architectural significance such as the Lighthipe and Laguna Bell substations.
Eagle Rock Substation	Recommended NRHP/CRHR eligible under Criterion A/1: Association with the historic Big Creek Hydroelectric System.	Replace 66 kV relays inside existing MEERs. Install/upgrade fiber optic cable and telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** Proposed work would not alter Eagle Rock Substation's association with the historic Big Creek Hydroelectric System, and proposed work would occur inside existing buildings.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Fairfax Substation	Potentially NRHP/CRHR eligible (substation has not been evaluated but contains a building that exhibits potential architectural significance). Analysis in progress; results to be provided.	Replace 66 kV relays inside existing MEERs. Install/upgrade fiber optic cable and telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** No impacts are anticipated as proposed work would occur inside existing buildings and no material or physical changes are proposed that would alter historic elements, as demonstrated at other substations with architectural significance such as the Lighthipe and Laguna Bell substations.
Garfield Substation	Potentially NRHP/CRHR eligible (substation has not been evaluated but contains a building that exhibits potential architectural significance). Analysis in progress; results to be provided.	Replace 66 kV relays inside existing MEERs. Install/upgrade fiber optic cable and telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** No impacts are anticipated as proposed work would occur inside existing buildings and no material or physical changes are proposed that would alter historic elements, as demonstrated at other substations with architectural significance such as the Lighthipe and Laguna Bell substations.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
La Fresa	Potentially NRHP/CRHR eligible (substation has not been evaluated but contains a building that exhibits potential architectural significance). Analysis in progress; results to be provided.	Replace 220 kV circuit breakers and disconnect switches. Replace 66 kV relays inside existing MEERs. Install/upgrade fiber optic cable and telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** Existing transformer racks and switchracks do not contribute to the eligibility of substation properties. For the remaining work no impacts are anticipated as work would occur inside existing buildings and no material or physical changes are proposed that would alter historic elements, as demonstrated at other substations with architectural significance such as the Lighthipe and Laguna Bell substations.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Laguna Bell Substation	Recommended NRHP/CRHR eligible under Criterion A/1: Association with the historic Big Creek Hydroelectric System and the SCE 220 kV system in its position as an end point in the Eagle Rock-Laguna Bell Transmission Line that connected to the Big Creek hydroelectric system. Recommended NRHP/CRHR eligible under Criterion C/3: Laguna Bell Substation main building as an excellent example of the Stripped Classical style applied to a substation building. Features contributing to the eligibility of the Laguna Bell Substation Complex: Substation main building (Criteria A/1 and C/3) and warehouse (Criterion A/1).	Replace 220 kV circuit breakers and disconnect switches. Install/upgrade fiber optic cable and telecommunications equipment to connect Mesa Substation to SCE's existing telecommunications system. Install telecommunications facilities to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** Existing transformer racks and switchracks at the property do not contribute to the eligibility of the Laguna Bell Substation property. Proposed fiber optic and telecommunications work would occur within the substation building. Modifications would not cause a substantial adverse change to the historically and architecturally significant Laguna Bell Substation building because no material intervention—including, but not limited to, full or partial demolition, exterior wall removal, fenestration changes, or other architectural or aesthetic modification—would occur.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Lighthipe Substation	Recommended NRHP/CRHR eligible under Criterion A/1: association as one of the nine substations that are regarded as the backbone of the SCE 220 kV system that connected the SCE Big Creek Hydroelectric System and the SCE Long Beach Steam Plant, and that helped to energize and industrialize the Los Angeles region. Recommended NRHP/CRHR eligible under Criterion C/3: Lighthipe Substation main building as an embodiment of the Art Deco style of architecture and for representing SCE's programmatic historicist architecture in the first four decades of the 20th century. Features contributing to the eligibility of the substation complex: substation entrance pillars (Criterion A/1), main substation building (Criteria A/1 and C/3), pump house and	Replace 220 kV circuit breakers and disconnect switches. Install/upgrade telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system. Install telecommunications facilities to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** Existing transformer racks and switchracks at the property do not contribute to the eligibility of the Lighthipe Substation property. Proposed fiber optic and telecommunications work would occur within the substation building. Modifications would not cause a substantial adverse change to the historically and architecturally significant Lighthipe Substation building because no material intervention—including, but not limited to, full or partial demolition, exterior wall removal, fenestration changes, or other architectural or aesthetic modification—would occur.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
	paint and oil storage house (Criterion A/1), and water supply pump house (Criterion A/1).		
Newmark Substation	Potentially NRHP/CRHR eligible (substation has not been evaluated but contains a building that exhibits potential architectural significance). Analysis in progress; results to be provided.	Replace 66 kV relays inside existing MEERs. Install/upgrade fiber optic cable and telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** No impacts are anticipated as proposed work would occur inside existing buildings and no material or physical changes are proposed that would alter historic elements, as demonstrated at other substations with architectural significance, such as the Lighthipe and Laguna Bell substations.
San Gabriel Substation	Recommended NRHP/CRHR eligible under Criterion C/3: San Gabriel Main Substation Building as an excellent example of the Period Revival style with a discernible Gothic Revival influence.	Replace 66 kV relays inside existing MEERs. Install/upgrade telecommunications equipment to connect the Proposed Project to SCE's existing telecommunications system.	**No Impact.** No impacts are identified as no material or physical changes are proposed to the historic elements of the San Gabriel Main Substation Building.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Montebello Oil Field	NRHP/CRHR eligibility unknown, previously unevaluated. The field survey revealed no cultural constituents within the Proposed Project area.	Installation of new telecommunications line from transmission tower M38-T5 to Mesa Substation.	**No Impact.** The telecommunications line in the vicinity of this resource would be installed along existing overhead facilities and would involve minimal ground disturbance (if any) within a previously disturbed area. Therefore, construction activities associated with the telecommunications line would not result in an adverse impact/effect to a historic property, nor would it cause a substantial change in the significance of any historical resource.
Juan Matias Sanchez Adobe	Listed on the CRHR as a Historical Landmark; listed on the Historical Resource Inventory (HRI) as number 090181.	Installation of new telecommunications line from transmission tower M38-T5 to Mesa Substation.	**No Impact.** The telecommunications line in the vicinity of this resource would be installed along existing overhead facilities and would involve minimal ground disturbance (if any) within a previously disturbed area. Therefore, construction activities associated with the telecommunications line would not result in an adverse impact/effect to a historic property, nor would it cause a substantial change in the significance of any historical resource.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Mission Vieja Plaque	Listed on the CRHR as a Historical Landmark; listed on the HRI as number 089715	Installation of new telecommunications line from transmission tower M38-T5 to Mesa Substation.	**No Impact.** The telecommunications line in the vicinity of this resource would be installed along existing overhead facilities and would involve minimal ground disturbance (if any) within a previously disturbed area. Therefore, construction activities associated with the telecommunications line would not result in an adverse impact/effect to a historic property, nor would it cause a substantial change in the significance of any historical resource.
Whittier Narrows Dam Recreation Area	NRHP/CRHR eligibility unknown, previously unevaluated. The field survey revealed a sparse, highly fragmented scatter of historic/modern debris and a single concrete enclosure	Installation of new telecommunications line from transmission tower M38-T5 to Mesa Substation.	**No Impact.** The telecommunications line in the vicinity of this resource would be installed along existing overhead facilities and would involve minimal ground disturbance (if any) within a previously disturbed area. Therefore, construction activities associated with the telecommunications line would not result in an adverse impact/effect to a historic property, nor would it cause a substantial change in the significance of any historical resource.

Historical Resource	NRHP/CRHR Eligibility	Proposed Project Modifications	Impact Analysis
Temple School	Previously recommended eligible as a Local Landmark and for NRHP listing under Criteria A, B, C, and D.	Installation of new telecommunications line from transmission tower M38-T5 to Mesa Substation.	**No Impact.** The telecommunications line in the vicinity of this resource would be installed along existing overhead facilities and would involve minimal ground disturbance (if any) within a previously disturbed area. Therefore, construction activities associated with the telecommunications line would not result in an adverse impact/effect to a historic property, nor would it cause a substantial change in the significance of any historical resource.

Sources: Chiang and Tinsley Becker (2014a, b); Davis (1959); DeBiase and Tinsley Becker (2014); Fulton and Fulton (2008); Messick (2003); PAR Environmental Services (2012); Roberts and Brock (1987); Shoeni (1972); Tsunoda (2008); Williams (2014)

4.5.5 Cultural Resources Significance Criteria

The significance criteria for assessing the impacts to cultural resources are derived from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5
- Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries

Cultural resources include archaeological and historic objects, sites and districts, historic buildings and structures, and sites and resources of concern to local Native Americans and other ethnic groups. Cultural resources that meet the criteria of eligibility to the CRHR are termed "historical resources." Archaeological resources that do not meet CRHR criteria may also be evaluated, as "unique" impacts to such resources could be considered significant.

A site meets the criteria for inclusion in the CRHR if the following occurs:

1) It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

2) It is associated with the life or lives of a person or people important to California's past

3) It 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

4) It has yielded, or may be likely to yield, information important to prehistory or history

A resource eligible for the CRHR must meet one of the criteria of significance described previously 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 historical resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally Determined Eligible for the NRHP

- California Registered Historical Landmarks from No. 770 onward

- California Points of Historical Interest that have been evaluated by the California Office of Historic Preservation and that have been recommended to the State Historical Resources Commission for inclusion on the CRHR

Other resources that may be nominated to the CRHR include the following:

- Historical resources with a significance rating of Category 3 through 5
    - Category 3 – The resource appears to be eligible for the NRHP or CRHR following the completion of a survey and subsequent evaluations
    - Category 4 – The resource appears to be eligible for the NRHP or CRHR following the completion of additional evaluations
    - Category 5 – The resource is recognized as historically significant by the local government
- Individual historical resources
- Historical resources contributing to historic districts
- Historical resources designated or listed as Local Landmarks, or designated under any local ordinance, such as a historic preservation overlay zone

Impacts to "unique archaeological resources" are also considered under CEQA, as described under PRC Section 21083.2. A unique archaeological resource means an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one of the following criteria:

- It contains information needed to answer important scientific questions and there is a demonstrable public interest in that information
- It has a special and particular quality, such as being the oldest of its type or the best available example of its type
- It is directly associated with a scientifically recognized important prehistoric or historic event or person

A non-unique resource is one that does not fit the previous criteria.

4.5.6 Cultural Resources Impact Analysis

4.5.6.1 Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Construction

No Impact. As summarized in Table 4.5-3: Historical Resources and Properties within the Proposed Project Area, a total of 14 resources are eligible, recommended eligible, or have not been evaluated for inclusion in the NRHP/CRHR:

- Anita Substation
- Eagle Rock Substation
- Fairfax Substation
- Garfield Substation
- La Fresa Substation
- Laguna Bell Substation
- Lighthipe Substation

- Newmark Substation
- San Gabriel Substation
- Montebello Oil Field
- Juan Matias Sanchez Adobe
- Mission Vieja Plaque
- Whittier Narrows Dam Recreation Area
- Temple School

Proposed modifications at the Anita, Eagle Rock, Fairfax, Garfield, La Fresa, Laguna Bell, Lighthipe, Newmark, and San Gabriel substations would consist of minor modifications inside and outside of the buildings within the substations' existing fenced perimeters. The proposed modifications do not involve material or physical changes that would alter historic elements that contribute or may contribute to the eligibility of the substations. Therefore, proposed minor modifications at these substations would not result in an adverse impact/effect to a historic property or cause a substantial adverse change in the significance of any historical resource. As a result, no impact would occur.

The Montebello Oil Field, Juan Matias Sanchez Adobe, Mission Vieja Plaque, Whittier Narrows Dam Recreation Area, and Temple School are present along the proposed telecommunications line from telecommunications tower M38-T5 to Mesa Substation. The overhead telecommunications line in proximity to these resources would be installed along existing overhead facilities and would require minimal ground disturbance (if any) within a previously disturbed area. Therefore, installation of the overhead telecommunications line would not result in an adverse impact/effect to a historic property or cause a substantial adverse change in the significance of any historical resource. As a result, no impact would occur.

There are no additional recommended or previously determined historical resources or historic properties within the Proposed Project area. As such, construction of the Proposed Project would not result in a significant adverse change to historical resources. Regardless, as described in Section 3.9.2, Worker Environmental Awareness Training in Chapter 3, Project Description, SCE would implement the Worker Environmental Awareness Program (WEAP) as a best management practice (BMP) to train workers and establish procedures for treating previously unidentified resources. In addition, if changes to the Proposed Project area occur based on final engineering or new resources are discovered during construction, the following BMPs would be implemented as appropriate:

- Prior to construction, all areas within the Proposed Project area would be inventoried for cultural resources.

- All cultural resources potentially affected by construction of the Proposed Project would be evaluated for their eligibility for listing in the CRHR and/or NRHP.

- Cultural resources found to meet any of the CRHR or NRHP eligibility criteria would be avoided and preserved in place, if feasible. If avoidance of an eligible resource is not feasible, an appropriate treatment and mitigation plan would be implemented to reduce adverse impacts prior to construction of the Proposed Project.

- If previously unanticipated cultural resources are discovered during construction of the Proposed Project, personnel would be instructed to suspend work within 50 feet of any find, and work would be redirected to avoid impacting the resource. If the resource cannot be avoided by project activities, the resource would then be evaluated for listing in the CRHR and NRHP (if required) by a qualified archaeologist. If the resource is determined to be eligible for listing in the CRHR or NRHP, the resource would be avoided and preserved in place, if feasible. If avoidance of an eligible resource is not feasible, an appropriate treatment and mitigation plan would be implemented to reduce adverse impacts prior to resuming construction in the area of the resource.

With the implementation of the WEAP and BMPs, no substantial adverse changes related to a historical resource—as defined in CEQA Guidelines Section 15064.5—are anticipated; therefore, no impact would occur.

Operation

No Impact. O&M at NRHP/CRHR eligible, recommended eligible, or potentially eligible Anita, Eagle Rock, Fairfax, Garfield, La Fresa, Laguna Bell, Lighthipe, Newmark, and San Gabriel substations does not include material or physical changes that would alter historic elements that contribute or may contribute to the eligibility of the substations. Montebello Oil Field, Juan Matias Sanchez Adobe, Mission Vieja Plaque, Whittier Narrows Dam Recreation Area, and Temple School are intersected by the proposed telecommunications route from transmission tower M38-T5 to Mesa Substation. O&M of the overhead telecommunications line on existing overhead facilities would involve minimal ground disturbance (if any) within previously disturbed areas. O&M activities would not cause a substantial adverse change in the significance of a historical resource; therefore, there would be no impact.

4.5.6.2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Construction

No Impact. Records search data and a cultural resources inventory determined that there are no known archaeological resources present in the Proposed Project area; therefore, there would be no impact from construction-related activities. Regardless, as described in Section 3.9.2, Worker Environmental Awareness Training in Chapter 3, Project Description, SCE would implement the WEAP as a BMP to train workers and establish procedures for treating previously unidentified resources. In the event of an unanticipated discovery, implementation of SCE’s unanticipated discovery protocol as previously described would guide the protection of potentially eligible cultural resources during construction.

Operation

No Impact. There are no known archaeological resources located at the Proposed Project sites; therefore, O&M would not cause significant adverse changes to archaeological resources after the Proposed Project is complete. As a result, there would be no impact.

4.5.6.3 Would the project disturb any human remains, including those interred outside of formal cemeteries?

Construction

Less-Than-Significant Impact. Records searches and a cultural resources inventory identified no human remains in the Proposed Project area. The Proposed Project's eastern work area at Mesa Substation is adjacent to the Resurrection Cemetery. Although the Proposed Project does not contain any known, formal cemetery or burial features, there is a potential for encountering human remains, including Native American human remains. It is not always possible to predict where Native American human remains might occur outside of formal cemeteries. Ground-disturbing activities could disturb human remains, including those interred outside of formal cemeteries. Any unanticipated impacts to human remains during construction would be reduced to a less-than-significant level through the implementation of the WEAP, which would provide sensitivity training to workers and establish procedures for stopping work and notifying SCE's cultural resource staff and construction supervisors in the event that human remains are detected.

If human remains are inadvertently discovered during construction activities, all work in the vicinity of the find will cease within a 100-foot radius of the remains and the area will be secured and protected to ensure that no additional disturbance occurs. In accordance with California Health and Safety Code (HSC) Section 7050.5, the Los Angeles County coroner will be contacted, and the coroner would have two working days to examine the remains after being notified. If the coroner determines that the remains are Native American, not subject to the coroner's authority, and are located on private or State land, the coroner has 24 hours to notify the NAHC of the determination. The NAHC is required under PRC Section 5097.98 to identify a Most Likely Descendant (MLD), notify that person, and request that they inspect the remains and make recommendations for treatment and/or disposition. The MLD will have 48 hours to inspect the find and make recommendations for treatment of the human remains. Work will be suspended in the area of the find until the MLD and landowner confer on the mitigation and treatment of the human remains. However, the human remains and associated burial items will be reburied, with appropriate dignity, on the property in a location not subject to further subsurface disturbance if one of the following occurs:

- The NAHC is unable to identify a descendent
- The descendent identified fails to make a recommendation
- The recommendation of the MLD is rejected and the mediation provided for in Public Resources Code Section 5097.94 subdivision (k) fails to provide measures acceptable to the landowner.

This procedure would ensure that the remains are treated in accordance with Section 15064.5(d) and (e) of the CEQA Environmental Guidelines and policies and procedures contained in California HSC Section 7050.5 and PRC Sections 5097.98 and 5097.99. Therefore, any potential impacts to human remains resulting from construction of the Proposed Project would be less than significant.

Operation

Less-Than-Significant Impact. O&M activities for the Mesa Substation and transmission, subtransmission, distribution, and telecommunications lines would include repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment, and are typically short-term in nature. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC General Order 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. Ground disturbance during O&M activities could occur in previously disturbed or potentially undisturbed, but previously surveyed areas. However, O&M activities would have a low potential to encounter human remains, if any are present. If human remains are discovered during O&M of the Proposed Project, work would stop, BMPs similar to those previously outlined would be implemented, and the remains would be treated in accordance with Section 15064.5(d) and (e) of the CEQA Environmental Guidelines and policies and procedures contained in California HSC Section 7050.5 and PRC Sections 5097.98 and 5097.99. Therefore, any potential impacts would be less than significant.

4.5.7 Paleontological Resources Environmental Setting

The Proposed Project is located within the Los Angeles Basin, an alluviated lowland coastal plain bounded by mountains and hills that expose Mesozoic or older basement rocks and sedimentary and igneous rocks of Late Cretaceous to Late Pleistocene age. The physiographic basin is underlain by a deep, structural depression. Parts of this depression have been the sites of discontinuous deposition since the Late Cretaceous period and of continuous subsidence and deposition since the Middle Miocene period. The Holocene deposits include sediments in modern stream channels and on their alluvial fans and floodplains, as well as sediments on beaches, in embayments, and in most dunes. The Los Angeles Basin consists of four primary structural blocks: southwestern, northwestern, central, and northeastern. The surface of the lowland plain of the central block is formed by the coalesced alluvial fans of the Los Angeles River, Rio Hondo, San Gabriel River, and Santa Ana River. From this central block, floodplain deposits extend up the Rio Hondo and San Gabriel River through the Whittier Narrows to form the surficial strata of the San Gabriel Valley in the central part of the northeastern block; toward the coast, these deposits extend through several narrow gaps in the chain of low hills and mesas along the Newport-Inglewood-Rose Canyon fault zone into estuarine deposits along the shoreline. Except in coastal areas, the deposits contain as much as 200 feet of boulder, cobble, and pebble gravel; coarse- to fine-grained sand; and silt. The coarser sediment is most abundant in the lower part of the deposit.

4.5.8 Paleontological Resources Regulatory Setting

Federal, State, and local regulations related to paleontological resources were reviewed for applicability to the Proposed Project.

4.5.8.1 Federal

A small portion of the Proposed Project is located on USACE lands and may require federal permitting. The following federal regulations for paleontological resources apply to the Proposed Project.

Paleontological Resources Preservation Act

The Omnibus Public Lands Act-Paleontological Resources Preservation (OPLA-PRP) directs the Secretary of the Interior and the Secretary of Agriculture to manage and protect paleontological resources on federal land using "scientific principles and expertise." The OPLA-PRP incorporates most of the recommendations of the Secretary of the Interior's report, entitled "Assessment of Fossil Management on Federal and Indian Lands," in order to formulate a consistent paleontological resources management framework. In passing the OPLA-PRP, Congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. The OPLA-PRP codifies existing policies of the Bureau of Land Management (BLM), NPS, U.S. USFS, Bureau of Reclamation, and U.S. Fish and Wildlife Service, and provides the following:

- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands
- Uniform minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants)
- Uniform definitions for "paleontological resources" and "casual collecting"
- Uniform requirements for curation of federal fossils in approved repositories

4.5.8.2 State

The significance criterion for assessing the impacts to paleontological resources comes from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Appendix G (part V) of the CEQA Environmental Guidelines provides guidance relative to significant impacts on paleontological resources, which states, "a project will normally result in a significant impact on the environment if it will … disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

4.5.8.3 Local

As previously discussed in Section 4.5.3.3, Local the CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. The following discussion of local regulations is provided for informational purposes only.

County of Los Angeles General Plan

A portion of the Proposed Project is located within unincorporated Los Angeles County. The Conservation and Open Space Element of the county's General Plan contains one policy that generally calls for the protection of paleontological resources.

City of Monterey Park General Plan

No applicable paleontological policies were identified within the Resources Element of the City of Monterey Park General Plan.

City of Montebello General Plan

No applicable paleontological policies were identified within the Conservation Element of the City of Montebello General Plan.

City of Rosemead General Plan

The City of Rosemead General Plan does not contain any goals, policies, or programs pertaining to paleontological resources.

City of South El Monte General Plan

The City of South El Monte General Plan does not contain any goals, policies, or programs pertaining to paleontological resources.

City of Commerce General Plan

The following program from the Resource Management Element of the City of Commerce's General Plan is relevant to paleontological resources:

- Compliance with the Cultural Resource Management program, which requires that should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established

City of Bell Gardens General Plan

The following program from the Conservation Element of the City of Bell Gardens General Plan is relevant to paleontological resources:

- Implementation of archaeological and paleontological monitoring for all major projects which would include a stipulation that should archaeological or paleontological resources be uncovered during excavation or grading activities, all work would cease until appropriate mitigation measures were established

City of Pasadena General Plan

The following applicable objective and policy were identified within the Land Use Element of the City of Pasadena General Plan:

Objective

- Objective 19 – Requires that the city protect and enhance areas of the city containing important biological resources; protect and minimize disturbance of any important paleontological and/or archaeological resources that might remain in the city

Policy

- Policy 19.3 – Paleontological/Archaeological Resources Survey. Requires that project proponents proposing substantial grading or earthmoving in areas that might contain important paleontological and/or archaeological resources shall conduct a pre-excavation field assessment and literature search to determine the potential for disturbance of paleontological and/or archaeological resources. If warranted, grading and other earthmoving activities shall be monitored by a qualified professional who, if necessary, shall undertake salvage and curation. Any paleontological or archaeological resources recovered shall be documented and archived appropriately.

4.5.9 Paleontological Resources Records Search and Survey Results

4.5.9.1 Record Searches

A record search was conducted at the Natural History Museum of Los Angeles County, which included a review of mapped resources known to exist in the area and an analysis of Proposed Project maps, engineering drawings, and technical data. The potential for paleontological resources to occur within the Proposed Project was determined on the basis of a paleontological review of the Proposed Project vicinity and mapped geological units that underlie the Proposed Project area. As part of the analysis, the geologic units in the Proposed Project vicinity were classified according to the PFYC System, a predictive resource management tool that was originally developed and refined by the USFS and BLM. The Proposed Project was considered in light of this information to assess potential impacts of the Proposed Project to paleontological resources.

4.5.9.2 Survey Results

On June 12, 2014, a pedestrian survey was conducted within the Proposed Project area in the vicinity of Mesa and Goodrich substations where ground-disturbing activities may occur. In December 2014, pedestrian surveys were conducted for accessible areas in the vicinity of the additional transmission, subtransmission, distribution, and telecommunications work associated with the Proposed Project. The surveys included a thorough examination of the ground surface to determine the presence of surface fossils and to evaluate the potential for occurrences of subsurface fossils that could be unearthed during construction.

According to the geologic maps of the Los Angeles and Pasadena quadrangles, four mapped geologic units that range in age from early Pliocene to Holocene are present in the vicinity of the Proposed Project. Of these, one geologic unit (Quaternary surficial deposits of Holocene age) has a very low paleontological sensitivity (PFYC Class 2); one geologic unit (Quaternary surficial deposits of Pliocene age) has moderate paleontological sensitivity (PFYC Class 3); and two geologic units (Fernando Formation upper and lower member of Pliocene age) have high paleontological sensitivity (PFYC Class 4). The following is a discussion of the formations identified within the Proposed Project area. Additionally, Appendix G: Cultural Resources Reports provides descriptions and maps of these geologic units relative to the proposed ground-disturbing activities.

Quaternary Wash Deposits

Quaternary wash deposits (Qw) are only present within the Goodrich Substation area. Quaternary wash deposits are Holocene in age (i.e., younger than 11,000 years old), and consist of poorly consolidated silt, sand, and gravel deposited along modern drainages and on floodplains. The deposits likely originated from Eaton Wash during the early Holocene to the present (McLeod 2014). Quaternary wash deposits within the Proposed Project area have a very low paleontological potential (PFYC Class 2).

Quaternary Young Alluvium

Quaternary young alluvial deposits (Qyf 1, 2, 3, and 4) are present within the Proposed Project area. The younger alluvial deposits are late Pleistocene to Holocene in age. The Quaternary young alluvial deposits consist of poorly consolidated silt, sand, and gravel deposited along modern drainages and on floodplains. These deposits likely originate from the San Gabriel Mountains (McLeod 2014).

No fossils are known from Holocene alluvial deposits. Their young age indicates that they are unlikely to contain *in situ* paleontological resources. Due to the young age and/or disturbed nature of these deposits, they have low paleontological potential (PFYC Class 2). Late Pleistocene alluvium is known to yield scientifically important fossils and has moderate paleontological potential (PFYC Class 3).

Quaternary Older Alluvium

Quaternary older alluvium (Qof 1, 2, and 3) is present within the Proposed Project area. These deposits consist of moderately consolidated, non-marine, poorly sorted silt, sand, and gravel. Quaternary older alluvium is Pleistocene age (1.8 million years ago to 11,000 years ago), and consists of silt, sand, and gravel that forms low to moderate relief hills within the Mesa Substation area. Additionally, several flat-lying areas within the Proposed Project area are also mapped as Quaternary older alluvium.

Pleistocene geologic units, particularly alluvium, are generally considered to have moderate to high sensitivity because these units have yielded fossils of Ice Age mammals from nearby localities. Numerous other examples exist in the Los Angeles area, including fossil plants, invertebrates, and mammals (e.g., ground sloth, rodents, horse, tapir, camel, deer, llama, mastodon, and mammoth) (Jefferson 1991; Reynolds and Reynolds 1991; Springer et al. 2010; Scott 2010). Discoveries of Pleistocene-age fossils are known from construction projects along the coast of Southern California. Older alluvium within the Proposed Project area has a moderate paleontological potential (PFYC Class 3).

Fernando Formation

The Fernando Formation is Pliocene in age, and consists of both marine and non-marine deposits. The Fernando Formation contains two sandstone members, both of which are present within the Mesa Substation area, the telecommunications line reroute between Mesa and Harding substations, and the proposed telecommunications lines from towers M40-T3 and M38-T5 to Mesa Substation. The Fernando Formation was not observed or reported in the vicinity of Goodrich Substation. The sandstone members within the Fernando Formation are distinguished by differences in clastic grain sizes. The upper member (Tfu) is characterized by fine-grained, light gray, non-marine, silty sandstone. The age of the upper member spans the late Pliocene and Pleistocene epochs (Dibblee 1989). The lower member (Tfuc) is a sandstone-rich conglomerate, near shore deposit containing cobbles and course sandstone deposit (Blake 1991). The age of the lower member is middle-Pliocene in age (Dibblee 1989).

The Fernando Formation has yielded marine fossils, including bony fish, sharks, whales, dolphins, and invertebrates (Cooper et al. 2006). Specimens of shark teeth—including that of great white sharks, eagle rays, and mako sharks—are the most common fossils (Cooper et al. 2006). Additionally, invertebrate shells may be locally abundant (Woodring 1938; Downs 1968; Morris 1976). Although it is not mapped as being present on the surface within the Proposed Project area boundaries, the Fernando Formation may be disturbed during construction because it underlies the area at an unknown depth. The Fernando Formation has a high paleontological potential (PFYC Class 4).

Mesa Substation

Geologic units underlying Mesa Substation consist of low-relief Quaternary alluvium to moderate- and steep-relief hills composed of two members of the Pliocene-age Fernando Formation. In addition, two parcels within the Mesa Substation property exhibited bedrock of the lower member Fernando Formation. Ground disturbances were observed around graded access roads, existing transmission towers, substation facilities, gravel laydown areas, and paved roads. Construction activities associated with the Proposed Project may result in disturbances to areas in which the high-sensitivity Fernando Formation is present. No fossils were discovered during the field survey of Mesa Substation. In addition, according to a search of available literature and museum records, no previously recorded fossil localities were reported within the vicinity of Proposed Project.

Telecommunications Line Reroute between Mesa and Harding Substations

Geologic units underlying the telecommunications line reroute between Mesa and Harding substations consist of PFYC 2 and PFYC 3 Quaternary older alluvium, Quaternary alluvium, Quaternary older surficial deposits, and the Fernando Formation (PFYC Class 4) (Dibblee and Ehrenspeck 1989; Dibblee and Ehrenspeck 1999). Bedrock exposures were identified in the vicinity of the telecommunications line reroute; however, the exposures were not accessible due to fencing and associated obstacles. Therefore, a pedestrian survey was not conducted for areas in the vicinity of the telecommunications line reroute between Mesa and Harding substations. No vertebrate fossil localities are located within the boundaries of the proposed telecommunications line reroute.

Replacement of an Existing Lattice Steel Tower on the Goodrich-Laguna Bell 220 kV Transmission Line/Street Light Source Line Conversion from Overhead to Underground within Loveland Street

Geologic units underlying the areas in the vicinity of the proposed tower replacement and street light source line undergrounding consist of PFYC Class 2 and PFYC Class 3 Quaternary older alluvium, Quaternary alluvium, Quaternary younger fan, and Quaternary gravel deposits (Dibblee and Ehrenspeck 1999; Saucedo et al. 2003). A pedestrian survey was not conducted for areas in the vicinity of the proposed tower replacement and street light source line undergrounding due to the low paleontological sensitivity, lack of exposures, and the heavily disturbed ground surface observed in these locations. In addition, no vertebrate fossil localities were reported within the boundaries of the proposed tower replacement and street light source line undergrounding.

Telecommunications Line from Transmission Tower M38-T5 to Mesa Substation

Geologic units underlying the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation consist of PFYC Class 2 and PFYC Class 3 Quaternary older alluvium, Quaternary alluvium, and Quaternary gravel, as well as the Fernando Formation (PFYC Class 4) (Dibblee and Ehrenspeck 1999). One non-significant fossil locality (2014216CLG.01) was observed in the vicinity of the proposed telecommunications line and consists of trace fossils (burrows) and displaced shell fragments. The fossils were derived from an exposed outcrop of siltstone located south of San Gabriel Boulevard on East Lincoln Avenue (Dibblee and Ehrenspeck 1999). However, this locality is not considered to be significant due to the fractured and displaced nature of the associated fossils. No additional vertebrate fossil localities were observed or reported within the boundaries of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation.

Telecommunications Line from Transmission Tower M40-T3 to Mesa Substation

Geologic units underlying proposed telecommunications line from transmission tower M40-T3 to Mesa Substation consist of PFYC Class 2 and PFYC Class 3 Quaternary older alluvium and Quaternary gravel, as well as the Fernando Formation (PFYC Class 4) (Dibblee and Ehrenspeck 1999). No bedrock exposures, paleontological resources, or vertebrate fossil localities were observed or reported within the boundaries of the proposed telecommunications line from transmission tower M40-T3 to Mesa Substation.

Temporary 220 kV Line Loop-In at Goodrich Substation

Geologic units underlying Goodrich Substation consist of low-relief Quaternary wash deposits and Quaternary young alluvium. Ground disturbances were present in areas containing previously graded terrain, substation facilities, transmission towers, paved roads, and parking lots. Although no fossils were observed during the field survey or reported in available historical resources, construction activities resulting in the disturbance of older alluvium may impact paleontological resources.

4.5.10 Paleontological Resources Impact Analysis

4.5.10.1 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Construction

Less-Than-Significant Impact. Based on an analysis of data from a paleontological review and U.S. Geological Survey maps, there are mapped geological units of moderate to high paleontological sensitivity in the vicinity of the Proposed Project. Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications work areas contain low-sensitivity Quaternary alluvium and the high-sensitivity Pliocene-age Fernando Formation. In addition, one non-significant fossil locality was observed in the vicinity of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation. The fossils within this locality originated from the Fernando Formation and are considered to be non-significant due to the fractured and displaced nature of the fossils. Goodrich Substation is underlain with low-sensitivity Quaternary wash deposits and low-sensitivity Quaternary young alluvium that overlies older alluvium. Construction excavations that exceed the thickness of the younger alluvium may disturb underlying moderate-sensitivity Pleistocene older alluvium.

Depending on the locations and depths of excavations during construction, there is a potential to disturb moderate- and high-potential geologic units (Pleistocene older alluvium and Plio-Pleistocene Fernando Formation). Impacts to potential unique paleontological resources or unique geologic features resulting from construction of the Proposed Project would be reduced to a less-than-significant level through the implementation of applicant-proposed measure (APM-) CUL-01, which requires preparation and implementation of a Paleontological Resources Management Plan. Additionally, as a standard BMP—as described in Section 3.9.2, Worker Environmental Awareness Training in Chapter 3, Project Description—a WEAP would provide training to workers and establish procedures for treating previously unidentified paleontological resources or geological features. As a result, impacts to potential unique paleontological resources or unique geologic features would be reduced to a less-than-significant level.

Operation

Less-Than-Significant Impact. O&M of the Proposed Project would occur as needed and would include routine inspections and possible ground-disturbing activities within previously disturbed areas. Ground disturbance during O&M activities could occur in undisturbed, but previously surveyed areas. O&M activities include repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. However, these O&M activities are typically short-term in nature and have a low potential to impact paleontological resources. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC General Order 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. O&M activities are accompanied by standard BMPs similar to those previously described, as well as the implementation of a WEAP, as described Section 3.9.2, Worker Environmental Awareness Training in Chapter 3, Project Description. Implementation of these BMPs would guide the protection of potentially significant paleontological resources during O&M.

4.5.11 Applicant-Proposed Measures

No APMs are proposed for cultural resources; however, SCE would implement its standard BMPs related to the protection of cultural resources as previously described, as well as the WEAP, as described in Section 3.9.2, Worker Environmental Awareness Training in Chapter 3, Project Description.

SCE proposes the following APM to minimize potential impacts to paleontological resources:

- **APM-CUL-01: Paleontological Resources Management Plan.** A Paleontological Resources Management Plan would be developed for construction within areas that have been identified as having a moderate and high sensitivity for paleontological resources. The Paleontological Resources Management Plan would be prepared by a professional paleontologist in accordance with the recommendations of the Society of Vertebrate Paleontology.

4.5.12 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

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4.6 Geology and Soils

This section describes the geology and soils in the area of the proposed Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]). Potential impacts are also discussed.

This analysis reviews State and local resources characterizing geologic units and soils in the Proposed Project area, including databases maintained by the United States (U.S.) Geological Survey (USGS), the U.S. Department of Agriculture (USDA), and the California Geological Survey (CGS). The potential geologic and seismic impacts of the Proposed Project are analyzed and include the potential for exposure of people and structures to substantial adverse effects involving strong seismic ground shaking, fault rupture, liquefaction, unstable soils, landslides, expansive soil, substantial soil erosion, or the loss of topsoil.

4.6.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in

[1] The term "Proposed Project" is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

changes to geology and soils in the area. As a result, these components are not discussed further in this section.

4.6.1.1 Geologic Setting

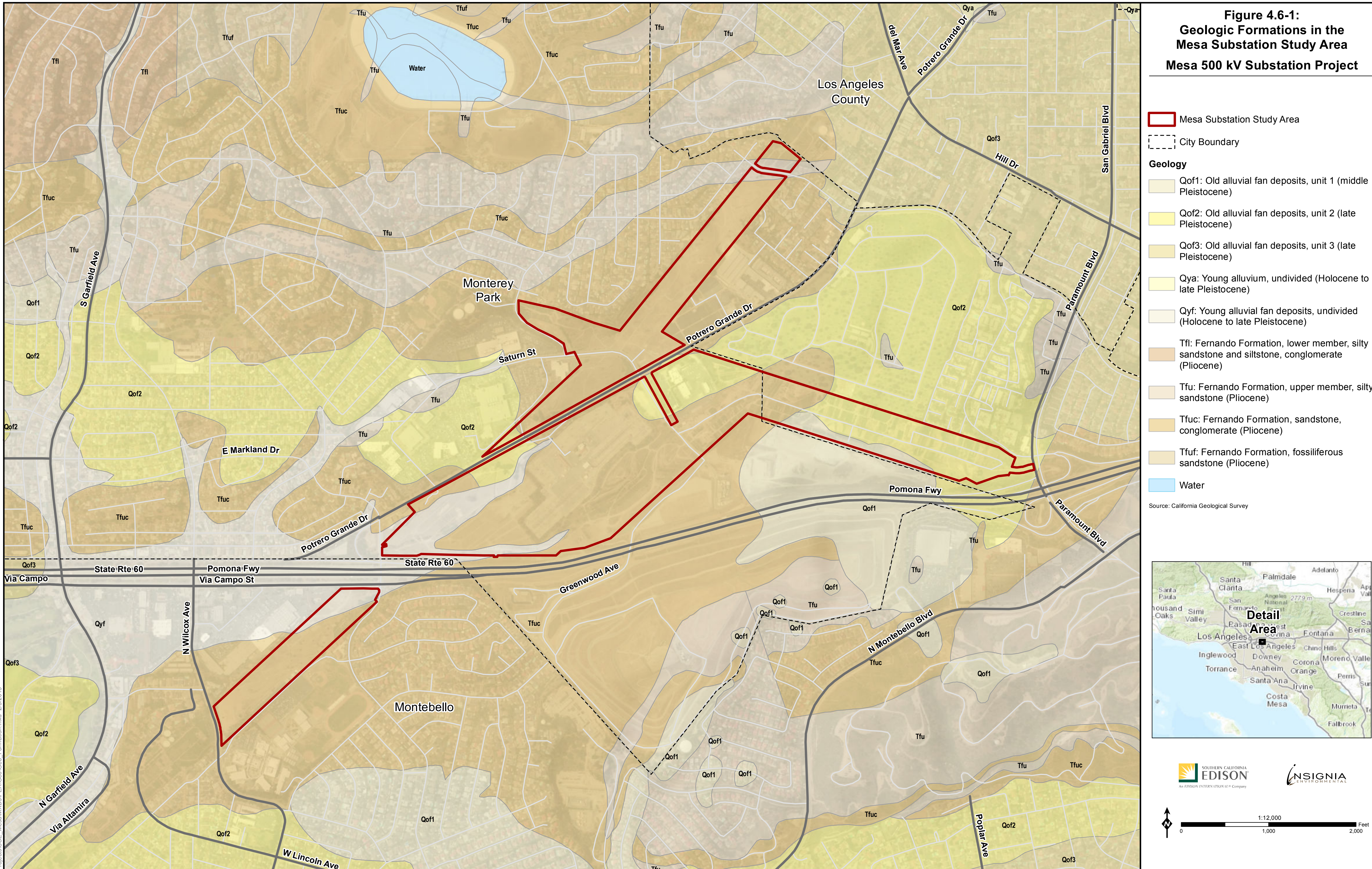
The Proposed Project is located within the northwestern portion of the Peninsular Ranges Geomorphic Province in the foothills of the San Gabriel Mountains in the Los Angeles Basin, where the Peninsular and Transverse ranges meet. The Peninsular Ranges Geomorphic Province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California, and it varies in width from 30 to 100 miles. The geomorphic province is characterized by mountainous terrain on the east (which is composed mostly of Mesozoic igneous and metamorphic rocks) and relatively low-lying coastal terraces to the west (which are underlain by Upper-Cretaceous, Tertiary, and Quaternary sedimentary rocks). The Transverse Ranges Geomorphic Province is composed of a series of east-west trending steep mountain ranges and valleys. The CGS notes that intense north-south compression is squeezing the Transverse Ranges, making it one of the most rapidly rising regions on earth.

All Proposed Project activities would occur in the vicinity of the existing Mesa Substation, Laguna Bell Substation, and Goodrich Substation in southern-central Los Angeles County. The terrain in the vicinity of Mesa Substation changes abruptly from the low-lying, low-relief alluvium to moderate to steep relief hills composed of two units of the middle Pliocene-age Fernando Formation. The lower unit is composed of a sandstone-rich conglomerate with rounded, cobble-sized clast. The upper unit is composed of sandstone. Quaternary alluvial sediments that overlay the Fernando Formation are found throughout the Proposed Project area and are the formation in the majority of parcels for Mesa Substation. The only parcels containing Fernando Formation sandstone are found in the northwestern portion of the Proposed Project area, and the only bedrock exposures pertaining to the sandstone-rich conglomerate Fernando Formation are interspersed throughout various portions of the Mesa Substation site of the Proposed Project. The lower-lying terrain consists of Quaternary alluvium. These geologic formations are provided in Figure 4.6-1: Geologic Formations in the Mesa Substation Study Area.[2]

Geologic formations in the vicinity of Harding Substation, proposed modifications outside of Laguna Bell Substation, and a majority of the proposed telecommunications routes are comprised of Pliocene to Holocene Quaternary alluvium and marine deposits. This formation consists primarily of unconsolidated and semi-unconsolidated lake, playa, and terrace deposits. Additional Proposed Project components in the vicinity of existing and proposed telecommunications routes are located within similar geologic formations as Mesa Substation.

