DRAFT
Mitigated Negative Declaration and Supporting Initial Study

for Southern California Edison Company's

Banducci Substation Project

(A.12-11-011)

Lead Agency:

California Public Utilities Commission

Prepared by:

Aspen Environmental Group

November 2014

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

TO: All Interested Parties

Pursuant to the California Public Utilities Commission's (CPUC) General Order 131-D, Southern California Edison Company (SCE) has filed an application with the CPUC for a Permit to Construct for the Banducci Substation Project (Application No. A.12-11-011).

Project Background: SCE is proposing to construct the Banducci Substation Project, which would include construction of the following components: (1) new Banducci 66/12 kilovolt (kV) Substation, located at the southeast corner of Pelliser Road and unimproved Dale Road in unincorporated Cummings Valley, Kern County; (2) two new 66 kV subtransmission lines segments that would loop into the existing Correction-Cummings–Kern River #1 66 kV subtransmission line; (3) three new underground 12 kV distribution getaways; and (4) 32 miles of overhead and underground telecommunication facilities to connect the proposed Banducci Substation to SCE's existing telecommunications system near the City of Tehachapi.

Construction is estimated to last approximately 12 months. SCE states that the Banducci Substation Project is needed to serve increased electrical demand and to address reliability and operational flexibility issues in the Electrical Needs Area.

Information Available: The CPUC Energy Division has prepared a Mitigated Negative Declaration and supporting Initial Study (IS/MND) describing the project and its potential environmental effects. Based on this document, it has been determined that the Banducci Substation Project, as modified, will not have any significant effects on the environment with incorporation of the mitigation identified in the IS/MND. The CPUC's environmental document may be reviewed at the following locations:

CPUC Energy Division
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Kern County Library – Tehachapi Branch
1001 W. Tehachapi Blvd
Tehachapi, CA 93561

For electronic access to the MND and other project information/reports, check the CPUC's website at:

http://www.cpuc.ca.gov/Environment/info/aspen/banduccisubstation/banduccisubstation.htm

Public Informational Meeting: In order to help affected communities understand the Proposed Project and the Proposed IS/MND and to explain how the public can participate in the CPUC's decision-making processes, the CPUC will hold an informational workshop on December 11, 2014. This informal workshop is an opportunity to ask questions about the content of the Draft IS/MND. While written comments may be submitted during the workshop, there will be no facilities to record oral comments.

December 11, 2014 from 5:30 p.m. to 8:00 p.m. at
Tehachapi Police Department, Community Room
220 West C Street; Tehachapi, CA 93561

Time for Review: This IS/MND will undergo a public review period from November 14 through December 15, 2014. Comments must be received in writing by 5:00 p.m. on December 15, 2014, at the following address:

Jensen Uchida
California Public Utilities Commission
c/o Aspen Environmental Group
235 Montgomery Street, Suite 935
San Francisco, CA 94104-3002
BanducciSubstation@AspenEG.com

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for

Southern California Edison Company's

Banducci Substation Project

(A.12-11-011)

Lead Agency:

California Public Utilities Commission, Energy Division
505 Van Ness Avenue, 3rd Floor
San Francisco, California 94102

Prepared by:

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November 2014

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Appendices

Appendix B. Estimated Temporary and Permanent Land Disturbance
Appendix A. List of Preparers

List of Acronyms

ACSR	Aluminum conductor steel reinforced
ADI	Area of Direct Impact
APLIC	Avian Powerline Interaction Committee
APM	Applicant Proposed Measure
ARB	Air Resources Board
ATCM	Airborne Toxic Control Measures
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAA	Clean Air Act
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CalARP	California Accidental Release Prevention
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Prevention
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
CIWMB	California Integrated Waste Management Board
CJUTCM	California Joint Utility Traffic Control Manual
CLP	Cross-linked polyethylene
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CPRC	California Public Resources Code
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRTP	Cultural Resources Treatment Plan
CSMP	Construction Site Monitoring Program
CUPA	Certified Unified Program Agency
CWA	Clean Water Act

DHS	Department of Health Services
DOC	California Department of Conservation
DOGGR	Department of Oil, Gas, and Geothermal Resources
DOSH	Division of Occupational Safety and Health
DPM	Diesel particulate matter
DPR	Department of Pesticide Regulation
DRECP	Desert Renewable Energy Conservation Plan
DTSC	Department of Toxic Substance Control
DWR	Department of Water Resources
EDR	Environmental Data Resources, Inc.
EHC	Environmental Health Criteria
EKAPCD	Eastern Kern Air Pollution Control District
EMF	Electric and magnetic fields
ENA	Electrical Needs Area
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHSZ	High Fire Hazard Severity Zone
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse gas
GLO	General Land Office
GTA	Greater Tehachapi Area
GTASCP	Greater Tehachapi Area Specific and Community Plan
HCP	Habitat Conservation Plan
HSWA	Hazardous and Solid Waste Act
HVAC	Heating, ventilation, and air-conditioning
HWCL	Hazardous Waste Control Law
IARC	International Agency for Research on Cancer
IBC	International Building Code
ICC	International Code Council
IEEE	Institute of Electrical and Electronics Engineers
IS	Initial Study
IWMB	Integrated Waste Management Board
KCWA	Kern County Water Agency
LACM	Natural History Museum of Los Angeles County
LOS	Level of service
LTC	Load tap changing
LWS	Light-weight steel

MBTA	Migratory Bird Treaty Act
MEER	Mechanical Electrical Equipment Room
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MT	Metric ton
MVA	Megavolt-amperes
MVAR	Megavolt-ampere reactive
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCP	National Contingency Plan
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NFIP	National Flood Insurance Program
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NSH	National Seismic Hazards
NSR	New Source Review
OEHHA	Office of Environmental Health Hazard Assessment
OHGW	Overhead ground wire
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPGW	Overhead optical ground wire
PEA	Proponent's Environmental Assessment
PGA	Peak ground acceleration
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
PRC	Public Resources Code
PRMP	Paleontological Resources Management Plan
PTC	Permit to Construct
PT	Potential transformer
PVC	Polyvinyl chloride
RCRA	Recovery Act of 1976
ROW	Right-of-way
RPF	Registered Professional Forester
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition

SCE	Southern California Edison Company
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SPCC	Spill Prevention Control and Countermeasure
SR	State Route
SRRE	Source Reduction Recycling Element
SSJVIC	Southern San Joaquin Valley Information Center
SSURGO	Soil Survey Geographic
SVP	Society of Vertebrate Paleontology
SWGS	Solid Waste Generation Study
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TCCWD	Tehachapi-Cummings County Water District
TMDL	Total maximum daily load
TSP	Tubular steel pole
TTC	Temporary traffic control
TWW	Treated wood waste
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USGS	U.S. Geological Survey
WDR	Waste discharge requirement
WEAP	Worker Environmental Awareness Program
WECC	Western Electricity Coordinating Council
WHO	World Health Organization

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

DRAFT

Mitigated Negative Declaration

Southern California Edison Company's Banducci Substation Project

Application No. A.12-11-011

Lead Agency: California Public Utilities Commission
Energy Division
505 Van Ness Avenue, 3rd Floor
San Francisco, California 94102

Contact: Jensen Uchida, Project Manager
(415) 703-5484 or Jensen.Uchida@cpuc.ca.gov

1. Mitigated Negative Declaration

1.1 Project Information

Project: Banducci Substation Project
Kern County, California

Project Sponsor: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770
(626) 302-6634

1.2 Introduction

Pursuant to California Public Utilities Commission's (CPUC) General Order 131-D, Southern California Edison Company (SCE) filed an application (A.12-11-011) with the CPUC on November 15, 2012 for a Permit to Construct (PTC) the Banducci Substation Project ("Proposed Project"). On June 17, 2014, SCE filed an Amended Proponent's Environmental Assessment (PEA), prepared by SCE pursuant to the CPUC's Rules of Practice and Procedure Rule 2.4 (CEQA Compliance). The CPUC Energy Division deemed the Amended PEA and Application complete on July 15, 2014.

Pursuant to CEQA, the CPUC must prepare an Initial Study (IS) for the Proposed Project to determine if any significant adverse effects on the environment would result from project implementation. The IS utilizes the significance criteria outlined in Appendix G of the CEQA *Guidelines*. If the IS for the project indicates that a significant adverse impact could occur, the CPUC would be required to prepare an Environmental Impact Report.