[2] The “Mesa Substation Study Area” shown on Figure 4.6-1: Geologic Formations in the Mesa Substation Study Area represents the potential disturbance area associated with work at Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines in adjacent rights-of-way.

Figure 4.6-1:
Geologic Formations in the Mesa Substation Study Area
Mesa 500 kV Substation Project



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Holocene Quaternary alluvial wash underlies Goodrich Substation, and is in an area characterized by flat, low-relief terrain, paved roads, and building development. Pleistocene Quaternary older alluvium surrounds Goodrich Substation and appears as low-to-moderate relief hills.

4.6.1.2 Soils

The soils directly underlying the Proposed Project area consist of soils created from Quaternary alluvium, sandstone, and sandstone-rich conglomerate bedrock formation parent materials. Information regarding the specific soil types that underlie the Mesa Substation study area is provided in the following subsections and in Figure 4.6-2: Soils in the Mesa Substation Study Area.

Tujunga Fine Sandy Loam

The Tujunga soil series is characterized by very deep soil formed in alluvium weathered mostly from granitic sources on alluvial fans and floodplains with slopes up to nine percent. Erosion potential is slight to moderate and expansion potential is generally considered low.

Hanford Gravelly Sandy Loam and Fine Sandy Loam

The Hanford soil series is a very deep soil consisting of fine sandy to sandy loam formed in alluvium derived from granite; these soils are commonly found on stream bottoms, floodplains, and alluvial fans with slopes up to 15 percent. Erosion potential for this soil type varies, but it is generally considered to be slight when slopes are less than 10 percent. The expansion potential for this soil type is generally low.

Ramona Loam

The Ramona soil series are formed in alluvium derived primarily from granitic and related rock types on nearly level to moderately steep terraces and fans. Erosion potential is considered to be slight with the exception of steeply sloped areas. The expansion potential for the Ramona soil series is generally considered to be low.

Altamont Clay Loam

Altamont soils are typically found on uplands, hills, and mountains, with slopes up to 75 percent. These soils are formed in material weathered from fine-grained sandstone and shale. The soils are well-drained with varying permeability; during dry seasons, the soils form deep cracks and increase permeability, but during wet seasons, the cracks close and permeability is low. Erosion potential may be considered high depending on the steepness of the slopes. Expansion potential is generally considered to be low.

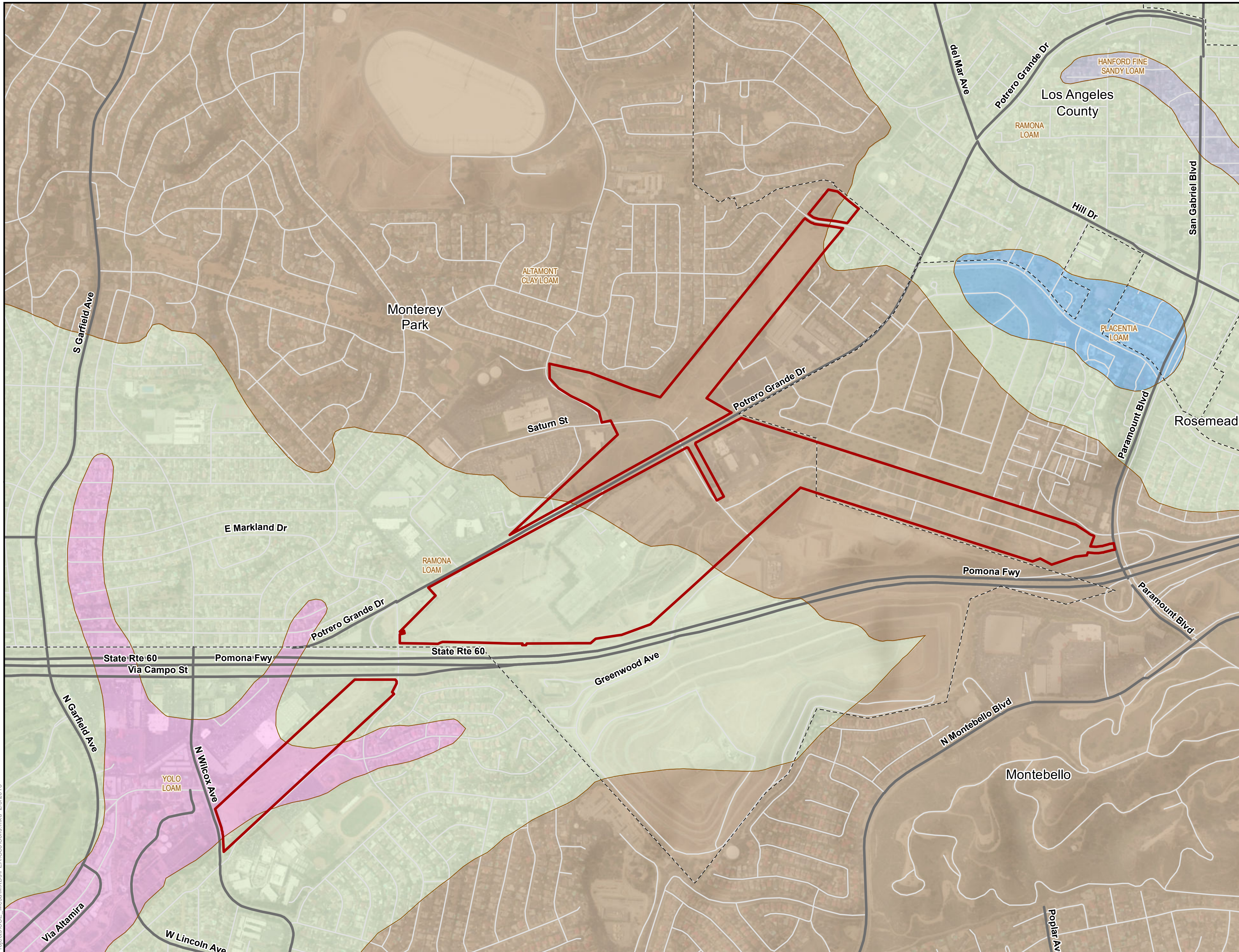

Figure 4.6-2:
Soils in the
Mesa Substation Study Area
Mesa 500 kV Substation Project

Mesa Substation Study Area
City Boundary

Soil Types

ALTAMONT CLAY LOAM
HANFORD FINE SANDY LOAM
PLACENTIA LOAM
RAMONA LOAM
YOLO LOAM

Source: Los Angeles County Department of Public Works

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

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Yolo Loam

The Yolo soil series is found on nearly level to moderately sloping alluvial fans and is formed in fine loamy alluvium derived from sedimentary formations. These soils are considered to be well-drained and have moderate permeability. They have slight to moderate potential for erosion and generally a low expansion potential.

Chino Silt Loam

The Chino soil series was formed in alluvium derived primarily from granitic rocks. These soils are poorly to somewhat poorly drained and have moderately slow permeability; runoff within the Chino series is slow to very slow. Soils at depths ranging from 4 to 12 inches are typically moist from November until sometime in May and remain dry throughout the rest of the year. From February to May, Chino soils are generally saturated between 40 and 60 inches below ground surface. In addition, the Chino soil series generally has a low expansion potential.

4.6.1.3 Faults, Seismicity, and Related Hazards

The State of California considers a fault to be active if there is evidence of surface displacement along the fault during the Holocene epoch (i.e., within the past 11,000 years), and the fault is well-defined. In addition, potentially active faults are those that have demonstrated activity within the Quaternary period (i.e., approximately the past 1.6 million years). The geologic structure of Southern California is dominated by right-lateral strike-slip faults with a general northwest-by-southwest trend.

The Proposed Project area is located in the northern portion of the Peninsular Ranges' northwest-southwest-trending faults that meet the Transverse Ranges' east-west-trending faults. The closest faults to the Proposed Project site include the East Montebello and Sierra Madre faults to the northeast; the Verdugo, Hollywood, and Newport-Inglewood-Rose Canyon faults to the west; the Raymond fault to the north; and the Elsinore fault to the south. The East Montebello fault is the northern extension of the Whittier section of the Elsinore fault north of the San Gabriel River and is the closest fault to the Proposed Project—approximately 0.2 mile northeast of the proposed telecommunications route from transmission tower M40-T3 to Mesa Substation. Faults located within 25 miles of the Proposed Project and their approximate distance from any component of the Proposed Project are listed in Table 4.6-1: Active and Potentially Active Faults in the Vicinity of the Proposed Project and are shown in Figure 4.6-3: Active and Potentially Active Faults in the Proposed Project Area.

Table 4.6-1: Active and Potentially Active Faults in the Vicinity of the Proposed Project

Fault	Approximate Distance to Nearest Proposed Project Component	Approximate Fault Length (Miles)	Maximum Estimated Earthquake Magnitude
East Montebello	0.6 mile northeast of the telecommunications line from transmission tower M40-T3 to Mesa Substation	1.8	--
Raymond	1.4 miles north of the temporary 220 kV line loop-in at Goodrich Substation	13.1	6.5
Elsinore (Whittier Section)	2.0 miles southeast of the telecommunications line from transmission tower M38-T5 to Mesa Substation	23.0	6.8
Verdugo	7.6 miles west of the temporary 220 kV line loop-in at Goodrich Substation	18.0	6.7
Newport-Inglewood-Rose Canyon	8.1 miles southwest of the conversion of a street light source line from overhead to underground within Loveland Street	39.8	6.9
San Jose	9.0 miles east-northeast of the telecommunications line from transmission tower M38-T5 to Mesa Substation	11.2	6.5
Unnamed fault in the western Coyote Hills	10.0 miles southeast of the telecommunications line from transmission tower M38-T5 to Mesa Substation	1.1	--
Hollywood	10.2 miles northwest of Mesa Substation	10. 6	6.4
Sierra Madre (B Section)	11.3 miles northwest the temporary 220 kV line loop-in at of Goodrich Substation	35.4	7.0
Sierra Madre (San Fernando Section)	14.5 miles northwest of the temporary 220 kV line loop-in at Goodrich Substation	11.2	6.7

Fault	Approximate Distance to Nearest Proposed Project Component	Approximate Fault Length (Miles)	Maximum Estimated Earthquake Magnitude
Unnamed fault in North Hollywood	15.8 miles northwest of the temporary 220 kV line loop-in at Goodrich Substation	9.7	--
Palos Verdes (San Pedro Shelf Section)	16.6 miles southwest of the conversion of a street light source line from overhead to underground within Loveland Street	56.7	7.1
Santa Monica	16.9 miles west of Mesa Substation	17.4	6.6
Redondo Canyon	18.1 miles southwest of the conversion of a street light source line from overhead to underground within Loveland Street	6.8	6.4
Elsinore (Chino Section)	19.8 miles southeast of the telecommunications line from transmission tower M38-T5 to Mesa Substation	17.4	6.7
Sierra Madre (Santa Susana Section)	22.9 miles northwest of the temporary 220 kV line loop-in at Goodrich Substation	16.8	6.6
San Andreas (Mojave Section)	23.6 miles north of the temporary 220 kV line loop-in at Goodrich Substation	61.5	7.1
Cabrillo – offshore	24.1 miles west of Mesa Substation	12.4	6.2
Sierra Madre (Cucamonga Section)	24.1 miles east of the temporary 220 kV line loop-in at Goodrich Substation	17.4	7.0

Sources: USGS (2014), CGS (2013b)
Note: “--” = Information not available

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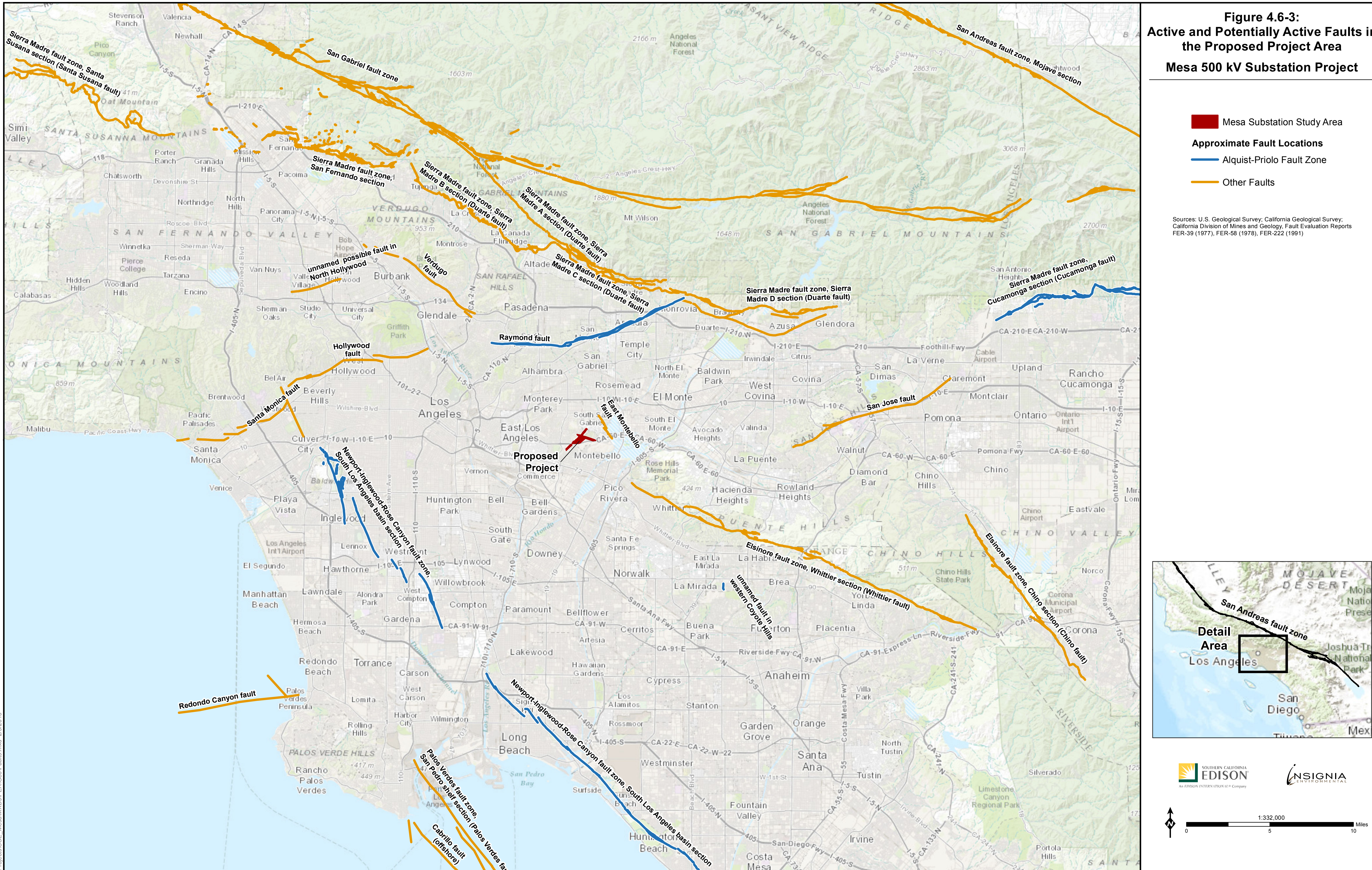
Figure 4.6-3: Active and Potentially Active Faults in the Proposed Project Area

Mesa 500 kV Substation Project



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Fault Rupture

The Alquist-Priolo Earthquake Fault Zoning Act of 1972, formerly known as the Special Studies Zoning Act, regulates construction and development of buildings intended for human occupancy to avoid rupture hazards from surface faults. This act does not specifically regulate substations and power lines, but it does aid in defining areas where fault rupture is most likely to occur. The Proposed Project site is located within the following two mapped Alquist-Priolo fault zones:

- The El Monte Quadrangle, in which active portions of the East Montebello fault have been identified
- The Mount Wilson Quadrangle, in which active portions of the Raymond fault have been identified

Strong Ground Motion

Ground shaking is the seismic effect that results in the vast majority of damage. Several factors control how the ground motion interacts with structures, making the impact hazard of ground shaking difficult to predict. Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the seismic epicenter, and the path and material through which the waves are propagating moderate to large earthquakes. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the structure. Based on data from the USGS and CGS, the closest faults to the Proposed Project area are the East Montebello and Raymond faults.

An earthquake is commonly described by the amount of energy released, which has traditionally been quantified using the Richter scale. However, seismologists have recently begun using a Moment Magnitude scale because it provides a more accurate measurement of a major earthquake's size. Specifically, the Moment Magnitude is based on the measurement of maximum motion recorded by a seismograph. The Moment Magnitude and Richter scales are almost identical for earthquakes of less than magnitude 7.0. Moment Magnitude scale readings are slightly greater than a corresponding Richter scale reading for earthquakes with magnitudes greater than 7.0.

Active faults are classified as Type A, Type B, or Type C by the CGS. Type A faults are capable of producing large-magnitude events (Moment Magnitude [Mw] ≥ 7.0) and have a high rate of seismic activity. Type C faults are not capable of producing large magnitude events and have a relatively low rate of seismic activity. Type B faults are all other faults that are not classified as Type A or Type C. Segments of the Elsinore and San Andreas fault zones are Type A. The majority of the other faults are Type B faults, and they are listed in Table 4.6-1: Active and Potentially Active Faults in the Vicinity of the Proposed Project and shown in Figure 4.6-3: Active and Potentially Active Faults in the Proposed Project Area. The intensity of ground motions induced by earthquakes can be described using peak site accelerations, represented as a fraction of the acceleration of gravity (g). CGS Probabilistic Seismic Hazard Assessment (PSHA) maps were used to estimate peak ground accelerations within the vicinity of the Proposed Project area. PSHA maps indicate that there is an approximately 10-percent probability of exceeding a peak site acceleration of 0.511g in a 50-year period at the Mesa Substation site, based on a 7.5 magnitude earthquake, which equals an annual probability of one in 475 each year.[3] Based on the same criteria, there is an approximately 10-percent probability of exceeding a peak site acceleration of 0.585g, 0.498g, and 0.456g in a 50-year period at the Goodrich Substation, Harding Substation, and Laguna Bell Substation, respectively.

The Modified Mercalli Intensity Scale is another common measure of earthquake intensity, which is a subjective measure of earthquake strength at a particular place and is determined by its effects on people, structures, and earth materials. Table 4.6-2: Earthquake Intensity Scale presents the Modified Mercalli Intensity Scale, including a range of approximate average peak accelerations associated with each intensity value. Based on the previously described approximate peak accelerations, the Proposed Project is estimated to fall within Intensity Value VIII.

4.6.1.4 Liquefaction

Liquefaction is the process in which the soil below the water table becomes converted to a fluid state and loses its strength when sufficiently shaken or vibrated during a seismic event. The soil types considered most susceptible to liquefaction are granular, low-plasticity, fine-grained soils that are saturated and have a density that ranges from loose to medium. Adverse effects of liquefaction include loss of bearing strength, lateral spreading, sand boils, ground oscillation, and settlement when liquefied ground reconsolidates following the seismic event.

Soils underlying Mesa Substation primarily consist of sandstone and alluvium. According to data provided by the California Emergency Management Agency, Mesa Substation is not located in an area where liquefaction has occurred or is likely to occur based on the site conditions. According to the USGS, liquefaction areas are present directly south of Laguna Bell Substation where undergrounding of the street light source line would occur and along the proposed telecommunications route from the intersection of East Avenida De La Merced and North Lincoln Avenue to the eastern terminus of the route. Liquefaction areas are defined by historical occurrences of liquefaction and local geological, geotechnical, and groundwater conditions that indicate a potential for permanent ground displacement. Liquefaction areas in the vicinity of the Mesa Substation study area are depicted in Figure 4.6-4: Hazards in the Mesa Substation Study Area. Additional detail on soil characteristics is provided in Section 4.6.1.2, Soils.

[3] This peak site acceleration refers to an Upper Bound Earthquake, as defined in Chapter 16 of the 2001 California Building Code (CBC).

Table 4.6-2: Earthquake Intensity Scale

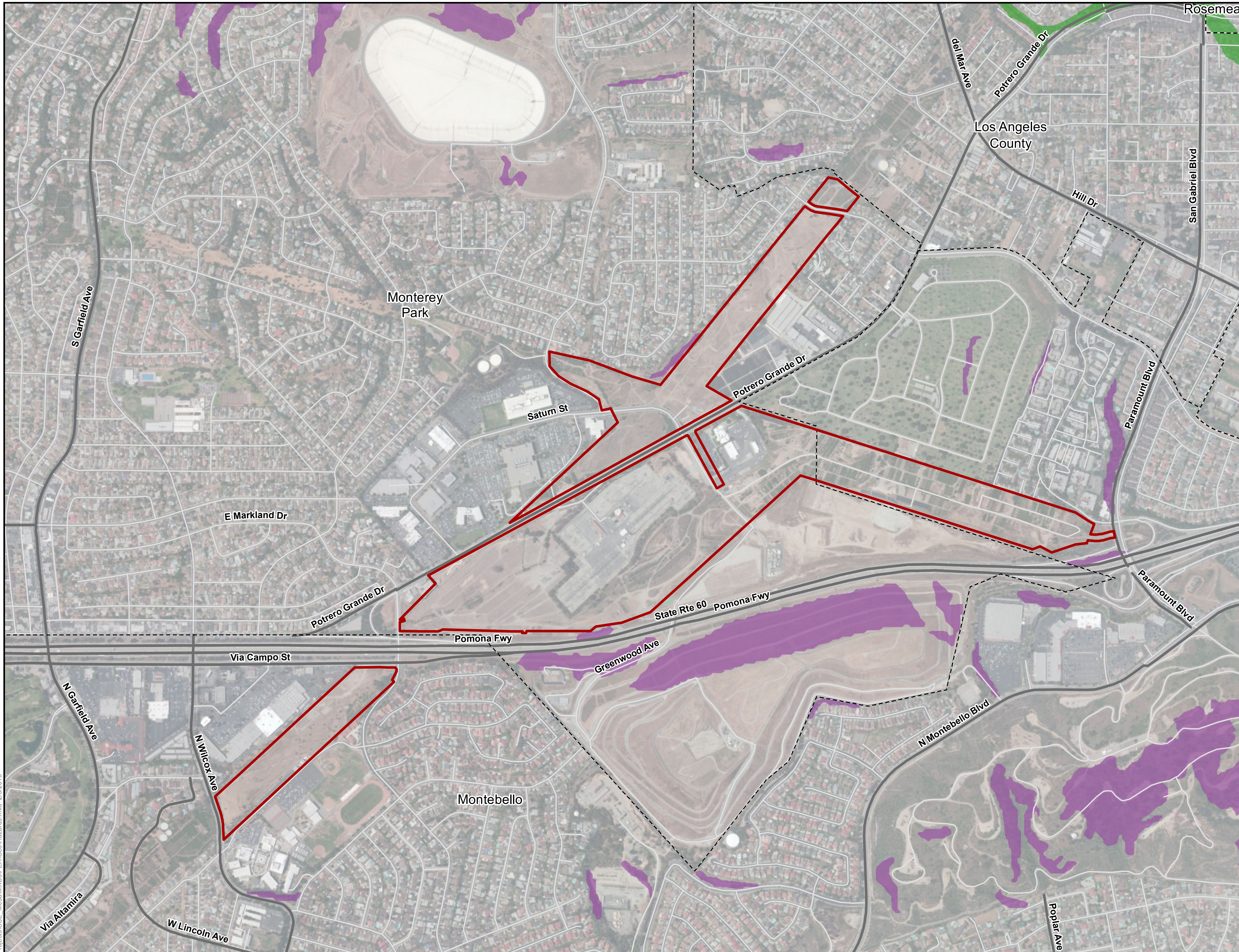
Intensity Value	Intensity Description	Average Peak Acceleration Range (g)
I	Not felt except by very few people under especially favorable circumstances.	<0.0017
II	Felt only by a few people at rest, especially on upper floors of buildings. Delicately suspended objects may swing.	0.0017-0.014
III	Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly; vibration similar to a passing truck.	
IV	During the day, felt indoors by many, and outdoors by few. At night, some awakened. Dishes, windows, and doors disturbed; walls make a cracking sound. The sensation is like a heavy truck striking a building. Standing motor cars rock noticeably.	0.014-0.039
V	Felt by nearly everyone, and many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees and poles may be noticed. Pendulum clocks may stop.	0.039-0.092
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moves and plaster falls or chimneys are damaged. Damage slight.	0.092-0.18
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; damage slight to moderate in well-built, ordinary structures; damage considerable in poorly built or badly designed structures. Some chimneys broken. Noticed by people driving motor cars.	0.18-0.34
VIII	Damage slight in specially designed structures; damage considerable in ordinary substantial buildings, with partial collapse; damage great in poorly built structures. Panel walls thrown out of frame structures. Chimneys, factory stacks, columns, monuments, and walls fall. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. People driving motor cars disturbed.	0.34-0.65

<table>
<tr><th>Intensity Value</th><th>Intensity Description</th><th>Average Peak Acceleration Range (g)</th></tr>
<tr><td>IX</td><td>Damage considerable in specially designed structures. Well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.</td><td>0.65-1.24</td></tr>
<tr><td>X</td><td>Some well-built wooden structures destroyed. Most masonry and frame structures destroyed with foundations. Ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.</td><td>>1.24</td></tr>
<tr><td>XI</td><td>Few, if any, masonry structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.</td><td rowspan="2">>1.24</td></tr>
<tr><td>XII</td><td>Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.</td></tr>
</table>

Source: Bolt (1988)

Figure 4.6-4: Hazards in the Mesa Substation Study Area

Mesa 500 kV Substation Project



Mesa Substation Study Area

City Boundary

Seismic Hazards*

Liquefaction

Landslide

* liquefaction and landslides may occur during a strong earthquake.
Source: California Geological Survey, Seismic Hazard Mapping Program

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4.6.1.5 Slope Instability

Strong ground motion can result in rockfall hazards and/or slope instability. The slopes most susceptible to earthquake-induced failure include those with highly weathered and unconsolidated materials on moderately steep slopes, especially in areas of previously existing landslides.

Landslides occur when masses of rock, earth, or debris move down a slope, and include rockfalls, deep failure of slopes, and shallow debris flows. The actuators of landslides can be both natural events (e.g., earthquakes, rainfall, and erosion) and human activities. Those induced by humans are most commonly related to large grading activities that can potentially cause new slides or reactivate old ones when compacted fill is placed on potentially unstable slopes.

Excavation operations can also contribute to landslides when lateral support is removed near the base of unstable hillside areas. Conditions to be considered in regard to slope instability include slope inclination, characteristics of the soil materials, the presence of groundwater, and degree of soil saturation. According to data from the County of Los Angeles Department of Public Works, there are limited areas where mapped landslides or the potential for landslides may occur that are adjacent to and in the vicinity of the Proposed Project. Slopes within the Proposed Project area range from less than one percent to 56 percent, with a median slope of approximately 13 percent.

USGS-designated landslide areas are defined by previous occurrences of landslides or where local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacement. Landslide areas are crossed by the Proposed Project in two locations. The proposed telecommunications reroute crosses a landslide area near West Jefferson Boulevard in Montebello. A second landslide area is crossed by the telecommunications line south of the San Gabriel Boulevard and East Lincoln Avenue intersection. No landslide areas are mapped in the Mesa Substation, Goodrich Substation, Harding Substation, Laguna Bell Substation, or other Proposed Project component areas. Landslide areas near the Mesa Substation Study area are depicted in Figure 4.6-4: Hazards in the Mesa Substation Study Area.

4.6.1.6 Differential Settlement

If the soil beneath a structure settles non-uniformly, the structure can be damaged. The reasons for differential settlement are usually traced to differences in the bearing characteristics of the soils. Alternatively, a portion of the soil beneath a structure may lose strength during an earthquake due to liquefaction. If liquefaction occurs non-uniformly, differential compaction would occur. A majority of the geologic units within the Proposed Project area are not prone to liquefaction. However, as previously described in 4.6.1.4, Liquefaction, areas subject to liquefaction are present in the vicinity of several Proposed Project components.

Secondary hazards associated with seismic activity include flooding, tsunamis, and seiches. Earthquakes have the potential to damage levees, dikes, or dams, which can result in the rapid emptying of reservoirs and the flooding of downstream communities. Waves generated by tsunamis and seiches also have the potential to induce flooding and severely damage coastal communities. However, the Proposed Project is not located near areas at risk of being inundated as a result of tsunamis or seiches.

4.6.1.7 Subsidence

Subsidence occurs most often when fluids are withdrawn from the ground, removing partial support for previously saturated soils. More rarely, subsidence occurs due to tectonic down-warping during earthquakes. With the exception of the Chino Silt Loam soil series, a majority of the soil units within the Proposed Project have a low potential to hold water. Therefore, the potential for subsidence is considered to be low in the Proposed Project area.

4.6.1.8 Expansive or Collapsible Soils

Expansive soils are characterized by the ability to undergo significant volume change (i.e., shrink and swell) as a result of variation in soil moisture content. Soil moisture content can change due to many factors, including perched groundwater, landscape irrigation, rainfall, and utility leakage. Expansive soils typically have high clay content and are associated with many of the geologic units throughout the Los Angeles Basin. Section 1803.2 of the 1994 Uniform Building Code (UBC) provides a grading method for expansive soils. According to UBC Table 18-1-B, soils with an expansion index of 20 or greater require additional foundation design considerations. Soils underlying the Proposed Project site are considered to have low expansion potential. Section 4.6.1.2, Soils provides a discussion on the qualities of the soils in the Proposed Project area.

4.6.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.6.2.1 Federal

Uniform Building Code

Published by the International Conference of Building Officials, the UBC provides complete regulations covering all major aspects of building design and construction relating to fire and life safety and structural safety. This is the code that has been adopted by most western states. The provisions of Volume 1 of the UBC contain the administrative, fire and life safety, and field inspection provisions, including all non-structural provisions and those structural provisions necessary for field inspections. Volume 2 contains provisions for structural engineering design, including those design provisions formerly in the UBC Standards. Volume 3 contains the remaining material, testing, and installation standards previously published in the UBC Standards.

Clean Water Act

The Clean Water Act (CWA) (33 U.S. Code §1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain non-point-source discharges to surface water. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source discharges of pollutants into waters of the U.S. Discharges or construction activities that disturb 1 or more acres, including the Proposed Project, are regulated under the NPDES storm water program and are required to obtain coverage under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements, such as the implementation of a Storm Water Pollution Prevention Plan (SWPPP), which would further specify best management practices (BMPs) and other measures designed to avoid or eliminate pollution discharges in waters of the U.S.

4.6.2.2 State

California Building Code

The Proposed Project is subject to the applicable sections of Title 24, Part 2 of the CBC, which is administered by the California Building Standards Commission. Under State law, all building standards must be centralized in Title 24 to be enforceable. The CBC contains necessary California amendments, which are based on American Society of Civil Engineers (ASCE) Standard 7-05. ASCE Standard 7-05 provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads for inclusion into building codes. The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, which are used to determine a seismic design category (SDC) for a project. An SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site. Once a project is categorized according to an SDC, design specifications can be determined. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure—or any appurtenances connected or attached to such buildings or structures—throughout California.

California Public Utilities Commission General Order 95

California Public Utilities Commission (CPUC) General Order (G.O.) 95 Rules for Overhead Line Construction provides general standards for the design and construction of overhead electric transmission lines.

California Public Utilities Commission General Order 128

CPUC G.O. 128 (Rules for Construction of Underground Electric Supply and Communication Systems) provides general standards for the construction of underground electric systems.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted by the State of California in 1972 to mitigate the hazard of surface faulting to structures planned for human occupancy and other critical structures. The State of California has established regulatory zones, known as earthquake fault zones, around the surface traces of active faults. Earthquake fault zone maps have been issued for use by government agencies to plan and review new construction projects. In addition to residential projects, structures planned for human occupancy that are associated with industrial and commercial projects are also a concern near the Alquist-Priolo fault zones.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Chapter 7.8, §2690-2699.6) directs the CGS to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of this program is to minimize the loss of life and property through the identification, evaluation, and mitigation of seismic hazards. Seismic Hazard Zone Maps that identify Zones of Required Investigation have been generated as a result of the program. Counties and cities are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Proposed Project is in an area that has not yet been mapped as part of the Seismic Hazards Mapping Act.

Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)

The Porter-Cologne Water Quality Control Act provides for the regulation of pollutants entering the State's surface and ground waters. The Los Angeles Regional Water Quality Control Board (RWQCB) is responsible for protecting the beneficial uses of surface water and groundwater resources in the Los Angeles County area. The RWQCB adopted a Water Quality Control Plan (Basin Plan) in June 1994. The Basin Plan sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act. The Basin Plan establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Project discharges to surface waters are subject to the regulatory standards set forth in applicable regional Basin Plans, which prevent the discharge of hazardous materials into waters of the State.

4.6.2.3 Local

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC G.O. 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

County of Los Angeles General Plan

The Safety Element of the County of Los Angeles General Plan contains the following goals to address geologic and seismic hazards:

- Minimize injury and loss of life, property damage, and the social, cultural, and economic impacts caused by earthquake damage
- Protect public safety and minimize the social and economic impacts from geologic hazards

City of Monterey Park

General Plan

The Safety and Community Services Element within the City of Monterey Park's General Plan has the following three goals addressing geologic and seismic hazards:

- Minimizing the potential damage to structures and loss of life that could result from earthquakes
- Ensuring that all residents and business owners in the City of Monterey Park have full and equal access to information regarding seismic hazards
- Protecting public and private properties from geologic hazards associated with steep slopes and unstable hillsides

City of Monterey Park Building Code

The City of Monterey Park has adopted the UBC, which is considered to be the minimum standard necessary to protect the health, safety, and welfare of the public. While the city may impose more stringent standards, it cannot adopt any that are less stringent than those of the UBC. No standard has been adopted above the minimum standard of the UBC.

City of Montebello General Plan

The Seismic Safety Element of the City of Montebello's General Plan includes goals and policies pertaining to scale of risks, as well as assigned zones that correspond to different hazard levels of ground shaking. The Proposed Project area is located in Zone 3, which is characterized by thin alluvium (less than 200 feet in depth) underlain by sedimentary rocks. According to the General Plan, these characteristics could contribute to additional effects on low- and medium-rise buildings from ground shaking. The city has the following two goals (with corresponding policies) addressing geologic and seismic hazards:

- Identify and appraise the geologic and seismic hazards within the community
- Reduce the loss of life, damage to property, and the economic and social dislocations resulting from future earthquakes

City of Rosemead General Plan

The Public Safety Element of the City of Rosemead's General Plan includes goals and policies aimed at minimizing impacts resulting from geologic and soil hazards, seismic shaking, fault rupture, and other earthquake-induced hazards. The following goal (with corresponding policies) has been implemented by the city to address geologic and seismic hazards:

- The City of Rosemead will act in cooperation with federal, State, and county agencies responsible for the enforcement of planning statues, environmental laws, and building codes to minimize, to the extent practical, risks to people and property damage, risks related to economic and social disruption, and other impacts resulting from geologic, soil, and seismic hazards

City of South El Monte General Plan

The primary seismic and geologic hazards listed within the Public Safety Element of the City of South El Monte's General Plan include high-intensity ground shaking, ground failure due to liquefaction and shallow groundwater, and seismic-induced surface rupture. The following goal is included in the plan to address geologic and seismic hazards:

- Reduce the risk of danger related to natural hazards

City of Commerce General Plan

The Health and Safety Element of the City of Commerce's General Plan includes several objectives to identify geologic hazards and provide ways to reduce the risk of property damage, injuries, or loss of life associated with living in an urban environment. The following two objectives are included in the plan to address geologic and seismic hazards.

- Minimize the loss of life and damage to property resulting from an earthquake
- Ensure that the city is prepared to respond to emergencies produced by a variety of hazards

City of Bell Gardens General Plan

The primary seismic and geologic hazards listed within the Safety Element of the City of Bell Gardens General Plan include ground shaking, ground failures and liquefaction, and surface rupture. The following policy is included in the plan to address geologic and seismic hazards:

- The City of Bell Gardens shall minimize the loss of life, injuries, and property damage through continuing prevention, inspection, and public education programs, including continual updating of the City's Emergency Preparedness Plan

City of Pasadena

City of Pasadena General Plan

The Safety Element of the city's General Plan contains goals, policies, and programs designed to identify and mitigate potential risks that could result from earthquakes and other seismic or geologic hazards.

City of Pasadena Building Code

The City of Pasadena has adopted Title 24 of the most current California Code of Regulations (CCR), which is based substantially on the new International Building Code. Local governments are permitted to make local amendments to the CCR that address unique local climatic, geologic, and/or topographical conditions in their respective communities. The City of Pasadena's location in a seismically active area necessitates great structural modifications to provide protection from earthquakes; as a result, the city has implemented more restrictive building standards for roof sheathing, diaphragms, footings and foundations, shear walls, and building separation to reduce the risk of injury and property damage in the event of an earthquake.

4.6.3 Significance Criteria

The significance criteria for assessing the impacts to geology and soils are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving the following:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to the California Division of Mines and Geology's Special Publication 42)
    - Strong seismic ground shaking
    - Seismic-related ground failure, including liquefaction
    - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

4.6.4 Impact Analysis

4.6.4.1 Would the project expose people or structures to 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 strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides?

Construction

Less-Than-Significant Impact. Two known faults—the East Montebello and Raymond faults—are located within 2 miles of the Proposed Project. The Proposed Project site is located within the following two mapped Alquist-Priolo fault zones:

- The El Monte Quadrangle, in which active portions of the East Montebello fault have been identified
- The Mount Wilson Quadrangle, in which active portions of the Raymond fault have been identified

As shown in Table 4.6-1: Active and Potentially Active Faults in the Vicinity of the Proposed Project, 17 additional faults—many of which are estimated to be capable of producing earthquakes with a maximum magnitude in excess of 6.4—are located within 25 miles of the Proposed Project area. Strong earthquakes, particularly near active faults, can result in liquefaction and collapse of soils if all of the right conditions are present. Although the Proposed Project is located within USGS-designated liquefaction and landslide areas, construction activities would be conducted where substations and associated transmission, subtransmission, and distribution lines currently exist. In addition, a majority of the proposed telecommunications routes are located along existing distribution or telecommunications routes where soils have been previously modified and engineered to support structures.

The Proposed Project would be engineered to withstand strong ground movement and moderate ground deformation. However, because the Proposed Project site is located within Alquist-Priolo fault zones, additional geotechnical investigation is necessary to ensure the final design of the Proposed Project is able to withstand seismic shaking and seismic-induced hazards.

SCE would prepare a geotechnical investigation and implement the Institute of Electrical and Electronics Engineers (IEEE) 693 Recommended Practices for Seismic Design of Substations (which has specific requirements to mitigate substation equipment damage), which would ensure that the Proposed Project is able to withstand seismic activity and reduce any potential adverse effects to a less-than-significant level. When these requirements are followed, very little structural damage from horizontal ground accelerations approaching 1g is anticipated. In addition, proposed aboveground and underground infrastructure would be designed in accordance with CPUC G.O. 95 and G.O. 128. As a result, the Proposed Project would be able to withstand reasonably foreseeable seismic events. Incorporation of these standard engineering practices would ensure that people or structures would not be exposed to hazards associated with strong seismic ground shaking. As a result, potential impacts are anticipated to be less than significant. The final Proposed Project design would also take into account the site-specific soil conditions, such as water table depth, evidence of faulting, liquefaction potential, physical properties of subsurface soils, soil resistivity, and slope stability. Therefore, impacts resulting from liquefaction or landslides would be less than significant.

Operation

Less-Than-Significant Impact. O&M activities for the Proposed Project would be similar to those currently conducted for the substation, as well as the transmission, subtransmission, distribution, and telecommunications lines. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with

CPUC G. O. 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability.

As discussed previously, the Proposed Project would be located within two Alquist-Priolo fault zones. However, the Proposed Project would be engineered to withstand strong ground movement and moderate ground deformation. In addition, the preparation of a geotechnical investigation and the implementation of the IEEE 693 Recommended Practices for Seismic Design of Substations would ensure that the Proposed Project is able to withstand seismic activity. Further, SCE would design proposed aboveground and underground infrastructure in accordance with CPUC G.O. 95 and G.O. 128, which would allow structures to withstand reasonably foreseeable seismic events. Therefore, O&M of the Proposed Project is not expected to expose people or structures to hazards associated with strong seismic ground shaking. As a result, impacts would be less than significant.

4.6.4.2 Would the project result in substantial soil erosion or the loss of topsoil?

Construction

Less-Than-Significant Impact. Grading would expose soil to erosion by removing the vegetative cover and potentially compromising the soil structure. Rain and wind may potentially further detach soil particles and transport them off site. Because the Proposed Project would disturb more than 1 acre, a Proposed Project-specific SWPPP would be prepared that identifies BMPs to be implemented during construction. Information based on the soil type, slope, and other on-site characteristics would be used to develop appropriate BMPs to ensure that erosion and sedimentation would be controlled during construction of the Proposed Project.

The existing Mesa Substation, Goodrich Substation, the existing lattice steel tower on the Goodrich-Laguna Bell 220 kV Transmission Line, and the telecommunications line reroute between Mesa and Harding substations are located on generally flat and rolling terrain with low erosion potential, as described in Section 4.9, Hydrology and Water Quality. Erosion at these sites would occur primarily through wind, water, and tracking from vehicles and equipment. The erosion potential would be considered when developing BMPs included in the SWPPP. In addition, soil exposure to erosion would be temporary and would be sufficiently stabilized following the completion of construction. As a result, impacts would be less than significant.

The majority of the Proposed Project would be constructed within developed areas where the soil is highly disturbed as a result of past and current substation, transmission, subtransmission, distribution, and telecommunications construction and O&M activities. Ground disturbance would occur primarily during the undergrounding of subtransmission, distribution, and telecommunications lines, potential structure removal and installation, and the construction of Mesa Substation. The expansion of Mesa Substation would permanently impact approximately 40 acres; however, topsoil in these locations is generally not present and, where it is present, is of low value. Therefore, the loss of topsoil would be considered less than significant.

During construction, exposed soil would be subject to wind erosion and runoff that can detach and transport sediment off site. However, given the relatively flat topography within and adjacent to the Proposed Project, the potential for erosion from run-on and run-off is anticipated to be low. A Worker Environmental Awareness Program would be provided for workers to ensure that proper procedures are taken to implement BMPs during construction. With implementation of the SWPPP, which would include BMPs to control erosion and prevent off-site sedimentation, substantial soil erosion is not anticipated to occur.

Operation

Less-Than-Significant Impact. Within the developed substation, the potential for soil erosion is considered low due to the site drainage and surfacing improvements that would be in place. O&M of the Proposed Project components would not typically involve ground-disturbing activities or grading, and further loss of topsoil is not anticipated. If grading is required, SCE would implement BMPs to minimize erosion and control sedimentation within the work areas. In addition, existing access roads would be used for routine O&M activities. Therefore, impacts to soil erosion or topsoil would be less than significant.

4.6.4.3 Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Construction

Less-Than-Significant Impact. Landslides typically occur on moderate to steep slopes where soils become saturated to the point that they cannot hold their own weight and begin to slough downward. The Proposed Project would be located primarily on flat to rolling terrain with slopes up to two percent. Steeper slopes are present, but are limited throughout the Proposed Project area. The soils in a majority of the Proposed Project area are well-drained and are not likely susceptible to catastrophic slope movement, lateral spreading, subsidence, or collapse. Only one soil type crossed by the Proposed Project—the Chino Silt Loam series—is not considered to be a well-drained soil type. This soil type is found within the area of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation; however, ground disturbance within this area would be limited to pole replacement activities. New poles would be engineered to withstand ground movement and would not result in a significant impact related to unstable soil. As described in Chapter 3, Project Description and with the incorporation of site-specific recommendations based on the geotechnical report for the site, the Proposed Project facilities would be designed to withstand landslides or other soil movement based on the existing soil conditions and other factors identified from the geotechnical investigation. As a result, impacts from unstable geologic units would be considered less than significant.

As described previously, soils underlying Mesa Substation primarily consist of sandstone and alluvium. According to data provided by the County of Los Angeles Department of Public Works, Mesa Substation site is not located in an area where liquefaction has occurred or is likely to occur. As previously described, additional Proposed Project components are located within USGS-designated landslide and liquefaction areas. Two Proposed Project components would be located within designated liquefaction areas—the proposed conversion of a street light source line from overhead to underground configuration and the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation. However, the landslide and liquefaction areas crossed by the Proposed Project are located within developed areas where the soils have been stabilized as a result of past and current substation, transmission, subtransmission, distribution, and telecommunications construction and O&M. As a result, no impacts related to liquefaction or landslides are anticipated to occur.

Operation

No Impact. As previously described, O&M activities for the Proposed Project would be similar to those currently conducted for the substation, as well as for transmission, subtransmission, distribution, and telecommunications lines. O&M activities are not expected to result in the increase or relocation of soils that would increase the probability of slope movement, lateral spreading, subsidence, or collapse as they are generally limited to work in existing developed areas. As a result, there would be no impact.

4.6.4.4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Construction

Less-Than-Significant Impact. As described in Section 4.6.1.2, Soils, the six soil types identified near the surface of the Proposed Project area have low expansion potential and are not anticipated to have enough shrink/swell potential to result in large expansions. According to Table 18-1-B of the UBC, soils with an expansion index of 20 or greater require additional foundation design considerations. Data acquired during the geotechnical investigation would be used to design the final grading plans so that the soil composition, compaction, and grade mitigates the risk of damage from expansive soils. Given that the Proposed Project would be located on soils that have a generally low shrink/swell potential, and that site-specific grading plans would be used at the proposed Mesa Substation site, impacts related to the risks associated with expansive soils would be less than significant.

Operation

No Impact. As previously described, O&M activities for the Proposed Project would be similar to those currently conducted for the substation, as well as for the transmission, subtransmission, distribution, and telecommunications lines. O&M activities are not anticipated to result in new expansive soil conditions, and any new soils imported for O&M activities would meet the requirements of Table 18-1-B of the UBC. Therefore, O&M of the Proposed Project is not expected to result in substantial risks to life or property due to soil expansion or shrinkage. As a result, there would be no impact.

4.6.4.5 Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Construction

No Impact. Soil permeability is a consideration for projects that require septic system installation. Because the Proposed Project would not involve the installation of a septic tank or alternative wastewater disposal system, no impact would occur.

Operation

No Impact. O&M of the Proposed Project would not involve the use of a septic tank or alternative wastewater disposal system. As a result, no impact would occur.

4.6.5 Applicant-Proposed Measures

Because no significant impacts to geology and soils would occur as a result of the Proposed Project, no avoidance and minimization measures are proposed.

4.6.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

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4.7 Greenhouse Gas Emissions

This section describes the greenhouse gas (GHG) regulations that are applicable to electrical transmission projects and evaluates the potential impacts from construction and operation of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]).

Federal, State, regional, and local regulations and policies were consulted to determine the Proposed Project's level of compliance with—and potential impacts to—applicable climate action plans and/or GHG standards. Information for this section was obtained from Internet searches of federal, State, regional, and local websites. The simulated GHG emissions presented in this section were developed using the South Coast Air Quality Management District's (SCAQMD's) California Emissions Estimator Model (CalEEMod). This analysis of GHG emissions evaluates the Proposed Project's potential to generate GHG emissions for the construction and operation phases of the Proposed Project. GHG emissions were calculated with the intent of identifying the biggest contributors of GHGs.

4.7.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern

[1] The term "Proposed Project" is inclusive of all components of the Mesa Substation 500 kV Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

California Edison Company (SCE); therefore, construction of these minor modifications to existing substations would not result in changes to the air quality in the area. As a result, these components are not discussed further in this section.

4.7.1.1 Climatic Environmental Setting

GHGs refer to gases that trap heat in the atmosphere, causing a greenhouse effect. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). Atmospheric concentrations of the two most important directly emitted, long-lived GHGs, CO_2 and CH_4, are currently well above the range of atmospheric concentrations that occurred over the last 650,000 years. According to the Intergovernmental Panel on Climate Change (IPCC), increased atmospheric levels of CO_2 are correlated with rising temperatures; concentrations of CO_2 have increased by 31 percent above pre-industrial levels since the year 1750. Climate models show that temperatures will probably increase by 1.4 degrees Celsius (°C) to 5.8°C by the year 2100.

Global warming potential (GWP) estimates how much a given mass of a GHG contributes to climate change. The term enables comparison of the warming effects of different gases. GWP uses a relative scale that compares the warming effect of the gas in question with that of the same mass of CO_2. The CO_2 equivalent (CO_2e) is a measure used to compare the effect of emissions of various GHGs based on their GWP, when projected over a specified time period (generally 100 years). CO_2e is commonly expressed as million metric tons of CO_2 equivalents (CO_2e). The CO_2e for a gas is obtained by multiplying the mass of the gas (in tons) by its GWP.

4.7.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.7.2.1 Federal

Federal Mandatory Reporting of Greenhouse Gases (Title 40 Code of Federal Regulations Part 98)

The United States (U.S.) Environmental Protection Agency (EPA) promulgated this rule in 2009 to require mandatory reporting of GHGs from large GHG emissions sources in 31 source categories in the U.S. In general, the threshold for reporting is 25,000 metric tons (MTs) or more of CO_2e ($MTCO_2e$). Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs, along with vehicle and engine manufacturers, report at the corporate level. Facilities and suppliers began collecting data on January 1, 2010. The first emissions report was due on March 31, 2011 for emissions during 2010. Manufacturers of vehicles and engines outside of the light-duty sector began reporting CO_2 for model year 2011 and other GHGs in subsequent model years as part of existing EPA certification programs.

Since 2012, EPA regulations also require the reporting of SF_6 emissions from certain electrical facilities (40 CFR Part 98, Subpart DD). SCE complies with these requirements. Furthermore, SCE has developed and would implement SF_6 Gas Management Guidelines, as described in SCE's document entitled "An Asset Management Approach for EPA/CARB SF_6 Regulations," dated April 2012. This document includes an overview of the tools and methods that SCE utilizes to comply with both EPA's Voluntary SF_6 Emission Reduction Partnership for Electric Power Systems program and the California Air Resources Board's (CARB's) SF_6 regulations. Currently, SCE O&M complies with this requirement. Following the guidelines in this document would ensure compliance with these regulations once the Proposed Project is in operation. This guideline document identifies storage methods, disposal method alternatives, and record-keeping requirements. Inventories are documented and annually reported to the EPA and the CARB.

4.7.2.2 State

California Global Warming Solutions Act of 2006 (Assembly Bill 32)

The California Global Warming Solutions Act of 2006 (Assembly Bill [A.B.] 32) charges the CARB with the responsibility of monitoring and regulating sources of GHG emissions in order to reduce those emissions. The CARB established a scoping plan in December 2008 for achieving reductions in GHG emissions and has established and implemented regulations for reducing those emissions by the year 2020.

Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (Title 17 California Code of Regulations Sections 95350 to 95359)

The CARB adopted this rule in 2011 to reduce SF_6 emissions from gas insulated switchgear (GIS) and circuit breakers that use SF_6 as an electrical insulating medium. The rule specifies maximum annual SF_6 emission rates for each GIS owner's active GIS equipment. These emission rates decrease with time. The rule also specifies recordkeeping and reporting requirements. SCE complies with this regulation.

California Mandatory Greenhouse Gas Reporting Regulation (Title 17 California Code of Regulations Sections 95100 to 95133)

Pursuant to A.B. 32, the CARB adopted the Mandatory Greenhouse Gas Reporting Regulation. The facilities required to annually report their GHG emissions include electricity-generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 $MTCO_2e$ per year from stationary source combustion. In particular, retail providers of electricity are required to report fugitive emissions of SF_6 related to transmission and distribution systems, substations, and circuit breakers located in California that the retail provider or marketer is responsible for maintaining in proper working order. SCE complies with these requirements.

4.7.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

South Coast Air Quality Management District

The air districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their respective geographic areas and for preparing the air quality plans that are required under the federal Clean Air Act and the California Clean Air Act. The SCAQMD is the primary agency responsible for planning, implementing, and enforcing federal and State ambient air quality standards in the urban portions of Los Angeles County. The SCAQMD has adopted an Air Quality Management Plan (AQMP), which is intended to bring the area in compliance with federal and State clean air standards. Rules are adopted to reduce emissions from various sources, including specific types of equipment, industrial processes, and paints and solvents. The SCAQMD also issues permits to businesses and industries to ensure compliance with air quality rules. The SCAQMD has also developed thresholds for GHG emissions with the involvement of the CARB, the Governor's Office of Planning and Research, other agencies, and stakeholders.

County of Los Angeles

County of Los Angeles General Plan

The County of Los Angeles General Plan does not contain any policies related to GHG emissions.

County of Los Angeles Community Climate Action Plan

The County of Los Angeles is currently preparing a Community Climate Action Plan to mitigate and avoid GHG emissions associated with community activities in unincorporated Los Angeles County. The plan will evaluate current GHG emissions, forecast business-as-usual emissions, establish initiatives to reduce emissions, and develop reduction strategies.

City of Monterey Park

City of Monterey Park General Plan

The City of Monterey Park General Plan does not contain any policies related to GHG emissions.

City of Monterey Park Climate Action Plan

In 2012, the City of Monterey Park prepared a Revised Draft Climate Action Plan to establish a comprehensive strategy for addressing GHG emissions related to land use, transportation, building design, energy use, water demand, and waste generation. The plan evaluates current GHG emissions, forecasts business-as-usual emissions, establishes a policy to reduce emissions to 15 percent below baseline 2009 levels by 2020, and develops reduction strategies.

City of Montebello

City of Montebello General Plan

The City of Montebello General Plan was adopted in 1973 and does not contain any policies related to GHG emissions.

Energy Efficient Climate Action Plan

The City of Montebello is one of 27 cities participating in the Energy Efficient Climate Action Plan (EECAP) project, which is administered by SCE. The goal of the EECAP is to summarize the city's existing and future energy use, project future energy use through 2020, identify energy efficiency goals and targets, create an energy efficiency strategy to meet reduction goals, and assist in meeting State and regional goals for GHG reduction.

City of Rosemead

City of Rosemead General Plan

The Resource Management Element of the City of Rosemead General Plan includes a policy to adopt a Climate Action Plan or policy to address greenhouse gas mitigation.

Energy Efficient Climate Action Plan

The City of Rosemead is participating in the EECAP project and is currently preparing a Climate Action Plan.

City of South El Monte

City of South El Monte General plan

The City of South El Monte General Plan does not have any policies pertaining to GHG emissions.

Energy Efficient Climate Action Plan

The City of South El Monte is one of 27 cities participating in the EECAP project.

City of Commerce

The City of Commerce General Plan does not have any policies pertaining to GHG emissions; the city does not have an adopted Climate Action Plan.

City of Bell Gardens

The City of Bell Gardens General Plan does not have any policies pertaining to GHG emissions; the city does not have an adopted Climate Action Plan.

City of Pasadena

City of Pasadena General Plan

The Open Space and Conservation Element of the City of Pasadena General Plan contains goals and policies for GHG emission reductions, including the following:

- Reduce peak electric load, and maximize the energy efficiency of new and existing buildings
- Increase the proportion of energy mix provided by renewable energy sources to 40 percent
- Achieve CO_2 emission reductions of at least 40 percent by 2020

City of Pasadena Greenhouse Gas Emissions Inventory

In 2012, the City of Pasadena adopted a Greenhouse Gas Emissions Inventory to identify the sources and quantities of GHG emissions within the city's jurisdictional boundaries. The goal of the plan was to identify where the greatest opportunities for GHG emission reductions exist, create a GHG emissions baseline from which the City of Pasadena can set targets for GHG emission reductions and measure future progress, and help develop a citywide Climate Action Plan.

4.7.3 Significance Criteria

The significance criteria for assessing the impacts from GHG emissions are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions

The SCAQMD has published interim CEQA guidelines regarding GHG emission thresholds for projects for which the SCAQMD is the lead agency. In the absence of statewide project-specific significance thresholds, this analysis of potential impacts compares the Proposed Project emissions to the SCAQMD significance thresholds. The applicable numeric significance threshold for projects within the SCAQMD is 10,000 $MTCO_2e$ per year. This threshold includes construction emissions, amortized over 30 years, plus operational emissions.

4.7.4 Impact Analysis

4.7.4.1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction and Operation

Less-Than-Significant Impact. The SCAQMD has adopted a significance threshold of 10,000 $MTCO_2e$ emissions annually for industrial sources. This threshold includes construction emissions, amortized over 30 years, and operational emissions. The main source of GHG emissions associated with the Proposed Project would be fossil fuel combustion during construction. GHG emissions for construction were calculated using the same approach as criteria air pollutant emissions for overall construction emissions. Estimated GHG emissions are summarized in Table 4.7-1: Greenhouse Gas Construction Emissions.

Table 4.7-1: Greenhouse Gas Construction Emissions

Category	GHG Emissions (Metric Tons per Year)			
	CO_2	CH_4	N_2O	CO_2e
GWP	1	21	310	N/A
Annual Construction Emissions				
2016	8,357.9	2.2	0.0	8,403.5
2017	5,236.1	1.4	0.0	5,266.3
2018	4,096.7	1.1	0.0	4,120.4
2019	6,254.8	1.7	0.0	6,291.4
2020	1,603.4	0.4	0.0	1,612.4
2021	223.2	0.1	0.0	224.5
Amortized Construction Emissions (Amortized CO_2e over 30 Years)	**864.0**			

Note: "N/A" = Not Applicable

During O&M, one of the main sources of GHG emissions would be fugitive emissions from equipment containing SF_6 gas installed at the proposed Mesa Substation. This facility would be an air-insulated substation; therefore, the 500 kV, 220 kV, and 66 kV circuit breakers and 220 kV ground disconnect switches would be the only pieces of equipment on site containing SF_6. The Proposed Project's circuit breakers and 220 kV ground disconnect switches would have a maximum annual leak rate of 0.5 percent, based on the manufacturer's guaranteed specifications. The 220 kV ground disconnect switches are unique to the Proposed Project and are a maintenance requirement due to 220 kV fault duty (protection against abnormal electric current). Table 4.7-2: Annual Fugitive SF_6 Emissions summarizes the annual fugitive SF_6 emissions that are anticipated from O&M of the proposed Mesa Substation. The "delta" represents the estimated increase in emissions specifically due to the Proposed Project's new equipment containing SF_6 over existing equipment containing SF_6 currently located at Mesa Substation.

Table 4.7-2: Annual Fugitive SF_6 Emissions

Equipment Type	Quantity	Circuit Breaker Capacity (Pounds of SF_6 Per Circuit Breaker)	Total Annual Fugitive SF_6 Emissions (Pounds)	Annual CO_2e Fugitive Emissions (Metric Tons)
Existing Substation Layout				
220 kV Circuit Breaker	23	270	31.1	336.6
66 kV Circuit Breaker	48	40	9.6	104.1
Subtotal	N/A	N/A	40.7	440.7
Proposed Substation Layout				
500 kV Circuit Breaker	9	1,445	65.0	704.9
220 kV Circuit Breaker	33	270	44.6	483.0
220 kV Ground Disconnect Switch	132	45	29.7	322.0
66 kV Circuit Breaker	45	40	9.0	97.6
Subtotal	N/A	N/A	148.3	1,607.5
Delta (increase due to Proposed Project)	**N/A**	**N/A**	**107.6**	**1,166.8**

Fossil fuel combustion during periodic maintenance and repair activities and on-road vehicle travel associated with employee travel to and from the site would be an additional source of GHG emissions during O&M. Periodic maintenance and repair activities would continue to be conducted at a similar frequency and intensity as they are for the existing facilities. It is also anticipated that the same number of employees (47) would travel to the site each day as they do currently. As a result, the delta from these emissions would be zero and they have not been included in Table 4.7-3: Greenhouse Gas Operation and Maintenance Emissions.

Table 4.7-3: Greenhouse Gas Operation and Maintenance Emissions

Source	GHG Emissions ($MTCO_2e$ per Year)
Amortized Construction Emissions	864.0
Increase in Fugitive SF_6 Emissions	1,166.8
Total	**2,030.8**
SCAQMD Threshold	**10,000**

As shown in Table 4.7-3: Greenhouse Gas Operation and Maintenance Emissions, the amortized construction emissions and increase in fugitive SF_6 emissions would result in approximately 2,030.8 $MTCO_2e$ annually. This level would not exceed the SCAQMD's significance threshold of 10,000 $MTCO_2e$ emissions annually for industrial sources. Accordingly, impacts would be less than significant.

4.7.4.2 Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction

No Impact. Construction of the Proposed Project would not conflict with the policies, plans, and regulations for reducing GHG emissions. Currently, State law does not require GHGs to be included in AQMPs, and they are not currently regulated by local air quality management districts. Statewide GHG emissions are regulated through A.B. 32, which codifies the State's GHG emissions target by requiring that the State's GHG emissions be reduced to 1990 levels by 2020 and directs the CARB to enforce the Statewide Climate Action Plan. As shown in Table 4.7-3: Greenhouse Gas Operation and Maintenance Emissions, the Proposed Project emissions are less than the SCAQMD interim GHG thresholds and, therefore, would not conflict with any State targets for GHG emission reductions. Furthermore, construction activities would not be expected to consume a substantial amount of energy that would result in a conflict with policies that serve to reduce GHG emissions through a reduction in energy consumption. As such, the Proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Operation

No Impact. O&M of the Proposed Project would be consistent with the policies, plans, and regulations for reducing GHG emissions. As described in Section 4.7.2, Regulatory Setting, the CARB has implemented a regulation designed to reduce and control SF_6 emissions from electricity transmission and distribution equipment. SCE would comply with the established requirements. SCE is actively engaged in practices and programs to reduce GHG emissions. O&M of the Proposed Project would not conflict with plans, policies, or regulations adopted by the County of Los Angeles or the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, or Pasadena for the purpose of reducing GHG emissions.

SCE has developed SF_6 Gas Management Guidelines that require proper documentation and control of SF_6 gas inventories, whether in equipment or in cylinders. Inventories are documented on both a quarterly and a yearly basis. SCE assumes that any SF_6 gas that is purchased and not used to fill new equipment is needed to replace SF_6 gas that has inadvertently leaked from equipment already in service. This assumption forms the basis for SCE to track and manage SF_6 gas emissions. Currently, SCE voluntarily reports these emissions to the California Climate Action Registry, which was created by the California legislature to help companies track and reduce GHG emissions. It is expected that the Proposed Project would have a minimal amount of SF_6 leakage as a result of the installation of state-of-the-art equipment and SCE's SF_6 gas management practices.

By complying with applicable rules and regulations and maintaining the O&M protocols that are being conducted at the existing substation, the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. As a result, no impact would occur.

4.7.5 Applicant-Proposed Measures

Because no potentially significant impacts from GHG emissions would occur as a result of the Proposed Project, no avoidance or minimization measures are proposed.

4.7.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

4.7.7 References

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4.8 Hazards and Hazardous Materials

This section describes the hazards and hazardous materials in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]), as well as potential impacts.

For the purposes of this assessment, hazards include air traffic related to nearby airports or airstrips, wildland fires, existing hazardous sites, and hazardous materials related to construction and operation of the Proposed Project. Information for this analysis was obtained from the following resources:

- Database search reports produced by Environmental Data Resources, Inc. (EDR), which are included in Appendix I: Hazardous Materials Record Search Results
- California Department of Forestry and Fire Protection (CAL FIRE) website
- General plans and zoning maps from the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as the County of Los Angeles

In addition, aerial photographs, city directories, and topographic maps were reviewed, where available, to assess historical site and adjacent property uses and to identify the potential for encountering hazardous materials in the Proposed Project area as a result of historical use.

4.8.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens

[1] The term “Proposed Project” is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., “telecommunications line reroute between Mesa and Harding substations”).

- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to the hazards and hazardous materials in the area. As a result, these components are not discussed further in this section.

4.8.1.1 Records Review

EDR conducted a database search for areas in the vicinity of Mesa Substation, Goodrich Substation, the proposed telecommunications routes, the street light source line undergrounding south of Laguna Bell Substation, and the tower replacement on the Goodrich-Laguna Bell 220 kV Transmission Line. The EDR reports document findings of various federal, State, and local regulatory database searches regarding properties with known or suspected releases of hazardous materials or petroleum hydrocarbons. The following federal, State, and local records were reviewed, among others, to determine areas where contamination might be encountered during construction:

- Active Underground Storage Tank facilities (UST)
- California Department of Conservation (DOC) Online Well Record database
- California Hazardous Material Incident Report System
- California Office of Environmental Health Hazard Assessment Notify 65 Database
- Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS)
- CERCLIS No Further Response Actions Planned
- Department of Toxic Substances Control (DTSC) Cortese List
- DTSC EnviroStor database
- Federal Emergency Response Notification System
- Federal Institutional Controls/Engineering Controls
- Federal Underground Storage Tank listings
- Local Landfill/Solid Waste Disposal sites
- Local Brownfield sites
- National Priorities List (NPL) (including delisted and proposed sites)
- Needing Further Evaluation sites
- Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) facilities list
- RCRA Non-CORRACTS Treatment, Storage, and Disposal facilities list
- RCRA generators list
- School Property Evaluation Program
- State and Tribal Equivalent NPL/CERCLIS sites
- State and Tribal Registered Underground Storage Tanks
- State and Tribal Landfills and Solid Waste Disposal sites

- State and Tribal Leaking Underground Storage Tanks (LUSTs)
- State and Tribal Voluntary Cleanup sites
- State Response sites
- Statewide Spills, Leaks, Investigations, and Cleanups (SLIC)
- Toxic Alert for California Superfund sites

The databases identified properties located within the recommended ASTM International distances of the Proposed Project. A review of the search results identified hazardous materials and the use, generation, storage, treatment, or disposal of chemicals, as well as any release incidents of such materials that may be encountered during construction of the Proposed Project. The EDR reports are included in Appendix I: Hazardous Materials Record Search Results.

4.8.1.2 Existing Conditions

The following discussion addresses the potential types and amounts of hazardous materials that are anticipated to be located within 1 mile of the Proposed Project. Schools located within 0.25 mile of the Proposed Project have been identified according to the California Environmental Quality Act (CEQA) requirement to assess potential impacts with regard to hazardous conditions.

Existing Hazardous Sites

Mesa Substation

Hazardous material sites were identified on a number of properties, including the Mesa Substation site. The results of EDR's database search are provided in Appendix I: Hazardous Materials Record Search Results. Two NPL Superfund sites, one RCRA CORRACTS facility, and three DTSC EnviroStor sites were identified within 1 mile of the Proposed Project. Within 0.75 mile of the Proposed Project site, one CERCLIS site and 30 LUST sites were identified. Of the 30 LUST sites, seven remain open. In addition, within 0.5 mile of the Proposed Project, 24 properties were identified on the RCRA generators list. The open hazardous sites located within the vicinity of the Proposed Project are listed in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project.

The Mesa Substation site was identified in the RCRA Large Quantity Generator (LQG) database, which includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste, as defined by the RCRA. LQGs generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Four additional RCRA LQG sites were identified within 0.5 mile of the Proposed Project site. The Proposed Project site was also identified in the LUST database. A leaking tank was discovered in 1999, and a Soil and Water Investigation Work Plan was prepared in 2002. The case was closed in 2003, and no further action is required.

In addition, existing transformers and other oil-filled equipment with a combined oil/petroleum storage capacity of 166,037 gallons are located on the Mesa Substation site. As required by the Clean Water Act (CWA), SCE maintains a Spill Prevention, Control, and Countermeasure (SPCC) Plan in case of spills or leaks.

Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project

Site	Cleanup Status	Media Affected	Approximate Distance from Proposed Project (Miles)	Nearest Proposed Project Component
Operating Industries, Inc. (OII) Landfill	Final NPL (Monitoring)	Groundwater, air, soil, and sludge contaminated with tetrachloroethylene (PCE); 1,1,1-trichloroethane; tricholorethylene (TCE); and vinyl chloride	Adjacent	Mesa Substation
SCE Montebello Service Center	Open	Soil contaminated with gasoline and waste oil	Adjacent	Mesa Substation
Don Bosco Technical Institute	Open – Eligible for closure as of September 27, 2014	Groundwater contaminated with petroleum hydrocarbons	Adjacent	New telecommunications line from transmission tower M40-T3 to Mesa Substation
Mobil Number 18-EVF	Open	Groundwater contaminated with petroleum hydrocarbons and other fuel oxygenates	Adjacent	New telecommunications line from transmission tower M40-T3 to Mesa Substation
Whittier Narrows Operable Unit (WNOU) (San Gabriel Superfund Site)	Open	Groundwater contaminated with perchlorate, PCE, TCE, 1,4-dioxane, and NDMA	Adjacent	New telecommunications line from transmission tower M38-T5 to Mesa Substation

Site	Cleanup Status	Media Affected	Approximate Distance from Proposed Project (Miles)	Nearest Proposed Project Component
Trident Plating, Inc.	Open	Soil and soil vapor contaminated with arsenic, lead, PCE, and chromium VI	0.1	Replacement of an existing lattice steel tower (LST) on the Goodrich-Laguna Bell 220 kV Transmission Line
Naval Information Research Foundation	Open	Soil contaminated with arsenic, dioxin, petroleum, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons, and volatile organic compounds (VOCs)	0.1	Temporary 220 kV line loop-in at Goodrich Substation
Alpha Photonics Inc.	Unknown	Not specified	0.2	Mesa Substation
Narf Management Group Chevron	Open	Aquifer used for drinking water supply	0.2	Telecommunications line reroute between Mesa and Harding substations
Whittier Narrows Flood Control Basin	Inactive – Needs Evaluation	Not Specified	0.2	New telecommunications line from transmission tower M38-T5 to Mesa Substation
Arco/JSND Incorporated	Open	Soil contaminated with groundwater	0.2	New telecommunications line from transmission tower M38-T5 to Mesa Substation
Advance Process Supply	Open – inactive as of December 2, 2014	Soil contaminated with acetone and toluene	0.2	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line

Site	Cleanup Status	Media Affected	Approximate Distance from Proposed Project (Miles)	Nearest Proposed Project Component
Geo Petroleum, Inc.	Open	Contamination is under investigation, suspected contaminants of concern are petroleum hydrocarbons	0.2	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line
Vard Inc.	Open	Not specified	0.2	Temporary 220 kV line loop-in at Goodrich Substation
Naval Information Research Foundation Undersea Center	Open	Not specified	0.2	Temporary 220 kV line loop-in at Goodrich Substation
Bell Gardens High School	Open – Eligible for closure as of November 19, 2014	Not Specified	0.3	Street light source line conversion from overhead to underground within Loveland Street
Chevron Stations Inc. Number 9-4784	Open	Soil contaminated with gasoline	0.4	Mesa Substation
Derlan Incorporated True Trace Facility	Open – Inactive	Groundwater contaminated with VOCs	0.4	New telecommunications line from transmission tower M38-T5 to Mesa Substation
Semou Shallow-Zone Extraction	Open – In remediation	Groundwater contaminants (i.e., VOCs) are treated and discharged on site	0.4	New telecommunications line from transmission tower M38-T5 to Mesa Substation

Site	Cleanup Status	Media Affected	Approximate Distance from Proposed Project (Miles)	Nearest Proposed Project Component
Newcrow II	Open	Soil, soil vapor, and groundwater contaminated with 1,4-dioxane, metals, n-nitrosodimethamine (NDMA), perchlorate, and VOCs	0.4	Street light source line conversion from overhead to underground within Loveland Street
Chevron Stations Inc. Number 91049	Open – Eligible for Closure	Surface/structure, and soil under investigation for chlorinated hydrocarbons and waste oil contamination	0.5	Mesa Substation
Mobil Number 18-EQA	Open	Soil contaminated with gasoline	0.5	Mesa Substation
Pacific Tube Company/ Commerce 12.9-acre site	Open	Soil and groundwater contaminated with 1,2-dichloroethylene, 1,1,2,2-tetrachloroethane, and 1,1,2-trichloroethane	0.5	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line
Kinneloa Avenue Property	Voluntary	Soil contaminated with halogenated organic compounds, metals, and asbestos	0.5	Temporary 220 kV line loop-in at Goodrich Substation
Shell Service Station	Open	Aquifer used for drinking water supply	0.6	Mesa Substation

Site	Cleanup Status	Media Affected	Approximate Distance from Proposed Project (Miles)	Nearest Proposed Project Component
Mobil Number 18-ERR	Open – Eligible for Closure	Aquifer used for drinking water supply	0.6	Mesa Substation
MQS Inspection, Inc. (Former)	Open	Soil and groundwater contaminated with PCE and TCE	0.6	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line
Chrome Crankshaft Company	Open	Soil and groundwater contaminated with metals and VOCs	0.6	Street light source line conversion from overhead to underground within Loveland Street
6801 Suva Street Property	Open	Soil and soil gas contaminated with TCE	0.6	Street light source line conversion from overhead to underground within Loveland Street
J & S Chrome Plating	Open	Soil and groundwater contaminated with metals and VOCs	0.7	Street light source line conversion from overhead to underground within Loveland Street
Georgia Pacific Corporation	Open	Soil, soil vapor, and groundwater contaminated with PCE, TCE, 1,1-dichloroethane, 1,1-dichloroethylene, and 1,4-dioxane	0.8	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line
Chevron Montebello Terminal	Open	Soil, soil vapor, and groundwater contaminated with petroleum hydrocarbons	0.8	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line

Site	Cleanup Status	Media Affected	Approximate Distance from Proposed Project (Miles)	Nearest Proposed Project Component
Conoco Phillips Company	Open	Soil, soil vapor, and groundwater contaminated with petroleum hydrocarbons	0.8	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line
Former Preco Site	Open	Groundwater contaminated with petroleum hydrocarbons	0.8	Street light source line conversion from overhead to underground within Loveland Street
Cameo	Open	Soil and groundwater contaminated with chromium III, chromium VI, and VOCs	0.8	Street light source line conversion from overhead to underground within Loveland Street
Royal Dry Cleaners	Unknown	Not specified	0.9	Mesa Substation
SCE Refuse Substation	Voluntary	Soil, soil vapor, and groundwater contaminated with VOCs and petroleum hydrocarbons	0.9	Replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line
Wicks Boulevard Investment Company	Open	Soil and groundwater contaminated with VOCs and petroleum hydrocarbons	0.9	Street light source line conversion from overhead to underground within Loveland Street

Sources: DTSC (2014), EDR (2014 a, b, c, d, e), State Water Resources Control Board (SWRCB) (2014)

The most notable of the sites identified in the vicinity of the Proposed Project is the inactive Class I and II landfill owned by OII, which is located adjacent to the Proposed Project site. Landfill operations began at the site in 1948 and ceased in 1984 after the State of California placed the site on the California Hazardous Waste Priority List. Subsequently, the United States (U.S.) Environmental Protection Agency (EPA) placed the site on the NPL. From 1948 to 1952, the City of Monterey Park operated the site as a municipal landfill. In 1952, the site became a privately owned landfill under the ownership of OII. The site was permitted by the Los Angeles Regional Water Quality Control Board (RWQCB) to receive various non-hazardous and hazardous liquid wastes, including lead compounds, chrome oxide, pigment sludge, refinery wastes, wastewater from paint manufacturing, and caustic cleaning waste.

A leachate treatment plant (LTP) operates on the north parcel of the landfill to collect leachate from the south parcel. A by-product of the leachate treatment process is landfill gas. The gas generated by the LTP is routed to the OII main station flare on the south parcel through a 12-inch polyvinyl chloride pipe. Landfill gas from both the north and south parcels is treated at this flare. A thermal destruction facility was constructed adjacent to the LTP to improve leachate treatment and to control the amount of off-gas released.

The EPA has completed an investigation and study to explore the nature and extent of groundwater contamination from the landfill and to select remedies to clean up the entire site. Various alternatives were evaluated for cleanup of the contaminated groundwater. The Record of Decision for the Final Remedy was signed in September 1996. The EPA’s selected alternative includes control of landfill liquids around the perimeter of the landfill and natural attenuation and monitoring of contaminated groundwater away from the landfill perimeter. The selected alternative also includes long-term site monitoring and O&M of site remedy systems.

OII is required by the DTSC to conduct a variety of daily site activities to maintain the landfill and the existing environmental control facilities, including the following:

- Operation of the gas control systems and landfill gas treatment facility
- Maintenance of the landfill cover, access roads, drainage facilities, and security fences
- Monitoring of the environment both on and off the site
- Installation of new gas recovery wells and monitoring probes to allow the collection of more gas
- Repairs to the gas control system at different on-site locations to improve the collection of landfill gas
- Improvements to the site irrigation system

These site control and monitoring activities have been ongoing since 1987. According to the September 2010 Fourth Five-Year Review Report and an October 2014 Notice of the 2015 Five-Year Review, the OII Landfill is considered to be fully protective of human health and the environment. Current monitoring activities include the continued evaluation of naturally attenuating groundwater contaminants, the maintenance of leachate collection and treatment systems, and the analysis of 1,4-dioxane concentrations detected in a monitoring well located on the southwest portion of the landfill property.

In addition, a review of the DOC Online Well Record database for oil and gas well records revealed 12 underground injection control (UIC) sites within 0.25 mile of the Proposed Project. In California, all Class II injection wells are regulated by the DOC's Division of Oil, Gas, and Geothermal Resources' UIC program, which is monitored and audited by the EPA.

New Telecommunications Line from Transmission Tower M40-T3 to Mesa Substation

One RCRA-SQG/LUST site and one LUST site are located adjacent to the proposed telecommunications route from transmission tower M40-T3 to Mesa Substation. Open hazardous sites in the vicinity of the proposed telecommunications route are summarized in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project. The results of EDR's search within the proposed telecommunications route from transmission tower M40-T3 to Mesa Substation are provided in Appendix I: Hazardous Materials Record Search Results.

One open LUST site—Mobil Number 18-EVF—is located adjacent to the proposed telecommunications route south of the San Gabriel Boulevard and Walnut Grove Avenue intersection. This site is currently being evaluated to delineate and remediate petroleum hydrocarbon contamination in groundwater. According to a 2014 Semi-Annual Groundwater Monitoring Report, on-site groundwater flow has been variable and was most recently reported traveling north-northwest and toward the Proposed Project.

One additional LUST site—the Don Bosco Technical Institute—is located adjacent to the proposed telecommunications route on the southwest corner of the San Gabriel Boulevard and Rose Glen Avenue intersection. However, this site is listed as being eligible for closure under the Low-Threat Case Closure Policy. The most recent regulatory correspondence posted on the GeoTracker database indicated that a closure letter would be issued following the proper abandonment of on-site monitoring wells. Therefore, this site does not constitute a significant environmental concern.

New Telecommunications Line from Transmission Tower M38-T5 to Mesa Substation

One Superfund site, one EnviroStor site, one RCRA-SQG/CA SLIC site, and one CA SLIC site are located within 1 mile of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation. Open hazardous sites in the vicinity of the proposed telecommunications route are summarized in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project. The results of EDR's search within the proposed telecommunications route from transmission tower M38-T5 to Mesa Substation are provided in Appendix I: Hazardous Materials Record Search Results.

One LUST site, Arco/JSND Incorporated, is located approximately 0.15 mile north of the eastern terminus of the proposed telecommunications line from transmission tower M38-T5 to Mesa Substation. This site is listed only on the GeoTracker database and limited information is available regarding potential releases. The responsible party associated with the site received a directive to initiate corrective action in December 2009 due to a reported UST release. No additional environmental documentation was reported.

The WNOU site is located adjacent to the proposed telecommunications route east of the Highway 19 and Durfee Avenue intersection. This site is one of eight operable units established by the EPA to address groundwater contamination associated with the San Gabriel Superfund Site. The primary contaminants of concern include TCE, additional chlorinated VOCs, 1,4-dioxane, perchlorate, and NDMA. PCE is the most prevalent contaminant of concern exceeding applicable drinking water standards within the WNOU. Several extraction wells have been installed to contain and remediate contaminated groundwater north of Whittier Narrows Dam. Extracted groundwater is transferred to a centralized treatment plant, which converts VOC-impacted groundwater to potable drinking water. Treated water is also transferred to Legg Lake to maintain desired water levels. Remedial action is expected to continue as long as groundwater impacts exceed federal or State drinking water standards. According to available historical documentation, shallow groundwater levels within the contaminant plume range from 20 to 90 feet below ground surface (bgs); the groundwater flows to the south-southwest.

Replacement of an Existing Lattice Steel Tower on the Goodrich-Laguna Bell 220 kV Transmission Line

Open hazardous sites within 0.25 mile of the tower replacement construction area include one EnviroStor site, one RCRA-Small Quantity Generator (SQG)/UST site, and one LUST site. Six additional open sites are located within 1 mile of the construction activities associated with the tower replacement. The results of EDR’s database search are provided in Appendix I: Hazardous Materials Record Search Results, and open hazardous sites in the vicinity of the tower replacement are summarized in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project.

The closest open hazardous site to the tower replacement construction area is the Trident Plating, Inc. site, which is located on the southwest corner of the Corvette Street and Saybrook Avenue intersection. Historical documentation revealed that this site was formerly in operation as an electroplating metal finishing business from 1981 to 2000. Business operations ceased in April 2000 due to a fire, and soil impacts were subsequently discovered during site cleanup activities. The site was referred to the DTSC, which initiated the removal of approximately 313 tons of soils contaminated with chromium, chromium VI, arsenic, and PCE. A Human Health Risk Assessment (HHRA) was conducted to assess potential impacts from residual soil vapors, and the results of the HHRA indicated that soil vapors would not present a risk to future commercial or industrial workers. Future development of the site was restricted to commercial/industrial land uses, and groundwater quality is in the process of being evaluated. According to groundwater data obtained from a site approximately 0.55 mile southeast of the Proposed Project (MQS Inspection, Inc., Case Number SL184401423), groundwater flow in the vicinity of Trident Plating, Inc. is to the southwest and away from the Proposed Project.

Street Light Source Line Conversion from Overhead to Underground Configuration within Loveland Street

One open EnviroStor/SLIC/Cortese site and one open LUST site were identified within 0.5 mile of the proposed undergrounding of street light source line on Loveland Street. Six additional open hazardous sites are located within 1 mile of the Proposed Project and are summarized in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project. No hazardous sites were identified within 0.25 mile of the proposed undergrounding activities. The results of EDR's database search in the vicinity of the proposed undergrounding of street light source line are provided in Appendix I: Hazardous Materials Record Search Results.

The Laguna Bell Substation site was listed as a LUST and California Aboveground Storage Tank (AST) site in the EDR reports for a release of gasoline. However, this site is listed as closed on the SWRCB's GeoTracker database, and no additional violations were reported for the Laguna Bell Substation site. SCE maintains an SPCC Plan for Laguna Bell Substation, similar to operations at Mesa Substation, for the oil, and/or petroleum products stored at the Laguna Bell Substation site.