According to Article 6 (Negative Declaration Process) and Section 15070 (Decision to Prepare a Negative Declaration or Mitigated Negative Declaration) of the CEQA *Guidelines*, a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

(b) The initial study identifies potentially significant effects, but:

(1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

Based on the analysis in the Initial Study, it has been determined that all project-related environmental impacts could be reduced to a less than significant level with the incorporation of feasible mitigation measures. Therefore, adoption of a Mitigated Negative Declaration (MND) will satisfy the requirements of CEQA. The mitigation measures included in this MND are designed to reduce or eliminate the potentially significant environmental impacts described in the Initial Study. Where a measure described in this document has been previously incorporated into the project, either as a specific project design feature or as an Applicant-Proposed Measure, this is noted in the discussion. Mitigation measures are structured in accordance with the criteria in Section 15370 of the CEQA *Guidelines*.

1.3 Project Description

Southern California Edison Company (SCE) is proposing to construct the Banducci Substation Project, which would include construction of the following components:

- New Banducci 66/12 kilovolt (kV) Substation,
- Two new 66 kV subtransmission lines segments that would loop into the existing Correction-Cummings–Kern River #1 66 kV subtransmission line,
- Three new underground 12 kV distribution getaways, and
- Telecommunication facilities to connect the proposed Banducci Substation to SCE's existing telecommunications system.

1.4 SCE PEA Alternatives Considered

The purpose of an alternatives analysis pursuant to CEQA is to identify options that would feasibly attain the project's objectives while reducing the significant environmental impacts resulting from the Proposed Project. CEQA does not require the inclusion of an alternatives analysis in MNDs because the Initial Study concludes that, with incorporation of mitigation measures, there would be no significant adverse

impacts resulting from the Proposed Project (CEQA Guidelines Sections 15063(d) and 15071). Therefore, no alternatives analysis needs to be provided in the Initial Study.

However, pursuant to Section IX.B.1(c) of CPUC General Order 131-D, SCE's application did consider several locations and subtransmission route alternatives and system alternatives (SCE, 2012). To meet the need in the ENA, SCE first considered three System Alternatives:

- **System Alternative 1:** Construction of the new Banducci 66/12 kV Substation, which would incorporate two new 28.0 megavolt-amperes (MVA) banks and three new 12 kV distribution circuit getaways.
- **System Alternative 2:** Expansion of the existing Cummings 66/12 kV Substation, which would incorporate two new 28.0 MVA replacement banks and three additional 12 kV distribution circuit getaways.
- **System Alternative 3:** No Project Alternative

Because SCE determined that new infrastructure would be required as part of the Proposed Project, SCE also considered alternative locations for that infrastructure. The placement of a substation within this area would allow SCE to increase transformer capacity in the ENA and to transfer load between distribution circuits and the existing substations located near the ENA. The Proposed Project Study Area was developed using the following basic requirements:

- The substation should be in an area where existing and future electrical demand can be served within the ENA.
- The substation should be located in an area where it would improve operational flexibility with adjacent substations and circuits.

Twenty-six (26) substation sites were analyzed and eliminated from further consideration in the PEA because they failed to meet basic project objectives, would not be feasible, or would not avoid or substantially reduce potential environmental effects of the Proposed Project. Two potential substation sites and one potential 66 kV subtransmission line route that would connect the new substation to SCE's existing electrical system were identified for further consideration in the PEA. The preferred and alternative substation sites are located in proximity to the existing Correction-Cummings–Kern River 1 66 kV Subtransmission Line. Additional subtransmission line routes were not evaluated because construction of any other source route would cause additional environmental impacts.

However, the alternative substation site studied in the PEA currently is the location of an existing house and appurtenant structures associated with its current use as an office. Construction of a substation at the alternative site would require additional work, including but not limited to demolition of these existing developed features. That additional work would be expected to cause additional environmental impacts in areas such as aesthetics, air quality, greenhouse gas emissions, hazards and hazardous materials, and noise. Although the alternative substation site would not require the conversion of Prime Farmland as would the proposed substation site, overall, the substation site selected for the Proposed Project is expected to result in fewer overall environmental impacts when compared to the alternative site.

SCE also explored the option of using wireless antenna system for this project as an alternative to the telecommunication system upgrades. However, there is no existing wireless infrastructure in place to support the requirements for this project. For example, at Cummings Substation the property's footprint is not large enough to accommodate an antenna tower, there is no room for a new Mechanical Electrical Equipment Room (MEER) to house the telecommunication equipment to support the antenna system, and there is no line of sight between Cummings and Banducci substations. Further, there are no third party utilities that could provide wireless communication in the area and additional antenna locations

would have to be identified and developed. Therefore, SCE determined that the proposed fiber optic cable plan is the most viable option for this project (SCE, 2014b).

SCE's application (A.12-11-011) and Proponent's Environmental Assessment are available for public review at the CPUC Energy Division CEQA Unit and at the following website:

http://www.cpuc.ca.gov/Environment/info/aspen/banduccisubstation/banduccisubstation.htm

1.5 Environmental Determination

The Initial Study was prepared to identify the potential environmental effects resulting from Proposed Project implementation, and to evaluate the level of significance of these effects. The Initial Study relies on information in SCE's Amended PEA filed on June 17, 2014 (Application No. A.12-11-011), project site reconnaissance by the CPUC environmental team in September 2013, CPUC data requests, and other environmental analyses.

SCE's PEA identified measures to address potentially significant environmental impacts — the Applicant Proposed Measures (APMs) — and these APMs are considered to be part of the description of the Proposed Project. Based on the Initial Study analysis, additional mitigation measures are identified for adoption to ensure that impacts of the Proposed Project would be less than significant. The additional mitigation measures either supplement, or supersede the APMs. SCE has agreed to implement all of the additional recommended mitigation measures as part of the Proposed Project.

Implementation of the mitigation measures listed here and presented fully in the Initial Study would avoid potentially significant impacts identified or reduce them to less than significant levels.

Mitigation Measures for Conversion of Important Farmland

MM AG-1 **Minimize Impacts to Agricultural Resources.** For project components sited on or adjacent to Important Farmland, SCE shall:

- Minimize paving and ground-disturbing activities to the maximum extent practical within agricultural fields to retain agricultural soil characteristics.
- Notify adjacent agricultural operations of construction schedules at least 30 days in advance of the start of construction-related activities. The announcement shall: (1) describe where and when construction is planned; and (2) provide contact information for a point of contact for complaints about impacts to adjacent agricultural resources related to construction activities.

Prior to commencing ground disturbing activities, the Applicant shall submit a copy of the template used for the notification letter and a list of the landowners notified to the CPUC. The Applicant shall document all complaints and strategies for resolving complaints in regular reporting to the CPUC.

MM AG-2 **Compensate for Loss of Prime Farmland.** If Prime Farmland (as designated by the California Department of Conservation's Farmland Mapping and Monitoring Program) is converted to non-agricultural use, SCE shall mitigate for the loss of farmland through permanent preservation of off-site farmlands of equal or greater quality at a 1:1 ratio. Prior to the start of ground disturbance, SCE shall provide evidence to the CPUC that an Agricultural Conservation Easement has been granted in perpetuity to the local jurisdiction or an Agricultural Land Trust.

The Agricultural Land Trust must either: (A) demonstrate that it: (1) has adopted the Land Trust Alliance's Standards and Practices; (2) has substantial experience creating and stewarding Agricultural Conservation Easements; and (3) has a stewardship endowment to help pay for its perpetual stewardship obligations; or (B) be approved by the CPUC.

Prior to the commencement of ground disturbing activities, the applicant shall also provide appropriate funds (as determined by the CPUC) to compensate for reasonable administrative costs incurred by the easement holder, including an endowment to cover the cost of monitoring and enforcing the easement in perpetuity.

Mitigation Measure for Construction-Phase Air Quality

MM AQ-1 **Implement EKAPCD Dust Control Measures.** SCE shall implement the following measures during site preparation and construction:

- All soil excavated or graded should be sufficiently watered or treated with non-toxic soil stabilizers to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
- All clearing, grading, earth moving and excavation activities should cease: during periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown; or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.
- All fine material transported offsite should be sufficiently watered, treated with non-toxic soil stabilizers, or securely covered to prevent excessive dust.
- If more than 5,000 cubic yards of fill material will be imported to or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed.
- Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times.
- Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
- Where acceptable to the fire department, weed control should be accomplished by mowing instead of discing, thereby, leaving the ground undisturbed and with a mulch covering.
- Once initial leveling has ceased all inactive soil areas within the construction site should either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission.
- All active disturbed soil areas should be sufficiently watered or treated with non-toxic soil stabilizers to prevent excessive dust, but no less than twice per day.
- Onsite vehicle speed should be limited to 15 mph.
- All areas with vehicle traffic should be paved, treated with dust palliatives, or watered a minimum of twice daily.

- Streets adjacent to the project site should be kept clean and accumulated silt removed.
- Access to the site should be by means of an apron into the project from adjoining surfaced roadways. The apron should be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of the vehicles, a grizzly or other such device should be used on the road exiting the project, immediately prior to the pavement, in order to remove most of the soil material from the vehicle's tires.

Mitigation Measures for Impacts to Special-Status Plants

MM B-1 **Perform Biological Resource Surveys and Construction Monitoring.** After project approval, but within 30 days prior to the start of construction, updated biological resource surveys shall be conducted confirming special-status or listed biological resources, if any, in the vicinity of the Proposed Project, including the 66 kV subtransmission line route, telecommunication line route, wire stringing locations, access roads, and staging yards. Updated survey results, including a map of biological resources identified, shall be provided to the CPUC for review and verification prior to construction. Prior to submitting the first survey report, SCE shall consult with the CPUC regarding the preferred format.

During construction, any special-status or listed species identified shall be reported to the CPUC within 24 hours. SCE shall provide a report documenting biological surveys conducted, construction activities observed, biological resources identified, and compliance with APMs and MMs to the CPUC on a weekly basis. Maps of special-status or listed biological resources identified during project surveys and monitoring activities shall be provided to the CPUC on a weekly basis.

- Sensitive plant surveys shall be conducted by a qualified botanist, approved by the CPUC, familiar with plants in the Cummings Valley. Field surveys will be conducted at the appropriate time of year to locate and identify the target species. Surveys will focus on identifying whether state and federally listed species as well as California Native Plant Society special-status plants are present. In addition, potential habitat to support special-status plant species and sensitive vegetation communities will be identified.
- Clearance surveys shall be conducted no more than 7 days prior to the start of construction in a particular area to identify potential plant and animal species that may be affected by construction activities. Clearance surveys will include a field survey by a qualified botanist and wildlife biologist and will include 500-feet beyond the border of any proposed project disturbance areas (where these areas are legally accessible). Clearance surveys will be submitted to the CPUC for review and verification prior to construction.

Biological monitors shall monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique biological resources to ensure such resources are avoided to the extent feasible.

MM B-2 **Establish Special-status Plants Buffers.** If special-status plants are found during field surveys, a buffer shall be established around the plants or plant populations within which no construction work is permitted unless the CPUC determines that such work may proceed without significantly impacting the special-status and listed species. The size of the buffer shall be adequate to ensure that plants are not significantly disturbed

and shall be determined by a qualified biologist. Construction monitors shall ensure that work crews are aware of the buffer and related work restrictions.

If special-status plants cannot be avoided, SCE shall coordinate with the CPUC, CDFW, and USFWS to determine whether construction and operation impacts of the Proposed Project would be significant. Impacts to special-status plants will be considered significant if listed threatened or endangered species would be directly or indirectly affected; or plants presumed extinct in California (California Rare Plant Rank [CRPR] 1A) would be directly or indirectly affected; or ten (10) percent or more of a local occurrence of CRPR 1B or CRPR 2 species would be directly or indirectly affected.

In the event any of the above are triggered, SCE shall coordinate with the CPUC, CDFW, and USFWS to design and implement appropriate mitigation measures. These measures may include, but would not be limited to:

- **Avoidance**. Project construction would be adjusted as necessary to avoid or minimize impacts to special-status plants and provide a minimum 25-foot buffer area surrounding each avoided occurrence, where no project activities will take place.
- **Off-site Compensation.** SCE would provide compensation lands to protect off-site special-status plant occurrence(s). Compensation lands would protect acreage, habitat suitability, and overall numbers of each special-status plant at no less than a 1:1 ratio or levels comparable to the project's impacts. In addition, the applicant will provide funding for long-term conservation management of the compensation land. The applicant will prepare a Compensation Plan, identifying the proposed compensation lands, proposed habitat improvements and long-term management, and specific legal mechanism for long-term preservation (e.g., holder of conservation easement or fee title). The Conservation Plan will be subject to review and approval by the CPUC in consultation with the CDFW and, upon approval, will be implemented in full. In cases where a federally or state-listed threatened or endangered species may be affected, the Conservation Plan will conform to applicable conditions under any CESA or federal ESA Incidental Take Permit, Biological Opinion, or other consultation documents. Where a Habitat Conservation Plan or similar conservation instrument is applicable, then participation in that plan may constitute compliance with this habitat compensation requirement.
- **Salvage**. In instances where salvage and relocation for special status or listed species is feasible, SCE will consult with a qualified conservation and horticulture institute (such as Rancho Santa Ana Botanic Garden in Claremont, California) to design a Salvage and Relocation Plan, to be reviewed and approved by the CPUC in consultation with CDFW prior to disturbance of any occupied special-status plant habitat. The Plan will include at minimum: (a) collection/salvage measures for plants or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plants or seed banks; (c) location of the proposed recipient site, and detailed site preparation and plant introduction technique; (d) details for topsoil storage, as applicable; (e) time of year that the salvage and replanting or seeding will occur and the methodology of the replanting; (f) a description of the irrigation method(s), if used; (g) success criteria; and (h) a detailed monitoring program, commensurate with the Plan's goals.

- **Horticultural propagation and off-site introduction**. If salvage and relocation is not believed to be feasible for special-status plants, then the applicant will develop and implement an appropriate propagation and relocation strategy, based on the life history of the species affected. The strategy will include at minimum: (a) collection/ salvage measures for plant materials or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the strategy's goals.

MM B-3 **Minimize Noxious Weeds.** Precautions shall be taken to minimize the introduction of any invasive weeds. Construction vehicles and equipment shall be clean before they arrive at work areas in the project corridor. Any landscaping involving vegetation other than trees and shrubs shall consist of native seed mix or other ecologically appropriate, non-invasive plants. Only weed-free straw or mulch shall be used.

Mitigation Measures for Impacts to Special-Status Wildlife

MM B-4 **Manage Trash and Microtrash.** Trash and microtrash shall be removed from work areas daily. Construction monitors shall conduct daily sweeps of work areas to ensure all trash and microtrash has been collected and removed. Microtrash in the form of construction materials such as nuts and bolts or other small materials must be secured at the end of each work day in secured, closed containers.

MM B-5 **Wildlife Prevent Entrapment.** SCE shall ensure that all potential wildlife pitfalls (trenches, bores, portable water tanks, and other excavations) have been backfilled or securely covered at the end of each workday. If backfilling or covering is not feasible, these potential pitfalls will be sloped at a 3:1 ratio at the ends as wildlife escape ramps. The biological monitor shall inspect all potential pitfalls no fewer than three times daily throughout and at the end of each workday.

All pipes or other construction materials or supplies shall be covered or capped in storage or laydown areas. No pipes or tubing is to be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials shall be inspected for wildlife before it is moved, buried, or capped.

Should native wildlife become trapped in excavations, materials, or other project-related situation, the biological monitor shall remove it (if feasible and safe) or immediately contact CDFW and the CPUC. Any native wildlife encountered shall be allowed to leave the area unharmed.

If injured native wildlife is found on or near Project access roads, work areas, or the ROW, whether or not the injuries are obviously project-related, SCE shall contact and work with a local wildlife rehabilitator, animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. SCE shall bear the costs of veterinary treatment and rehabilitation for any native injured wildlife found on or near Project access roads, work areas, or the ROW and any native wildlife injured by Project-related activities.

Dead animals of non-special-status species found on Project access roads, work areas, or the ROW shall be reported to the appropriate local animal control agency within 24 hours or a biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found on Project roads, work areas, or the ROW shall be reported to the appropriate agency within 24 hours, and if required, the carcass handled according to agency guidelines.

Mitigation Measure for Impacts to Burrowing Owl

MM B-6 **Survey for and Avoid Burrowing Owl.** This mitigation measures supersedes APM BIO-3 (Burrowing Owl). Preconstruction surveys for burrowing owl shall be conducted in project areas within 30 days of construction. If any ground disturbing activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), avoidance measures shall include a no construction buffer zone of a minimum distance of 250 feet, consistent with the Staff Report on Burrowing Owl Mitigation (CDFG, 1995). SCE shall comply with CDFW burrowing owl mitigation guidelines as detailed in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012) or more recent updates, if available.

Construction activities shall be scheduled and planned to avoid burrowing owls and their burrows. If occupied burrows cannot be avoided, an appropriate relocation strategy shall be developed in conjunction with CDFW. Biological monitors shall monitor all construction activities that have the potential to impact active burrows.