Temporary 220 kV Line Loop-in at Goodrich Substation

Eleven properties were identified on a list of hazardous material sites in the vicinity of the Goodrich Substation site. The results of EDR's database search are provided in Appendix I: Hazardous Materials Record Search Results. One RCRA CORRACTS facility (closed), one DTSC response site, and four DTSC EnviroStor sites were identified within 1 mile of Goodrich Substation. Within 0.5 mile, two LUST sites were identified (both closed), and three RCRA generators were identified within 0.25 mile. The open hazardous sites located within the vicinity of the Proposed Project are listed in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project.

In addition, transformers and oil and/or petroleum products stored at the Goodrich Substation site require an SPCC Plan, similar to operations at Mesa Substation. Goodrich Substation is owned by the City of Pasadena, which maintains and implements the plan for the facility.

Contaminated Soil and Groundwater

No visual or olfactory indications of soil or groundwater contamination have been identified at the Proposed Project site. According to the 2013 Annual Groundwater Monitoring and Evaluation Report for the OII Landfill, groundwater levels at the proposed Mesa Substation site range from 266 to 283 feet bgs, as described further in Section 4.9, Hydrology and Water Quality.

The Proposed Project is located adjacent to the OII inactive Class I and II landfill. Contaminated groundwater is associated with the landfill. The EPA is currently implementing a variety of daily site activities to maintain the landfill and the existing environmental control facilities, including the operation of the gas control systems and landfill gas treatment facility; maintenance of the landfill cover, access roads, drainage facilities, and security fences; and monitoring of the environment both on and off the site. In addition, activities include long-term site monitoring and O&M of site remedy systems. As part of the final remedy, five existing extraction wells are located along the northwestern edge of the north parcel on the Mesa Substation property. The wells were installed between April 2008 and January 2009.

As previously described, the proposed telecommunications routes are located in the vicinity of potentially contaminated groundwater. Impacted groundwater associated with the Mobil Number 18-EVF LUST site and the WNOU site may exist in the vicinity of the Proposed Project.

Fire Hazards

Fire Hazard Severity Areas are designated by CAL FIRE. Fire hazard severity zone levels range from Moderate to Very High. Fire Hazard Severity Areas are based on the level of government that is financially responsible for preventing and suppressing wildfires, and are designated as the following three types of areas:

- Federal Responsibility Areas: The federal government is financially responsible for wildfire suppression
- State Responsibility Areas: The State is financially responsible for wildfire suppression
- Local Responsibility Areas: Cities or the counties are financially responsible for wildfire suppression

Based on CAL FIRE data, Mesa Substation and the main Proposed Project components are not located within a designated Fire Hazard Severity Zone.

Schools

Schurr High School is located adjacent to the transmission ROW south of Mesa Substation and SR-60 in the City of Montebello, along Via Campo and Wilcox Avenue. Wilcox Elementary School and Kiddy Tyme Child Care Learning Center are located within 0.25 mile of Mesa Substation. The Don Bosco Technical Institute, La Merced Middle School, and Potrero Heights Elementary School are located adjacent to proposed telecommunications routes. Additional schools within 0.25 mile of the proposed telecommunications routes include the Community Christian Academy, YMCA Montebello, Marian Pre-School, Wonder World Pre-School, University of the West, and South El Monte High School. The Bell Gardens Christian School and Caesar E. Chavez Elementary School are located within 0.25 mile of Laguna Bell Substation and the main Proposed Project components. The Pasadena City College Community Education Center is located adjacent to Goodrich Substation. All other schools are located further from the Proposed Project, as discussed in Section 4.14, Public Services.

Airports

The Proposed Project is not located within 2 miles of a public or private airport. The nearest public airport—El Monte Airport—is located approximately 1 mile north of the City of El Monte in Los Angeles County. El Monte Airport is approximately 4.5 miles from Mesa Substation and approximately 3.6 miles from the nearest Proposed Project component.

Emergency Response and Evacuations Plans

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information during times of emergency. Emergency response plans are maintained at the federal, State, and local levels for all types of disasters, including man-made and natural. It is the responsibility of the government to undertake an ongoing comprehensive approach to emergency management in order to avoid or minimize the effects of hazardous events. Local governments have the primary responsibility for preparedness and response activities.

The Los Angeles County Office of Emergency Management (OEM) maintains the Los Angeles County Operational Area Emergency Response Plan and the County of Los Angeles All-Hazard Mitigation Plan. The Los Angeles County OEM leads and coordinates disaster plans and disaster preparedness exercises for all 88 cities and 288 special districts in Los Angeles County. The City of Pasadena also maintains a citywide Emergency Operations Plan, adopted in 2011.

4.8.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.8.2.1 Federal

Code of Federal Regulations Title 40

Title 40 of the Code of Federal Regulations (CFR) provides regulations related to the EPA's operations. The EPA maintains a list of materials considered to be hazardous to the environment or to human health. These materials are identified in the following three categories:

- F-List: Wastes from the F-list are published under Title 40, Section 261.31 of the CFR. These wastes include non-specific source wastes common in manufacturing and industrial processes

- K-List: K-list wastes are published under Title 40, Section 261.32 of the CFR. These wastes include source-specific wastes from specific industries, including pesticide manufacturing and petroleum refining

- P-List and U-List: Wastes from the P-List and U-List are published under Title 40, Section 261.33 of the CFR. These wastes include discarded commercial chemical products in an unused form

Waste that has not been previously listed may still be considered hazardous if it exhibits one or more of the following characteristics: ignitibility, corrosivity, reactivity, or toxicity (40 CFR Part 261 Subpart C).

Code of Federal Regulations Title 14

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). Title 14, Part 77 of the CFR establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height—or those extending at a ratio greater than 100 to 1 (horizontal to vertical) from a public or military airport runway more than 3,200 feet long, out to a horizontal distance of 20,000 feet—are considered potential obstructions and require FAA notification. In addition, construction projects extending at a ratio greater than 50 to 1 (horizontal to vertical) from a public or military airport runway measuring 3,200 feet or less, out to a horizontal distance of 10,000 feet, are considered potential obstructions and require FAA notification. Title 14, Section 133 of the CFR also requires an operating plan to be developed in coordination with and approved by the local FAA Flight Standards District Office that has jurisdiction over when helicopter use would be required.

Resource Conservation and Recovery Act

Developed by the EPA, the RCRA regulates potential health and environmental problems associated with hazardous and non-hazardous waste. This law is implemented by the EPA through Subtitle C, Title 42, Section 6921 et seq. of the U.S. Code (U.S.C.) and its implementing regulations (40 CFR Part 260 et seq.). The generation, transportation, treatment, storage, and disposal of hazardous waste are regulated through Subtitle C of the RCRA, which addresses a "cradle-to-grave" approach to hazardous waste management. All states are subject to Subtitle C with regard to hazardous waste generation. The RCRA also provides the specific quantities of wastes that it regulates.

Under the authority of the RCRA, the DTSC regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce hazardous waste production.

Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act

Along with their implementing regulations, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA)—an amendment to CERCLA—govern the use, planning, reporting, cleanup, and notification of hazardous materials and hazardous material releases into the environment. These statutes are codified in Title 40, Parts 239 through 282 of the CFR, and the regulations are defined in Title 40, Parts 302 through 355 of the CFR.

Annual reporting requirements associated with hazardous materials released into the environment are provided in Title 42, Section 11023 of the U.S.C. and Title 40, Section 372.30 of the CFR by the EPA. Reporting of both routine discharges and spill releases is required. In addition, Title III of SARA (identified as the Emergency Planning and Community Right-To-Know Act of 1986) requires that all states develop and implement local chemical emergency preparedness programs and release information pertaining to hazardous materials that are used at facilities within local communities.

Uniform Building Code and Uniform Fire Code

The Uniform Building Code (UBC) and the Uniform Fire Code (UFC) provide codes for fire protection at the federal level. To minimize potential fire risk and damage to structures, the UBC provides requirements to which building construction, materials, and other elements or construction practices must adhere. In addition, the UFC provides design measures for the installation of fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards and safety measures, hazardous material storage and use, and other general and specialized requirements pertaining to fire safety and prevention.

Clean Water Act

The CWA provides measures governing the accidental release of hazardous materials to surface waters. Requirements for SPCC Plans were developed as one of the regulations under the CWA. SPCC Plans are described in Title 40, Part 112 of the CFR (Oil Spill Prevention), have specific requirements for electrical substations, and are intended to reduce the threat of oil spills to "navigable waters" of the U.S. The site-specific plan must identify the design, control, training, and response requirements of a facility. An SPCC Plan is required for facilities that have an aggregate aboveground storage capacity of oil (e.g., gasoline, diesel, and transformer liquids) of more than 1,320 gallons (only containers with a capacity of 55 gallons or greater are counted).

Clean Air Act

The Clean Air Act (CAA) provides measures aimed at preventing the accidental release of hazardous materials into the atmosphere. Regulations implementing the CAA and governing hazardous materials emissions are provided in Title 40, Part 68 of the CFR. Implementation of these regulations is intended to prevent the accidental release of hazardous materials into the environment.

Occupational Safety and Health Act

The hazardous material regulations of the Occupational Safety and Health Administration (OSHA) were created by the Occupational Safety and Health Act of 1970 and govern worker safety. Separate OSHA standards have been developed for construction and industrial workers, and Title 29, Part 1926 of the CFR generally governs construction worker safety. Title 29, Section 1926.55(a) of the CFR requires avoidance of exposure of employees to inhalation, ingestion, skin absorption, or contact with any material or substance at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants for 1970" of the American Conference of Governmental Industrial Hygienists.

Hazardous Materials Transportation Act

U.S. Department of Transportation regulations govern the interstate transport of hazardous materials and wastes through the implementation of the Hazardous Materials Transportation Act (HMTA). The provisions of the HMTA contain requirements for hazardous material shipments and packaging, and guidelines for marking, manifesting, labeling, packaging, placarding, and spill reporting. Specific regulations dealing with hazardous materials are covered under Title 49, Part 173 et seq. of the CFR (Hazardous Material Regulations, Shippers – General Requirements for Shipping and Packaging) and Title 49, Part 397 of the CFR (Transportation of Hazardous Materials; Driving and Parking Rules).

4.8.2.2 State

California Occupational Safety and Health Act

The California Occupational Safety and Health Act of 1973 provides measures to address the safety of construction and industrial workers. Title 8 of the California Code of Regulations (CCR) implements the majority of these measures. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for enforcing the occupational and public safety laws adopted by OSHA. OSHA is responsible for the regulation of workplace hazards and hazardous materials at the federal level, while Cal/OSHA regulates hazards and hazardous materials at the State level.

Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)

The Porter-Cologne Water Quality Control Act provides for the regulation of pollutants entering the State's surface and ground waters. The Los Angeles RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the Los Angeles County area. The RWQCB adopted a Water Quality Control Plan (Basin Plan) in June 1994. The Basin Plan sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act. The Basin Plan establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Project discharges to surface waters are subject to the regulatory standards set forth in applicable regional basin plans, which prevent the discharge of hazardous materials into waters of the State.

California Health and Safety Code

Within the State of California, the storage, handling, use, and/or disposal of hazardous materials are regulated through various sections of the Health and Safety Code (HSC). In addition, HSC Section 33437 requires lessees or purchasers of property in a redevelopment project to comply with all covenants, conditions, and restrictions imposed by the agency for the reasonable protection of lenders. Individual states are required by the RCRA to develop their own programs for the regulation of hazardous waste discharges; however, such plans are required to meet or exceed RCRA requirements.

The California Hazardous Waste Control Law (HWCL) addresses the control of hazardous wastes for California. The HWCL regulates generators of universal waste (e.g., batteries, mercury control devices, dental amalgams, aerosol cans, and lamps/cathode ray tubes) under Section 25100 et seq. of the HSC, as well as hydrocarbon waste (e.g., oils, lubricants, and greases) that is not classified as hazardous waste under the federal RCRA regulations. The DTSC is responsible for the administration and enforcement of the HWCL. HSC Section 25249.5 et seq. of the Safe Drinking Water and Toxics Enforcement Act (i.e., Proposition 65) is administered through the California Office of Environmental Health Hazard Assessment and regulates cancer-causing and reproduction-impairing chemicals. Under Proposition 65, users of such regulated chemicals are required to issue a public warning before potential exposure to chemicals above a threshold amount occurs (HSC §25249.6). In addition, the Safe Drinking Water and Toxics Enforcement Act is aimed at preventing discharges or releases of specified hazardous materials into a "source of drinking water." The Safe Drinking Water and Toxics Enforcement Act provides a list of chemicals of concern (HSC §25249.5), which is periodically updated.

Section 25404 et seq. of the California HSC includes the California Unified Hazardous Waste and Hazardous Material Management Regulatory Program Act, which establishes specific requirements for handling hazardous waste locally by establishing the Certified Unified Program Agency (CUPA). The responsibility for management of local hazardous wastes is delegated by the California EPA to the local agency through a Memorandum of Understanding. The primary CUPA relative to the Proposed Project site is the Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department.

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act (HSC §25500 et seq.) and regulations provided in Title 19, Part 2620 et seq. of the CCR require that local governments be responsible for the regulation of facilities that store, handle, or use hazardous materials above threshold quantities (TQs). The TQs for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at a standard temperature and pressure. Facilities that store such hazardous materials in excess of their TQs are required to prepare a Hazardous Materials Business Plan (HMBP) to provide information on the storage of hazardous materials and identify the facility's internal response requirements to accidental spills. The HMBP would include safety information regarding the transport, use, and disposal of hazardous materials. A Hazardous Materials Management Plan (HMMP) would also be prepared to identify hazardous materials present during construction and to address storage and use of the materials. The HMMP would include safety information regarding the transport, use, and disposal of hazardous materials. The HMBP and the HMMP may identify emergency contacts, hazardous material inventory and quantities, control methods, emergency response measures, and employee training methods. The HMBP and the HMMP are required to be submitted to the local administering agency, which is typically the local fire department or public health agency. In the event of a spill from such a facility, both the local administrative agency and the California Governor's Office of Emergency Services must be notified.

California Aboveground Petroleum Storage Act

Chapter 6.67, Sections 25270 through 25270.13 of the HSC grant CUPAs the authority to administer the Aboveground Petroleum Storage Act (APSA) program in their jurisdictions. The California APSA applies to facilities that are subject to the oil pollution prevention regulations specified in Title 40, Part 112 of the CFR or that have a storage capacity of at least 1,320 gallons of petroleum. The California APSA only regulates tank facilities that store petroleum, whereas the federal SPCC requirement includes other oils. The California APSA requires preparation of an SPCC Plan in accordance with Title 40, Part 112 of the CFR.

California Code of Regulations Title 13

Title 13, Division 2, Articles 1 through 6 of the CCR outline applicable procedures for the safe transport of hazardous materials and designates required routes, stops, and inspection procedures when transporting these materials. General hazardous materials regulations are also provided and describe the proper storage procedures, hazard classification and labeling methods, inspection fees, registration requirements, training protocols, and safety measures. In addition, Title 13 contains specific regulations associated with the transport of explosives, inhalation hazards, and radioactive materials, which illustrate acceptable travel routes.

California Building Code

The California Building Code (CBC) provides design and construction measures for structures and other facilities with regard to fire protection and prevention. The CBC supplements the UBC by providing measures that are specific to potential conditions in the State of California. Measures provided in the CBC are integrated and enforced through city and county review of development projects, the Office of the State Fire Marshal, and by local city or county fire chiefs or marshals.

California Public Resources Code

The California Public Resources Code (PRC) provides regulations to enhance safety with regard to the operation and management of electrical transmission lines. These include, but are not limited to, the following:

- PRC Section 4292: This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. An approximately 10-foot radius around such structures must remain clear of vegetation for the entirety of the fire season.

- PRC Section 4293: This section requires specific clearance between conductors and vegetation. As the line voltage increases, the clearance radius also increases. In addition, some trees must be removed if they pose the potential to fall on an electrical transmission line and cause damage.

California Public Utilities Commission General Order 95

The California Public Utilities Commission (CPUC) is a State organization that regulates privately owned energy facilities—including natural gas, water, and electrical facilities—as well as railroad and passenger transportation facilities. General Order (G.O.) No. 95—originally adopted by the CPUC on December 23, 1941 and amended through 2014—contains requirements and specifications for overhead electrical line construction. These requirements are intended to ensure safety to workers engaged in the construction, O&M, and use of electrical facilities. The regulations are also intended to ensure the general reliability of the State's utility infrastructure and services.

Rule 35 of G.O. 95 establishes minimum clearances between line conductors and nearby vegetation for fire prevention purposes. These minimum clearances must be maintained through tree trimming prior to construction and throughout O&M of utility facilities.

4.8.2.3 Local

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC G.O. 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 county and city regulations are not applicable as they do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only. Relevant local policies for the jurisdictions that would be crossed by the Proposed Project were reviewed. The following subsections provide relevant local policies.

County of Los Angeles

Within Los Angeles County, the HHMD is responsible for the implementation of the CUPA. Hazardous materials are addressed through various county codes and regulations. The HHMD's hazardous material requirements include hazardous waste determination, storage and transportation of hazardous waste, treatment and disposal requirements, biennial reporting, emergency preparedness and prevention, emergency procedures, business plans, personnel training, and standards for violations.

City of Monterey Park General Plan

The Safety and Community Services Element of the City of Monterey Park General Plan addresses community safety and service issues, such as hazardous materials, fire and police protection, and emergency response management. The General Plan identifies a goal and policies intended to reduce the potential for hazardous or emergency situations to occur. The goal and policies include the following:

Goal

- Goal 8: Protect residents and business employees from potential hazards associated with the use, storage, manufacture, and transportation of hazardous materials in and through the city

Policies

- Policy 8.1: Continue participation in the Standardized Emergency Management System
- Policy 8.2: Partner with Los Angeles County to sponsor household hazardous waste disposal programs for residents to bring pesticides, cleaning fluids, paint cans, and other common household toxic chemicals to a centralized location for proper disposal
- Policy 8.3: Educate the community regarding the proper storage, handling, use, and disposal of hazardous household materials
- Policy 8.4: Incorporate into the development review and business license issuance processes a means for ascertaining the materials and production methods used by a business and the potential risks posed to adjacent and nearby residential neighborhoods, schools, and other sensitive land uses

City of Montebello General Plan

The purpose of the Safety Element of the City of Montebello General Plan is to protect the community from fires and geologic hazards. The plan identifies the following goals and policy:

Goals

- Prevent the loss of life and injuries from fires and geologic hazards

- Prevent or minimize property damage and social and economic disruption resulting from fires and geologic events
- Maintain and promote safety programs which create a sense of community security and wellbeing

Policy and Action Program

- Continue to review all land proposals from the standpoint of minimizing hazards

City of Rosemead General Plan

The Public Safety Element within the City of Rosemead General Plan addresses hazardous materials incidents, fires, and other conditions that have the potential to impact infrastructure and impede emergency response. The following goals and policies within the General Plan are relevant to the Proposed Project:

Goals

- Goal 2: Ensure the safety of all city residents and workers from hazardous wastes and the hazards associated with the transport of such wastes
- Goal 3: Provide high levels of public safety, emergency response, and law enforcement services

Policies

- Policy 2.1: Work with the Los Angeles County Fire Department to identify and maintain an up-to-date database of all producers, users, and transporters of hazardous materials and wastes

- Policy 2.2: Strictly enforce the use of designated truck routes for vehicles transporting hazardous materials

- Policy 2.3: Support, develop, and participate in safety hazard awareness programs that provide for the safe and efficient collection and disposal of household hazardous wastes

City of South El Monte General Plan

The Public Safety Element within the City of South El Monte General Plan addresses hazardous materials, emergency preparedness, and fire hazards. The following goals and policies within the General Plan are relevant to the Proposed Project:

Goals

- Goal 5: Protect the resident and business populations from potential hazards associated with the use, storage, manufacture, and transportation of toxic and hazardous materials in and through the city

- Goal 6: Develop procedures to deal effectively with the city's response to natural and human-induced emergencies

Policies

- Policy 5.2 – Cooperate with responsible Federal, State, and County agencies to reduce the risk from the use and transport of hazardous materials
- Policy 6.1 – Keep the city's emergency plan up to date and relevant to all types of disasters affecting the city

City of Commerce General Plan

The purpose of the Safety Element within the City of Commerce General Plan is to reduce and mitigate natural and man-made hazards. The scope of the Safety Element includes fire, hazardous materials, public safety, and emergency preparedness and response. The following policies within the General Plan are relevant to the Proposed Project:

- Safety Policy 1.1: The City of Commerce will strive to respond to all in-city emergency incidents within a five-minute or less response time

- Safety Policy 4.1: The City of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards

- Safety Policy 4.4: The City of Commerce will work with Federal, State, and County agencies, as well as the Industrial Council, to protect all city residents and workers from hazardous materials and the risks associated with the transportation of these materials

- Safety Policy 4.6: The City of Commerce will maintain a city liaison officer who will continue to work with the Fire Department to monitor production, use, and storage of hazardous materials

- Safety Policy 4.9: The City of Commerce will encourage the proper disposal of hazardous materials produced, used, and stored within the city's limits.

City of Bell Gardens General Plan

The purpose of the Safety Element within the City of Bell Gardens General Plan is to reduce the potential for loss of life, injury, property damage, and economic dislocation resulting from natural or manmade hazards. The following policies within the General Plan are relevant to the Proposed Project:

- Policy 1: The City of Bell Gardens shall provide the safety of the community through physical planning and maintaining an adequate level of police, fire, and emergency services facilities

- Policy 2: The City of Bell Gardens shall minimize the loss of life, injuries, and property damage through continuing prevention, inspection, and public education programs, including continual update of the city's Emergency Preparedness Plan
- Policy 3: The City of Bell Gardens shall protect the community from hazardous materials and waste spills by identifying hazardous materials stored, utilized, or transported in the city and the city shall pursue local and State legislation for greater control of hazardous materials

City of Pasadena General Plan

The Safety Element of the City of Pasadena General Plan addresses safety hazards resulting from natural disasters, including earthquakes, landslides, wildland and structural fires, and contamination of soils and groundwater resources from hazardous materials. The General Plan presents goals, policies, and programs that, if implemented, can substantially reduce the risk these hazards. The following goal and policy are specific to hazardous materials:

Goal

- Goal H-1: Reduce the potential for hazardous contamination in the city

Policy

- Policy H-1.3: New proposed facilities involved in the production, use, storage, transport or disposal of hazardous materials will be located a safe distance from land uses that may be adversely impacted by such activities. Conversely, new sensitive facilities shall not be allowed to be located near existing sites that use, store or generate hazardous materials.

4.8.3 Significance Criteria

The significance criteria for assessing the impacts to hazards and hazardous materials are derived from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- 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
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site that is included on a list of hazardous material sites, compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment

- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the project would result in a safety hazard for people residing or working in the project area
- For a project within the vicinity of a private airstrip, the project would result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response or evacuation plan
- Expose people or structures to a risk of loss, injury, or death related to wildland fires

4.8.4 Impact Analysis

4.8.4.1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction

Less-Than-Significant Impact. The routine transport, use, and disposal of hazardous materials (e.g., fuels, lubricating oil, and hydraulic fluid) during construction could result in inadvertent releases of these materials. A general list of the products anticipated to be used during construction is provided in Table 4.8-2: Hazardous Materials Typically Used for Construction. Any release of hazardous materials would most likely result from accidental spills or other unauthorized releases during vegetation clearing, grading, pole removal and installation, and other Proposed Project construction activities.

A Proposed Project-specific HMMP would be prepared and implemented throughout construction of the Proposed Project. The HMMP would include safety information regarding the transport, use, and disposal of hazardous materials. In addition, all transport, use, and disposal of hazardous materials would be in compliance with applicable laws, rules, and regulations. As required for the handling of hazardous materials, SCE maintains an identification number from the EPA, as well as approval of the local CUPA. Implementation of the HMMP would reduce the likelihood of inadvertent spills originating from hazardous substances during construction.

Construction of the Proposed Project would result in the generation of various waste materials that would require recycling and/or disposal. Waste items and materials would be collected by construction crews and stored in roll-off boxes or other similar containers at the staging areas. All waste materials that are not recycled would be characterized by SCE in order to ensure appropriate final disposal. Non-hazardous waste would be transported to SCE-approved, licensed, local waste management facilities, as described in Section 4.17, Utilities and Service Systems. Hazardous materials would be disposed of at SCE-approved, local facilities that accept hazardous waste materials, in accordance with all applicable laws and regulations. Therefore, impacts from routine transport, use, or disposal of hazardous materials would be less than significant.

Table 4.8-2: Hazardous Materials Typically Used for Construction

Hazardous Materials	
ABC fire extinguisher	Hydraulic fluid
Acetylene gas	Insulating oil (inhibited, non-PCB)
Air tool oil	Lubricating grease
Ammonium hydroxide	Mastic coating
Battery acid (in vehicles and in the meter house of the substations)	Methyl alcohol
Bottled oxygen	Mineral oil
Brake fluid	Motor oils
Canned spray paint	Paint thinner
Chain lubricant (contains methylene chloride)	Propane
Connector grease (penotox)	Puncture seal tire inflator
Contact cleaner 2000	Safety fuses
Diesel fuel	Starter fluid
Diesel fuel additive	Sulfur hexafluoride (within the line breakers in the substations)
Eye glass cleaner (contains methylene chloride)	Two-cycle oil (contains distillates and hydro-treated heavy paraffinic)
Gasoline	WD-40
Gasoline treatment	ZEP (safety solvent)
Hot stick cleaner (cloth treated with polydimethylsiloxane)	ZIP (1,1,1-trichloroethane)

Due the Proposed Project's proximity to the OII Landfill site, there is a potential to encounter contaminated soil or groundwater during excavation activities. As previously stated, groundwater levels range from 266 to 283 feet bgs, and the deepest excavation for the Proposed Project is approximately 50 feet bgs; therefore, groundwater is not anticipated to be encountered when excavating in this area. However, SCE would prepare and implement a Proposed Project-specific Soil Management Plan that would include precautionary measures and methods for handling potentially contaminated soils at all sites that involve excavation activities. In the event that unanticipated, contaminated soil is encountered during excavation activities, the soil would be segregated and soil samples would be collected and analyzed to determine appropriate disposal or treatment options. Based on the results of the analysis, SCE would decide whether to remove the contaminated soil, or modify the design of the Proposed Project to avoid contaminated soil. Therefore, impacts from uncovering unknown, contaminated soil would be less than significant.

Several OII Landfill groundwater monitoring wells are located on the Mesa Substation site. Grading and development of the site would necessitate the relocation of the wells. To facilitate the design of the Proposed Project and construction work, SCE would coordinate with OII personnel and representatives of the EPA to develop a well management plan for the maintenance of monitoring wells, extraction wells, and associated piping during the construction and operation of the Mesa Substation.

Operation

Less-Than-Significant Impact. Use of hazardous materials during O&M of the Proposed Project would continue in the same manner as they are currently used. Most of the chemicals used for O&M activities are similar to those used in the construction phase and are listed in Table 4.8-2: Hazardous Materials Typically Used for Construction. Hazardous materials are typically brought to and removed from the site by maintenance personnel, rather than being stored on site for extended periods. In addition, should a discharge occur, O&M personnel are trained and equipped to respond appropriately. Therefore, the Proposed Project would not create a significant hazard to the public or the environment, and impacts would be less than significant.

As discussed in Chapter 3, Project Description, as part of the ultimate configuration, transformers containing a total of approximately 379,000 gallons of insulating mineral oil would be required as part of Mesa Substation. This is an increase of approximately 212,963 gallons over current operations. The potential exists for a transformer to leak due to age, major natural events, or collisions from O&M equipment. Mineral oil is considered a hazardous material under California regulations. In addition, mineral oil storage or use in aboveground storage containers at levels exceeding 1,320 gallons in one or multiple containers at a site is regulated under the CWA. Because the anticipated total oil volume at the site would be in excess of 1,320 gallons, an SPCC Plan would be internally recertified for the proposed Mesa Substation, in accordance with Title 40, Sections 112.1 through 112.7 of the CFR. Typical SPCC secondary containment features include curbs, berms, and ramps, or a dedicated pond designed and installed to contain spills, should they occur. These features would be part of SCE's final engineering design for the Proposed Project and would comply with federal regulations. In addition, the SPCC Plan would contain the procedures for storage, handling, spill response, and disposal of oils. In addition, SCE maintains an HMBP, which specifies the maintenance and handling of other hazardous materials and identifies the spill-response materials that must be maintained in vehicles and at substation sites. With installation of secondary containment features, the internal recertification of the SPCC Plan for the substation, and implementation of the HMBP, the potential impact would be less than significant.

4.8.4.2 Would the project 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?

Construction

Less-Than-Significant Impact. Construction of the Proposed Project would require the limited use of hazardous materials, such as fuels, lubricants, and cleaning solvents. A Proposed Project-specific HMMP would be prepared and implemented throughout construction of the Proposed Project, pursuant to California HSC Section 25503.5. The HMMP would include safety information regarding the transport, use, and disposal of hazardous materials. Additionally, all hazardous materials would be stored, handled, and used in accordance with applicable regulations, and Material Safety Data Sheets would be made available at the construction site for all crew members.

If minor spills or drips occur during construction activities, any fluid or impacted soil would be cleaned up immediately, in accordance with the Proposed Project's Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would provide the locations for storage of hazardous materials during construction, as well as protective measures, notifications, and cleanup requirements for any incidental spills or other potential releases of hazardous materials. With implementation of the SWPPP, any impacts due to accidental spills or releases would be less than significant.

SCE would also develop a Worker Environmental Awareness Plan (WEAP) as part of the Worker Environmental Awareness Training, which would provide site personnel with instruction regarding the SWPPP and Proposed Project-specific best management practices (BMPs), as described in Section 3.9.2, Workers Environmental Awareness Training in Chapter 3, Project Description. The WEAP would also provide instructions to notify the foreman and regional spill response coordinator in case of a hazardous material spill or leak from equipment, or upon the discovery of soil contamination.

During construction activities, subsurface utilities or structures could be encountered, which could result in a release of hazardous substances. However, subsurface utilities and structures would be avoided by screening for such structures prior to any trenching or excavation activities. Screening activities would include the use of Underground Service Alert, visual observations, and buried line-locating equipment. Therefore, the Proposed Project would not create a significant hazard to the public or the environment, and any potential impacts would be less than significant.

Operation

Less-Than-Significant Impact. The potential for hazardous material impacts to the public or the environment would be similar to current O&M activities. However, the Proposed Project would pose an increased risk of an accident occurring due to the potential for additional storage of hazardous materials and additional use of hazardous materials associated with the increase in transformers. As previously stated, SCE would implement a modified SPCC Plan at Mesa Substation to prevent and address any accidental releases of mineral oil. In addition, should a discharge occur, O&M personnel are trained and equipped to respond appropriately. As such, potential impacts from O&M of the Proposed Project would be less than significant.

4.8.4.3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction

Less-Than-Significant Impact. As previously stated and as described in Section 4.14, Public Services, 15 schools are located within 0.25 mile of the Proposed Project. Construction of the Proposed Project would require the limited use of hazardous materials, such as fuels, lubricants, and cleaning solvents. If hazardous materials are released and/or emitted during construction, they would be contained and managed through implementation of the BMPs provided in the SWPPP. Therefore, any potential impacts would be less than significant.

Operation

Less-Than-Significant Impact. Use of hazardous materials during O&M of the Proposed Project would be similar to current O&M activities. There would be an increase in the use of hazardous materials associated with additional transformers at Mesa Substation. However, these hazardous materials would not be located within 0.25 mile of a school. Similar to current O&M requirements, oil used for transformers would need to be transported to and from the site. Transport of hazardous materials is regulated by the U.S. Department of Transportation and the California Highway Patrol. Transport of the oil would comply with the safety regulations contained in Title 13 of the CCR and Title 49 of the CFR. In addition, should a discharge other than mineral oil occur, O&M personnel are trained and equipped to respond appropriately. Thus, there would be a less-than-significant impact.

4.8.4.4 Would the project 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?

Construction

Less-Than-Significant Impact. As previously stated, the Proposed Project site was identified in the RCRA LQG database, which includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste, as defined by the RCRA. The Proposed Project site was also identified in the LUST database. A leak was discovered in 1999, and a Soil and Water Investigation Work Plan was prepared in 2002. The case was subsequently closed in 2003, and no further action is required. Laguna Bell Substation was also listed as a LUST site due to a previous release of gasoline. However, the site was closed on January 7, 2007, and no additional violations or releases were reported.

In addition, the Proposed Project is located adjacent to the former OII Landfill, an NPL Superfund site under management by the EPA for contaminated groundwater and soil. Groundwater levels range from 266 to 283 feet bgs, as described further in Section 4.9, Hydrology and Water Quality. Because maximum excavation depths would not exceed 50 feet, groundwater is not anticipated to be encountered when excavating in this area.

The proposed telecommunications routes would be in the vicinity of two contaminated groundwater plumes. As previously discussed, groundwater within the WNOU site is currently being extracted and treated for several contaminants, including PCE, 1,4-dioxane, and NDMA; and the Mobil Number 18-EVF LUST site is being evaluated for petroleum hydrocarbons in groundwater. Although these hazardous sites are crossed by the Proposed Project, no undergrounding or significant excavation activities would be conducted in the vicinity of these sites. In addition, the depth to groundwater reported for both contaminated sites is significantly below the depth of potential excavations proposed along the telecommunications routes. Therefore, groundwater is not anticipated to be encountered during construction activities associated with the proposed telecommunications routes.

As presented in Table 4.8-1: Hazardous Sites Within 1 Mile of the Proposed Project, several contaminated sites are located within 1 mile of the Proposed Project. However, based on the relative distance of these sites to the Proposed Project, available topographic data, and a review of applicable historical documentation, no additional hazardous sites or contaminated media are located in the vicinity of the Proposed Project.

However, during construction activities, contaminated groundwater or soils could be encountered. As previously discussed, a Proposed Project-specific Soil Management Plan would be prepared and implemented throughout construction of the Proposed Project. In the event that contaminated soil or groundwater is encountered during excavation activities, the soil would be segregated and soil samples would be collected and analyzed to determine appropriate disposal or treatment options, in accordance with the Soil Management Plan. Based on the results of the analysis, SCE would decide whether to remove the contaminated soil or modify the design of the Proposed Project to avoid the contaminated soil. Therefore, impacts from uncovering unknown contaminated soil would be less than significant. A SWPPP, BMPs, and an HMMP would also be implemented during construction. As a result, any potential hazardous materials impacts would be less than significant.

Operation

No Impact. O&M activities would primarily occur on aboveground structures, and excavation activities are not typically required. If excavation activities are required during O&M of the Proposed Project, they would most likely occur in areas that were previously disturbed. Therefore, the potential for uncovering existing hazardous material sites during O&M of the Proposed Project is unlikely and would not change from the existing potential. Therefore, no impact would occur.

4.8.4.5 For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Construction and Operation

Less-Than-Significant Impact. The Proposed Project site is not located within 2 miles of a public or private airport. The closest public airport to the Proposed Project—El Monte Airport—is located approximately 3.6 miles from the Proposed Project. However, as described in Section 3.5.2.1, 500 kV/220 kV Transmission Poles/Towers, Proposed Project structures would have a maximum height of approximately 200 feet. SCE would file FAA notifications for Proposed Project structures, as required. With respect to Proposed Project structures, the FAA would conduct its own analysis and may recommend no changes to the design of the proposed structures; or may request redesigning the proposed structures near the airports to reduce the height of such structures; or marking the structures, including the addition of aviation lighting; or placement of marker balls on wire spans. SCE would evaluate the FAA recommendations for reasonableness and feasibility, and in accordance with Title 14 Part 77, SCE may petition the FAA for a discretionary review of its determination to address any issues with the FAA determination. FAA agency determinations for permanent structures typically are valid for 18 months, and therefore such notifications would be filed upon completion of final engineering and before construction commences. The entirety of the Proposed Project area would be built within existing SCE fee-owned and/or properties to be acquired, and all construction activities would be performed at a distance from airport activity sufficient to minimize safety concerns to construction personnel. A very low probability of a safety hazard would exist for nearby residents or personnel. Therefore, the impact would be less than significant.

4.8.4.6 For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Construction and Operation

No Impact. The Proposed Project site is not located within 2 miles of a private airstrip. The closest private airstrip to the Proposed Project—Goodyear Blimp Base Airport—is located approximately 15 miles southwest of the Proposed Project. Therefore, no impact would occur.

4.8.4.7 Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

Less-Than-Significant Impact. As described in detail in Section 4.16, Transportation and Traffic, temporary road or lane closures would be necessary during some construction activities to provide safe conditions for the public and workers within public areas and roadways. In addition, some roads may be temporarily limited to one-way traffic at times, and one-way traffic controls would be implemented as required. Road closures and encroachment into public roadways could increase hazards if the appropriate safety measures (e.g., proper signage, orange cones, and flaggers) are not in place. However, SCE would obtain the required encroachment permits from the local jurisdictions and implement traffic control measures accordingly. In addition, SCE would coordinate with local authorities, including emergency responders, regarding appropriate procedures. Therefore, emergency access would not be directly impacted during construction. As a result, any potential impacts during construction would be less than significant.

Operation

No Impact. O&M of the Proposed Project would occur in a manner similar to current activities at the substations and would not affect emergency plans or known evacuation routes. The transmission, subtransmission, and distribution facilities would be remotely operated, with the exception of periodic O&M activities, which would occur at least annually or on an as-needed basis. If O&M activities do require road closures, SCE personnel would coordinate emergency routes with local responders, as is currently implemented for events associated with existing O&M activities. O&M of the Proposed Project would not affect traffic congestion levels. Therefore, no impact would occur.

4.8.4.8 Would the project expose people or structures to a risk of loss, injury, or death related to wildland fires?

Construction

No Impact. The Proposed Project is located in an urban area with little to no vegetation on site. As previously discussed, the Proposed Project is not located in a wildland fire hazard area. In addition, the design and construction of the transmission and subtransmission facilities must meet the requirements of CPUC G.O. 95. Therefore, no impact would occur.

Operation

No Impact. As previously discussed, the Proposed Project is not located in a wildland fire hazard area. Consistent with CPUC G.O. 95 and other applicable federal and State laws, SCE would maintain an area of cleared brush around the equipment, minimizing the potential for fire. No changes to existing O&M activities related to fire prevention would occur as a result of the Proposed Project. As a result, no impact would occur.

4.8.5 Applicant-Proposed Measures

Because no significant impacts associated with hazards or hazardous materials would occur as a result of the Proposed Project, no avoidance and minimization measures are proposed.

4.8.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

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4.9 Hydrology and Water Quality

This section describes the hydrology and water quality in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]), as well as potential impacts.

Hydrology and water quality in the Proposed Project area were evaluated through a reconnaissance-level survey and review of the following:

- Water quality studies, Environmental Impact Report/Environmental Impact Statement from the Tehachapi Renewable Transmission Project (TRTP)
- The Supplemental Jurisdictional Delineation Report, which is provided in Attachment 4.4-A: Supplemental Jurisdictional Delineation Report to Section 4.4, Biological Resources
- City and county general plans
- United States (U.S.) Geological Survey (USGS) 7.5-minute series quadrangle maps
- Online geographic information system sources
- Aerial photographs of the Proposed Project area

The Los Angeles Regional Water Quality Control Board's (RWQCB's) Water Quality Control Plan for the Los Angeles Region (Basin Plan) was reviewed to ensure compliance with State and local regulations. Federal Emergency Management Agency (FEMA) maps were referenced to determine the location and extent of flood zones.

4.9.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park,

[1] The term "Proposed Project" is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County

- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to the hydrology and water quality in the area. As a result, these components are not discussed further in this section.

4.9.1.1 General Hydrologic Setting

The Proposed Project is located in the coastal plains, which are noted for their subtropical Mediterranean climate, with mild, rainy winters and warm, dry summers. With prevailing winds from the west and northwest, moist air from the Pacific Ocean is carried inland until it is forced upward by the mountains. The resulting storms, which are common from November through March, are followed by dry periods during summer months (California Public Utilities Commission [CPUC] 2009).

The average maximum and minimum temperatures recorded at the closest National Oceanic and Atmospheric Administration (NOAA) station to the Proposed Project in the City of Montebello are 79 degrees Fahrenheit (˚F) and 55˚F, respectively. Precipitation generally occurs as rainfall, and snowfall is rare. Most precipitation occurs during just a few major storms. The average annual rainfall in the area is approximately 15.32 inches (NOAA National Climatic Data Center, 2014).

Most of the landscape in the Proposed Project area is highly developed and urbanized, with a mix of industrial, commercial, and residential land uses. Residential development is nearly continuous throughout the Los Angeles Basin and is only interrupted by a few preserved open spaces within the region.

The Proposed Project lies within the Los Angeles Basin, within the South Coast Hydrologic Region. The Proposed Project is located within the Los Angeles River Hydrologic Unit, and crosses the Los Angeles Hydrologic Area and the Pasadena Hydrologic Subarea (California Department of Transportation [Caltrans] 2014).

4.9.1.2 Surface Waters

In the Los Angeles River Hydrologic Unit, where the Proposed Project components are located, streams are generally dry in the summer months. However, it is common for perennial flows to be present, especially in the larger streams, which are fed by the San Gabriel Mountains or urban runoff. Many of the drainages in this region have been lined with concrete to serve as flood control channels, or have otherwise been altered to conform to the urban landscape. Flood-control and debris-control dams have been built on many of the larger channels, especially at the interface between the mountains and the urban area, such as the Whittier Narrows Flood Control Basin and the Santa Fe Flood Control Basin. With the exception of several smaller or headwater drainages in undeveloped areas, few streams remain in a natural state. Major drainages in the region include Alhambra Wash, Avocado Creek, Chino Creek, Eaton Wash, La Canada Verde Creek, Mission Creek, Los Angeles River, Rio Hondo, Rubio Wash, and the San Gabriel River (CPUC 2009).