Mitigation Measure for Impacts to Tehachapi Slender Salamander

MM B-7 **Survey Requirements and Avoidance Relocation Measures for Tehachapi Slender Salamander.** This mitigation measure supersedes APM BIO-4 (Tehachapi Slender Salamander).

Pre-construction surveys and avoidance measures shall be implemented for Tehachapi slender salamander subject to applicable permit requirements. For construction activities involving ground disturbance in or directly adjacent to occupied or suitable habitat for the Tehachapi slender salamander, preconstruction surveys shall be conducted by a qualified biologist, approved by the CPUC, prior to disturbance to determine if Tehachapi slender salamander individuals are present in the disturbance zone. If visual searches are used for pre-construction surveys, they shall be conducted no earlier than 72 hours prior to disturbance, and if pitfall trapping is used, it shall be conducted no earlier than 5 days prior to disturbance.

If Tehachapi slender salamanders are located, individuals within the disturbance zone shall be captured and relocated to the closest suitable habitat area containing talus, as and to the extent required by USFWS and/or CDFW in applicable permits or habitat conservation plans. If project activities are located within oak woodlands and ravines, construction activities shall avoid displacement of rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. Biological monitors shall monitor all construction activities in occupied or suitable Tehachapi slender salamander habitat to ensure that construction activities do not impact this species.

When occupied habitat for Tehachapi slender salamander is directly impacted by construction activities involving ground disturbance, a habitat restoration plan shall be developed for the Tehachapi slender salamander that specifies, at a minimum, the following: (1) the location of creation, enhancement, or restoration planting sites; (2) a

complete description of the hardscape (e.g., talus, rocks, and logs) to be installed and where hardscape materials will be deposited, along with desired leaf and litter cover; (3) a description of how the existing typical hydrologic regime will support Tehachapi slender salamander habitat; (4) the quantity and species of plants to be planted; (5) planting procedures, including the use of soil preparation and irrigation; (6) methods for the removal of non-native plants; (7) a schedule and action plan to maintain and monitor the creation/enhancement/ restoration area; (8) a list of criteria (e.g., growth, percent plant cover, plant diversity, debris, and hardscape) and performance standards by which to measure success of the creation/enhancement/restoration; and (9) contingency measures in the event that creation/enhancement/restoration efforts are not successful. Performance standards shall be defined by a site-specific pre-construction study of known locations occupied by Tehachapi slender salamander, including evaluation of specific cover; distance to water; water inundation levels; percent canopy cover; percent shrub and grass cover; presence of talus, boulder, log, or other refugia; and other factors. The restoration plan performance standard under this mitigation measure is to create, restore, or enhance areas so that Tehachapi slender salamanders can naturally colonize these areas or Tehachapi slender salamanders within the disturbance zone can be successfully relocated to these areas. The plan shall be prepared by SCE and submitted to the CPUC and the resource agencies for approval prior to ground disturbance activities that would have an impact on occupied habitat for the Tehachapi slender salamander.

Pre-construction survey methods, avoidance measures, and final mitigation requirements for this species shall be established by USFWS and CDFW. Permit applications submitted to CDFW shall include, at a minimum, the applicable mitigation measures from this document.

Mitigation Measure for Impacts to California Condor

MM B-8 **Halt Construction when California Condor Present.** SCE shall retain a qualified biologist with demonstrated knowledge of California condor identification to monitor all construction activities within the project area. If a California condor is present in any project work area (except flying over), construction activities shall be halted in that area (and within 500 feet of the condor) and the animal shall be allowed to leave the area on its own. All condor sightings in the project area will be immediately reported to the USFWS, CDFW, and the CPUC. Construction may resume upon the departure of the California condor and verification by a qualified biologist.

Mitigation Measure for Impacts to Nesting Birds

MM B-9 **Prepare Nesting Birds Management Plan and Conduct Surveys.** This mitigation measure supersedes APM BIO-2 (Pre-construction Surveys for Nesting Birds/Raptors).

Clearing of any vegetation (including agricultural fields and grasslands), site preparation in open or barren areas, or other project-related activities that may adversely affect breeding birds shall be scheduled outside the nesting season as feasible. Nesting season is generally February 1 to August 31, but varies with region, environmental factors, and species.

Within one week (7 days) prior to the start of construction in a particular area during nesting season, a nesting survey shall be conducted within project disturbance areas

and a 500-foot buffer surrounding all project disturbance areas (wherever legal access is available). At a minimum, nesting surveys shall be conducted from February 1 to August 31. A qualified biologist will determine if nesting activity is occurring either prior to or after this February-August period and nesting surveys will be performed accordingly.

If an active nest is found, a buffer shall be established around the nest in which no construction work is permitted. The size of the buffer will be adequate to ensure that the nest, nesting birds, and chicks (including fledglings and precocial chicks) are not disturbed. For nests of raptors and special-status bird species, the size of the buffer will be determined based on a project-specific nesting bird management plan approved by the appropriate resource agencies or consultation with the appropriate resource agencies. For all other nests, the size of the buffer will be determined by a qualified biologist. Construction monitors will ensure that work crews are aware of the buffer and related work restrictions. The buffer zone will remain in place until the young have fledged and are no longer dependent on the nest or the nest is no longer active, as determined by a qualified biologist.

An active nest is defined as a nest with eggs or chicks, or as otherwise defined by CDFW

If an active nest must be moved during the nesting season, SCE shall coordinate with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to obtain approval prior to moving the nest.

Prior to the start of construction, SCE shall prepare a draft Nesting Bird Management Plan, in consultation with the CPUC, describing measures to detect birds that may nest on and adjacent to the project site or facilities and to avoid impacts to or take of those birds or their nests during project construction. The draft Nesting Bird Management Plan shall be submitted to the CPUC for review and approval in consultation with USFWS and CDFW. The Nesting Bird Management Plan will be finalized by SCE prior to issuance of CPUC's Notification to Proceed.

The Nesting Bird Management Plan will describe avoidance measures, such as buffer distances from active nests, based on the specific nature of project activities, noise, or other disturbance of those activities, the bird species and conservation status, and other pertinent factors. The Plan will specify species' (or groups of species) appropriate buffer distances based on tolerance of human activities. Standard nest buffers shall be 300 feet, and 500 feet for raptor species, or as specified in the CPUC-approved Nesting Bird Management Plan.

Mitigation Measure for Impacts to Other Protected Species

MM B-10 **Follow APLIC Guidelines.** Design, install, and maintain distribution lines and all electrical components in accordance with the Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 to reduce the likelihood of electrocutions of large birds. Specifically, the phase conductors should be separated by a minimum of 60 inches. Where adequate separation is not feasible, avian protection materials should be used to cover electrical equipment (APLIC, 2006). Before construction begins, SCE shall submit a plan to the CPUC documenting that project design is consistent with APLIC guidelines.

Mitigation Measure for Loss of Sensitive Habitat

MM B-11 **Replace or Offset Sensitive Habitat Loss.** This mitigation measures augments APM BIO-5 (Avoidance of Sensitive Habitats). In the case of any conflict between Mitigation Measure B-11 and APM BIO-5, Mitigation Measure B-11 supersedes the APM.

Native vegetation in Big Sagebrush Scrub, Blue Oak Woodland, and Foothill Pine-Oak Woodland vegetation communities and aquatic features in construction sites shall be flagged for avoidance prior to construction activities. If avoidance is not feasible, SCE shall implement one or both of the following measures to offset or compensate for those impacts.

- **On-site Restoration.** If sensitive vegetation communities or habitat that may support special-status plants or animals are removed or degraded due to temporary project impacts, the applicant shall prepare and implement an Ecological Restoration Plan, to restore any temporary habitat loss within five (5) years of initial disturbance. The Plan will be subject to review and approval by the CPUC, in coordination with CDFW. The Ecological Restoration Plan's goal will be to replace habitat values that are damaged or degraded by the project. The plan will include: (a) soil or substrate preparation measures, such as recontouring, decompacting, or imprinting; (b) provisions for soil or substrate salvage and storage; (c) plant material collection and acquisition guidelines, including guidelines for salvaging, storing, and handling seed, cuttings, or rooted plants from the project site, as well as obtaining materials from commercial nurseries or collecting from outside the project area; (d) time of year that the planting or seeding will occur and the methodology of the planting; (e) an irrigation plan or alternate measures to ensure adequate water; (f) quantitative success criteria, to reflect yearly progress and final completion; (g) a detailed monitoring program to evaluate conformance with the success criteria; and (h) contingency measures to remediate the restoration site if success criteria are not met.