Storm water generally flows from the northeast to the southwest and is collected in storm drains that connect to the Rio Hondo, Rio Hondo Channel, or San Gabriel River, which flow into the Los Angeles River and ultimately into the Pacific Ocean.

Twelve potentially jurisdictional waters, which are listed in Table 4.9-1: Potentially Jurisdictional Waters within the Proposed Project Area, are located within the Proposed Project area. These waters, as well as non-jurisdictional waters that were identified during field surveys, are depicted in Attachment A: Wetlands and Waters Map of Attachment 4.4-A: Supplemental Jurisdictional Delineation Report to Section 4.4, Biological Resources.

Table 4.9-1: Potentially Jurisdictional Waters within the Proposed Project Area

Feature Number[2]	Feature Location	Mapbook Page(s)[3]	Feature Type	Flow Characteristic
7-38-S-1	East of Mesa Substation	7	Drainage	Ephemeral, concrete-lined
7-39-S-1	Within the Mesa Substation site	4, 5	Drainage	Ephemeral, dirt-lined
7-39-S-2	Within the Mesa Substation site	4, 5	Drainage	Ephemeral, lined with riprap, concrete, and dirt
7-39-S-3	Southeast of Mesa Substation	5, 7	Drainage	Ephemeral, lined with riprap, concrete, and dirt
7-39-S-5	Southwest of Mesa Substation	2	Drainage	Ephemeral, concrete-lined
7-39-S-6	Within the Mesa Substation site	4	Drainage	Ephemeral, dirt-lined
11-94-S-2	Within the Mesa Substation site	4, 6	Drainage	Ephemeral, dirt-lined
11-94-S-5	Within the Mesa Substation site	3	Drainage	Ephemeral, dirt-lined
11-136-S-100	North of Mesa Substation	11	Drainage	Ephemeral, dirt and concrete-lined
11-136-S-101	North of Mesa Substation	11	Drainage	Ephemeral, dirt-lined
11-138-S-100	Within the Mesa Substation site	4	Drainage	Ephemeral, dirt and concrete-lined
7-39-S-11 (Rio Hondo)	East of the Mesa Substation site	15	Drainage	Intermittent, dirt-lined

[2] Feature locations are depicted in Attachment A: Wetlands and Waters Map of the Supplemental Jurisdictional Delineation Report in Appendix F: Biological Resources Reports.

[3] Mapbook page numbers refer to map numbers in Attachment A: Wetlands and Waters Map of the Supplemental Jurisdictional Delineation Report in Appendix F: Biological Resources Reports.

4.9.1.3 Groundwater

The groundwater basins in the vicinity of Mesa Substation are depicted in Figure 4.9-1: Hydrologic Features in the Vicinity of the Mesa Substation Study Area.[4] The groundwater basins underlying the Proposed Project area are described in the following subsections.

Central Subbasin

Mesa Substation and portions of its associated transmission, subtransmission, distribution, and telecommunications lines, as well as the conversion of the existing street light source line conversion from overhead to underground on Loveland Street within the City of Bell Gardens are underlain by the Central Subbasin of the Coastal Plain of the Los Angeles Groundwater Basin. The Central Subbasin underlies approximately 277 square miles in the southeastern part of the Coastal Plain of the Los Angeles Groundwater Basin. This subbasin is bordered on the north by a surface divide called the La Brea High, and it is bordered on the northeast and east by emergent, less permeable Tertiary rocks of the Elysian, Repetto, Merced, and Puente hills. The southeast boundary between the Central Subbasin and the Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary of the subbasin is formed by the Newport Inglewood-Rose Canyon fault system and the associated less permeable folded rocks of the Newport Inglewood-Rose Canyon uplift (CPUC 2009).

Groundwater enters the Central Subbasin through surface and subsurface flow and by direct percolation of precipitation, stream flow, and applied water. Replenishment of the aquifers occurs mainly in the forebay areas where permeable sediments are exposed at the ground surface. Natural replenishment of the subbasin’s groundwater supply is largely from surface inflow through the Whittier Narrows and some underflow from the San Gabriel Valley. Percolation into the Los Angeles Forebay area is restricted due to paving and development of the surface of the forebay. Imported water purchased from the Metropolitan Water District of Southern California and recycled water from the Whittier Narrows and San Jose Creek water reclamation plants are used for artificial recharge in the Montebello Forebay at Rio Hondo and San Gabriel River spreading grounds. Saltwater intrusion is a problem in areas where recent or active river systems have eroded through the Newport-Inglewood-Rose Canyon uplift. A mound of water to create a barrier is formed by the injection of water in wells along the Alamitos Gap (CPUC 2009).

[4] The “Mesa Substation Study Area” shown Figure 4.9-1: Hydrologic Features in the Vicinity of the Mesa Substation Study Area represents the potential disturbance area associated with work at Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines in adjacent rights-of-way.

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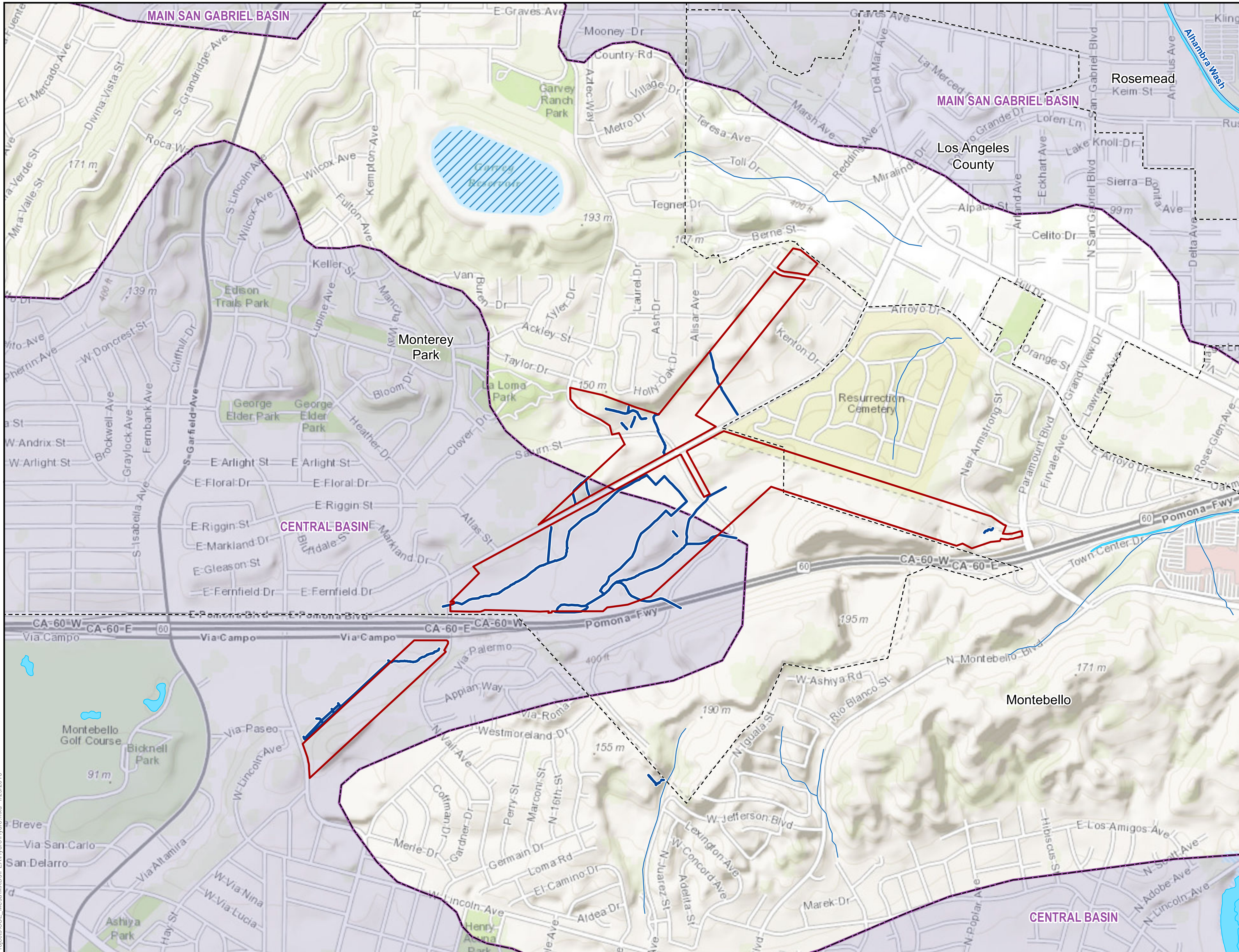
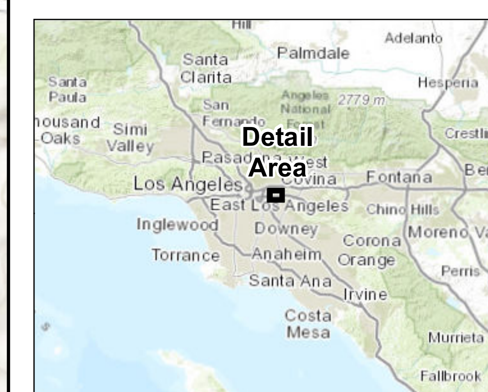
Figure 4.9-1: Hydrologic Features in the Vicinity of the Mesa Substation Study Area

Mesa 500 kV Substation Project



- Mesa Substation Study Area
- Surveyed Water Feature
- Drainage (National Hydrography Dataset)
- Groundwater Basin
- Wetland/Water Feature (National Wetlands Inventory)
- Reservoir
- City Boundary

Sources: Los Angeles County Department of Public Works; California Department of Water Resources; U.S. Fish & Wildlife Service; Insignia Environmental, 2014



SOUTHERN CALIFORNIA EDISON
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Throughout the Central Subbasin, groundwater occurs in Holocene- and Pleistocene-age sediments at relatively shallow depths. The Central Subbasin is historically divided into forebay and pressure areas. The Los Angeles Forebay is located in the northern part of the Central Subbasin where the Los Angeles River enters the Central Subbasin through the Los Angeles Narrows from the San Fernando Groundwater Basin. The Montebello Forebay extends southward from the Whittier Narrows where the San Gabriel River encounters the Central Subbasin and is the most important area of recharge in the subbasin. Both forebays have unconfined groundwater conditions and relatively interconnected aquifers that extend up to 1,600 feet in depth to provide recharge to the aquifer system of the subbasin. The Whittier Narrows area extends from the Puente Hills south and southwest to the axis of the Santa Fe Spring-Coyote Hills uplift and contains up to 1,000 feet of freshwater-bearing sediments. The Central Subbasin pressure area is the largest of the four divisions, and contains many aquifers of permeable sands and gravels separated by semi-permeable sandy clay and impermeable clay, which extend approximately 2,200 feet below the surface. Throughout much of the subbasin, the aquifers are unconfined, but areas with semipermeable aquicludes—or groundwater barriers—allow some interaction between the aquifers (CPUC 2009).

According to the Metropolitan Water District of Southern California, the total storage capacity of the Central Subbasin is approximately 13.8 million acre feet (af). The Water Replenishment District of Southern California requires that groundwater levels be maintained at a level of 75 feet or more below ground surface (bgs) (CPUC 2009).

Based on the Operating Industries Inc. (OII) Draft 2013 Annual Groundwater Monitoring and Evaluation Report for the landfill adjacent to the Mesa Substation site, groundwater levels in the vicinity of the Mesa Substation site range from approximately 266 to 283 feet bgs (Geosyntec Consultants 2013). There may be isolated cases where locally perched groundwater is present.

In the Central Subbasin, Maximum Contaminant Levels (MCLs) are exceeded in several wells throughout the basin for the following contaminants: inorganics, radiology, nitrates, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs) (CPUC 2009).

San Gabriel Valley Groundwater Basin

Portions of the new telecommunications line from transmission tower M40-T3 to Mesa Substation and the new telecommunications line from transmission tower M38-T5 to Mesa Substation are underlain by the San Gabriel Valley Groundwater Basin. The San Gabriel Valley Groundwater Basin underlies approximately 255 square miles of eastern Los Angeles County. This basin is bounded on the north by the Raymond fault and the contact between Quaternary sediments and consolidated basement rocks of the San Gabriel Mountains. Exposed consolidated rocks of the Repetto, Merced, and Puente Hills bound the basin on the south and west, and the Chino fault and the San Jose fault form the eastern boundary (CPUC 2009).

Recharge of the San Gabriel Groundwater Basin is mainly from direct percolation of precipitation and percolation of stream flow. Stream flow is a combination of runoff from the surrounding mountains, imported water conveyed in the San Gabriel River channel to spreading grounds in the Central Subbasin, and treated sewage effluent. Subsurface flow enters from the

Raymond Groundwater Basin, from the Chino Subbasin and from fracture systems along the San Gabriel Mountain front (CPUC 2009).

The water-bearing materials of this basin are dominated by unconsolidated to semi-consolidated alluvium deposited by streams flowing out of the San Gabriel Mountains. These deposits include Pleistocene and Holocene alluvium and the lower Pleistocene San Pedro Formation. Upper Pleistocene alluvium deposits form most of the productive water-bearing deposits in this basin. They consist of unsorted, angular to sub-rounded sedimentary deposits ranging from boulder-bearing gravels near the San Gabriel Mountains to sands and silts in the central and western parts of the basin. The lower Pleistocene San Pedro Formation consists of interbedded marine sand, gravel, and silt. This formation bears fresh water and may grade eastward into continental deposits indistinguishable from the overlying Pleistocene age alluvium (CPUC 2009).

The storage capacity of the San Gabriel Valley Groundwater Basin is approximately 9,000,000 af, and approximately 8,500,000 af are currently stored in the basin. The depth to groundwater varies from approximately 150 to 350 feet bgs (CPUC 2009).

In the San Gabriel Valley Groundwater basin, MCLs are exceeded in several wells throughout the basin for the following contaminants: total dissolved solids (TDSs), nitrate, VOCs, perchlorate, and N-nitrosodimethylamine (NDMA) (CPUC 2009).

Raymond Groundwater Basin

Goodrich Substation is underlain by the Raymond Groundwater Basin. The Raymond Groundwater Basin underlies approximately 50 square miles of the northwest part of the San Gabriel Valley. The western boundary is delineated by a drainage divide at Pickens Canyon Wash and the southeast boundary is the Raymond Fault. The Raymond Fault trends east-northeast and acts as a groundwater barrier along the southern boundary of the Raymond Groundwater Basin. It also acts as a complete barrier along its western end, but becomes a less-effective barrier eastward. East of Santa Anita Wash, this fault ceases to be an effective barrier and the flow of groundwater southward into the San Gabriel Valley Groundwater Basin becomes essentially unrestricted. A north-trending divide paralleling the Eaton Wash separates both surface and subsurface water flow in the eastern portion of the basin (CPUC 2009).

Natural recharge to the Raymond Groundwater Basin is mainly caused by direct percolation of precipitation and percolation of ephemeral stream flow from the San Gabriel Mountains to the north. The principal streams bringing surface inflow are the Arroyo Seco, Eaton Creek, and Santa Anita Creek. Some stream runoff is diverted into spreading grounds and some is impounded behind small dams, allowing the water to infiltrate and contribute to groundwater recharge of the basin. An unknown amount of underflow enters the basin from the San Gabriel Mountains through fracture systems (CPUC 2009).

The water-bearing materials of Raymond Groundwater Basin are dominated by unconsolidated Quaternary alluvial gravel, sand, and silt deposited by streams flowing out of the San Gabriel Mountains. Water in the older alluvium is typically unconfined, and sediment sizes range from coarser to finer as the sediment moves away from the San Gabriel Mountains. However, confined groundwater conditions have existed locally in the basin, particularly along the

Raymond Fault near Raymond Hill, where layers of finer-grained sediments are more abundant (CPUC 2009).

The total storage capacity of Raymond Groundwater Basin is approximately 1.45 million acre feet. No estimates of available storage have been made recently. In 1970, the available amount of stored water was estimated to be approximately 1 million acre feet, leaving approximately 450,000 acre feet of storage space available. Because this basin is managed, the present amount of stored water and storage space available should be similar to the amount available in 1970. The depth to groundwater is at least 200 feet bgs throughout the basin (CPUC 2009).

In the Raymond Groundwater Basin, MCLs are exceeded in several wells throughout the basin for the following contaminants: TDSs, inorganics, radiology, nitrates, VOCs, SVOCs, pesticides, and perchlorate (CPUC 2009).

4.9.1.4 Surface Water Quality

The Los Angeles RWQCB’s Basin Plan designates beneficial uses for surface waters and groundwater in the basin, and it also sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State’s antidegradation policy. The closest inland surface water with designated beneficial uses near the Mesa Substation site is Rio Hondo Reach 3, which is crossed by the new telecommunications line from transmission tower M38-T5 to Mesa Substation. The closest inland surface water with designated beneficial uses near the Goodrich Substation site is the Eaton Wash, which is immediately to the east of the substation. Existing beneficial uses of Rio Hondo Reach 3 are Rare, Threatened, and Endangered Species (RARE) and Wetland Habitat (WET); potential beneficial uses are Municipal and Domestic Supply (MUN) and Warm Freshwater Habitat (WARM); and intermittent beneficial uses are Groundwater Recharge (GWR) and Wildlife Habitat (WILD). The existing beneficial use of the Eaton Wash is WILD; the potential beneficial use is MUN; and the intermittent beneficial uses are GWR and WARM (Los Angeles RWQCB 1994).

Several of the streams and other waterbodies in the region are listed on the State Water Resources Control Board’s (SWRCB’s) 303(d) list of impaired waterbodies. The closest 303(d)-listed waterbody to the Proposed Project is San Gabriel River Reach 3, which is approximately 0.1 mile south of the new telecommunications line from transmission tower M38-T5 to Mesa Substation, and which has been identified as impaired for ammonia as nitrogen, indicator bacteria, lead, and toxicity. Downstream of San Gabriel River Reach 3 is San Gabriel River Reach 2, which is on the 303(d) list for aluminum, chloride, coliform bacteria, copper, cyanide, iron, lead, nitrogen (nitrite), total dissolved solids, and zine. Downstream of San Gabriel River Reach 2 is San Gabriel River Reach 1, which is on the 303(d) list for abnormal fish histology (lesions), ammonia, coliform bacteria, excess algal growth, pH, and toxicity. Downstream of San Gabriel River Reach 1 is San Gabriel River Estuary, which is on the 303(d) list for abnormal fish histology (lesions), ammonia as nitrogen, copper, dioxin, nickel, and dissolved oxygen. The San Gabriel River Estuary flows into San Pedro Bay, approximately 19 miles south of the Proposed Project, which is on the 303(d) list for chlordane, chromium (sediment), copper (sediment), DDT (tissue and sediment), polycyclic aromatic hydrocarbons (sediment), polychlorinated biphenyls, and sediment toxicity, zinc (sediment) (SWRCB, 2011b).

The Proposed Project is also in the vicinity of a segment of Rio Hondo Reach 2 that has been identified on the 303(d) list as impaired for coliform bacteria and cyanide, which is approximately 1.4 miles south of one of the proposed telecommunication lines. Downstream of Rio Hondo Reach 2 is Rio Hondo Reach 1, which is on the 303(d) list for toxicity, trash, coliform bacteria, copper, lead, zinc, and pH. Rio Hondo confluences with the Los Angeles River Reach 2, approximately 4.6 miles southwest of the Mesa Substation site, which is on the 303(d) list for trash, coliform bacteria, oil, ammonia, copper, lead, and nutrients (algae) (SWRCB 2011b).

4.9.1.5 Groundwater Quality

As described in Section 4.8, Hazards and Hazardous Materials, four hazardous sites adjacent to the Proposed Project have groundwater contamination. Groundwater at the Mesa Substation site is contaminated due to the landfill owned by OII, which is a Superfund site on the National Priorities List (NPL) Superfund list. Contaminated substances at this site include with tetrachloroethylene (PCE); 1,1,1-trichloroethane; tricholorethylene (TCE); and vinyl chloride. In addition, the new telecommunications line from transmission tower M40-T3 to Mesa Substation is located adjacent to Mobil Number 18-EVF-Leaking Underground Storage Tank (LUST), and the new telecommunications line from transmission tower M38-T5 to Mesa Substation is located adjacent to the Whittier Narrows Operable Unit (WNOU) (San Gabriel Superfund Site), both of which are potentially contaminated groundwater sites. The Mobil Number 18-EVF site has groundwater contaminated with petroleum hydrocarbons. The WNOU site has groundwater contaminated with perchlorate, PCE, TCE, 1,4-dioxane, and NDMA. The sites are currently undergoing cleanup.

4.9.1.6 Floodplains

According to FEMA's Flood Insurance Rate Maps (FIRMs), the majority of the Proposed Project is in FEMA Zone X, which is the 500-year floodplain with less than 0.2-percent annual probability of flooding. Two proposed 220 kV towers (Tower 2207 along the Redondo-Mesa and Laguna Bell No.1-Mesa transmission lines and Tower 2304 along the Lighthipe-Mesa and Laguna Bell No. 2-Mesa transmission lines) and the associated removal towers (Tower M4-T3 along the Mesa-Redondo and Goodrich-Laguna Bell transmission lines and Tower M4-T3 along the Lighthipe-Mesa and Laguna Bell-Rio Hondo transmission lines), as well as one existing telecommunication pole (Pole 1773781E) that may be replaced, are located in FEMA Zone A, which is an area subject to a 100-year flood (FEMA, 2014).

4.9.1.7 Dam Failure Inundation Areas

The California Governor's Office of Emergency Services is responsible for the identification of inundation areas for dam failures in California. The majority of the Proposed Project is not located within an inundation area for dam failure; however, Goodrich Substation is located within an inundation area for dam failure.

4.9.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.9.2.1 Federal

Clean Water Act

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

Under the current USACE-administered Nationwide Permit (NWP) Program, substation expansion may be authorized under NWP 12 (Utility Line Activities) if the project does not result in a loss of more than 0.5 acre of waters of the U.S. Permanent impacts to waters of the U.S. that are greater than 0.5 acre may require an Individual Permit.

CWA Section 401 requires that applications for a Section 404 permit, or any other federal permit or license for activities resulting in a discharge in jurisdictional waters of the U.S., must obtain a water quality certification from the State, to ensure compliance with the State's water quality standards. Within California, the SWRCB and the nine RWQCBs are given the primary responsibility to control water quality. A Water Quality Certification or waiver pursuant to Section 401 of the CWA, issued by the Los Angeles RWQCB, would be required for the issuance of a Section 404 permit.

Clean Water Act Section 402

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

- Facilities already covered by an NPDES permit for storm water
- Facilities that engage in industrial activities
- Large municipal separate storm sewer systems (MS4s) that serve more than 250,000 people
- Medium MS4s that serve between 100,000 and 250,000 people
- Facilities that are considered significant contributors of pollutants to waters of the U.S.

The U.S. EPA issued a final rule for Phase II discharges in August 1995. Phase II storm water discharges include light industrial facilities, small construction sites (i.e., less than 5 acres), and small municipalities (i.e., populations of less than 100,000 people).

On August 19, 1999, the SWRCB reissued a General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and, later that year, amended the permit to apply to sites as small as 1 acre. In California, NPDES permitting authority is delegated to and administered by the State's nine RWQCBs.

On September 2, 2009, the SWRCB adopted Order No. 2009-0009-DWQ (as amended by 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit), which replaced and combined Water Quality Order 99-08-DWQ and Water Quality Order 2003-0007 (Small Linear Utility General Permit) for projects disturbing 1 or more acres of land, or that are part of a common plan of development or sale that disturbs more than 1 acre of land where the rainfall erosivity waiver does not apply. The new permit became effective July 1, 2010, whereby all existing dischargers and new dischargers are required to obtain coverage under the new permit by submitting Permit Registration Documents.

The Construction General Permit requires the implementation of a Storm Water Pollution Prevention Plan (SWPPP), which must be prepared before construction begins and kept on site throughout the construction process. In accordance with the Construction General Permit, the SWPPP must include the following:

- Identification of pollutant sources and non-storm water discharges associated with construction activity
- Specifications for best management practices (BMPs) that would be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and other temporary work areas
- Calculations and design details, as well as BMP controls for site run-on
- BMPs used to eliminate or reduce pollutants after construction is complete
- Certification from a Qualified SWPPP Developer

The Construction General Permit requires that the site sediment risk be calculated based on rainfall, soil erodibility, and slope. It also requires that the receiving water risk be calculated based on whether the disturbed areas discharge to a 303(d)-listed waterbody that is impaired for sediment or that has a U.S. EPA-approved total maximum daily load (TMDL) implementation plan for sediment. The receiving water risk must also be calculated based on whether the disturbed areas discharge to a waterbody with a beneficial use of fish spawning, cold freshwater habitat, and fish migration. The result of this analysis determines the combined risk level or type (i.e., 1, 2, or 3), which dictates the monitoring and reporting requirements.

The SWRCB adopted the Statewide General NPDES Permit for Discharges from Utility Vaults & Underground Structures to Surface Waters (General Permit CAG990002) on July 19, 2006. This permit authorizes permittees to have short-term, intermittent discharges of uncontaminated water from vaults and substructures to waters of the U.S. during the operational phase of projects. The new Utility Vault General Permit (2014-0008-DWQ) was recently adopted on October 21, 2014 by the SWRCB and will be in effect on July 1, 2015.

Clean Water Act Section 404

Section 404 of the CWA authorizes the USACE to regulate the discharge of dredge or fill material to waters of the U.S., including wetlands (33 U.S.C. § 1344). The USACE issues individual site-specific permits or general permits (i.e., NWPs or Regional General Permits) for such discharges. Projects that involve the discharge of dredge or fill material—including soil, sediment, and other materials into waters of the U.S.—require CWA Section 404 permit authorizations from the USACE.

Clean Water Act Section 401

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

Clean Water Act Sections 303 and 304

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

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

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop a list of waterbodies where beneficial uses are impaired. The waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water segments on the lists and develop action plans, or TMDLs, to improve water quality.

4.9.2.2 State

California Fish and Game Code

Sections 1600 through 1616 of the California Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Wildlife (CDFW) in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. A Lake and Streambed Alteration Agreement (LSAA) is required between the CDFW and an entity proposing to substantially divert or obstruct the natural flow or affect changes to the bed, channel, or bank of any river, stream, or lake. The LSAA is designed to protect the fish and wildlife resources of a river, stream, or lake.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1967, as amended, described in California Water Code Section 13000 et seq. requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect waters of the State. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. Under the Porter-Cologne Water Quality Control Act, a project proposing to discharge waste into a non-federal water of the State must submit a Report of Waste Discharge to the RWQCB and obtain Waste Discharge Requirements, which is issued by the RWQCB. The criteria for the Proposed Project area are contained in the Los Angeles RWQCB's Basin Plan.

4.9.2.3 Local

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

Los Angeles Regional Water Quality Control Board

Municipal Separate Storm Water Sewer System Permit

The Los Angeles RWQCB reissued the MS4 Permit Water Quality Order No. R4-2012-0175 (NPDES No. CAS004001) on November 8, 2012 to the Los Angeles County Flood Control District, County of Los Angeles, and 84 cities within the Los Angeles County Flood Control District—including the cites of Monterey Park, Montebello, and Pasadena—with the primary goal of preventing polluted discharges from entering the storm water conveyance system and local receiving and coastal waters. Pursuant to the permit, the co-permittees are required to develop and implement measures that would address and prevent pollution from development projects. Development projects are also required to include BMPs in the permanent design to reduce pollutant discharges from their project sites.

Los Angeles Regional Water Quality Control Board Basin Plan

The Los Angeles RWQCB (Region 4) is responsible for protecting the beneficial uses of surface water and groundwater resources in the Los Angeles region. The RWQCB adopted the Basin Plan in June 1994. The plan designates beneficial uses for surface water and groundwater, sets narrative and numeric objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles region. Discharges to surface waters within the coastal watersheds of Los Angeles and Ventura counties are subject to the regulatory standards set forth in the Basin Plan, which prevents the unauthorized discharge of pollutants into waters of the U.S. and State. NPDES permits, waste discharge requirements, and waivers are mechanisms used by the RWQCB to control discharges and protect water quality. The Basin Plan is regularly reviewed and updated with amendments, as necessary.

County of Los Angeles

Standard Urban Storm Water Mitigation Plan

The Los Angeles Standard Urban Storm Water Mitigation Plan (SUSMP), approved by the Los Angeles RWQCB in 2000, was developed as part of the municipal storm water program to address post-construction storm water pollution from new development and redevelopment projects. The SUSMP defines water quality concerns, and ensures that pollutants carried by storm water are confined to the site and not delivered to waterways. Depending on the types of pollutants that can be anticipated to occur in storm water runoff from a site, project applicants are required to select appropriate source control and treatment control BMPs from the list included in the SUSMP. These treatment control BMPs must be sufficiently designed and constructed to treat or filter the first 0.75 inch of storm water runoff from a storm event. As permittees under the Los Angeles NPDES municipal storm water permit, projects in the cities of Monterey Park, Montebello, and Pasadena are subject to SUSMP requirements.

City of Monterey Park

Storm Water Control Ordinance

The City of Monterey Park developed a program to stop the dumping and discharging of hazardous materials into storm drains and passed the Storm Water Control Ordinance in 1997 to meet the requirements of the federal NPDES program. The goal of the ordinance is to protect rivers and oceans from pollutants that are dumped or washed into storm drains. Under the ordinance, which was updated in September 2000, it is illegal for persons to release chemicals, hazardous materials, used motor oil, machinery oils, household cleaners, pesticides, grease, leaves, or debris into the streets, gutters, or storm drains. Industrial and commercial businesses, as well as construction contractors, are required to modify their operations to eliminate illegal discharge into the storm drains.

Storm Water and Urban Runoff Pollution Prevention Control Code

The City of Monterey Park Municipal Code Chapter 6.30 Storm Water and Urban Runoff Pollution Prevention Control contains measures to accomplish the following:

- Regulate non-storm water discharges to the MS4
- Control spillage, dumping, or disposal of materials and pollutants into the storm drain system
- Reduce pollutants in storm water and urban runoff to the maximum extent practicable in order to achieve water quality standards and receiving water limitations, as required under applicable law
- Eliminate illicit connections and illicit discharges to the MS4
- Control the contribution of pollutants from the MS4 through interagency coordination
- Provide the City of Monterey Park with sufficient authority to implement and enforce the requirements of applicable law, to control discharges to and from those portions of the MS4 over which it has jurisdiction, and then hold dischargers to the MS4 accountable for violating the applicable law

City of Pasadena Storm Water Management and Discharge Control Code

The City of Pasadena Municipal Code Chapter 8.70 Storm Water Management and Discharge Control contains measures to accomplish the following:

- Regulate non-storm water discharges to the MS4
- Control spillage, dumping, or disposal of materials into the municipal storm water system
- Reduce pollutants in storm water and urban runoff to the maximum extent practical

City of Montebello Storm Water and Urban Runoff Pollution Prevention Code

The City of Montebello Municipal Code Chapter 8.36 Storm Water and Urban Runoff Pollution Prevention contains measures to accomplish the following:

- Reduce illicit discharges to the municipal storm water system to the maximum extent practicable
- Eliminate illicit connections to the municipal storm water system
- Eliminate spillage, dumping, and disposal of pollutant materials into the municipal storm water system
- Reduce pollutant loads in storm water and urban runoff from land uses and activities identified in the municipal NPDES permit

City of Rosemead Storm Water Management Code

The City of Rosemead Municipal Code Chapter 13.16 Storm Water Management contains measures to accomplish the following:

- Prohibit illicit connections and discharges
- Control urban runoff

City of South El Monte Storm Water and Urban Runoff Pollution Control Code

The City of South El Monte Municipal Code Chapter 8.44 Storm Water and Urban Runoff Pollution Control contains measures to accomplish the following:

- Reduce pollutant in storm water discharges to the maximum extent practicable
- Regulate illicit connections and discharges thereby reducing the level of contamination of storm water and urban runoff into the municipal storm water system
- Regulate non-storm water discharges to the municipal storm water system

City of Commerce Storm Water and Runoff Pollution Control Code

The City of Commerce Municipal Code Chapter 6.17 Storm Water and Runoff Pollution Control adopted by reference the Los Angeles County code relating to control of pollutant carried by storm water and runoff.

City of Bell Gardens Urban Stormwater Management Code

The City of Bell Gardens Municipal Code Chapter 11.12 Urban Stormwater Management contains measures to accomplish the following:

- Prohibit illicit discharges
- Prohibit installation of use of illicit connections
- Removal of illicit connections from the storm drain system
- Prohibit littering and other discharges of polluting or damaging substances
- Storm water and runoff pollution mitigation from construction activities
- Prohibit discharges from industrial or commercial activities

4.9.3 Significance Criteria

The significance criteria for assessing the impacts to hydrology and water quality come from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on site or off site
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on site or off site
- Create or contribute to runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality
- Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary Map or FIRM, or other flood hazard delineation map
- Place structures within a 100-year flood hazard area, which would impede or redirect flood flows
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including as a result of the failure of a levee or dam
- Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow

4.9.4 Impact Analysis

4.9.4.1 Would the project violate any water quality standards or waste discharge requirements?

Construction

Less-Than-Significant Impact. The Proposed Project would not cross or span any 303(d)-listed waterbodies. The closest 303(d)-list waterbody to the Proposed Project is San Gabriel River Reach 3, approximately 0.1 mile south of the new telecommunications line from transmission tower M38-T5 to Mesa Substation. San Gabriel River Reach 3 is impaired for ammonia as nitrogen, indicator bacteria, lead, and toxicity. The Proposed Project would not contribute to this water quality impairment because the Proposed Project would not result in discharge of ammonia as nitrogen, indicator bacteria, lead, or other toxic materials. However, construction of the Proposed Project would result in ground-disturbing activities that would expose soil to erosion and subsequent sedimentation. Sediment transport from construction work areas to adjacent water resources could contribute to water quality degradation and violate RWQCB standards.

Sediment can cause turbidity, smother riparian habitat, impair recreational uses, and transport other pollutants. Water trucks, which would be used frequently during construction to assist with soil compaction and abate fugitive dust, would also have the potential to cause erosion and discharges if not applied properly.

Sedimentation from work areas would primarily occur from vehicles tracking and transporting soil onto adjacent paved surfaces. Sediment transport from work areas could also occur from surface water run-on and runoff, heavy rains, or overwatering during grading or dust-abatement activities. As discussed in Section 4.6, Geology and Soils, the erosion potential at most of the work areas is low, primarily because of flat to gentle terrain and well-drained soils. However, the erosion potential would increase during construction when the soils become disturbed, and vehicles and equipment enter and exit work areas.

In order to address the potential for erosion and sedimentation, SCE would conduct a risk assessment prior to construction and prepare a SWPPP in accordance with the Construction General Permit described in Section 4.9.2, Regulatory Setting. The risk assessment would take into consideration the receiving waters, soil type, slopes, construction duration, and rainfall to determine the potential erosion and estimate the volume of sediment that could leave disturbed areas during the Proposed Project. From the risk assessment Proposed Project and site-specific BMPs would be identified in the SWPPP that would ensure water quality standards are met. BMPs to be implemented would include, erosion control and stabilization, sediment controls, good housekeeping, waste management and hazardous materials controls, and guidelines for working around waterbodies.

Hazardous materials used during construction (e.g., diesel fuel, hydraulic fluid, oils, grease, and concrete) have the potential to be transported by storm water runoff and threaten aquatic life. These hazardous materials could violate water quality standards if they come in contact with storm water and/or are transported to nearby water resources or the MS4. The handling, storage, and disposal of potentially hazardous materials are discussed in Section 4.8, Hazards and Hazardous Materials, and specific measures to manage hazardous materials would be addressed in the SWPPP.

Wastewater would be generated by construction workers over the duration of the Proposed Project's construction, which is scheduled to take approximately 55 months. However, the wastewater generated during the short construction period would be contained within portable restrooms and disposed of by a licensed contractor. No wastewater would be discharged from the site.

As discussed previously, it is unlikely that groundwater would be encountered at the Mesa Substation site, Goodrich Substation site, or along the transmission, subtransmission, distribution, and telecommunications line routes. However, contaminated groundwater plumes are known to occur at the Mesa Substation site, and groundwater levels at the site range from approximately 266 to 283 feet bgs. The deepest excavation for at the Mesa Substation site is approximately 50 feet bgs; therefore, groundwater is not anticipated to be encountered or impacted when excavating in this area. In addition, the depth to groundwater reported for the contaminated groundwater sites along the new telecommunications line from transmission tower M40-T3 to Mesa Substation and the new telecommunications line from transmission tower M38-T5 to Mesa Substation is significantly below the depth of potential excavations proposed; therefore, groundwater is not anticipated to be encountered during construction activities. There may be isolated cases where locally perched groundwater is present, which would be evaluated during the geotechnical investigation. If groundwater is encountered, dewatering would be conducted in compliance with the Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (SWRCB's Water Quality Order No. 2003-0003-DWQ). Water quality testing would be performed to characterize the constituents of the water; if the levels are under the specific Basin Plan Thresholds, dewatered groundwater could be utilized for dust control. If the Basin Plan Thresholds cannot be met, the groundwater would be shipped to a licensed off-site facility for treatment and disposal.

With implementation of the Proposed Project-specific BMPs provided in the SWPPP and adherence to the Construction General Permit, the Proposed Project is not expected to violate water quality standards or waste discharge requirements. Therefore, impacts would be less than significant.

Operation

Less-Than-Significant Impact. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. O&M of the Proposed Project would not impact water quality or result in discharges to waters as ground-disturbing activities are not typically part of O&M.

Mesa Substation would include permanent restrooms and sinks; however, SCE would apply for sewer and water service from the City of Monterey Park, and any wastewater generated by the restrooms would be discharged accordingly. Therefore, there would be no impact to water quality as a result of restroom use. More information regarding the restroom facilities is provided in Section 4.17, Utilities and Service Systems.

The transformers at Mesa Substation would include mineral oil, which would be in excess of 1,320 gallons and contained in aboveground equipment. As such, there exists the potential for a hazardous oil leak. In order to minimize impacts, Mesa Substation would include a secondary containment system to prevent an oil leak and/or spill from entering any nearby waterways and would adhere to the Spill Prevention, Control, and Countermeasure (SPCC) Plan. The containment facilities are described further in Chapter 3, Project Description and Section 4.8, Hazards and Hazardous Materials. Therefore, an accidental spill would be contained on site and not be anticipated to result in a water quality violation. O&M of the Proposed Project would not violate any water quality standards or waste discharge requirements; therefore, impacts would be less than significant.

4.9.4.2 Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?

Construction

Less-Than-Significant Impact. During grading activities, the Proposed Project would typically draw approximately 64,000 gallons of water per day from the City of Monterey Park, and would typically draw approximately 143,000 gallons of water per day for dust control and compaction during peak grading activities. The City of Monterey Park's water supply consists entirely of groundwater withdrawn from the Main San Gabriel Valley Basin, which is located within the San Gabriel Valley in southeastern Los Angeles County. The City of Monterey Park is projected to have an average of approximately 3.5 billion gallons of water available in its water supply each year through 2025; therefore, a sufficient water supply is available to meet water demands for construction needs. While water usage will occur during the entire project for dust control on access roads, the highest demand for water would be during grading activities, lasting approximately 16 months. Since groundwater withdrawal is not anticipated, the Proposed Project would not substantially deplete groundwater supplies as a result of dust control, and there would be a less-than-significant impact.

Impervious surfaces created during construction can reduce localized groundwater recharge. Construction of Mesa Substation would include the removal of approximately 9.1 acres of impervious surfaces at the existing substation site and the installation of approximately 18.1 acres of impervious surface from paved driveways, equipment foundation pads, and buildings, resulting in a net increase of approximately 9 acres of impervious surfaces. This increase in impervious surfaces represents approximately 25.8 percent of the total surface area (70 acres) for the substation site. These impervious surfaces would not be contiguous and would not impede groundwater recharge at the site. Furthermore, there are enough pervious surfaces within the Proposed Project site to allow rain water and storm water runoff to continue to infiltrate the ground surface, similar to pre-construction conditions. Thus, the increase in impervious surfaces would not substantially alter the groundwater recharge capabilities of the substation site. Therefore, impacts to groundwater recharge would be less than significant.

The Proposed Project would include the removal of approximately 112 existing transmission, subtransmission, and distribution structures. The installation of transmission, subtransmission, distribution, and transmission structures—including approximately 29 new lattice steel towers, 30 tubular steel poles (TSPs), 46 wood distribution poles, 21 duct banks, and 38 vaults—would introduce new, permanent, impervious surfaces. Pole diameters range from 1.2 to 7 feet, and concrete foundations for TSPs measure approximately 5 to 7 feet in diameter. This would result in a small amount of additional impervious area due to the footprint of these structures. The installation of transmission, subtransmission, distribution, and transmission structures would not result in a significant increase in impervious surfaces; therefore, it would not substantially alter groundwater recharge capabilities. Consequently, impacts to groundwater recharge would be less than significant.

Operation

Less-Than-Significant Impact. Mesa Substation would include the same number of permanent restrooms and sinks as the existing substation. SCE would continue to obtain sewer and water service from the City of Monterey Park. During O&M, the substation would be staffed by the same number of workers as the existing substation. Therefore, the restroom facilities would draw roughly the same amount of water and would not substantially deplete groundwater supplies. Landscaping around the proposed substation would also require water, particularly during the first two to five years of establishment; however, since this is a small amount, a sufficient water supply would be available to meet water demands for landscaping needs during operation. Thus, less-than-significant impacts to groundwater would occur.

4.9.4.3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Construction

Less-Than-Significant Impact. The Mesa Substation site is relatively flat with a small hill located in the middle of the site. Expansion of Mesa Substation would require grading to develop a level substation site. Existing vegetation would be removed during grading activities and soils would be disturbed, making the site more susceptible to wind and water erosion. Construction would occur in several phases, each with different potential impacts to water quality. During the grading and civil construction phases, soils would be disturbed, moved, and transported within the site. These phases of construction would have the highest potential for runoff.