- **Compensation.** If sensitive vegetation communities or habitat that may support special-status species are removed or degraded, resulting in long-term or permanent project impacts (i.e., impacts lasting more than five [5] years), the applicant will provide for long-term habitat replacement by acquiring and protecting compensation land that will provide habitat value equivalent or greater than habitat removed for the project. Compensation may include off-site habitat restoration or other habitat improvements as needed, to replace habitat components affected by the project. In addition, the applicant will provide funding for long-term conservation management of the compensation land. The applicant will prepare a Compensation Plan, identifying the proposed compensation lands, proposed habitat improvements and long-term management, and specific legal mechanism for long-term preservation (e.g., holder of conservation easement or fee title). The Conservation Plan will be subject to review and approval by the CPUC in consultation with the CDFW. After approval, the Conservation Plan must be implemented in full. In cases where a federally or state-listed threatened or endangered species may be affected, the Conservation Plan will conform to applicable conditions under any CESA or federal ESA Incidental Take Permit, Biological Opinion, or other consultation documents. Where a Habitat Conservation Plan or similar conservation instrument is applicable, then participation in that plan may constitute compliance with this habitat compensation requirement.

Mitigation Measure for Impacts to Wetlands

MM B-12 **Delineate Jurisdictional Wetlands and Waters.** Prior to the start of construction, a jurisdictional delineation shall be conducted to describe the type and extent of waters of the United States, including wetlands, and/or waters of the State within the proposed impact area. The presence or absence of wetlands shall be verified through an analysis of any hydrological conditions, hydrophytic vegetation, and hydric soils pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008). SCE shall provide copies of delineation reports to the CPUC.

Prior to any impacts to jurisdictional areas, permits/agreements from the USACE, the CDFW, and the RWQCB shall be obtained for direct and indirect impacts to areas within these agencies' jurisdictions. SCE would implement all measures required by the permits/agreements as issued by the resource agencies, potentially including constraints on proposed activities and restoration of disturbed jurisdictional areas and/or replacement as determined by the resource agencies. Copies of permits issued shall be provided to the CPUC.

Mitigation Measure for Conflicts with Local Policies or Ordinances Protecting Trees

MM B-13 **Identify Trees Affected by Project.** Prior to construction, SCE shall identify any trees covered by tree protection local policies or ordinances that may be affected by construction of the Proposed Project and consult with applicable jurisdictional agencies prior to any tree alteration, removal, or other impacts. Impacts include trimming or removal of the tree; any construction activities within the dripline of the tree; any trenching or excavation that may damage tree roots, and any other project-related activities that may cause damage to the tree or as specified by local policies or ordinances protecting trees.

If operation of the Proposed Project requires tree trimming to the extent that would require a tree alteration or removal permit as a requirement of a local policy or ordinance protecting trees, SCE shall consult with the local agency and a local agency certified arborist consistent with CPUC General Order No. 131 D.

Mitigation Measure for Impacts to Known Cultural Resources

MM C-1 **Avoid Known Cultural Resources.** Where feasible, all impacts to sites identified in the preliminary cultural resource inventories shall be avoided and protected. Wherever a pole, access road, equipment, etc., must be placed or accessed within 100 feet of a recorded, reported, or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an Environmentally Sensitive Area (ESA) (without disclosure of the exact nature of the environmental sensitivity [i.e., the ESA is not identified as an archaeological site]). Construction equipment shall then be directed away from the ESA, and construction personnel shall be directed not to enter the ESA. Archaeological monitoring of Project construction shall occur in all areas of ground disturbing activity that occur within 100 feet of a cultural resource ESA.

Mitigation Measures for Impacts to Unknown Archaeological Resources

MM C-2 **Conduct Cultural Resources Surveys.** Prior to construction, and based on final engineering, cultural resource surveys would be conducted in areas of the Area of Direct Impact

(ADI) that have not been previously surveyed for the Proposed Project. No work shall be conducted in the previously un-surveyed areas until approval has been received by the CPUC. Supplemental cultural resource surveys of all new areas that would be affected shall be conducted by a qualified professional archaeologist. Any identified cultural resource would be documented and evaluated for its eligibility for listing in the CRHR. A supplemental technical report shall be provided to the CPUC discussing the supplemental surveys, documented and evaluated cultural resources, potential impacts, and avoidance and minimization measures. Ideally, cultural resources found to meet any of the CRHR eligibility criteria would be avoided and preserved in place. If avoidance is not feasible, then SCE and CPUC shall develop and implement appropriate mitigation measures to reduce any impacts to a less-than-significant level and all ground disturbing activities would be monitored by a qualified archaeologist.

MM C-3 **Treat Previously Unidentified Cultural Resources Appropriately.** If previously unidentified cultural resources are unearthed during construction of the Proposed Project, construction work in the immediate area of the find shall be halted and directed away from the discovery until a qualified professional archaeologist assesses the significance of the resource. The archaeologist, in consultation with SCE and the CPUC, shall make the necessary plans for evaluation of the CRHR-eligibility of find(s) and for the assessment and mitigation of impacts if the finds are found to be historically significant according to CEQA (CEQA Guidelines Section 15064.5(a)).

SCE shall develop a Cultural Resources Treatment Plan (CRTP) for all known and newly discovered cultural resources within the Project ADI, including procedures for protection and avoidance of ESAs, evaluation and treatment of the unexpected discovery of cultural resources including Native American burials; provisions and procedures for Native American consultation; detailed reporting requirements by the Project Archaeologist; curation of any cultural materials collected during the Project; and requirements to specify that archaeologists and other discipline specialists meet the Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP).

Implementation of the CRTP shall ensure that known and recorded cultural resources will be avoided during construction. Specific protective measures shall be defined in the CRTP to reduce the potential adverse impacts on any presently undetected cultural resources to less-than-significant levels. The CRTP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction.

MM C-4 **Train Construction Personnel Regarding Cultural and Paleontological Resources.** Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained, by a qualified archaeologist, regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and paleontological resources, and protection of all archaeological and paleontological resources during construction. SCE shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of cultural or paleontological materials. All personnel shall be instructed that unauthorized removal or collection of artifacts is a violation of State law and unauthorized collection or disturbance of fossils is prohibited. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits or fossils. SCE shall

provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA and anticipated procedures to treat unexpected discoveries. A record of all trained personnel shall be kept and provided to the CPUC as requested.

Mitigation Measures for Impacts to Paleontological Resources

MM C-5 **Develop a Paleontological Resources Management Plan.** Prior to construction, SCE shall retain a qualified paleontologist to prepare a Paleontological Resources Management Plan (PRMP). The PRMP shall identify construction impact areas where significant paleontological resources may be encountered and the depths at which those resources are likely to be discovered. The Plan shall outline a coordination strategy to ensure that all construction disturbance in high sensitivity sediments or exceeding 10 feet in depth would be monitored full-time by qualified professionals. The Plan shall also detail methods of recovery; post-excavation preparation and analysis of specimens; final curation of specimens at a recognized, accredited facility; data analysis; and reporting, in the event that paleontological resources are encountered during construction.

MM C-6 **Monitor Construction for Paleontology.** Based on the paleontological sensitivity assessment and Paleontological Resource Management Plan consistent with Mitigation Measure C-5 (Develop a Paleontological Resource Management Plan), SCE shall ensure that full-time construction monitoring is conducted by the Paleontological Resource Monitor in areas determined to have high sensitivity. Sediments of moderate or undetermined sensitivity shall be monitored by a Paleontological Resource Monitor on a part-time basis (as determined by the Qualified Paleontologist). Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. The monitor may also screen sediments to check for the presence of microvertebrates if they are believed to be present. In the event that a paleontological resource is discovered, the monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance, and collected. Mitigation Measure C-6 does not apply to any drilling construction activities.

MM C-7 **Conduct Curation and Final Reporting.** All significant fossils collected will be prepared in a properly equipped paleontology laboratory to a point ready for curation no more than 45 days after all fieldwork is completed. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to an accredited museum repository for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of SCE.

At the conclusion of laboratory work and museum curation of any discovered paleontological resources, a final report will be prepared and submitted to the CPUC describing the results of the paleontological resource monitoring efforts associated with the project. The report will include a summary of the field and laboratory methods, an overview of the project area geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. A copy of the report will also be submitted to the designated museum repository.

Mitigation Measure for Disturbance of Human Remains

MM C-8 **Treat Human Remains Appropriately.** If human remains are unearthed during construction activities, construction work within 100 feet of the discovery shall be halted and directed away from the discovery until the county coroner can determine whether the remains are those of a Native American. If they are those of a Native American, the following would apply:

- The coroner shall contact the Native American Heritage Commission.
- If discovered human remains are determined to be Native American remains, and are released by the coroner, these remains shall be left in situ and covered by fabric or other temporary barriers.
- The human remains shall be protected until SCE, the landowner, and the Native American Heritage Commission come to a decision on the final disposition of the remains.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).

Mitigation Measure for Seismic-related Ground Failure and Liquefaction

MM G-1 **Conduct Geotechnical Investigations for Liquefaction.** Because seismically induced liquefaction-related ground failure has the potential to damage or destroy Project components, the design-level geotechnical investigations to be performed by the SCE shall include investigations designed to assess the potential for liquefaction to affect the new Project structures and replacement poles within Cummings and Tehachapi Valleys in areas with potential liquefaction-related impacts. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the Project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables to allow ground deformations without damage to structures. Study results and proposed solutions to mitigate liquefaction shall be provided to the CPUC for review and approval at least 60 days before final Project design.

Mitigation Measure for Transport, Use, or Disposal of Hazardous Materials

MM H-1 **Prepare and Implement Worker Environmental Awareness Program (WEAP).** SCE shall develop and implement a project-specific WEAP, which shall be submitted to the CPUC for review and approval prior to construction. The WEAP shall include, at a minimum, the following provisions:

- A presentation shall be prepared by SCE and used to train all site personnel prior to the commencement of work. A record of all trained personnel shall be kept and provided to the CPUC as requested. Crewmembers who have attended the WEAP training presentation shall be provided with a card or a hard hat sticker indicating that they have completed the WEAP training.
- Instruction on compliance with Proposed Project mitigation measures, including site-specific biological resources protective measures.

- A list of phone numbers of SCE environmental specialist personnel associated with the Proposed Project (archaeologist, biologist, environmental coordinator, and regional spill response coordinator).
- Instruction on the individual responsibilities under the Clean Water Act, the project SWPPP, site-specific BMPs, and the location of Material Safety Data Sheets for the project.
- Worker Training on Emergency Release Response Procedures to include hazardous materials handling procedures for reducing the potential for a spill during construction, and hazardous material clean up procedures and training to ensure quick and safe cleanup of accidental spills.
- Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination. The foreman or regional spill response coordinator shall have authority to stop work at that location and to contact the Certified Unified Program Agency (CUPA) (i.e., Kern County Environmental Health Services Department) immediately if unanticipated visual evidence of potential contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the CUPA or other entities as specified by the CUPA.
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the Proposed Project.

Mitigation Measure for Residual Herbicides and Pesticides

MM H-2 **Identify Pesticide/Herbicide Contamination.** Prior to project construction, soil samples shall be collected in construction disturbance areas where the land has historically or is currently being farmed to identify the possibility of and to delineate the extent of pesticide and/or herbicide contamination. Materials containing elevated levels of pesticide or herbicide in areas of trenching or excavation will require special handling and disposal procedures. The local Certified Unified Program Agencies (CUPA) shall be contacted to provide oversight regarding the handling, treatment, and/or disposal options for pesticide or herbicide contaminate soil. Standard dust suppression procedures (as defined in Mitigation Measure AQ-1 [Implement EKAPCD Dust Control Measures]) shall be used in these construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public.

Mitigation Measure for Discovery of Unknown Contamination

MM H-3 **Observe Exposed Soil for Evidence of Contamination.** During grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall segregate any suspect soil already excavated, stop work until sampling and testing is done to determine appropriate treatment and disposal, and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials/waste. Additionally, in the event that evidence of contamination is observed, the contractor shall document the

exact location of the contamination and shall immediately notify the local CUPA and CPUC, describing proposed actions. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CPUC.

Mitigation Measure for Wildland Fires

MM H-4 **Prepare a Fire Management Plan.** SCE's Fire Management Plan shall be project-specific and shall include guidance for preventing, controlling, and extinguishing fires during construction and maintenance activities for the Proposed Project. The Fire Management Plan shall include provisions applicable to construction crews and activities and maintenance crews and activities. The Fire Management Plan shall include protocols to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. The Plan shall require construction crews to carry fire extinguishing equipment, prohibit trash burning, restrict smoking to cleared areas, and designate vehicle parking areas away from any dry vegetation to reduce potential ignition of fires at or near the project sites. Additionally the Plan shall include the following measures:

- Cease work during Red Flag Warning events in areas where grassland or other vegetation would be susceptible to accidental ignition by project activities that could ignite a fire (such as welding or use of equipment that could create a spark by striking rock). During Red Flag Warning events, as issued daily by the National Weather Service, all non-emergency construction and maintenance activities shall cease in affected areas.
- Remove hazards from work areas. SCE shall clear dead and decaying vegetation from the work area prior to starting construction and/or maintenance work. The work areas would include only those areas where personnel are active or where equipment is in use or stored, and may include: the Proposed Banducci Substation area and associated new fiber optic and subtransmission equipment; the new fiber optic telecommunications route; construction laydown areas; pull, tension, and splicing sites; access roads; parking pads; and any other sites adjacent to Proposed Project components where personnel are active or where equipment is in use or stored. Cleared dead and decaying vegetation shall either be removed or chipped and spread on site in piles no higher than six (6) inches.

Mitigation Measure for Impacts to Water Quality and Prevention of Soil Erosion

MM HYD-1 **Develop Stormwater Pollution Prevention Plan and Implement Best Management Practices.** The Applicant shall develop a Stormwater Pollution Prevention Plan (SWPPP), as required by the RWQCB and outlined in General Permit 2009-0009-DWQ, which will describe best management practices (BMPs) to prevent the acceleration of natural erosion and sedimentation rates. The SWPPP will include a written site-specific Construction Site Monitoring Program (CSMP). A monitoring program, which shall include a reporting requirement to the CPUC, will be established to ensure that the prescribed BMPs are followed during project construction. BMPs shall include but not be limited to the following:

- Use of silt fences or other sediment containment methods placed around and/or downslope of disturbed areas prior to construction;

- Protection of drain inlets from receiving polluted stormwater through the use of filters, such as fabrics, gravel bags, or straw wattles;
- Construction of a stabilized construction entrance/exit to prevent tracking onto roadways;
- Establishment of a vehicle storage, maintenance, and refueling area, if needed, to minimize the spread of oil, gas, and engine fluids. Use of oil pans under stationary vehicles is strongly recommended; and
- Prohibition on overnight parking of mobile equipment within 100 feet of wetlands, culverts, or creeks. Stationary equipment (e.g., pumps, generators) used or stored within 100 feet of wetlands, culverts, or creeks will be positioned over secondary containment.

A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials management and spill response.

All BMPs shall be inspected on a weekly basis, and at least once every 24-hour period during extended storm events. BMPs shall be inspected as described in the SWPPP, maintained on a regular basis, and replaced as necessary through the course of construction. For each inspection required, an inspection checklist will be completed using a form as described in Attachment C of General Permit 2009-0009-DWQ. This checklist will remain onsite with the SWPPP.

Mitigation Measures for Impacts to Groundwater Supply

MM HYD-2 **Use Non-potable Water for Dust Control or Soil Compaction.** Project water supply for dust control or soil compaction activities shall be obtained from non-potable sources, if available, and ensured in a water contract through a local water agency or district.

MM HYD-3 **Dewater Construction Site As Needed.** If groundwater is unexpectedly encountered during construction, operation, or decommissioning of the Project, dewatering activities shall be performed in compliance with the California Stormwater Quality Association (CASQA) Handbook for Construction or other similar guidelines, as approved by the Central Valley and/or Lahontan RWQCB, as applicable based on jurisdiction. The Applicant shall submit a written description of all executed dewatering activities, including steps taken to return encountered groundwater to the subsurface and/or to dispose of the dewatered groundwater upon the completion of dewatering activities at the affected site(s).

Mitigation Measures for Construction Noise

MM N-1 **Limit Construction Noise to Daytime Hours.** SCE shall limit grading, scraping, hole augering and pole installation to daylight hours, between 6:00 a.m. and 9:00 p.m. Exceptions for work outside of these hours shall be allowed for project safety or to take advantage of the limited times when power lines can be taken out of service or as determined to be warranted by the CPUC. If nighttime work is needed because of clearance restrictions on power lines, SCE shall take appropriate measures to minimize disturbance to local residents by informing them in advance of the work schedule and probable inconveniences.

MM N-2 **Minimize Construction Vehicle and Traffic Noise.** SCE shall maintain construction equipment and vehicle mufflers in accordance with equipment vendor specifications on all engines used in construction. Where feasible, construction traffic shall be routed to avoid noise-sensitive areas, such as residences, schools, religious facilities, hospitals, and parks.