The proposed work at Mesa Substation would result in changes to the local drainage patterns within the substation limits when compared to pre-construction flows. During site grading, ephemeral drainages, concrete channels and perimeter drains, and earthen ditches would be filled, or removed, to grade the site for development. Construction of the Proposed Project would result in direct temporary impacts of approximately 0.09 acre, and direct permanent impacts of 0.54 acre to waters potentially under the jurisdiction of the USACE and RWQCB. Construction of the Proposed Project would also result in direct temporary impacts of 1.56 acres, and direct permanent impacts of 2.76 acres to waters and riparian habitat potentially under the jurisdiction of the CDFW. Only ephemeral, non-wetlands waters would be impacted by the Proposed Project. More detailed information on impacts to drainage features is included in Section 4.4, Biological Resources. Runoff across the site would continue to flow from northeast to southwest in the vicinity of Mesa Substation. The graded substation pad would maintain a minimum slope of one percent to drain on-site storm water toward the detention basin, which would be constructed in the southwest corner of the site and the drainage channels on the existing substation site would be rebuilt around the new substation perimeter to route off-site storm water away from the substation pad. Throughout construction, the Project-specific SWPPP would be implemented to ensure exposed or disturbed soils are contained within the Proposed Project site.

A drainage plan would be developed as part of the final grading design to account for flows that are interrupted by the substation on the upslope side, as well as runoff from within the substation limits. Implementation of the drainage plan would replace existing drainage patterns across the substation site and would ensure that drainage through, and runoff from the substation does not result in the alteration of downstream drainage features outside the substation limits. Thus, runoff would not cause significant erosion when compared to pre-construction conditions. Therefore, impacts would be less than significant.

After the below-grade work has been completed, road-base or gravel would be used to stabilize the surface within the substation limits, thereby minimizing wind and water erosion and reducing tracking. During the second phase of substation construction (or the above-grade phase), the site would be relatively flat, promoting infiltration and decreasing runoff volume. Thus, runoff would not cause significant erosion when compared to pre-construction conditions. Therefore, impacts would be less than significant.

Water quality and waste discharge concerns during construction of the transmission, subtransmission, distribution, and telecommunications lines would be similar to the concerns discussed for Mesa Substation. Grading may be required at some structure sites and for access or spur roads. The flow direction at each pole location along the transmission, subtransmission, distribution, and telecommunications lines may change due to the minor grading required to access the site and install each pole or tower. Structure locations and access roads would be stabilized according to the Proposed Project's SWPPP. Therefore, the potential for increased erosion or siltation would be less than significant.

Operation

Less-Than-Significant Impact. Drainage patterns established during construction would generally remain unchanged with long-term O&M of the Proposed Project. If, during the course of maintenance activities, grading or ground disturbance is necessary, appropriate BMPs would be implemented to manage erosion and siltation and temporary work areas would be restored to pre-construction conditions to avoid increases in runoff or changes in drainage patterns. As such, less-than-significant impacts resulting from on-site or off-site drainage patterns are anticipated with O&M of the Proposed Project.

4.9.4.4 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Construction

Less-Than-Significant Impact. Construction of Mesa Substation would change existing drainage patterns. However, implementation of the drainage plan and SWPPP would prevent these changes from altering on-site or off-site flow rates or volumes. Drainages in the vicinity of the other Proposed Project components are not expected to be altered. Because downstream flow rates and volumes would not change substantially, impacts to drainage patterns that may result in flooding would be less than significant.

Operation

Less-Than-Significant Impact. On-site drainage patterns established during construction would generally remain unchanged with long-term O&M of the Proposed Project. On-site runoff at Mesa Substation would be directed to a retention basin in the southwest corner of the substation site. Runoff discharge from the retention basin would follow the existing drainage pattern to the southwest. The retention basin would have sufficient storage capacity to retain or reduce post-construction discharge to a level consistent with pre-construction conditions. Off-site runoff would be directed around the substation wall and continue in the southwesterly direction to the drainages downstream eventually flowing into Rio Hondo. Drainages in the vicinity of the other Proposed Project components are not expected to be altered. If, however, during the course of maintenance activities, grading or ground disturbance is necessary, temporary work areas would be restored to pre-construction conditions to avoid increases in runoff or changes in drainage patterns that could result in flooding. As such, less-than-significant impacts to on-site or off-site drainage patterns are anticipated with O&M of the Proposed Project.

4.9.4.5 Would the project create or contribute to runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Construction

Less-Than-Significant Impact. Development of the Mesa Substation site would require compaction of soils to meet engineering standards. In addition, concrete foundations would be poured for the substation equipment, a perimeter wall would be constructed around the site, and driveways would be paved. The new approximately 70-acre Mesa Substation site would include a net increase of approximately 9 acres of impervious surfaces for the new driveways, equipment foundation pads, and buildings. However, during construction, runoff from the site is not expected to change substantially from pre-construction conditions, because the Mesa Substation site is relatively flat, and storm water runoff would be controlled through BMPs implemented through the SWPPP. The difference in runoff volume and rates along the transmission, subtransmission, and distribution line routes would be mitigated through implementation of the SWPPP. Consequently, there would be a less-than-significant impact to existing storm water conveyance systems.

Construction of the Proposed Project could introduce new sources of pollutants that can enter storm water and be transported off site. Potential pollutants would include hazardous materials (e.g., diesel fuel, hydraulic fluid, oils, grease, and concrete), as well as typical construction materials, sediment, and trash. With implementation of the BMPs described in the SWPPP and adherence to the Construction General Permit, impacts associated with the introduction of pollutants to storm water runoff would be less than significant.

Operation

Less-Than-Significant Impact. The proposed Mesa Substation site would be designed so that runoff flows toward the retention basin, which would control the discharge downstream into drainages that flow into the Rio Hondo. As described previously, the retention basin would have sufficient storage capacity to retain or reduce post-construction discharge to a level consistent with pre-construction conditions. Off-site runoff would be directed around the substation wall and continue in a southwesterly direction to the downstream drainages.

As with construction, O&M of the Proposed Project would comply with federal and State regulations. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. If, during the course of O&M activities grading or ground disturbance is necessary, runoff and runoff pollution impacts would be mitigated through implementation of applicable BMPs, and temporary work areas would be restored to pre-disturbance conditions. Therefore, less-than-significant impacts to storm water drainage systems associated with O&M of the Proposed Project are anticipated.

4.9.4.6 Would the project otherwise substantially degrade water quality?

Construction

Less-Than-Significant Impact. Construction of the Proposed Project would entail grading activities and the use of chemicals and materials that have the potential to degrade water quality if discharged to off-site waterways. However, the Proposed Project would incorporate BMPs, including sediment and erosion control and material management measures, which would be implemented through a SWPPP to reduce or prevent construction-related impacts to water quality. As such, construction of the Proposed Project would be expected to result in a less-than-significant impact to water quality.

Operation

Less-Than-Significant Impact. O&M of the Proposed Project would include activities such as equipment and structure maintenance, which would require the use of chemicals or materials that, if accidentally spilled or otherwise transmitted to waterways from the site, could result in impacts to water quality. SCE would incorporate BMPs, implement an updated SPCC Plan, implement an updated Storm Water Management Plan (SWMP), and implement other related measures that would significantly reduce or prevent these O&M-related activities from degrading water quality. As a result, O&M of the Proposed Project is anticipated to result in less-than-significant impacts related to water quality degradation.

4.9.4.7 Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map?

Construction and Operation

No Impact. No housing would be constructed as part of the Proposed Project. Following construction of the Proposed Project, O&M activities associated with the substation and transmission, subtransmission, distribution, and telecommunications lines would continue in essentially the same manner as the existing facilities. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires a minimum of once per year via ground observation, but inspection usually occurs more frequently based on system reliability. Therefore, no impact would occur.

4.9.4.8 Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Construction and Operation

Less-than-Significant Impact. According to the FEMA Flood Hazard Boundary Maps, two proposed 220 kV towers (Tower 2207 along the Redondo-Mesa and Laguna Bell No.1-Mesa transmission lines and Tower 2304 along the Lighthipe-Mesa and Laguna Bell No. 2-Mesa transmission lines) and the associated removal towers (Tower M4-T3 along the Mesa-Redondo and Goodrich-Laguna Bell transmission lines and Tower M4-T3 along the Lighthipe-Mesa and Laguna Bell-Rio Hondo transmission lines), as well as one existing telecommunication pole that may be replaced (Pole 1773781E), would be located within a 100-year flood hazard area. These structures would replace existing structures and would be designed to withstand the impacts due to flooding. Therefore, the Proposed Project would not cause a substantial changes in flood flows. Thus, a less-than-significant impact would occur.

4.9.4.9 Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Construction

Less-Than-Significant Impact. The installation of a temporary structure at Goodrich Substation site in the City of Pasadena and the conversion of the existing street light source line conversion from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens are the only Proposed Project components located within designated dam inundation zones. In the event of a dam failure, construction workers would evacuate the construction area in accordance with the cities' evacuation plans and routes. Therefore, potential impacts to workers during construction would be less than significant.

Operation

Less-Than-Significant Impact. Although the Goodrich Substation site is located within a designated dam inundation zone, the temporary structure would be removed during the construction phase. The underground distribution configuration in the City of Bell Gardens would be designed to withstand the effects of dam failure and the impacts due to flooding as a result of dam failure. Therefore, impacts are anticipated to be less than significant.

4.9.4.10 Would the project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

Construction

Less-than-Significant Impact. The Proposed Project would not be located within a tsunami inundation area and would be too far from the ocean to be subjected to tsunamis. In addition, the Proposed Project would not be located within and would not span any lakes, pools, or other bounded waterbodies. The nearest lake to the Proposed Project is Legg Lake, which is approximately 0.1 mile north of the new telecommunications line from transmission tower M38-T5 to Mesa Substation and approximately 2.5 miles southeast of the Mesa Substation site. Legg Lake may be subject to a seiche during an earthquake event. If a seiche were to occur within a nearby lake, construction workers would evacuate the construction area in accordance with Los Angeles County's evacuation plans and routes. Because the Proposed Project area is generally flat with no high inclinations and the soils are generally well-drained there is a low potential for landslides or mudflows. Therefore, the Proposed Project would not cause or be impacted by inundation due to a tsunami or mudflow, and would result in a less-than-significant impact.

Operation

Less-than-Significant Impact. The Proposed Project structures could be subject to a seiche in the areas previously described, but Proposed Project facilities would be designed to withstand the potential effects. As described previously, the Proposed Project area is not subject to tsunamis or mudflows. Therefore, impacts would be less than significant.

4.9.5 Applicant-Proposed Measures

With implementation of BMPs and adherence to the Construction General Permit and SWPPP, impacts would be less than significant, and no additional measures are proposed.

4.9.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

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4.10 Land Use and Planning

This section describes the land use and planning in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]), as well as potential impacts.

The land use analysis involved a review of various land use plans, policies, and regulations for the County of Los Angeles and the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, including general plans and municipal codes. The land use analysis also involved a study of Google Earth Pro aerial imagery of the Proposed Project area.

4.10.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would result not result in changes to land use and planning in the area. As a result, these components are not discussed further in this section.

[1] The term "Proposed Project" is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

4.10.1.1 Existing Land Uses

The Proposed Project is located in Los Angeles County and involves the expansion of an existing substation and associated transmission, subtransmission, distribution, and telecommunications work within the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, and Bell Gardens, and installation of a temporary 220 kV line loop-in at an existing substation located in the City of Pasadena. This area of Los Angeles County is highly developed with a mix of dense residential communities, commercial development, institutional development, and some open space. Mesa Substation is an existing substation that has been in operation since 1950. Figure 4.10-1: Existing Land Uses in the Mesa Substation Study Area depicts existing land uses within the vicinity of Mesa Substation.[2] The following subsections provide greater detail regarding existing land uses within the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena.

Los Angeles County

The unincorporated area of Los Angeles County in the vicinity of the Proposed Project is bordered by the City of Monterey Park to the west and south, the unincorporated area of South San Gabriel to the north, the City of Montebello to the southeast, and the City of Rosemead to the east. An approximately 0.9 mile portion of the telecommunications line would be located within the Whittier Narrows Natural Area and along Potrero Grande Drive and Hill Drive within the unincorporated community of South San Gabriel. Whittier Narrows Natural Area is located on property owned by the United States (U.S.) Army Corps of Engineers (USACE) and managed by Los Angeles County Parks. Existing land uses in the vicinity include a mix of commercial and residential uses. An additional approximately 1.9 miles of telecommunications line would be located along San Gabriel Boulevard and Durfee Avenue in unincorporated Los Angeles County. Existing land uses in the vicinity include Whittier Narrows Recreation Area, Whittier Narrows Water Reclamation Plant, the USACE Los Angeles District offices, commercial and residential uses, and a trucking storage yard.

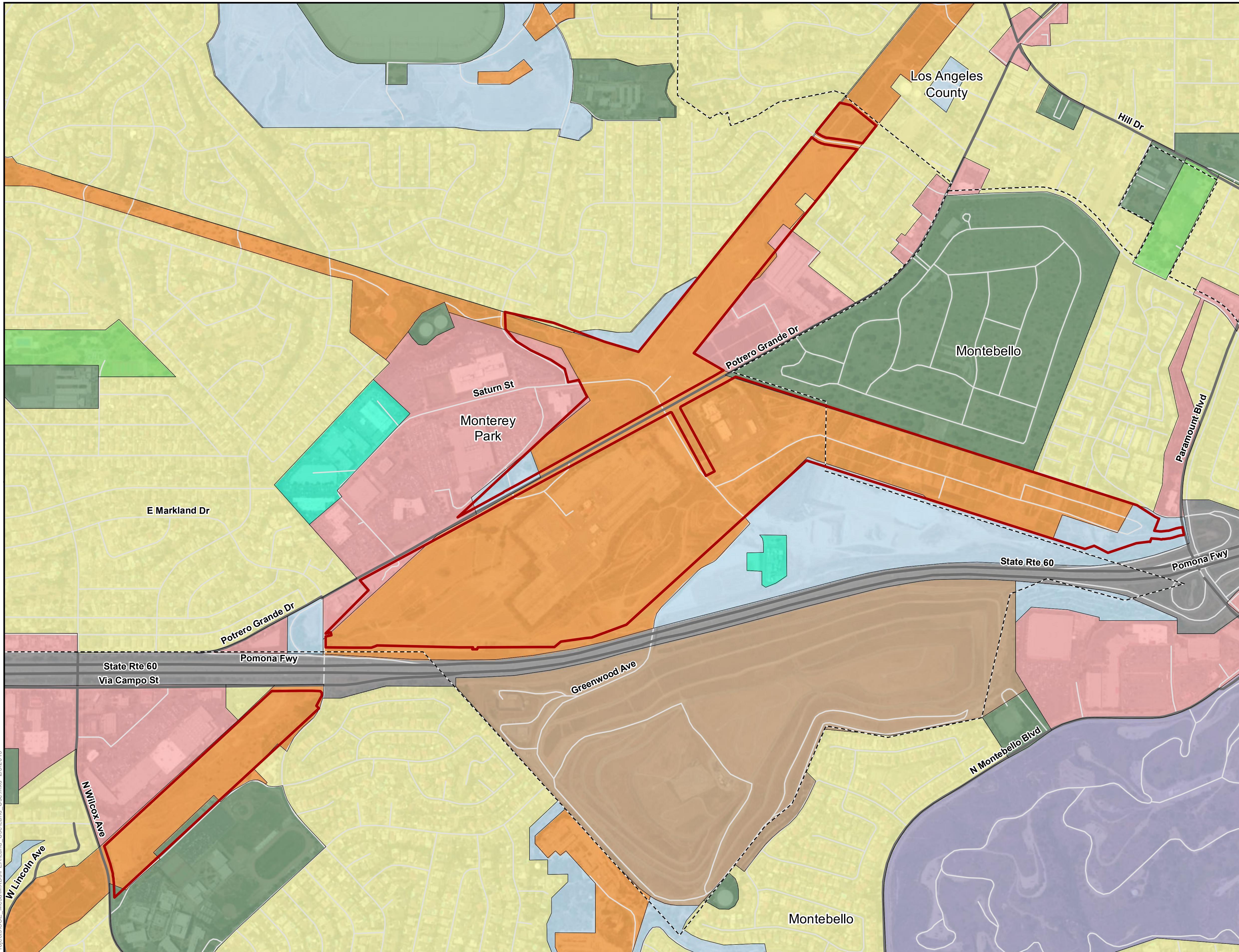
City of Monterey Park

The majority of Proposed Project activities, including the expansion of Mesa Substation, would be constructed in the City of Monterey Park. The City of Monterey Park is bordered to the west by the City of East Los Angeles, to the north by the cities of Los Angeles and Alhambra, to the east by the City of Rosemead, and to the east and south by the City of Montebello. The San Gabriel Mountains are located approximately 8 miles to the north of the City of Monterey Park and form the northern boundary of the San Gabriel Valley, in which the City of Monterey Park is located.

[2] The "Mesa Substation Study Area" shown on Figure 4.10-1: Existing Land Uses in the Mesa Substation Study Area represents the potential disturbance area associated with work at Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines in adjacent ROWs.

Figure 4.10-1: Existing Land Uses in the Mesa Substation Study Area

Mesa 500 kV Substation Project

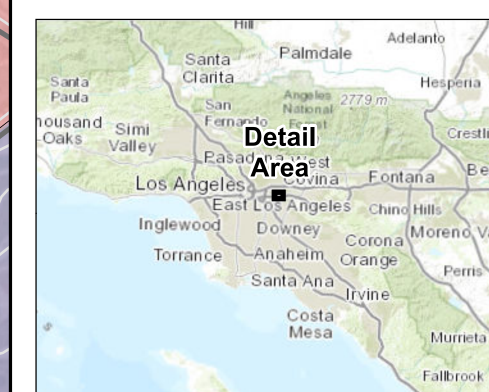


- Mesa Substation Study Area
- City Boundary

Land Use Types

- Brownfield
- Commercial
- Industrial
- Mineral Extraction
- Parks and Open Space
- Public/Quasi-Public/Institutional
- Residential
- Transportation Facilities
- Utilities
- Vacant

Sources: Southern California Association of Governments (SCAG), 2005; Insignia, 2014



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The City of Monterey Park is generally urban and developed with a few areas of open space or parkland. The Mesa Substation site is surrounded by industrial and office land uses to the north, State Route (SR-) 60 to the south, a cemetery to the northeast, and commercial and low-density residential land uses to the northwest. A large retail shopping center development—the Monterey Park Market Place—is currently in the entitlement phase and is proposed to be located directly southeast of the Mesa Substation site.

City of Montebello

Portions of the transmission, subtransmission, distribution, and telecommunications work would occur within the City of Montebello. The City of Montebello is bordered to the north by the cities of Monterey Park and Rosemead, to the southwest by the City of Commerce, to the southeast by the City of Pico Rivera, to the east by Whittier Narrows Recreation Area, and to the west by the City of Commerce and unincorporated portions of Los Angeles County. The City of Montebello is composed predominately of industrial, commercial, and residential uses. The transmission, subtransmission, distribution, and telecommunications work within the City of Montebello would occur within existing SCE rights-of-way (ROWs) and franchise locations along public roads.

Telecommunications lines would be installed on existing overhead poles and predominately within existing conduits along Potrero Grande, San Gabriel Boulevard, Lincoln Avenue, Avenida De La Merced, Wilcox Avenue, and Markland Drive. Existing land uses in these areas are predominately residential. A staging area would be located within an existing ROW east of Mesa Substation, and would be bordered by a third-party landscape nursery, cemetery, and residential uses to the northeast, and by a vacant former landfill and SR-60 to the south. To the south of Mesa Substation, a staging area would be located within an existing ROW, bordered by SR-60 to the north, Schurr High School to the south and east, another third-party landscape nursery to the southwest, and a shopping center to the west.

City of Rosemead

An approximately 0.9-mile portion of the telecommunications line would be located along San Gabriel Boulevard within the City of Rosemead. The proposed telecommunications line would be installed on existing overhead poles. Uses along this portion of the telecommunications route include a mix of commercial and residential uses, a church, and Don Bosco Technical Institute.

City of South El Monte

Within the City of South El Monte, an approximately 0.8-mile segment of the telecommunications line would be located south of Durfee Avenue. Existing land uses include commercial and residential uses and Whittier Narrows Recreation Area.

City of Commerce

Within the City of Commerce, and approximately 2.4 miles southwest of Mesa Substation, an existing lattice steel tower would be replaced within an SCE fee-owned ROW, approximately 2.1 miles north of Laguna Bell Substation. The City of Commerce is bordered by the unincorporated community of East Los Angeles to the north, the City of Bell Gardens to the south, the cities of

Montebello and Pico Rivera to the east, and the cities of Vernon and Maywood to the west. Land uses surrounding the proposed replacement of an existing lattice steel tower (LST) on the Goodrich-Laguna Bell 220 kV Transmission Line include a Union Pacific rail line to the north, SCE ROW to the south, and industrial uses to the east and west.

City of Bell Gardens

Within the City of Bell Gardens, a street light source line connecting three existing street lights would be converted from an overhead to underground configuration within Loveland Street, between Darwell Avenue and Toler Avenue, and approximately 0.2 mile south of Laguna Bell Substation. The City of Bell Gardens is bordered by the City of Commerce to the north, the City of Southgate to the south, the City of Downey to the east, and the cities of Bell and Cudahy to the west. Land uses surrounding the proposed underground conversion include an SCE ROW to the north and south, and residential uses to the east and west.

City of Pasadena

The Proposed Project also includes installation of a temporary 220 kV line loop-in at the existing Goodrich Substation (owned by the City of Pasadena). Goodrich Substation is located in the City of Pasadena, which is located approximately 10 miles northeast of downtown Los Angeles and is bordered by the San Gabriel Mountains to the north. The city is the largest in the San Gabriel Valley and is bordered by the cities of La Cañada-Flintridge and Glendale to the northwest; the cities South Pasadena and San Marino to the south; the cities of Arcadia and Sierra Madre and the unincorporated community of East Pasadena to the east; the unincorporated community of Kinneloa Mesa to the northeast; and the unincorporated community of Altadena. Land uses surrounding Goodrich Substation include vacant/undeveloped land, an SCE ROW (which includes a parking lot to the north), Interstate 210 (i.e., Foothill Freeway) and East Foothill Boulevard to the south, Pasadena City College Community Education Center to the east, and residential uses to the west.

4.10.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.10.2.1 Federal

Rivers and Harbors Appropriation Act of 1899

Section 14 of the Rivers and Harbors Appropriation Act of 1899 contains the authority to grant permission for temporary or permanent alterations to existing USACE federally authorized projects. This section is codified in Title 33, Section 408 of the U.S. Code (U.S.C.). Under Section 408, the Secretary of the Army may grant permission for the alteration, occupation, or use of a USACE project if the Secretary determines that the activity will not be injurious to the public interest and will not impair the usefulness of the project. When a project is anticipated to encroach upon or otherwise alter an existing USACE project, review and approval of such encroachment or alteration is required from the USACE.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) was enacted in 1969 to establish a national policy for the environment. Codified under 42 U.S.C. 4321-4347, federal agencies are required to consider the environmental impact of their decisions, including the issuance of permits, such as the Section 408 permit that would be required for work within the Whittier Narrows Natural Area, a USACE flood control project, or other approvals. Federal agencies establish regulations for compliance with NEPA, including categorical exclusions. The USACE has established categorical exclusions for minor utility projects under Title 33 of the Code of Federal Regulations, Section 230.9, which provides an exclusion for minor utility distribution and collection lines.

4.10.2.2 State

Regarding land use compatibility, Section 51238 of the California Government Code indicates that electrical facilities are compatible with the Williamson Act and other agricultural uses; Section 4.2, Agriculture and Forestry Resources provides further discussion regarding agricultural uses. There are no State regulations related to land use and planning that would apply to the Proposed Project.

4.10.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities’ regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

County of Los Angeles

County of Los Angeles General Plan

The Land Use Element of the County of Los Angeles General Plan sets forth policies for the general location and intensity of land uses within unincorporated Los Angeles County. Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis summarizes the Proposed Project’s consistency with relevant goals and policies. The General Plan designation along the approximately 0.97-mile portion of telecommunications line—located along Potrero Grande Drive and Hill Drive, within the unincorporated community of South San Gabriel—is Low Density Residential. The General Plan designation is Open Space in the vicinity of the approximately 1.96 miles of telecommunications line along San Gabriel Boulevard and Durfee Avenue.

County of Los Angeles Municipal Code

The County of Los Angeles' Zoning Ordinance implements the county's General Plan. Zoning designations along the telecommunications route include the following:

- Single Family Residence (R-1)
- Two Family Residence (R-2)
- Limited Multiple Residence (R-3)
- Residential Agriculture (R-A)
- Light Agriculture (A-1)
- Restricted Business (C-1)
- Neighborhood Business (C-2)
- Open Space (O-S)

These zoning designations provide for single-family and multi-family residences, and neighborhood commercial and retail uses. The A-1 zone provides for single-family residences situated on 1- to 5-acre properties on which crops are grown, greenhouses are maintained, or typical farm animals are raised.

City of Monterey Park

City of Monterey Park General Plan

The City of Monterey Park's General Plan provides a framework for land use planning in the city. The Land Use Element of the General Plan designates land uses and contains policies relevant to the Proposed Project. Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis summarizes the Proposed Project's consistency with relevant goals and policies. The intent of the Land Use Element is to provide a framework to guide the location, character, and intensity of land uses in the city. As shown in Figure 4.10-2: General Plan Designations in the Mesa Substation Study Area, Mesa Substation is located on a site that is designated for commercial land uses in the City of Monterey Park General Plan. Public utility substations are an allowed use within the Commercial designation. In addition, the CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. The telecommunications line reroute between Mesa and Harding Substations is located within land designated for Low Density Residential, Commercial, and Open Space uses. The telecommunications line from transmission tower M40-T3 to Mesa Substation is located on or in the vicinity of land designated for Commercial and Low-, Medium-, and High-Density Residential uses. As shown in Figure 4.10-2: General Plan Designations in the Mesa Substation Study Area, the associated transmission, subtransmission, distribution, and telecommunications work is located on or in the vicinity of land designated for commercial, open space, and public facilities.

Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis

Plan or Policy	Consistent (Yes/No)	Explanation
County of Los Angeles General Plan		
Land Use Policy 14: Establish and implement regulatory controls that ensure computability of development adjacent to or within major public open space and recreation areas including National Forests, the National Recreation Area, and State and regional parks.	Yes	A portion of the proposed telecommunications route would be located adjacent to Whittier Narrows Recreation Area and within Whittier Narrows Recreation Area. The proposed telecommunications facilities would be located within an existing franchise areas or within SCE ROWs; therefore, the Proposed Project is consistent with this policy.
City of Monterey Park General Plan		
Land Use Policy 8.1: Work with the City of Montebello to ensure good access to the Operating Industries, Inc. and SCE area via Paramount Boulevard.	Yes	The Proposed Project involves expansion of an existing electric substation and related infrastructure facilities on existing SCE fee-owned properties and/or properties to be acquired. Pursuant to the City of Monterey Park General Plan, public utility substations are an allowed use within the Commercial designation. The Mesa Substation site would not be publicly accessible nor would it impede access to the area via Paramount Boulevard. The Proposed Project activities conducted within the City of Monterey Park would not impact access to Paramount Boulevard.

Plan or Policy	Consistent (Yes/No)	Explanation
Land Use Policy 8.3: Work closely with SCE to create a reuse plan for SCE properties that optimizes potential for retail commercial and complementary development.	Yes	The Proposed Project involves expansion of an existing electric substation and related infrastructure facilities on existing SCE fee-owned properties and/or properties to be acquired. As previously stated, public utility substations are an allowed use, and Mesa Substation has been in continuous operation at the site since 1950. Further, the Proposed Project would improve system reliability and safety and would not affect future retail and commercial development in the area. SCE has coordinated with the City of Monterey Park on improvements to the substation and access to the adjacent proposed Monterey Park Market Place development, southeast of Mesa Substation. The Proposed Project is consistent with this policy.
City of Montebello General Plan		
Land Use Element – Industrial Policy 2: Adequate community infrastructure, including streets and utilities, should be developed to support and service the City's industrial development.	Yes	The Proposed Project is intended to provide safe and reliable electrical service and improve system reliability and flexibility. These improvements would support the Western Los Angeles Basin area's ability to meet infrastructure needs. The Proposed Project is consistent with this policy.
City of Commerce General Plan		
Community Development Policy 7.1: The City of Commerce will ensure that all future public facilities and improvements do not have a significant adverse impact on the community and that any such impacts must be mitigated to the fullest extent possible.	Yes	The Proposed Project is intended to provide safe and reliable electrical service and improve system reliability and flexibility. In addition, the Proposed Project has been designed to avoid impacts to sensitive resources and/or reduce potential environmental impacts to a less-than-significant level to the extent feasible. As a result, the Proposed Project would be consistent with this goal.

Plan or Policy	Consistent (Yes/No)	Explanation
Community Development Policy 7.2: The City of Commerce will oppose the over-concentration of public facilities and improvements that provide benefits to the region at large while adversely impacting the local community. The region at large must share both the benefits and the disadvantages of such uses and facilities	Yes	The Proposed Project is intended to provide safe and reliable electrical service and improve system reliability and flexibility. These improvements would support the Western Los Angeles Basin area’s ability to meet infrastructure needs. Thus, the Proposed Project is consistent with this policy.
City of Pasadena General Plan		
Land Use Policy 1.2 – Specific Plans: For identified targeted development areas, as a principal implementation tool, utilize Specific Plans containing development standards, distribution of land uses, infrastructure requirements, and implementation measures.	Yes	Goodrich Substation is located within the East Pasadena Specific Plan (EPSP) area. The Proposed Project site is located within the Foothill, Rosemead – Sierra Madre Villa area of the EPSP. In this area, the EPSP encourages additional industrial and office development with a limited amount of supporting retail/commercial development. Minor utility uses are permitted and major utilities are conditionally permitted in the area of the Proposed Project. The Proposed Project is consistent with this policy.

Plan or Policy	Consistent (Yes/No)	Explanation
Land Use Policy 19.2 – Wetlands and Riparian Habitat Surveys: All project proponents proposing to develop within areas containing wetlands, riparian habitat, and/or jurisdictional waters of the U.S. or the State of California shall conduct surveys in consultation with appropriate trustee agencies (including, but not limited to, the USACE, the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and/or the Los Angeles Regional Water Quality Board). If the surveys and/or consultation indicate that wetlands, riparian habitat, and/or jurisdictional waters are present or potentially present, appropriate measures shall be required as conditions of project approval to minimize and/or offset the project's potential effects on those resources.	Yes	Work on the Proposed Project at Goodrich Substation would not result in temporary or permanent impacts to waters of the U.S. The Proposed Project is consistent with this policy.

Plan or Policy	Consistent (Yes/No)	Explanation
Land Use Policy 19.3 – Paleontological/Archaeological Resources Survey: Project proponents proposing substantial grading or earth-moving in areas that might contain important paleontological and/or archaeological resources shall conduct a pre-excavation field assessment and literature search to determine the potential for disturbance of paleontological and/or archaeological resources. If warranted, grading and other earth-moving activities shall be monitored by a qualified professional who, if necessary, shall undertake salvage and curation. Any paleontological or archaeological resources recovered shall be documented and archived appropriately. Any human remains recovered shall be treated according to applicable state and federal regulations.	Yes	Field surveys for both archaeological resources and paleontological resources have been performed for the Proposed Project. Goodrich Substation is characterized by moderate and low sensitivity. No archaeological or historical resources are located on the site. Cultural resources are discussed in greater detail in Section 4.5, Cultural Resources. The Proposed Project is consistent with this policy.

Sources: City of Monterey Park (2001a), City of Montebello (1973), City of Rosemead (2010a), City of South El Monte (2000), City of Commerce (2008), City of Bell Gardens (1995), and City of Pasadena (2004).

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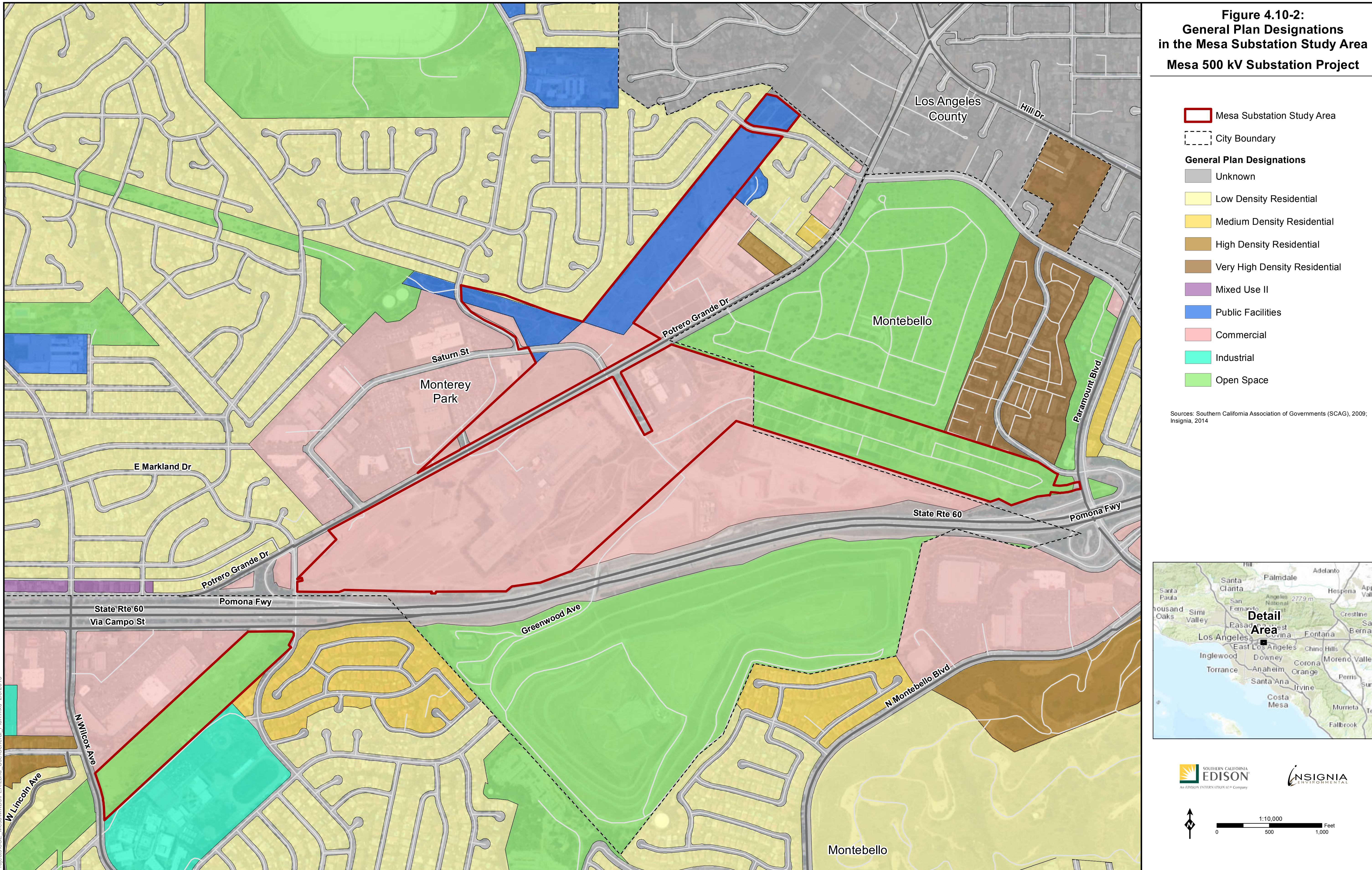
Figure 4.10-2: General Plan Designations in the Mesa Substation Study Area

Mesa 500 kV Substation Project



Sources: Southern California Association of Governments (SCAG), 2009; Insignia, 2014

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City of Monterey Park Municipal Code

The City of Monterey Park's Zoning Ordinance implements the city's General Plan. The Mesa Substation site is zoned Regional-Specialty Center Planned Development Overlay Zone (R-S zone). The R-S zone is generally characterized by wide, deep lots with large-scale development. This zone provides for the development of commercial areas that serve a regional need and promote the development of regional centers with diverse retail and entertainment uses. Public utility substations are an allowed use within this zone. In addition, the CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. The discussion of local land use regulations is provided for informational purposes only. Zoning designations for the associated transmission, subtransmission, distribution, and telecommunications work include R-S zone, Open Space (O-S), Office Professional (O-P), Single-Family Residential (R-1), Medium-Multiple Residential (R-2), and High-Density Residential (R-3). Figure 4.10-3: Zoning Designations in the Mesa Substation Study Area depicts zoning designations within the vicinity of Mesa Substation.

City of Montebello

City of Montebello General Plan

The City of Montebello General Plan provides the foundation for growth and development within the city. The Land Use Element recommends locations and the extent of the various uses to be allowed in the city. Portions of the transmission, subtransmission, distribution, and telecommunications work would occur within the City of Montebello. General Plan designations in these areas include institutional and residential uses. In addition, the two proposed work areas adjacent to Mesa Substation within the City of Montebello are designated as open space by the city's General Plan. The telecommunications reroute between Mesa and Harding Substations is located within land designated for commercial, industrial, and low-, medium-, and high-density residential uses. Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis provides a summary of the Proposed Project's consistency with relevant goals and policies. Figure 4.10-2: General Plan Designations depicts the city's General Plan designations within the vicinity of the Mesa Substation.

City of Montebello Municipal Code

The City of Montebello's Zoning Ordinance implements the city's General Plan. Land along the proposed transmission, subtransmission, distribution, and telecommunications lines is designated as Residential Agricultural (R-A), Single-Family Residential (R-1), High-Density Residential (R-4), and General Commercial (C-2). The purpose of the R-A zone is to provide for single-family residential development. The R-A zone also allows accessory uses (e.g., non-commercial horticulture and agriculture crops) on the same lot as residential development. In addition, the R-A zone may be used as a transitional classification for open or agricultural land pending classification for a more permanent use (refer to Section 4.2, Agriculture and Forestry Resources). The purpose of the R-1 zone is to encourage and promote a suitable living environment by providing for the development of adequate homes, yards, and other residential facilities and to protect and stabilize desirable characteristics of residential neighborhoods. The R-4 zone provides for multiple dwelling units, particularly high-density structures. The C-2 zone allows for business centers in areas where a wide range of retail sales and service establishments are needed to accommodate the surrounding community. Figure 4.10-3: Zoning Designations in the Mesa Substation Study Area depicts zoning designations within the vicinity of Mesa Substation.

City of Rosemead

City of Rosemead General Plan

The Land Use Element of the City of Rosemead General Plan establishes policies for land uses throughout the city. The General Plan designations along the approximately 0.9-mile portion of the telecommunications line that would be constructed along San Gabriel Boulevard include Commercial, Public Facilities, and Low Density Residential.

City of Rosemead Municipal Code

The City of Rosemead's Zoning Ordinance implements the city's General Plan. Zoning designations along the telecommunications line in the City of Rosemead include Medium Commercial (C-3), Planned Development (P-D), and Single Family Residential (R-1). The C-3 zoning district is intended to provide for small- to medium-scale commercial uses—emphasizing community-serving retail, office, and service uses—as is consistent with the General Plan Commercial land use designation. The P-D district is intended to provide for residential, commercial, industrial, or institutional developments that are characterized by innovative use and design concepts. The R-1 zoning district is intended to protect the existing density and maintain the character of the city's single-family residential neighborhoods, consistent with the General Plan Low Density Residential land use designation.

City of South El Monte

City of South El Monte General Plan

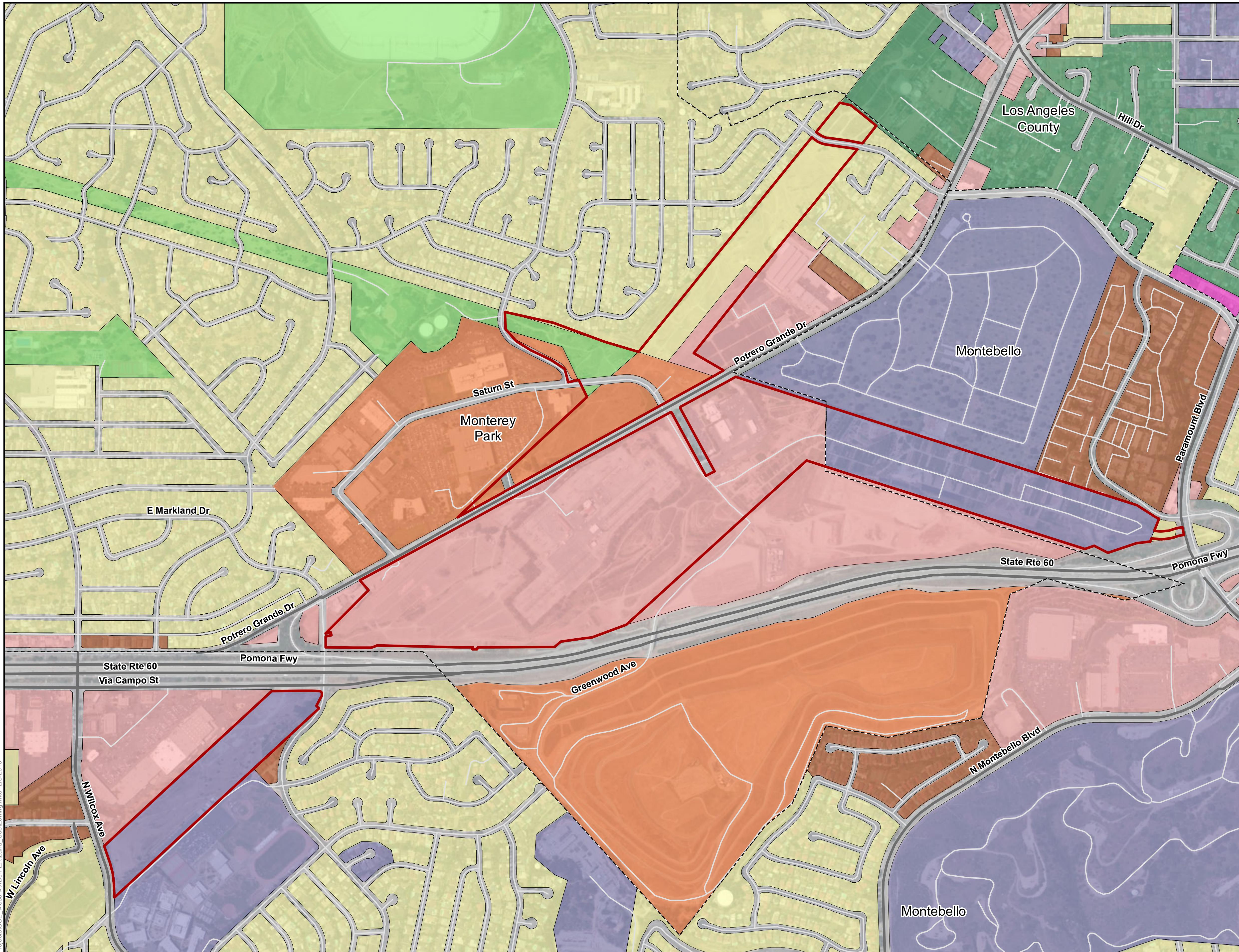
The City of South El Monte General Plan is the master plan for future growth and development within the city. The Land Use Element designates the general distribution, location, and extent of land throughout the city. The approximately 0.8-mile segment of the telecommunications line located south of Durfee Avenue is designated for Commercial Manufacturing in the City of South El Monte General Plan.