Mitigation Measures for Construction Traffic and Interference with Emergency Access during Construction

MM T-1 **Restrict Lane Closures.** SCE shall restrict all necessary lane closures or obstructions on major roadways associated with overhead or underground construction activities to off-peak periods in congested areas to reduce traffic delays. Lane closures must not occur between 6:00 and 9:30 a.m. or between 3:30 and 6:30 p.m., unless otherwise authorized in writing by the responsible public agency issuing an encroachment permit.

MM T-2 **Ensure Emergency Access and Response.** Prior to construction, SCE shall coordinate with Kern County and emergency service providers regarding emergency access and/or response to the Proposed Project area during construction activities to avoid restricting movements of emergency vehicles. SCE shall ensure that the Proposed Project has considered the relevant Kern County ordinances and building codes so as not to hinder or interfere with emergency access or response (such as, but not limited to, the Kern County Code of Building Regulations: Chapter 17.32, Fire Code and Chapter 17.34, Wildland-Urban Interface Code).

Police departments, fire departments, ambulance services, and paramedic services serving the project area shall be notified 30 days in advance by SCE of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where roads will be temporarily blocked, work crews shall be ready at all times to accommodate emergency vehicles through immediately stopping work for emergency vehicle passage and/or facilitating the use of short detours and alternate routes in conjunction with local agencies.

MM T-3 **Implement Traffic Management Plan.** SCE shall follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. SCE is a member of the California Joint Utility Traffic Control Committee, which published the California Joint Utility Traffic Control Manual (2010). SCE will follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the CVC. These recommendations include provisions for safe access of police, fire, and other rescue vehicles.

2. Environmental Determination

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" and requiring implementation of mitigation as indicated by the checklist on the following pages.

☐ Aesthetics	☒ Agriculture & Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☐ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials	☒ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☒ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☒ Transportation/Traffic	☐ Utilities/Service Systems	☒ Mandatory Findings of Significance

2.2 Environmental Determination

On the basis of this initial evaluation:

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

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

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

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

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

Mary Jo Borak — 11-5-14

Mary Jo Borak, Supervisor
Energy Division CEQA Unit
California Public Utilities Commission

Date

3. Introduction to the Initial Study

3.1 Proposed Project Overview

Southern California Edison Company (SCE), a regulated California utility, filed an application with the California Public Utilities Commission (CPUC) on November 15, 2012, for a Permit to Construct (PTC) the Banducci Substation Project (Proposed Project). On June 17, 2014, SCE submitted an Amended Proponent's Environmental Assessment (PEA) to the CPUC. The application and Amended PEA were deemed complete by the CPUC on July 15, 2014.

SCE is proposing to construct the Proposed Project, which would include the following components:

- Construction of a new Banducci 66/12 kilovolt (kV) Substation,
- Construction of two new 66 kV subtransmission lines segments that would loop into the existing Correction-Cummings–Kern River #1 66 kV subtransmission line,
- Construction of three new underground 12 kV distribution getaways, and
- Installation of telecommunication facilities to connect the proposed Banducci Substation to SCE's existing telecommunications system.

SCE's project objectives include adding sufficient additional substation capacity to the Electrical Needs Area (ENA), as well as three additional 12 kV distribution circuits, to increase capacity and meet current and projected load growth in the Cummings Valley, specifically in the communities of Bear Valley Springs and Stallion Springs. Additional details on the objectives appear in Section 4 (Project Description), specifically in Section 4.9.1 (Project Objectives).

3.2 Environmental Analysis

3.2.1 CEQA Process

This Initial Study (IS) has been prepared pursuant to the California Environmental Quality Act (CEQA), the amended State CEQA Guidelines (14 CCR 15000 et seq.), and the CPUC CEQA rules (Rule 2.4). The purpose of the Initial Study is to inform the decision-makers, responsible agencies, and the public of the Proposed Project, the existing environment that would be affected by the project, the environmental effects that would occur if the project is approved, and proposed mitigation measures that would avoid or reduce environmental effects.

A Mitigated Negative Declaration (MND) has been prepared based on the assessment of potential environmental impacts identified in the IS. All potentially significant impacts associated with the project can be mitigated to a level below significance; therefore, an MND can be adopted by the CPUC in accordance with Section 21080 of the Public Resources Code and CEQA Guidelines Section 15070.

3.2.2 CEQA Lead Agency

The CPUC is the lead agency for review of the project under CEQA because it must make a decision whether to adopt the MND and to approve or deny the PTC.

3.2.3 Initial Study

The IS presents an analysis of potential effects of the Proposed Project on the environment. The IS relies on information from SCE's Amended PEA and associated submittals, site visit, CPUC data requests, and additional research.

Construction activities and project operation could have direct and indirect impacts on the environment. The following environmental parameters are addressed based on the potential effects of the Proposed Project and potential growth-inducing or cumulative effects of the Proposed Project in combination with other projects:

- Aesthetics
- Agricultural Resources
- Air Quality
- Greenhouse Gases
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Traffic and Transportation
- Utilities and Service Systems
- Corona and Induced Current Effects
- Mandatory Findings of Significance

The IS has been organized into the following sections:

- Section 3: Introduction to the Initial Study. Provides an introduction and overview describing the Proposed Project and the CEQA process.
- Section 4: Project Description. Presents the project objectives and provides an in-depth description of the Proposed Project, including construction details and methods.
- Section 5: Initial Study: Environmental Analysis and Mitigation. Includes a description of the existing conditions and analysis of the Proposed Project's potential environmental impacts, and identifies mitigation measures to reduce potentially significant impacts to less than significant levels.
- Section 6: Mitigation Monitoring Plan. Includes applicant proposed measures (APMs) and mitigation measures that SCE must implement as part of the project, actions required to implement these measures, monitoring requirements, and timing of implementation for each measure.
- Section 7: References. Lists the sources of information used to prepare the IS.
- Appendix A: List of Preparers
- Appendix B: Temporary and Permanent Land Disturbance

4. Project Description

4.1 Project Title

SCE Banducci Substation Project
SCE Application No. A.12-11-011

4.2 Project Sponsor's Name and Address

Southern California Edison Company
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770

4.3 Lead Agency Name and Address

California Public Utilities Commission
Energy Division
505 Van Ness Avenue, Third Floor
San Francisco, California 94102

4.4 Lead Agency Contact Person and Phone Number

Jensen Uchida, Project Manager
Energy Division
Phone: (415) 703-5484
E-mail: Jensen.Uchida@cpuc.ca.gov

4.5 Project Location

The proposed 3.3-acre Banducci Substation would be located on a 6.3-acre site in south central Kern County, west of the City of Tehachapi. The site is at the southeast corner of Pelliser Road and unimproved Dale Road in the community of Cummings Valley (see Figure 4-1, Project Location). The Proposed Project site is in close proximity to the existing Correction-Cummings–Kern River #1 66 kV subtransmission line. Two new subtransmission segments would be constructed on new and replaced poles along Pelliser Road, Highline Road, and within the substation perimeter. A total of 30 miles of fiber optic conduit and cable would be installed in a loop between the proposed Banducci Substation and the existing Cummings and Monolith Substations, located approximately 6 and 12 miles east of the Proposed Project site, respectively.

4.6 Surrounding Land Uses and Setting

The Proposed Project is located entirely within unincorporated Kern County, California. In general, the land surrounding the Proposed Project is rural with mountainous areas to the north and south. The City of Tehachapi is the only incorporated city in the project area. It is located approximately 10 miles east of the Cummings Valley and portions of the proposed telecommunication routes for the Proposed Project would be within the City limits.

The proposed Banducci Substation site has a history of general agricultural use. The vicinity of the site is also in agricultural use, with occasional isolated farm residences along local roads. The nearest cluster of

residential development to the site is the community of Stallion Springs, approximately 2 miles southwest of the project site. The community of Bear Valley Springs is located in a separate valley approximately 3 miles northwest of the proposed Banducci Substation site. The California Correctional Institution is located approximately 1.6 miles northeast and east of the proposed substation site within the City of Tehachapi.

Several residences are located near the proposed telecommunications routes. The closest of the residences are one single family residence located off Highline Road just north of the Proposed Telecommunications Route #1 and several clusters of residences located just east and west of the Proposed Telecommunications Route #2 along South Curry Street and South Mill Street in the City of Tehachapi.