City of South El Monte Municipal Code

The City of South El Monte's Zoning Ordinance implements the city's General Plan. The portion of telecommunications line located in South El Monte is zoned Commercial Manufacturing (C-M). The C-M zone provides for general commercial and limited manufacturing uses.

Figure 4.10-3: Zoning Designations in the Mesa Substation Study Area

Mesa 500 kV Substation Project



Mesa Substation Study Area

City Boundary

Zoning Designations

- Unknown
- Agriculture
- Commercial
- Commercial Planned Development
- Single Family Residential
- Multiple Family Residential
- Residential Agricultural
- Office Professional
- Open Space

Sources: Southern California Association of Governments (SCAG), 2005; Insignia, 2014

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City of Commerce

City of Commerce General Plan

The City of Commerce General Plan serves as the framework for future planning and development in the city. The Land Use Element identifies the location and extent of development permitted throughout the city. The proposed replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line is located on Public Facility designated land. Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis provides a summary of the Proposed Project's consistency with relevant goals and policies.

City of Commerce Municipal Code

The City of Commerce's Zoning Ordinance implements the city's General Plan. The area where the proposed replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line is located is zoned Public Facility (PF). The PF zone is intended to accommodate schools, government offices, utility and transportation easements, and libraries.

City of Bell Gardens

City of Bell Gardens General Plan

The City of Bell Gardens General Plan contains goals and policies for future development within the city. The Land Use Element is a long-range guide for planning and development in the city. General Plan designations include Open Space/Parks and High Density Residential in the vicinity of the proposed conversion of an existing street light source line connecting three existing street lights from an overhead to underground configuration within Loveland Street.

City of Bell Gardens Municipal Code

The proposed conversion of an existing street light source line connecting three existing street lights from an overhead to underground configuration would occur within a public street. Zoning designations in the vicinity of the proposed project component include Light Agricultural and Medium Density Residential.

City of Pasadena

City of Pasadena General Plan

The City of Pasadena General Plan is a blueprint to guide future development within the city. Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis summarizes the Proposed Project's consistency with relevant goals and policies. The Land Use Element specifies how much and where various types of development are allowed. Goodrich Substation is located within the EPSP area. The EPSP focuses on providing additional employment opportunities for the city by facilitating the expansion of existing businesses and development of new businesses, and lands covered under this plan consist of industrial and retail areas. The temporary 220 kV line loop-in is located specifically within the Foothill, Rosemead – Sierra Madre Villa area of the

EPSP. In this area, the EPSP encourages additional industrial and office development with a limited amount of supporting retail/commercial development.

City of Pasadena Municipal Code

The City of Pasadena Zoning Ordinance implements the city's General Plan. The proposed 220 kV line loop-in is located in an area zoned Public, Semi-Public (EPSP-d2-PS). Minor utility uses are permitted within the EPSP-d2-PS zone, and major utilities are conditionally permitted with approval of a Conditional Use Permit. However, as previously stated, the CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project.

4.10.3 Significance Criteria

The significance criteria for assessing the impacts to land use and planning are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community conservation plan

4.10.4 Impact Analysis

4.10.4.1 Would the project physically divide an established community?

Construction

No Impact. The Proposed Project is located in a highly urbanized and developed area of Los Angeles County. The Proposed Project consists of the reconstruction and expansion of the existing Mesa Substation; associated transmission, subtransmission, distribution, and telecommunications line work; and other work required to accommodate the reconfiguration of the substation, including installation of temporary laydown yards. Mesa Substation is bordered by public streets, a highway, and commercial and industrial uses. Three residential neighborhoods are located to the north, south, and west of Mesa Substation (along Potrero Grande, south of SR-60, and along South Orange Avenue); however, they would not be physically divided as a result of the Proposed Project because none of the residential neighborhoods would be crossed by the Proposed Project and the reconstruction and expansion of Mesa Substation would take place on lands already owned and/or to be acquired by SCE. The associated transmission, subtransmission, distribution, and telecommunications line work would occur within existing SCE ROWs. These components would not physically divide residential neighborhoods and, as a result, there would be no impact.

The installation of a temporary 220 kV line loop-in at Goodrich Substation would occur in a predominately urbanized and developed area. Two residential neighborhoods are located to the east and west of Goodrich Substation; however, they would not be physically divided as a result of the Proposed Project because the work is temporary and would be limited to the existing substation site and the transmission ROW, and because the substation would not be expanded.

Because of the developed, infrastructure-heavy, mixed commercial-industrial nature of the Proposed Project area—and because there are numerous major roadways in the vicinity—there are no existing established communities that would be physically divided as a result of the Proposed Project. In addition, the Proposed Project would be constructed in locations where existing substation, transmission, subtransmission, distribution, and telecommunications facilities exist and, as a result, no changes to existing land uses would occur. Thus, no impact would occur.

Operation

No Impact. O&M activities resulting from the Proposed Project would be similar to those currently performed by SCE. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. O&M would occur on land owned by SCE or within franchise areas or SCE ROWs. Such activities do not currently divide an established community, nor would they be anticipated to do so as a result of the Proposed Project; therefore, there would be no impact.

4.10.4.2 Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Construction

No Impact. The CPUC’s jurisdictions over electric power line projects and substations preempts local land use regulations under G.O. 131-D. Construction of the Proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project.

A summary of the Proposed Project’s consistency with relevant goals and policies is provided in Table 4.10-1: Relevant Land Use Plans and Policies Consistency Analysis. Consistency with the general plans for the County of Los Angeles and the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena are specifically discussed. The Proposed Project does not conflict with these plans and their respective policies. In addition, construction of the Proposed Project utilizes existing access roads (on average approximately

18 feet wide) where dedicated public streets are not available. Use of the access roads would not create substantial land use impacts or conflict with existing and proposed land uses. Therefore, no impact would occur.

County of Los Angeles

A portion of the approximately 1.9 miles of new telecommunications line would be located in the Whittier Narrows Natural Area and along San Gabriel Boulevard and Durfee Avenue in unincorporated Los Angeles County. The telecommunications line would be located in areas where there is existing ROW and within existing franchise areas, and the new lines would be consistent with the existing land uses in the area and with existing plans for the area. Whittier Narrows Natural Area is owned by the USACE, and when a project is anticipated to encroach upon or otherwise alter an existing USACE project, a Section 408 permit would be required for approval of such encroachment or alteration. SCE would obtain approval for a telecommunications ROW and a permit to construct in this area. Therefore, there would be no impact associated with this Proposed Project component.

City of Monterey Park

The Mesa Substation site is located within an area of Monterey Park designated as an R-S zone. As previously described, the R-S zone is generally characterized by wide, deep lots with large-scale development. A variety of land use types are allowed within this designation, including public utility substations. Therefore, the Proposed Project would not conflict with relevant City of Monterey Park land use plans and goals, and there would be no impact.

City of Montebello

Land along the proposed transmission, subtransmission, distribution, and telecommunications lines within the City of Montebello would be designated as R-A, R-1, R-4, and C-2. As previously discussed, the R-A zone allows for single-family residential and compatible non-commercial agricultural uses. In addition, the R-A zone may also be used as a transitional classification for open or agricultural land pending classification to a more permanent use. The purpose of the R-1 zone is to encourage and promote a suitable living environment by providing for the development of adequate homes, yards, and other residential facilities and to protect and stabilize desirable characteristics of residential neighborhoods. The R-4 zone provides for multiple dwelling units, particularly high-density structures. The C-2 zone allows for business centers in areas where a wide range of retail sales and service establishments are needed to accommodate the surrounding community. The associated transmission, subtransmission, distribution, and telecommunications work would occur within existing SCE ROWs or in existing franchise areas. Following construction, SCE would clean up all areas temporarily disturbed by construction of the Proposed Project and restore them to near pre-construction conditions. Therefore, the Proposed Project would not conflict with relevant City of Montebello land use plans, and there would be no impact.

City of Rosemead

Zoning designations along the telecommunications line located in the City of Rosemead include C-3, P-D, and R-1. As previously discussed, the intent of the C-3 zone is provide for small- to medium-scale community-serving commercial uses. The P-D zone is intended to provide for innovative use and design concepts in the development of residential, commercial, industrial, or institutional uses. The R-Z zone provides for the preservation of single-family neighborhoods. The approximately 0.9-mile portion of the proposed telecommunications line that would be constructed within the City of Rosemead would occur within existing SCE ROWs. Following construction, SCE would clean up all areas temporarily disturbed by construction of the Proposed Project and restore them to near pre-construction conditions. Therefore, the Proposed Project would not conflict with relevant City of Rosemead land use plans, and there would be no impact.

City of South El Monte

The approximately 0.8-mile segment of the telecommunications line located in South El Monte is zoned C-M. As previously discussed, the C-M zone provides for general commercial and limited manufacturing uses. The proposed telecommunications line would be constructed within existing SCE ROWs. Following construction, SCE would clean up all areas temporarily disturbed by construction and restore them to near pre-construction conditions. Therefore, the Proposed Project would not conflict with relevant City of South El Monte land use plans, and there would be no impact.

City of Commerce

The proposed replacement of an existing LST on the Goodrich-Laguna Bell 220 kV Transmission Line would occur within an existing SCE ROW, on a site zoned PF. As previously discussed, the PF zone is intended to accommodate schools, government offices, utility and transportation easements, and libraries. Following the completion of construction, SCE would restore the site to pre-construction conditions. Therefore, the Proposed Project would not conflict with relevant City of Commerce land use plans, and there would be no impact.

City of Bell Gardens

The proposed conversion of an existing street light source line connecting three existing street lights from an overhead to underground configuration within Loveland Street, which is a public road. Following the completion of construction, SCE would restore the road to pre-construction conditions. Therefore, the Proposed Project would not conflict with relevant City of Bell Gardens land use plans, and there would be no impact.

City of Pasadena

The Proposed Project includes installation of a temporary 220 kV line loop-in at Goodrich Substation, located in the City of Pasadena. The Goodrich Substation site is located within the Foothill, Rosemead – Sierra Madre Villa area of the EPSP. In this area, the EPSP encourages additional industrial and office development with a limited amount of supporting retail/commercial development. As previously discussed, minor utility uses are permitted and major utilities are conditionally permitted on the Proposed Project site. However, the CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Therefore, the Proposed Project would not conflict with relevant City of Pasadena land use plans, and there would be no impact.

Operation

No Impact. As previously discussed, O&M activities resulting from the Proposed Project would be similar to those currently performed by SCE and would occur on land owned by SCE or within franchise areas. In addition, the CPUC's jurisdictions over electric power line projects and substations preempts local regulation of the Proposed Project under G.O. 131-D. O&M of the Proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project. O&M of the Proposed Project would not conflict with existing and proposed nearby residential, open space, recreation, public institutional schools, religious facilities, commercial, retail, and industrial uses because O&M of the Proposed Project would not facilitate any changes or modifications to the existing land uses. Therefore, no impacts would result from the Proposed Project.

4.10.4.3 Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Construction and Operation

No Impact. The Proposed Project would not be located within any areas subject to a habitat conservation plan or natural community conservation plan. Therefore, construction and operation of the Proposed Project would not conflict with a habitat conservation plan or natural community conservation plan, and no impact would occur.

4.10.5 Applicant-Proposed Measures

Because no impacts to land use or planning would occur as a result of the Proposed Project, no avoidance and minimization measures are proposed.

4.10.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

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4.11 Mineral Resources

This section describes the mineral resources in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]), as well as potential impacts.

According to the United States (U.S.) Geological Survey (USGS), a mineral resource is defined as a concentration of naturally occurring solid, liquid, or gaseous materials in or on the earth's crust in such a form and quantity, and of such a grade or quality, that it has reasonable prospects for economic extraction, either currently or in the future. Mineral resources include oil, natural gas, and metallic and non-metallic deposits. Mineral resources data were obtained from the following resources:

- County of Los Angeles General Plan
- Environmental Impact Report for the City of Monterey Park General Plan
- City of Montebello General Plan
- City of Rosemead General Plan
- City of South El Monte General Plan
- City of Commerce General Plan
- City of Bell Gardens General Plan
- City of Pasadena General Plan
- California Department of Conservation (DOC)
- USGS
- California Geological Survey (CGS)

4.11.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in portions of unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following main components:

- Construction of a new Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park

- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and portions of unincorporated Los Angeles County

- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens

[1] The term "Proposed Project" is inclusive of all components of the Mesa 500 kV Substation Project. Where the discussion in this section focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substations").

- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several existing substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would not result in changes to mineral resources in the area. As a result, these components are not discussed further in this section.

4.11.1.1 Mineral Resources in the Proposed Project Area

Based on a review of published sources and data from the USGS Mineral Resources Data System, two active mines and/or mineral plants and 24 sites with either producers,[2, 3] past producers, or mineral prospects are located within 5 miles of the Proposed Project, as detailed in Figure 4.11-1: Mineral Resources, Active Mines, and Mineral Plants Within 5 Miles of the Mesa Substation Study Area and Table 4.11-1: Mineral Resources Producers, Past Producers, and Prospects Within 5 Miles of the Proposed Project.[4]

Portions of the Proposed Project near Mesa Substation are located within the Montebello Oil Field, and there are two plugged oil wells and one abandoned oil well within the Mesa Substation site. Two plugged oil wells are located within the adjacent right-of-way (ROW) for the transmission and subtransmission lines. The Montebello Oil Field encompasses approximately 488 acres and is located southeast of Mesa Substation on the south side of Montebello Boulevard. Multiple Conditional Use Permit applications were approved in the 1950s, which authorized the continued use of the property for oil and gas recovery uses. Current field activities associated with the Montebello Oil Field include drilling operations for new wells, well maintenance and abandonment, and general facility operations.

Four plugged oil wells and one idle oil well are located within and adjacent to roads along which telecommunications lines are proposed to be installed.

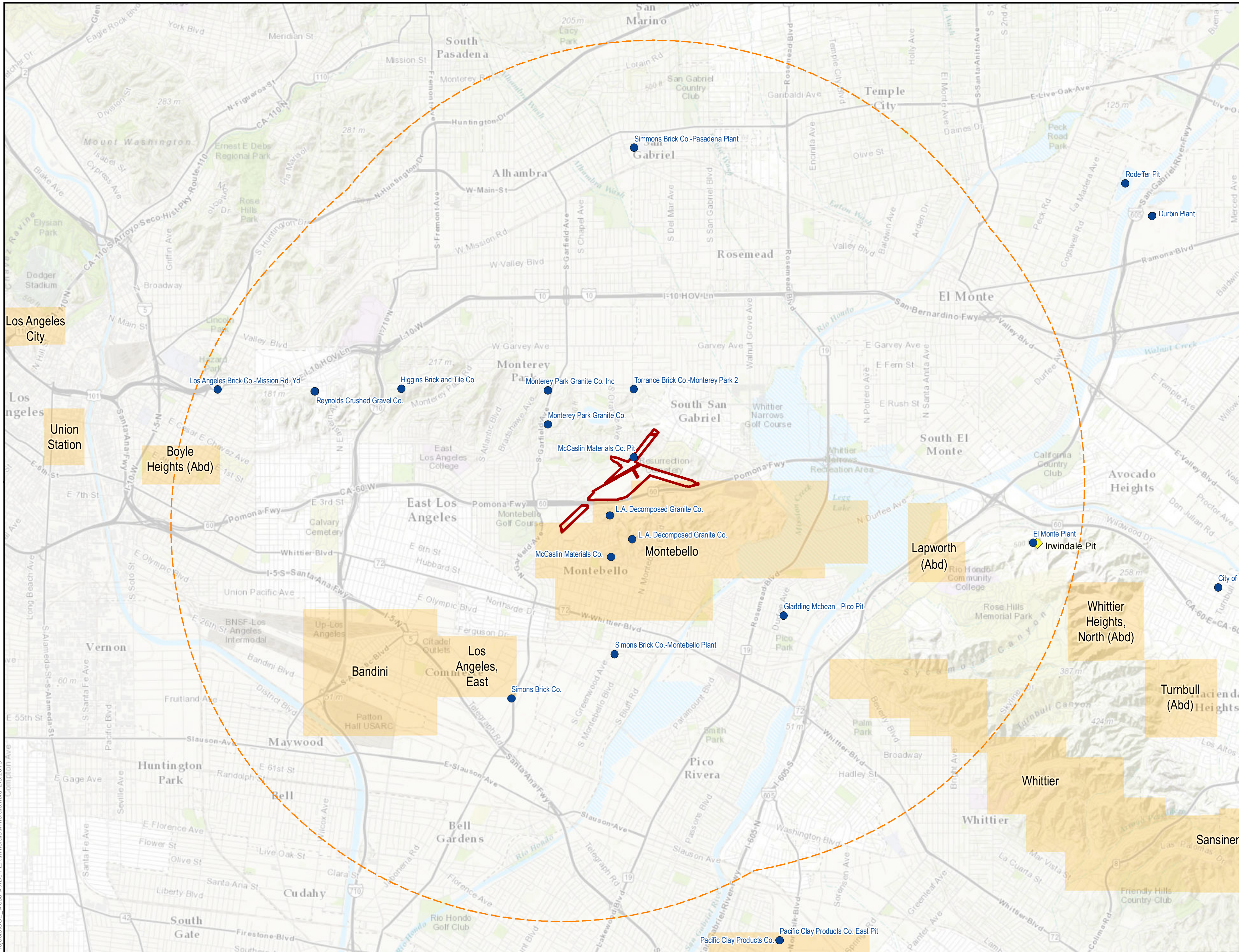
[2] Active mines are defined as U.S. mineral and metal operations that are monitored by the National Minerals Information Center of the USGS, surveyed by the USGS, and considered to be currently active as of 2003.

[3] According to the USGS, producers are mines that produce on demand or seasonally with variable lengths of activity. In addition, producers are considered to be in production at the time of data entry into the Mineral Resources Data System.

[4] The "Mesa Substation Study Area" shown on Figure 4.11-1: Mineral Resources, Active Mines, and Mineral Plants Within 5 Miles of the Mesa Substation Study Area represents the potential disturbance area associated with work at Mesa Substation and the associated transmission, subtransmission, distribution, and telecommunications lines in adjacent ROWs.

Figure 4.11-1:
Mineral Resources, Active Mines, and Mineral Plants Within 5 Miles of the Mesa Substation Study Area

Mesa 500 kV Substation Project



Mesa Substation Study Area

5-Mile Buffer

Mineral Resource

Mine

Oil Field

Note: (Abd) = Abandoned
Sources: California Department of Conservation; Mineral Resources Data System, USGS

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Table 4.11-1: Mineral Resources Producers, Past Producers, and Prospects Within 5 Miles of the Proposed Project

Mineral Prospect/ Past Mining Activity	Development Status	Commodity	Approximate Distance to Nearest Proposed Project Component (Miles)	Relative Location and Nearest Proposed Project Component
McCaslin Materials Company Pit	Past Producer	Stone, Crushed/Broken	0.0	Northeast of the telecommunications line from transmission tower M40-T3 to Mesa Substation
McCaslin Materials Company	Past Producer	Sand and Gravel, Construction	0.1	Northeast of the telecommunications line reroute between Mesa and Harding substations
L.A. Decomposed Granite Company	Prospect	Sand and Gravel, Construction	0.2	Southwest of the telecommunications line reroute between Mesa and Harding substations
L.A. Decomposed Granite Company	Past Producer	Stone, Crushed/ Broken	0.5	Southwest of the telecommunications line reroute between Mesa and Harding substations
Simons Brick Company	Past Producer	Clay	0.6	Southeast of the replacement of an existing lattice steel tower on the Goodrich-Laguna Bell 220 kV Transmission Line
Torrance Brick Company – Monterey Park 2	Past Producer	Clay	0.7	Northwest of the telecommunications line from transmission tower M40-T3 to Mesa Substation
Osborn Company	Producer	Sand and Gravel, Construction	0.9	North of the temporary 220 kV line loop-in at Goodrich Substation

Mineral Prospect/ Past Mining Activity	Development Status	Commodity	Approximate Distance to Nearest Proposed Project Component (Miles)	Relative Location and Nearest Proposed Project Component
Osborn Company	Past Producer	Sand and Gravel, Construction	0.9	North of the temporary 220 kV line loop-in at Goodrich Substation
Simons Brick Company – Montebello Plant	Past Producer	Clay	0.9	South of the telecommunications line reroute between Mesa and Harding substations
Monterey Park Granite Company	Past Producer	Stone, Crushed/Broken	1.0	Northwest of Mesa Substation
Monterey Park Granite Company	Past Producer	Sand and Gravel, Construction	1.4	Northwest of Mesa Substation
El Monte Plant	Producer	Sand and Gravel, Construction	1.6	East of the telecommunications line from transmission tower M38-T5 to Mesa Substation
Irwindale Pit	Active Mine	Sand and Gravel	1.6	East of the telecommunications line from transmission tower M38-T5 to Mesa Substation
Gladding McBean – Pico Pit	Prospect	Clay	2.0	South of the telecommunications line from transmission tower M38-T5 to Mesa Substation
Gladding McBean – Pico Pit	Past Producer	Clay	2.0	South of the telecommunications line from transmission tower M38-T5 to Mesa Substation

Mineral Prospect/ Past Mining Activity	Development Status	Commodity	Approximate Distance to Nearest Proposed Project Component (Miles)	Relative Location and Nearest Proposed Project Component
Higgins Brick and Tile Company	Prospect	Clay	2.7	Northwest of Mesa Substation
Reynolds Crushed Gravel Company Pit	Past Producer	Stone, Crushed/Broken	3.6	Northwest of the telecommunications line reroute between Mesa and Harding substations
Reynolds Crushed Gravel Company	Past Producer	Sand and Gravel, Construction	3.6	Northwest of the telecommunications line reroute between Mesa and Harding substations
Simons Brick Company – Pasadena Plant	Past Producer	Clay	3.6	North of the telecommunications line from transmission tower M40-T3 to Mesa Substation
City of Industry Plant	Producer	Calcium	4.0	East of the telecommunications line from transmission tower M38-T5 to Mesa Substation
Pacific Clay Products Company	Past Producer	Clay	4.4	Southeast of the street light source line conversion from overhead to underground within Loveland Street
Los Angeles Brick Company – Mission Road Yard	Past Producer	Clay	4.7	Northwest of the telecommunications line reroute between Mesa and Harding substations
Durbin Plant	Past Producer	Sand and Gravel, Construction	4.8	Northeast of the telecommunications line from transmission tower M38-T5 to Mesa Substation

Mineral Prospect/ Past Mining Activity	Development Status	Commodity	Approximate Distance to Nearest Proposed Project Component (Miles)	Relative Location and Nearest Proposed Project Component
Paramount Refinery	Active Mine	Sulfur	4.9	North of the street light source line conversion from overhead to underground within Loveland Street
Rodeffer Pit	Past Producer	Sand and Gravel, Construction	4.9	Northeast of the telecommunications line from transmission tower M38-T5 to Mesa Substation
Winter Creek	Past Producer	Copper, Gold, Molybdenum, and Silver	5.0	Northeast of the temporary 220 kV line loop-in at Goodrich Substation

Source: USGS (2014b)

One plugged well is located on West Lincoln Avenue northeast of Harding Substation; one idle well and two plugged wells are located on West Avenida De La Merced, directly east of the intersection with North Montebello Boulevard; and one plugged well is located south of San Gabriel Boulevard between East Lincoln Avenue and Rosemead Boulevard.

Goodrich Substation is located within an area designated as Mineral Resource Zone (MRZ-) 2; this zone includes areas where adequate information indicates that significant mineral deposits are present, or where a high likelihood exists for their presence. However, Goodrich Substation is not located within a designated mineral resource sector, which is an area formally designated by the State Mining and Geology Board (SMGB) for lands containing mineral resources of regional or Statewide economic significance that are needed to meet the demands of the future.

4.11.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

4.11.2.1 Federal

No federal regulations pertaining to mineral resources are applicable to the Proposed Project.

4.11.2.2 State

Surface Mining and Reclamation Act of 1975

The CGS designates MRZs where access to important mineral resources may be threatened, according to provisions of the California Surface Mining and Reclamation Act (SMARA) of 1975. The SMARA requires that all jurisdictions incorporate mapped mineral resource designations—as approved by the SMGB—into their general plans. The SMGB and the DOC's Office of Mine Reclamation (OMR) are jointly charged with ensuring proper administration of the SMARA's requirements. The SMGB promulgates regulations to clarify and interpret the SMARA's provisions, as well as to serve as a policy and appeals board. The OMR provides an ongoing technical assistance program for lead agencies and operators, maintains a database of mine locations and operational information Statewide, and is responsible for compliance-related matters.

4.11.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

County of Los Angeles General Plan

The Conservation and Open Space Element within the County of Los Angeles General Plan contains the following policy that is relevant to the Proposed Project:

- Policy 15: Protect and conserve existing mineral resources, evaluate the extent and value of additional deposits, and require future reclamation of depleted sites

City of Monterey Park General Plan

The City of Monterey Park General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

City of Montebello General Plan

The City of Montebello General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

City of Rosemead General Plan

The City of Rosemead General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

City of South El Monte General Plan

The City of South El Monte General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

City of Commerce General Plan

The City of Commerce General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

City of Bell Gardens General Plan

The City of Bell Gardens General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

City of Pasadena General Plan

The City of Pasadena General Plan was reviewed for mineral resource policies that are relevant to the Proposed Project. None were identified within this plan.

4.11.3 Significance Criteria

The significance criteria for assessing the impacts to mineral resources are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it 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
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

4.11.4 Impact Analysis

4.11.4.1 Would the project 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?

Construction

No Impact. Two active mining and/or mineral plant sites are located within 5 miles of the Proposed Project; however, mining operations associated with these facilities would not be affected due to their respective distances from the Proposed Project. There are 24 mineral resource producers, past producers, or prospects within 5 miles of the Proposed Project. However, only one past producer—McCaslin Materials Company Pit—is in the Proposed Project area and is specifically within the existing ROW for the transmission and subtransmission lines. Should future extraction from this previous production area be desired, such activities would be precluded in the ROW. In addition, no active mines, mineral plants, producers, or prospects are located within the immediate vicinity of the Proposed Project. Therefore, no impact to mineral resources would occur.

A small portion of the Mesa Substation site and the adjacent transmission and subtransmission ROWs are located within the Montebello Oil Field. There are two plugged oil wells and one abandoned oil well within the Mesa Substation site. There are two plugged oil wells within the adjacent ROW for the transmission and subtransmission lines. In addition, four plugged oil wells and one idle well are located in the vicinity of proposed telecommunications routes. The Proposed Project would avoid these abandoned oil wells or would coordinate their removal with the appropriate oil producers in accordance with applicable regulations. In addition, deepest excavation associated with the Proposed Project would not exceed 50 feet, and as the oil-producing depth is approximately 1,600 feet below the ground surface, it would not be adversely affected by the Proposed Project. Therefore, the Proposed Project would not impact oil production in the area.

The Goodrich Substation site is in an area mapped as MRZ-2 by the SMGB; however, the work associated with Goodrich Substation would not affect mineral resources. Therefore, the Proposed Project would not have an impact on a known mineral resource.

Operation

No Impact. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC General Order 165, which requires ground observation a minimum of once per year, but inspection usually occurs more frequently based on system reliability. As Proposed Project facilities are not located within and do not span any active mines, nor any active portion of the Montebello Oil Field, O&M activities would not result in any impacts to active mining operations or other mineral resources of value to the region and State. Therefore, no impact would occur.

4.11.4.2 Would the project 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?

Construction

No Impact. The general plans prepared for the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena do not designate areas outside those already designated by the SMGB as having important mineral resources. As a result, there would be no impact to a locally important mineral resource recovery site delineated on a general plan, specific plan, or other land use plan due to construction of the Proposed Project.

Operation

No Impact. As Proposed Project facilities would not be located within and would not span any active mines, nor any active oil or gas wells, O&M activities would not result in any impacts to locally important mineral resource sites. As a result, no impact would occur.

4.11.5 Applicant-Proposed Measures

Because no impacts to mineral resources would occur as a result of the Proposed Project, no avoidance and minimization measures are proposed.

4.11.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

4.11.7 References

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4.12 Noise

This section describes the noise in the area of the Mesa 500 kilovolt (kV) Substation Project (Proposed Project[1]), as well as potential impacts.

Information regarding noise standards was obtained from federal, State, Regional, and local literature reviews to establish the noise standards for the Proposed Project location. Information on existing noise sources is based on the Technical Noise Report prepared by Acentech Inc., which is provided in Appendix J: Noise Technical Report. Evaluation of potential noise impacts from the Proposed Project included measuring existing noise levels in the Proposed Project area, characterizing the existing noise environment, and calculating and examining the noise generation from the proposed construction and operation.

4.12.1 Environmental Setting

The Proposed Project is located in Los Angeles County, California, primarily in the City of Monterey Park, with other components also located in Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in unincorporated Los Angeles County, as depicted in Figure 3-1: Proposed Project Components Overview Map. The Proposed Project would include the following components:

- Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation within the City of Monterey Park
- Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, and in portions of unincorporated Los Angeles County
- Conversion of an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens
- Installation of a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena

Construction and operation of the proposed Mesa Substation would require additional minor modifications within several substations, as discussed in Section 3.5.4.23, Modifications to Existing Substations in Chapter 3, Project Description. These minor modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance (O&M) activities currently performed by Southern California Edison Company (SCE); therefore, construction of these minor modifications would

[1] The term "Proposed Project" is inclusive of all components of the Mesa Substation 500 kV Project. Where the discussion in this chapter focuses on a particular component, that component is called out by its individual work area (e.g., "telecommunications line reroute between Mesa and Harding substation").

not result in changes to noise levels in the area. As a result, these components are not discussed further in this section.

4.12.1.1 Noise in the Proposed Project Area

Noise Background

Noise is defined as an unpleasant or unwanted sound. Whether a sound is considered unpleasant depends on the individual who hears the sound, as well as the setting and circumstance under which the sound is heard. Because an individual's tolerance for noise varies by setting, some land uses are more sensitive to changes in the ambient noise environment. In general, noise-sensitive receptors could include, but are not limited to: schools, hospitals, convalescence homes, residential uses, places of worship, libraries, offices, city and county buildings, and outdoor recreational areas.

The unit of sound measurement is the decibel (dB). The dB scale is a logarithmic measure used to quantify sound power or sound pressure. A number of factors affect the perception of sound. These factors include the actual level of noise, the frequencies involved, the period of exposure to the sound, and changes or fluctuations in the sound level during exposure. The human ear is not uniformly sensitive to all noise frequencies. In order to measure sound in a manner that accurately reflects human perception, several measuring systems or scales have been developed, and the "A-weighting" scale was devised to correspond with the ear's sensitivity. The A-weighting scale uses specific weighting of sound pressure levels from 31.5 hertz to 8 kilohertz for the purpose of determining the human response to sound. The resulting unit of measure is the A-weighted decibel (dBA).

The subjective human perception of the loudness of a noise source is usually different than what is measured. Generally, a 3 dBA increase in ambient noise levels is considered the minimum threshold at which most people can detect a change in the noise environment; a 5 dBA increase in community noise is considered perceptible by the average human ear; and an increase of 10 dBA is perceived as a doubling of the ambient noise level. As a point of reference, a conversation between two people would typically measure 60 to 65 dBA, and prolonged noise levels above 85 dBA can cause hearing loss.

To reflect the fact that ambient noise levels from various sources vary over time, they are generally expressed as an equivalent noise level (L_{eq}), which is a computed steady noise level over a specified period of time as the noise level varies. L_{eq} values are commonly expressed for one-hour periods, but different averaging times may be specified.

For the evaluation of community noise effects, the Community Noise Equivalent Level (CNEL) is often used. It represents the average A-weighted noise level during a 24-hour day with a 5 dB penalty for the period from 7:00 p.m. to 10:00 p.m., and a 10 dB penalty for the period from 10:00 p.m. to 7:00 a.m. Another noise descriptor termed the Day-Night Average Sound Level (L_{dn}) is also used. The L_{dn} is similar to the CNEL, except there is no penalty to the noise level occurring during the evening hours.

Vibration is defined as a movement back and forth, particularly movement that is rhythmic and rapid. Construction activities could result in varying degrees of ground vibration, depending on the kind of equipment and operations involved, and the distances between the construction activities and the nearest receptors. The effects of construction vibration may be imperceptible at the lowest levels, whereas low rumbling sounds and detectable vibrations occur at moderate levels, and damage to nearby structures can occur at the highest levels. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Noise Sensitive Land Uses in the Project Proposed Area

The Proposed Project is located in a region with a mix of high-density residential, commercial, and institutional land uses, and some open space within the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in unincorporated Los Angeles County. The nearest noise-sensitive land uses in the vicinity of the Proposed Project area include:

- Occupied residential dwellings located approximately 280 feet from the Mesa Substation site (Monterey Park)
- Occupied residential dwellings located adjacent to transmission line rights-of-way (ROWs) near Mesa Substation (Monterey Park and Montebello)
- Schurr High School located adjacent to the 220 kV transmission line ROW and telecommunications line reroute between Mesa and Harding substations, southwest of the Mesa Substation site (Montebello)
- Occupied residential dwellings located adjacent to the new telecommunications line from transmission tower M38-T5 to Mesa Substation (Montebello)
- La Merced Intermediate School located adjacent to the new telecommunications line from transmission tower M38-T5 to Mesa Substation (Montebello)
- Occupied residential dwellings located adjacent to the telecommunications line reroute between Mesa and Harding substations (Montebello)
- Occupied residential dwellings located adjacent to the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead and unincorporated Los Angeles County)
- Whittier Narrows Recreation Area crossed by the new telecommunications line from transmission tower M38-T5 to Mesa Substation (unincorporated Los Angeles County)
- Bosque del Rio Hondo (Park) located adjacent to the new telecommunications line from transmission tower M40-T3 to Mesa Substation and the new telecommunications line from transmission tower M38-T5 to Mesa Substation (unincorporated Los Angeles County)

- Triangle Park located approximately 100 feet from the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead)
- Don Bosco Technical Institute located adjacent to the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead)
- Three convalescent homes located approximately 150, 180, and 270 feet from the new telecommunications line from transmission tower M40-T3 to Mesa Substation (Rosemead)
- Occupied residential dwellings located approximately 1,000 feet from the proposed replacement of an existing lattice steel tower on the Goodrich-Laguna Bell 220 kV Transmission Line (Commerce)
- Occupied residential dwellings located approximately 75 feet from the street light source line conversion from overhead to underground configuration within Loveland Street (Bell Gardens)
- Occupied residential dwellings located approximately 350 feet from construction areas at Goodrich Substation (Pasadena)
- Pasadena City College Community Education Center located approximately 300 feet east of the edge of Goodrich Substation (Pasadena)
- Vina Vieja Park and Alice Frost Kennedy Off-Leash Dog Area located are approximately 1,200 feet north of Goodrich Substation (Pasadena)

Existing Noise Sources

The primary existing source of noise in the Proposed Project area is vehicular traffic on highways and local streets, including State Route (SR-) 60 near Mesa Substation, SR-19 crossed by the new telecommunications line from transmission tower M38-T5 to Mesa Substation, and Interstate (I-) 210 near Goodrich Substation. The existing noise environment in the Proposed Project area also includes contributions from commercial and industrial activities, as well as the existing Mesa Substation.

A noise survey was conducted on June 24 through 25, 2014 and January 5 through 6, 2015 to document the existing noise environment at noise-sensitive receptors and to identify the existing noise sources within the Proposed Project area. Noise measurements were taken in the vicinity of Mesa Substation, with three locations in the City of Monterey Park and two locations in the City of Montebello, and in the vicinity of Goodrich Substation. The results of the community noise survey are presented in Appendix J: Noise Technical Report. Table 4.12-1: Noise Monitoring Summary summarizes the average eight-hour L_{eq} noise levels and the lowest one-hour daytime and nighttime L_{eq} noise levels measured at each monitoring location. The dominant noise source identified during the survey was vehicular traffic on SR-60 and I-210.

Table 4.12-1: Noise Monitoring Summary

Monitoring Location	Jurisdiction	Average L_{eq} (8 hour) (dBA)	Lowest L_{eq} (1 hour) (dBA)	
			Nighttime	Daytime
Schurr High School at Appian Way	Montebello	62	56	59
Northwest Corner of Potrero Grande Drive and East Markland Drive	Monterey Park	68	58	64
Holly Oak Drive	Monterey Park	52	47	50
Neil Armstrong Street, East of Building W	Montebello	55	49	53
Goodrich Substation	Pasadena	64	58	62

Source: Acentech (2015)
Note: Because noise levels naturally fluctuate, noise is measured and normalized over a time period (e.g., 8 hours).

4.12.2 Regulatory Setting

Federal, State, and local regulations were reviewed to evaluate potential noise impacts from the Proposed Project.

4.12.2.1 Federal

There are no federal noise standards that specifically regulate environmental noise related to electrical transmission lines and substation facilities. Although the United States Environmental Protection Agency (EPA) established general guidelines for noise levels to identify and address the effects of noise on public health and welfare and the environment in 1974, they transferred responsibilities for regulating noise control policies to the State and local government level in 1982.

4.12.2.2 State

California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also recognizes that continuous and increasing bombardment of noise exists in urban, suburban, and rural areas. This act declares that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. The Office of Noise Control in the Department of Health Services provides assistance to local communities developing local noise control programs and works with the Governor's Office of Planning and Research to provide guidance for the preparation of the required noise elements in city and county general plans, pursuant to Section 65302(f) of the Government Code.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) states that the exposure of people to noise, substantial increases in ambient noise, noise generation that exceeds local agency standards, and the potential for excessive groundborne noise and vibration levels must be analyzed.

4.12.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 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 county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

Each local government outlines requirements for noise abatement and control in its general plan and municipal code. The Noise Element of a general plan typically sets overall goals and objectives and provides land use/noise compatibility criteria for non-stationary noise sources. Most municipal codes provide noise limit guidelines for stationary noise sources and time limits for construction. The following sections provide a discussion of the general plans and municipal codes of the county and cities in the Proposed Project area.

County of Los Angeles

Los Angeles County General Plan

The Noise Element in the Los Angeles County General Plan contains specific goals and policies focused on reducing noise to a level consistent with health and quality of life goals. The following policy related to noise is relevant to the Proposed Project:

- Policy 3: Establish acceptable noise standards consistent with health and quality of life goals and employ effective techniques of noise abatement through such means as building code, noise, subdivision, and zoning ordinances

Noise-sensitive receptors referenced in the Los Angeles County General Plan include residences, hospitals, rest homes, long-term medical or mental care, and outdoor recreation areas.

Los Angeles County Municipal Code

Title 12, Chapter 12.08 of the Los Angeles County Municipal Code contains the following policy, which is relevant to the Proposed Project:

- Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work daily between the hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer is prohibited

- Creating or causing the creation of any noise disturbance within any noise-sensitive zone, as designated by the health officer, is prohibited, provided that conspicuous signs are displayed indicating the presence of the zone

Title 12, Chapter 12.08 of the Los Angeles County Municipal Code also contains regulations related to noise, including construction noise, which are provided in Table 4.12-2: Los Angeles County Construction Noise Restrictions. The county divides land uses into noise sensitive zones I through IV, with Noise Zone I categorized as noise-sensitive areas, and Noise Zone II categorized as residential areas. The exterior noise standards for these zones are provided in Table 4.12-3: Los Angeles County Exterior Noise Standards.

Table 4.12-2: Los Angeles County Construction Noise Restrictions

Restriction	**Structure Type**			
	Single-Family Residential	**Multi-Family Residential**	**Semi-Residential/ Commercial**	**Business**
Maximum Noise Levels (dBA) for Mobile Equipment (for nonscheduled, intermittent, short-term operation - less than 10 days)				
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80	85	85
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60	64	70	85
Maximum Noise Levels (dBA) for Stationary Equipment (for repetitively scheduled and relatively long-term operation - 10 days or more)				
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60	65	70	85
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50	66	60	85

Source: Los Angeles County (1975)

Table 4.12-3: Los Angeles County Exterior Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level (dB)
I	Noise-Sensitive Area	Anytime	45
II	Residential Properties	10:00 pm to 7:00 am	45
		7:00 am to 10:00 pm	50
III	Commercial Properties	10:00 pm to 7:00 am	55
		7:00 am to 10:00 pm	60
IV	Industrial Properties	Anytime	70

Source: Los Angeles County (1975)

Section 12.08.560 - Vibration of the County of Los Angeles Municipal Code includes the following criteria:

- Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 inch/second over the range of 1 to 100 Hertz.

City of Monterey Park

City of Monterey Park General Plan

The Noise Element in the City of Monterey Park General Plan contains specific policies to minimize the impact of point-source noises and ambient noise levels through the community, minimize noise impacts associated with the development of residential uses above or near commercial uses in mixed-use developments, and reduce aircraft noise impacts on City of Monterey Park residents and businesses. The following policies in the General Plan's Noise Element are relevant to the Proposed Project:

- Policy 5.1: Continue to enforce the noise ordinance to control point-source noise
- Policy 5.2: Incorporate noise impact considerations into the development review process, particularly the relationship of parking and ingress/egress, loading, and refuse collection areas to surrounding residential and other noise-sensitive land uses
- Policy 5.4: Enforce and revise as necessary City of Monterey Park ordinances regulating hours for construction activity

Noise-sensitive receptors referenced in the City of Monterey Park General Plan include residents, hospitals, schools, and churches.

City of Monterey Park Municipal Code

Title 9, Chapter 9.53 of the Monterey Park Municipal Code contains the noise standards provided in Table 4.12-4: City of Monterey Park Noise Standards.

Table 4.12-4: City of Monterey Park Noise Standards

Noise Zone	Time	Allowable Noise Level (dBA)[2]
Residential	7:00 a.m. – 10:00 p.m.	55
	10:00 p.m. – 7:00 a.m.	50
Commercial	7:00 a.m. – 10:00 p.m.	65
	10:00 p.m. – 7:00 a.m.	55
Industrial	Any time	70

Source: City of Monterey Park (2014b)

The noise standard is either the allowable noise level in Table 4.12-4: City of Monterey Park Noise Standards or the actual measured median ambient noise level, whichever is greater.

Construction or demolition work conducted between the hours of 7:00 a.m. and 7:00 p.m. on weekdays (Monday through Friday) and the hours of 9:00 a.m. and 6:00 p.m. on Saturdays, Sundays, and holidays are exempt from the standards in Table 4.12-4: City of Monterey Park Noise Standards.

City of Montebello

City of Montebello General Plan

The Noise Element in the City of Montebello General Plan contains specific goals and policies focused on viable approaches to control and reduce noise. The following goals and policies related to noise are relevant to the Proposed Project:

- Goals
  - Reduce noise to a level that does not jeopardize health and welfare
  - Minimize noise levels of future transportation facilities and other noise sources
  - Establish compatible land uses adjacent to transportation facilities and other noise sources
  - Allocate noise mitigation costs among those who produce the noise

[2] These values are the actual medium noise level measured or the presumed ambient noise level at a receiving property.

- Alert the public regarding the potential impact of transportation and other noise
- Protect areas that are presently quiet from future noise impact

- Policies

  - Enforce and encourage enforcement of all existing noise control regulations designed to bring about attainment of acceptable noise standards

  - Develop an enforceable Noise Ordinance, and implement this ordinance to control noise to reasonable levels in areas where the City of Montebello's jurisdiction has not yet been prepared

  - Utilize comprehensive planning, Environmental Impact Reports, redevelopment, and land use decisions to minimize adverse impact of noise in all areas of the community

Noise-sensitive receptors referenced in the City of Montebello General Plan include residential areas, hospitals, schools, churches, libraries, and convalescent homes.

City of Montebello Municipal Code

Title 9, Chapter 9.08 of the Montebello Municipal Code contains the noise ordinance for the City of Montebello, which prohibits any loud or raucous noise, including the following that are relevant to the Proposed Project:

- Noise sources associated with construction, demolition, grading, repair or remodeling of any real property other than between the hours of 7:00 a.m. and 8:00 p.m. on weekdays (Monday through Friday), and 9:00 a.m. to 6:00 p.m. on Saturdays, Sundays, and legal holidays, except in the case of an emergency where such action is immediately required to prevent injuries to persons or damage to property as determined by the director of building and safety or his designated representative

- The creation of noises adjacent to any school, institution of learning, church or court while the same are in use, or adjacent to any medical facility, including but not limited to, a hospital, medical office, clinic, or any location where medical treatment is rendered, which unreasonably interferes with the workings of such institution, or which unreasonably disturbs the occupants of or visitors to these structures

- Any pile driver, pneumatic hammer, bulldozers or other construction vehicles, motorized hoists, or other devices operated between the hours of 8:00 p.m. and 7:00 a.m.

- The operation of any noise-creating blower, power fan, or internal combustion engine in which the power is produced by the explosion of a fuel and air mixture within the cylinder(s) shall be prohibited unless the noise from such blower or fan is muffled and such engine is equipped with a muffler device sufficient to deaden such noise

Noise-sensitive receptors referenced in the City of Montebello Municipal Code include residential areas, medical facilities, schools, institutions of learning, churches, courts, and city or county buildings. The City of Montebello does not have any regulations for operational noise applicable to the Proposed Project.

City of Rosemead

City of Rosemead General Plan

The Noise Element in the City of Rosemead General Plan contains specific goals and policies focused on limiting the exposure of the community to excessive noise levels. The following goal and policies related to noise are relevant to the Proposed Project:

- Goal
  - Goal 3: Effective implementation of measures to control non-transportation noise impacts
- Policies
  - Policy 3.1: Enforce provisions of the Community Noise Ordinance to mitigate noise conflicts
  - Policy 3.3: Evaluate noise generated by construction activities to ensure compliance with the Community Noise Ordinance

City of Rosemead Municipal Code

Title 8, Chapter 8.36 of the City of Rosemead Municipal Code contains the following noise exemptions, which are relevant to the Proposed Project:

- Noise sources associated by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, are exempt, provided such activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday, and provided the noise level created by such activities does not exceed the noise standards in Table 4.12-5: City of Rosemead Noise Standards and does not endanger the public health, welfare, and safety[3]
- The provisions of Chapter 8.36 shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation departments, public work projects, or public utilities subject to the regulatory jurisdiction of the CPUC

[3] Section 8.36.060(B) specifies that the interior noise level for residential receptors be limited to 45 dBA. This noise level shall not be exceeded for a cumulative period of more than 5 minutes in any hour, more than 5 dBA for a cumulative period of more than 1 minute in any hour, nor more than 10 dBA for any period of time. In the event that the ambient noise level exceeds these noise limits, the cumulative period or maximum allowable noise level shall be increased to reflect the ambient noise level.

Table 4.12-5: City of Rosemead Noise Standards

Type of Land Use (Receptor Property)	Time Interval	Allowable Exterior Noise Level (dBA)[4]
Single-, Double-, or Multiple-Family Residential	7:00 a.m. – 10:00 p.m.	60
	10:00 p.m. – 7:00 a.m.	45
Commercial	7:00 a.m. – 10:00 p.m.	65
	10:00 p.m. – 7:00 a.m.	60
Industrial or Manufacturing	Any time	70

Source: City of Rosemead (2014)

Chapter 17.20 of the municipal code also prohibits any use within commercial and industrial zones that generates any ground-transmitted vibration that is perceptible to the human sense of touch when measured at the edge of the source's lot line.

City of South El Monte

City of South El Monte General Plan

The Public Safety Element in the City of South El Monte General Plan contains specific goals and policies focused on reducing impacts of noise on city residents. The following goal and policy related to noise are relevant to the Proposed Project:

- Goal
  - Goal 3.0: Minimize the adverse effects of excessive or unusual noise on the city's residential and business populations

- Policy
  - Policy 3.1: Use the noise/land use compatibility standards as a guide for future planning and development decisions

Noise-sensitive receptors referenced in the City of South El Monte General Plan include residential neighborhoods, hotels, motels, businesses, hospitals, churches, libraries, and schools.

[4] These values are the actual medium noise level measured or the presumed ambient noise level at a receiving property.

City of South El Monte Municipal Code

Section 8.36.040 of the City of South El Monte Municipal Code includes noise standards for residential, commercial, and industrial zones, which are provided in Table 4.12-6: City of South El Monte Noise Standards.

Table 4.12-6: City of South El Monte Noise Standards

Type of Land Use	Time Interval	Allowable Exterior Noise Level (dBA)[5]
Single-Family Residential	7:00 a.m. – 10:00 p.m.	50
	10:00 p.m. – 7:00 a.m.	45
Multi-Family Residential	7:00 a.m. – 10:00 p.m.	55
	10:00 p.m. – 7:00 a.m.	50
Commercial	7:00 a.m. – 10:00 p.m.	65
	10:00 p.m. – 7:00 a.m.	60
Industrial or Manufacturing	Any time	70

Source: City of South El Monte (2014)

The City of South El Monte Municipal Code Section 8.36.050 contains the following noise exemptions, which are relevant to the Proposed Project:

- Except as otherwise permitted, it is unlawful for any person within the city to operate power construction tools or equipment in the performance of any outside construction or repair work on buildings, structures, or projects in or adjacent to a residential area, except between the hours of 6:00 a.m. and 7:00 p.m. Monday through Friday or between the hours of 8:00 a.m. and 7:00 p.m. on Saturday and Sunday

- The provisions of this regulation shall not preclude the construction, operation, maintenance, and repairs of equipment, apparatus, or facilities of park and recreation departments, public work projects, or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the CPUC

In addition, Section 8.20.020 prohibits the operation of any device or machine that creates a vibration above the vibration perception threshold when measured at or beyond the property boundary of the source. The vibration perception threshold is considered to be 0.01 inch per second over the range of 1 to 100 Hertz.

[5] These values are the actual medium noise level measured or the presumed ambient noise level at a receiving property.

City of Commerce

City of Commerce General Plan

The Safety Element in the City of Commerce General Plan contains specific goals and policies focused on protecting residents from excessive noise. The following policies related to noise are relevant to the Proposed Project:

- Policy 6.1: The City of Commerce will ensure that residents are protected from harmful and irritating noise sources to the greatest extent possible
- Safety Policy 6.2: The City of Commerce will work with businesses in the city and other public agencies to identify ways to reduce noise impacts throughout the city

Noise-sensitive receptors referenced in the City of Commerce General Plan include residential areas, schools, convalescent homes, and properties in the vicinity of railroads and freeways.

City of Commerce Municipal Code

- The City of Commerce Noise Control Ordinance, together with the General Plan, establishes exterior noise standards for a wide range of land uses in the city. Residential uses, hospitals, schools, and churches are considered "noise-sensitive," and the following standards apply: between the hours of 7:00 p.m. and 10:00 p.m., external ambient noise levels must not exceed 60 dBA; between the hours of 10:00 p.m. and 7:00 a.m., external ambient noise levels must not exceed 50 dBA.

The code also regulates noise levels for nonresidential land uses. For these land uses, the following standards apply: between the hours of 7:00 a.m. and 10:00 p.m., external ambient noise levels must not exceed 75 dBA; between the hours of 10:00 p.m. and 7:00 a.m., external ambient noise levels must not exceed 65 dBA.

Section 19.19.160 of the City of Commerce Municipal Code contains the following policies, which are relevant to the Proposed Project:

- It is the policy of the city to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power, as certain noise levels are detrimental to the health and welfare of individuals. Therefore, any individual or organization that creates, maintains, causes, or allows to be created, caused, or maintained, any noise or vibration in a manner prohibited by or not in conformity with the provisions of this subsection, shall be considered to be creating a public nuisance and shall be punishable as such

- No person or organization within any residential zone, or within a radius of 500 feet of a residential zone, shall operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or operate any pile driver, steam shovel, pneumatic hammer, derrick, steam, electric hoist, or other construction type device between the hours of 10:00 p.m. and 7:00 a.m., unless a permit has been obtained from the city

- No person shall, at any location within the city, create nor allow the creation of noise on property owned, leased, occupied, or otherwise controlled by such person, that causes the noise level when measured on any property to exceed the ambient noise level or the noise standards included in Table 4.12-7: City of Commerce Noise Standards.

Table 4.12-7: City of Commerce Noise Standards

Type of Land Use	Time Interval	Allowable Exterior Noise Level (dBA)
Residential	7:00 a.m. – 7:00 p.m.	55
	7:00 p.m. – 10:00 p.m.	50
	10:00 p.m. – 7:00 a.m.	45
Commercial	7:00 a.m. – 10:00 p.m.	65
	10:00 p.m. – 7:00 a.m.	55
Industrial	Any time	70

Source: City of Commerce (2014)

Section 19.19.180 of the Municipal Code also prohibits the generation of ground vibration that would be harmful or injurious to the use or development of surrounding properties. In addition, no person may create, maintain, or cause ground vibration that is perceptible without instruments to a person of normal sensitivity on properties located adjacent to the vibration source.

City of Bell Gardens

City of Bell Gardens General Plan

The Noise Element in the City of Bell Gardens General Plan contains specific goals and policies focused on minimizing the potential for noise exposure. The following policy related to noise is relevant to the Proposed Project:

- Policy 2: The City of Bell Gardens shall ensure that the noise caused by sources other than traffic (construction, etc.) are at acceptable levels

Noise-sensitive receptors referenced in the City of Bell Gardens General Plan include residential areas, convalescent homes, schools, hospitals, churches, and libraries.

City of Bell Gardens Municipal Code

Chapter 16.24 Noise Regulation of the City of Bell Gardens Municipal Code contains the following policy, which is relevant to the Proposed Project:

- Between the hours of 7:00 p.m. of one day and 8:00 a.m. of the next day, it is unlawful for any person within a residential zone, or within a radius of 500 feet therefrom, to operate equipment, or perform any outside construction or repair work on buildings, structures, or projects, or operate any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other construction device in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance, unless beforehand a permit therefore has been duly obtained from the officer or body of the city having the function to issue permits of this kind. No permit shall be required to perform emergency work.

City of Pasadena

City of Pasadena General Plan

The Noise Element in the City of Pasadena General Plan contains specific goals and policies focused on minimizing the exposure of residents, workers, and visitors to excessive noise levels, while maximizing the Land Use Element's objectives to encourage mixed-use development in the Central District and other Specific Plan areas, as well as to promote economic vitality.

The following policies related to noise are relevant to the Proposed Project:

- Policy 7b: The city will encourage limitations on construction activities adjacent to sensitive noise receptors
- Policy 7c: The city will encourage construction and landscaping activities that employ techniques to minimize noise
- Policy 7d: The city will enforce noise level restrictions contained in the City of Pasadena Noise Regulations (Chapter 9.36 of the Municipal Code), except during federal, State, or local emergencies (such as power generators required for energy emergencies)

Noise-sensitive receptors referenced in the City of Pasadena General Plan include residences, schools, libraries, hospitals, churches, office, hotels, motels, and outdoor recreational areas.

City of Pasadena Code of Ordinances

Title 9, Article IV, Chapter 9.36 of the City of Pasadena Code of Ordinances contains the noise ordinance for the City of Pasadena. The following policy related to noise is relevant to the Proposed Project:

- Construction within 500 feet of a residential area is limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday, and is prohibited on Sundays and holidays. In addition, noise levels of construction equipment are limited to 85 dBA, as measured 100 feet from the equipment

Noise-sensitive receptors referenced in the City of Pasadena Code of Ordinances include residential areas, schools, institutions of learning, churches, hospitals, and city or county buildings.

4.12.3 Significance Criteria

The significance criteria for assessing the impacts from noise are determined from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would cause:

- Exposure of people to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of people to, or generation of, excessive groundborne vibration or groundborne noise levels
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- Exposure of people residing or working in the project area to excessive noise levels for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport
- Exposure of people residing or working in the project area to excessive noise levels for a project within the vicinity of a private airstrip

4.12.4 Impact Analysis

4.12.4.1 Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Less-Than-Significant Impact. Construction activities would require the temporary use of various types of noise-generating construction equipment, including bulldozers, graders, backhoes, drill rigs, augers, flatbed boom trucks, rigging and mechanic trucks, air compressors, generators, mobile cranes, concrete trucks, pole trailers, and man lifts. Line stringing (reconductoring) would require the use of pullers, tensioners, cable reel trailers, and helicopters. Modifications to existing substations would require the use of backhoes, drill rigs, concrete trucks, flatbed trucks, pickup trucks, cranes, man lifts, portable welding units, line trucks, and mechanic trucks. Typical noise levels from construction equipment are provided in Appendix A: Typical Noise Levels of Substation Construction Equipment of Appendix J: Noise Technical Report.

Construction activities would typically be limited to the hours specified in the local municipal codes as adopted by the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as the County of Los Angeles. In the event construction activities are anticipated on days or hours outside of what is specified by the local ordinances (for example, if existing lines must be taken out of service for the work to be performed safely and the line outage must be taken at night for system reliability reasons, or if construction needs require continuous work), SCE would provide five-day advanced notification, including a general description of the work to be performed, location, and hours of construction anticipated, to the CPUC, the local jurisdiction, and residents within 300 feet of the anticipated work, as well as route construction traffic away from residences, schools, and recreational facilities to the maximum extent feasible. Additionally, potential noise impacts would be further reduced and controlled during equipment operation from noise reduction features (e.g., mufflers and engine shrouds) typically installed on SCE and SCE contractor equipment.

The Los Angeles County Municipal Code has a requirement to limit noise from construction equipment to the levels specified in Table 4.12-2: Los Angeles County Construction Noise Restrictions, which include restricting nonscheduled, intermittent, short-term (less than 10 days) mobile equipment noise levels at single-family residences to 75 dBA Monday through Saturday from 7:00 a.m. to 8:00 p.m. The Proposed Project includes the construction of new telecommunications lines from transmission tower M40-T3 to Mesa Substation and from transmission tower M38-T5 to Mesa Substation, partially located in unincorporated Los Angeles County. This work will include the use of auger trucks, manlifts, boom trucks, and pickup trucks to replace existing wood poles. Backhoes, graders, scrapers, loaders, haul trucks, and pickup trucks will be used to excavate and backfill trenches where new underground cables will be installed. The existing cable will be removed and new cable will be installed using manlifts, pickup trucks and slicing equipment. The anticipated noise levels from each of these activities are provided in Table 4.12-8: Telecommunications Lines Construction Noise Levels. The data in this table indicate that residences within approximately 180 feet of trenching activities and 100 feet of pole replacement activities could be exposed to noise levels above 75 dBA, exceeding the Los Angeles County noise restrictions at these locations. In addition, residences within 20 feet of cable installation and removal could experience noise levels above 75 dBA. While Proposed Project construction in Los Angeles County may result in the exposure of persons to, or generation of, noise levels in excess of standards established in the Los Angeles County Municipal Code, these construction activities move very quickly and are very short in duration at each site, and would typically be within the Los Angeles County Municipal Code time limits for construction. In addition, poles requiring replacement will be determined based on the results of wind-load testing. If poles requiring replacement are located adjacent to residences or other noise sensitive receptors, or if needed for trenching or cable installation activities, SCE would confer with the County of Los Angeles where necessary to discuss the Proposed Project and address the potential for noise exceedances along the telecommunications routes. As a result, the associated impacts are anticipated to be less than significant.

The City of Pasadena Code of Ordinances has a requirement to limit noise from construction equipment to 85 dBA at a distance of 100 feet. However, noise levels from construction equipment at Goodrich Substation in the City of Pasadena would not exceed 85 dBA at 100 feet. Therefore, noise during construction of the Proposed Project within the City of Pasadena would comply with standards established in the City of Pasadena Code of Ordinances.

Table 4.12-8: Telecommunications Lines Construction Noise Levels

Activity	Duration	L_{eq} (dBA at 50 Feet)	Approximate Distance to 75 dBA (Feet)
Wood Pole Replacement	One day at pole location	81	100
Cable Installation	< One hour at pole location	66	20
Cable Removal	< One hour at pole location	66	20
Trenching	One to two days	86	180
Backfill and Repave Trench	One to two days	83	125

Source: Acentech (2015)

Because noise associated with construction activities for the Proposed Project would occur in accordance with guidance from the local agencies and/or restrictions and standards established by the municipal codes of the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as the County of Los Angeles, impacts would be less than significant.

Operation

Less-Than-Significant Impact. The primary source of operating noise at the new Mesa Substation would be the on-site transformers, i.e., eleven single phase 500/220 kV transformers, three, three phase 220/66 kV transformers, and two, three phase 66/16 kV transformers. Transformer noise levels were provided by SCE, based on the transformers' design sound levels outlined in the National Electrical Manufacturers Association (NEMA) Standards Publication No. TR 1-2013 (NEMA Publication No. TR1) and SCE Specification A1-2009. As presented in Table 4.12-9: Transformer Design Sound Levels, the NEMA Publication No. TR1 design sound level of the 500/220 kV and 220/66 kV transformers at the Mesa Substation would not exceed 88 dBA and 86 dBA, respectively. The 66/16 kV transformers would not exceed 68 dBA.

Table 4.12-9: Transformer Design Sound Levels

Transformer Type	Quantity	Design Sound Levels OA/FA/FOA (dBA)
500/220 kV, single phase	11	84/86/88
220/66 kV, three phase	3	84/85/86
66/16 kV, three phase	2	68

Source: Acentech (2015) – SCE Purchase Specification and NEMA Standards Publication No. TR 1-2013

Using the calculation methodology outlined in the IEEE Standard C57.12.90-2010, the sound power level[6] of each transformer and the resulting sound pressure levels were calculated. The resulting noise levels at the noise-sensitive receptors (monitor locations) near the Mesa Substation with all transformers simultaneously in operation are presented in Table 4.12-10: Transformer Noise Levels at Monitor Locations

Table 4.12-10: Transformer Noise Levels at Monitor Locations

Monitor Location	City	Transformers' Noise Levels (dBA)
Schurr High School at Appian Way	Montebello	44
Northwest Corner of Potrero Grande Drive and East Markland Drive	Monterey Park	48
Holly Oak Drive (at backyard property line facing substation)	Monterey Park	53
Neil Armstrong Street, East of Building W	Montebello	39

Source: Acentech (2015)

As shown in Table 4.12-10: Transformer Noise Levels at Monitor Locations, the transformers' noise levels would not exceed the City of Montebello's 60 dBA nighttime noise standard for residential uses. However, the City of Monterey Park's 50 dBA nighttime noise standard for residential land uses would be exceeded by 3 dBA at the property line of residences along Holly Oak Drive. To reduce the potential noise from the transformers' noise levels to 50 dBA or lower in the residential areas of the City of Monterey Park, SCE would implement applicant-proposed

[6] Sound Power Level is the sound energy radiated by the transformer, producing a Sound Pressure Level at the receptor location.

measure (APM)-NOI-01. The APM-NOI-01 entails providing an engineering solution to mitigate the transformers' noise levels to 50 dBA or below in the residential areas of the City of Monterey Park. This engineering solution may include the use of quieter transformers, a barrier wall, or another feasible engineering solution to be determined during final engineering. With the implementation of APM-NOI-01, noise levels would be reduced to less than 50 dBA in residential areas in the City of Monterey Park. Therefore, the noise impacts from operation of the transformers at the Mesa Substation would be less than significant.

The Proposed Project would not increase the number of transmission lines in the area and would not locate the transmission lines closer to sensitive receptors; therefore, no change to corona noise would occur.

Routine maintenance is expected to be performed by existing Mesa Substation staff, and some maintenance of the transmission, subtransmission, distribution, and telecommunications lines may be needed in franchise areas and the ROWs. O&M of the Proposed Project would occur as needed and could include various activities, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. O&M would also include routine inspections and emergency repair, which would require the use of vehicles and equipment. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165, which requires a minimum inspection of once per year via ground observation, but inspection usually occurs more frequently based on system reliability. Maintenance activities are already being conducted in the Proposed Project area for the existing Mesa Substation and the existing transmission, subtransmission, distribution, and telecommunications lines, which would continue after construction is complete; therefore, no changes in noise generated by maintenance activities would occur, and there would be no impact.

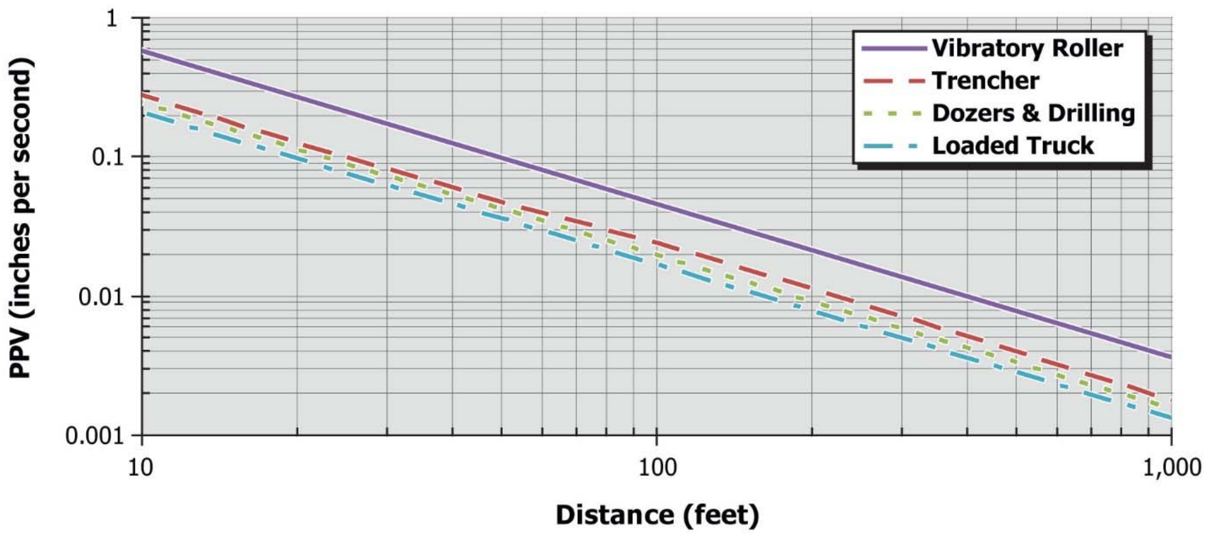
4.12.4.2 Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Construction

Less-Than-Significant Impact. Construction activities can generate varying degrees of groundborne vibration and noise levels, depending on the construction procedures and the construction equipment used. As described in the California Department of Transportation (Caltrans) Transportation- and Construction-Induced Vibration Guidance Manual, operation of haul trucks and dozers are the activities that could result in groundborne vibration due to travel and transport on cracked or faulting roadway surfaces (Caltrans 2004). Vehicles traveling on smooth roadway are rarely, if ever, the source of perceptible groundborne vibration (Caltrans 2004). Based on windshield observations of the existing roadways in the Proposed Project area, roadways that would be travelled during construction activities are maintained and relatively smooth such that groundborne vibration is not anticipated due to the use of haul or material delivery trucks.

Operation of construction equipment generates vibrations that spread through the ground and decrease with distance from the source, as presented in Figure 4.12-1: Construction Vibration Amplitudes. Perceptibility of vibrations from construction equipment can be estimated by comparing the vibration thresholds provided in Figure 4.12-1: Construction Vibration Amplitudes.

Figure 4.12-1: Construction Vibration Amplitudes



Source: Caltrans (2013)

CEQA does not define excessive groundborne noise and vibration; however, two jurisdictions (the County of Los Angeles and the City of South El Monte) have adopted standards to control activities that cause perceptible levels of vibration. These standards would apply to construction of the portions of the new telecommunications lines from transmission towers M38-T5 and M40-T3 that are located in these jurisdictions. Construction of the Proposed Project in this area would include the use of trenching equipment and trucks. As indicated in Figure 4.12-1: Construction Vibration Amplitudes, construction activities associated with trenching equipment and loaded trucks would produce vibrations that exceed the County and City of South El Monte standard of 0.01 PPV at property lines or, for the County, at distances closer than approximately 150 feet from construction activities in public areas. Sensitive receptors adjacent to or closer than 150 feet to the equipment may experience vibrations that exceed the standards. However, these activities would be temporary, of short duration, and not considered excessive; therefore, impacts would be less than significant.

For vibration produced by the construction of other components of the Proposed Project that are located in jurisdictions without vibration standards, the Caltrans Transportation- and Construction-Induced Vibration Guidance Manual is used to address vibration issues associated with the construction and O&M of Caltrans projects. This manual was used to determine the significance of groundborne noise and vibration associated with construction of the Proposed Project (Caltrans 2004). The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in inches per second. The PPV is most frequently used to describe vibration impacts to buildings. Table 4.12-11: Vibration Damage Threshold Guidance states that intermittent vibration sources with amplitudes greater than 0.5 PPV and 1.0 PPV have the potential to significantly affect older residential structures and newer residential structures, respectively. As indicated in Figure 4.12-1: Construction

Vibration Amplitudes, typical construction activities would generate a PPV of 0.3 at less than 10 feet. Construction activities would not occur within 10 feet of residences; therefore, no damage to these structures would occur. As noted in Figure 4.12-1: Construction Vibration Amplitudes, more extensive earth work activities, such as the use of a vibratory roller, would cause the highest level of vibration anticipated during construction, corresponding with a PPV of 0.5 at less than 15 feet. These types of activities are not planned within 15 feet of residences; therefore, the compaction process would not damage buildings, and impacts would be less than significant.

Table 4.12-11: Vibration Damage Threshold Guidance

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

Source: Caltrans (2004)

Table 4.12-12: Human Response to Transient Vibration indicates that Caltrans considers 0.25 PPV as the threshold of perception for human response to transient vibration sources. This amplitude corresponds with a distance of approximately 15 to 25 feet from construction activities. Construction activities would occur adjacent to residential property lines in some locations along the telecommunications line reroute; however, ground-disturbing activities in these areas would be minimal and in most cases more than 25 feet from any occupied structures. In addition, this work is anticipated to last one day in each location. Due to the short-term nature of this work and the limited activities, vibration may be perceptible, but persons would not be exposed to excessive groundborne vibration. All other Proposed Project components would be located more than 25 feet from occupied structures. As a result, impacts would be less than significant.

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

Table 4.12-12: Human Response to Transient Vibration

Human Response	Maximum PPV[7] (inches per second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Severe	2.00	0.40
Strongly Perceptible	0.90	0.10
Distinctly Perceptible	0.25	0.04
Barely Perceptible	0.04	0.01

Source: Caltrans (2004)

Operation

Less-Than-Significant Impact. O&M of the Proposed Project would consist of routine maintenance activities and emergency repairs, similar to current practices. These activities would not produce significant groundborne noise or vibration. Operation of transformers at the proposed Mesa Substation may produce groundborne vibration; however, groundborne vibrations would be perceptible only in the immediate vicinity of the transformer pad, if at all. Therefore, operation of the Proposed Project would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

4.12.4.3 Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

No Impact. Construction of the Proposed Project would be temporary, lasting approximately 55 months, and would not cause a permanent increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project. Therefore, no impact from construction would occur.

Operation

Less-Than-Significant Impact. The primary permanent noise sources associated with the Proposed Project are the transformers at Mesa Substation. As discussed previously, corona noise associated with the transmission and subtransmission lines would not change as a result of the Proposed Project, and operation of the proposed distribution line and the proposed telecommunications facilities would not generate appreciable noise levels.

As discussed previously, transformer noise levels were calculated based on the National Electrical Manufacturers Association (NEMA) Standards Publication No. TR 1-2013 design sound levels and SCE Specification A1-2009, shown in in Table 4.12-9: Transformer Design

Sound Levels. Table 4.12-13: Noise Level Changes Due to Transformers provides a comparison between the ambient conditions and the calculated combined transformer noise levels at each of the monitoring locations. The only increase in noise levels from the transformers would be approximately 6 dBA at Holly Oak Drive in the City of Monterey Park.

Table 4.12-13: Noise Level Changes Due to Transformers

Receptor Location	Lowest 1-hour Ambient L_{eq} (dBA)	Transformers (dBA)	Increase (dBA)
Schurr High School at Appian Way	56	45	--
Northwest Corner of Potrero Grande Drive and East Markland Drive	58	50	--
Holly Oak Drive	47	53	6
Neil Armstrong Street, East of Building W	49	40	--

Source: Acentech (2015)
Note: "--" indicates no change in ambient noise levels associated with the transformers.

CEQA does not define what a "substantial" permanent increase in ambient noise levels would be. As discussed previously, a 3-dBA increase in ambient noise levels is generally considered the minimum threshold at which most people can detect a change in the noise environment. SCE would implement APM-NOI-01, which entails providing an engineering solution to decrease the operational noise levels to 50 dBA or below measured at residential receptors within the City of Monterey Park. As a result, the Proposed Project would not result in a substantial permanent increase in ambient noise levels in the vicinity above levels existing without the Proposed Project. Therefore, impacts from operation of Mesa Substation would be less than significant.

4.12.4.4 Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

Less-Than-Significant Impact. The CEQA guidelines do not define a substantial increase in construction noise levels; therefore, in the absence of local guidance, Caltrans' definition for a substantial construction noise increase from the *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* has been used to evaluate the potential impacts from the proposed project's construction (CalTrans). According to CalTrans, a substantial noise increase is considered to occur when the project's predicted worst-hour design-year noise level exceeds the existing worst-hour noise level by 12 dBA or more.

Construction noise levels would vary from hour-to-hour and day-to-day, depending on the equipment in use and the operations being performed. Grading, excavation, and construction activities, as well as general truck trips to and from the construction sites, would increase the ambient noise levels in the Proposed Project area on an intermittent basis. The construction noise levels would vary throughout the construction period, depending on the equipment simultaneously operating in the same area, the equipment usage factors, and the equipment's varying noise level. The noisiest period of construction is estimated to occur in the fourth quarter of 2016. Noise monitoring locations were selected in the vicinity of Mesa Substation and the associated transmission, subtransmission, and distribution lines at the closest noise sensitive land uses to these activities. As described in Appendix J: Noise Technical Report, construction noise from the peak periods of activity at Mesa Substation and the adjacent ROWs were simulated using CadnaA, a computer-aided noise model. Figure 4-1: Construction Noise Contours in Appendix J: Noise Technical Report displays the resulting noise levels across the substation site and adjacent sensitive receptors. The results from the model were compared to the noise monitoring conducted for the Proposed Project in Table 4.12-14: Calculated Construction Noise Levels at Measurement Locations. In all locations, except near Holly Oak Drive, construction noise levels would cause a temporary increase in noise of less than 12 dBA.

Table 4.12-14: Calculated Construction Noise Levels at Measurement Locations

Calculation Location	Jurisdiction	Measured L_{eq} (dBA)	Calculated L_{eq} (dBA)	Increase in L_{eq} (dBA)
Schurr High School at Appian Way	Montebello	62	66	4
Potrero Grande Drive and East Markland Drive	Monterey Park	68	69	1
Holly Oak Drive	Monterey Park	52	71	19
East of Building W, Neil Armstrong Street	Montebello	55	48	--
Receivers within 480 Feet of I-210 and within 320 Feet of Construction Activities at Goodrich Substation	Pasadena	64	75	11

Source: Acentech (2015)

Noise levels at Holly Oak Drive were estimated to be approximately 71 dBA during peak construction. Although the 19 dBA temporary increase in ambient noise levels at Holly Oak Drive in the City of Monterey Park would exceed the 12 dBA Caltrans guideline, the noise levels identified in this analysis are typically considered acceptable for construction activities during daytime hours and noise levels of 71 dBA are of the same magnitude as the those generated by dense traffic on a major avenue (Acentech 2015). In addition, this noise level would occur at the closest backyard property line overlooking the substation site. Measurements on the properties themselves and within residences would be less than 71 dBA during construction.

Construction activities would typically be conducted during the hours that are exempt from the City of Monterey Park noise standards. In the event construction activities are anticipated on days or hours outside of what is specified by the local ordinances (for example, if existing lines must be taken out of service for the work to be performed safely and the line outage must be taken at night for system reliability reasons, or if construction needs require continuous work), SCE would provide five-day advanced notification, including a general description of the work to be performed, location, and hours of construction anticipated, to the CPUC, the local jurisdiction, and residents within 300 feet of the anticipated work, as well as route construction traffic away from residences, schools, and recreational facilities to the maximum extent feasible. Additionally, potential noise impacts would be further reduced and controlled during equipment operation from noise reduction features (e.g., mufflers and engine shrouds) typically installed on SCE and contractor equipment. Therefore, impacts would be less than significant.

During construction, helicopter use may occur up to seven hours per day for approximately 15 days spread throughout the approximately 55-month construction window for the stringing of electrical conductor. During that time, sensitive receptors within 660 feet of this helicopter use would be subject to temporary increases in ambient noise levels in excess of 80 dBA. When construction activities include helicopter operations, SCE would provide advance notice to all property owners within 660 feet of the Proposed Project helicopter operation areas. The announcement would state that the use of helicopters is anticipated and would provide the start date, anticipated completion date, hours of helicopter usage, and a telephone contact number for questions or complaints during construction. In addition, helicopters would maintain a height of at least 500 feet when passing over residential areas, as well as a lateral distance of at least 500 feet from all schools and hospital buildings, except when they are at construction areas or actively assisting with construction activities. In addition, helicopter activities would occur during the time periods allowed by the cities of Monterey Park and Montebello municipal codes. As a result, impacts would be less than significant.

Table 4.12-8: Telecommunications Lines Construction Noise Levels indicates the potential noise levels from the installation and rerouting of telecommunications lines. These activities will be primarily conducted along residential streets within unincorporated Los Angeles County and the cities of South El Monte, Montebello, Monterey Park, and Rosemead. As a result, these activities would be directly adjacent to sensitive noise receptors and may be exposed to noise levels in excess of 80 dBA. While these noise levels would exceed the Caltrans construction noise threshold, these activities would be limited to between one and two days at each location. SCE would provide five-day advanced notification, including a general description of the work to be performed, location, and hours of construction anticipated, to the CPUC, the local jurisdiction, and residents within 300 feet of the anticipated work. Potential noise impacts would be reduced and controlled during equipment operation from noise reduction features (e.g., mufflers and engine shrouds) typically installed on SCE and SCE contractor equipment. Therefore, impacts to these receptors would be less than significant.

The noise sensitive receptors near the lattice steel tower replacement along the Goodrich-Laguna Bell 220 kV Transmission Line are residences located approximately 1,000 feet from the planned construction activities. As described in Appendix J: Noise Technical Report, construction noise from this work was estimated to fluctuate between approximately 82 and 89 dBA at a distance of 50 feet. Because construction noise from these activities would be reduced by approximately 6 dBA for each doubling of distance from the source, the anticipated noise levels at the residences would be between approximately 56 and 63 dBA. These noise levels are well below any applicable threshold; therefore, impacts at this location would be considered less than significant.

An existing street light source line would be converted from an overhead to underground configuration along Loveland Street in the City of Bell Gardens. The closest sensitive receptors to these activities would be occupied residences located approximately 75 feet away. As described in Appendix J: Noise Technical Report, typical noise levels from the installation of underground distribution lines may fluctuate between approximately 81 and 90 dBA at a distance of 50 feet. These noise levels would be reduced to between approximately 77 and 86 dBA at the boundary of the residential parcels. Noise levels at these receptors may temporarily exceed the 80-dBA threshold identified by Caltrans; however, they would be short-term, lasting approximately seven days. As described previously, SCE would notify all residents within 300 feet of the anticipated work and all equipment would be fitted with mufflers or other noise reduction features. As a result, impacts would be less than significant.

A temporary 220 kV line loop-in would be installed at Goodrich Substation. The nearest sensitive receptors to this activity would include residences approximately 350 feet away, Pasadena City College Community Education Center approximately 300 feet away, and two parks approximately 1,200 feet away. As described in Appendix J: Noise Technical Report, typical noise levels from the installation of this temporary loop in would be between approximately 81 and 87 dBA. At a distance of 300 feet, the noise would be reduced to between approximately 65 and 71 dBA. As a result, noise from this activity would be below the Caltrans threshold and would be considered less than significant.

Operation

No Impact. As previously described, O&M activities are already being conducted in the Proposed Project area; therefore, no changes in temporary or periodic increases in ambient noise levels would occur, and there would be no impact.

4.12.4.5 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 expose people residing or working in the project area to excessive noise levels?

Construction and Operation

No Impact. The Proposed Project is not located within an airport land use plan or within 2 miles of a public or public-use airport. The nearest public airport is the El Monte Airport, which is located approximately 3.6 miles northeast of the Proposed Project. Therefore, no impact would occur.

4.12.4.6 For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Construction and Operation

No Impact. Construction of the Proposed Project would not be located within the vicinity of a private airstrip. The nearest private-use airport is Goodyear Blimp Base Airport, which is located approximately 15 miles southwest of the Mesa Substation site, and approximately 23 miles southwest of Goodrich Substation. Therefore, there would be no impact.

4.12.5 Applicant-Proposed Measures

SCE has designed and incorporated the following APM into the Proposed Project to avoid or minimize potential impacts associated with noise:

- **APM-NOI-01: Transformer Noise.** SCE would provide an engineering solution to decrease the operational noise levels of the substation transformers to 50 dBA or below, as measured at residential receptors. This may include the use of quieter transformers, a barrier wall, or another engineering solution. A feasible engineering solution will be incorporated during final engineering.

4.12.6 Alternatives

Alternatives to the Proposed Project are discussed in Section 5.2, Description of Project Alternatives and Impact Analysis, in Chapter 5, Detailed Discussion of Significant Impacts. The Proposed Project was selected as the only feasible option as it was approved by the California Independent System Operator (CAISO), meets project objectives (including the project need date), and has fewest potential environmental impacts; therefore, no other alternatives were analyzed other than the No Project Alternative.

4.12.7 References

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