4.7 General Plan Designation

The Proposed Project would be entirely within Kern County. Although the Proposed Project would not be subject to local plans and policies, this assessment considers project consistency with the federal, state, and local plans, including the Kern County General Plan and the Greater Tehachapi Area Specific and Community Plan (GTASCP), consistent with CPUC General Order 131-D (Kern County, 2009 and 2010).

The proposed Banducci Substation site would be located on land designated as Intensive Agriculture by the Kern County General Plan and the GTASCP (Kern County, 2009). "Public utility uses" is an allowed use in the Intensive Agriculture designation. The proposed telecommunications routes would be located on lands designated in the Kern County General Plan as Residential, Incorporated Cities (within the City of Tehachapi), Resource Reserve, and Intensive. Public utility uses are consistent with these General Plan designations as well.

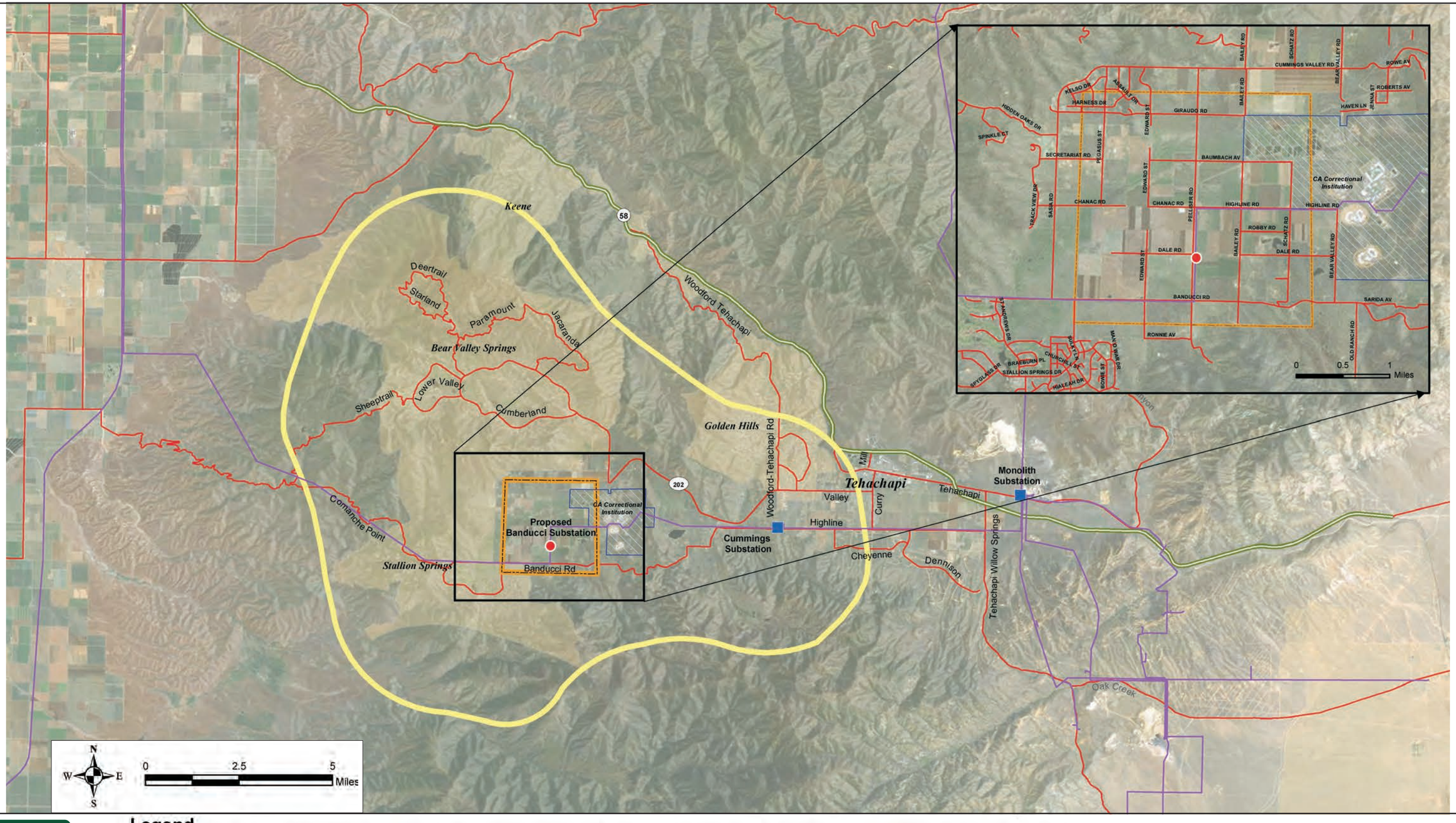
Four potential staging yard locations have been proposed. Temporary staging yards for use during construction would be located on the Banducci Substation property, and on previously disturbed land North of Highline Road and in Highwind Substation. These would be within the Intensive Agriculture land use designation (Kern County, 2009). The Tehachapi Service Center in the City of Tehachapi would also be used as a staging yard. It is designated for light industrial, residential, and manufacturing uses, with commercial and utility-related land uses.

4.8 Zoning

Most of the Substation Study Area (see Figure 4-1) is in Kern County and is zoned A (Exclusive Agriculture). A small area at the northwest corner of the study area is zoned E2-1/2 (Estate 2.5 acres, Residential Suburban Combining). A portion of the California Correctional Institution property is in the eastern part of the study area. It is within the City of Tehachapi and is zoned A (Agriculture), which was its zoning designation when the property was annexed in 1998.

Proposed Project components would be located within or adjacent to the following zoning districts:

- Banducci Substation property (substation and staging yard), North of Highline Road staging yard, and Highwind Substation staging yard (in Kern County):
  - A (Exclusive Agriculture).
- Tehachapi Service Center staging yard (in Tehachapi):
  - M-2 (Light Industrial)



Aspen Environmental Group

Source: SCE, 2014a.

Legend

- Proposed Banducci Substation
- Existing SCE Substation
- Banducci Electrical Needs Area
- Existing Subtransmission Lines
- Freeway / Major Highway
- Major Road / Minor Highway
- Substation Study Area
- CA Correctional Institution

Figure 4-1
Project Location

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- Telecommunications routes (in Kern County and Tehachapi):

  Agriculture:

  - A (Exclusive Agriculture)
  - A-1 (Limited Agriculture)
  - A WE (Exclusive Agriculture) (Wind Energy Combining)

  Commercial:

  - C-2 (Central Commercial)
  - C-2 PD (Neighborhood Commercial) (Precise Development Combining)
  - C-2 PD SC (Neighborhood Commercial) (Precise Development Combining) (Scenic Corridor Combining)
  - C-3 (General Commercial)

  Residential:

  - E(1) RS MH (Estate – I acre) (Residential Suburban Combining) (Mobilehome Combining)
  - E(2 1/2) RS (Estate – 2-1/2 acres) (Residential Suburban Combining)
  - E(5) (Estate – 5 acres)
  - E(5) RS (Estate – 5 acres) (Residential Suburban Combining)
  - E(2 1/2) RS MH (Estate – 2-1/2 acres) (Residential Suburban Combining) (Mobilehome Combining)
  - E(5) RS MH (Estate – 5 acres) (Residential Suburban Combining) (Mobilehome Combining)
  - E(10) RS MH (Estate – 10 acres) (Residential Suburban Combining) (Mobilehome Combining)
  - E(20) RS MH (Estate – 20 acres) (Residential Suburban Combining) (Mobilehome Combining)
  - MP (Mobilehome Park)
  - R-1 (Low Density Single Family Residential)
  - R-2 (Medium Density Residential)
  - RSP (Recreation, School, Public Use)

  Other:

  - M-1 (Light Industry)
  - M-2 (Heavy Industry)
  - M-2 PD (Medium Industrial) (Precise Development Combining)
  - OS (Open Space)

4.9 Project Overview

4.9.1 Project Objectives

SCE has identified the fundamental objectives of the Proposed Project as follows:

- **Provide safe and reliable electrical service** under the Federal Energy Regulatory Commission (FERC), North American Electric Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and California Public Utilities Commission (CPUC) rules, guidelines and regulations.
- **Add capacity to serve long-term forecasted electrical demand requirements in the Cummings Valley** (including Bear Valley Springs and Stallions Springs communities) in 2016.
- **Maintain system reliability within the Electrical Needs Area (ENA).** Line failures, maintenance outages, or failure of system components arise from unpredictable events caused by weather, earthquakes,

traffic accidents, or other unforeseen natural or manmade catastrophes. The addition of distribution lines and electrical capacity would ensure reliable service for the ENA's approximately 7,250 metered customers by offering more points at which to intervene in the event of these system failures.

- **Provide greater operational flexibility to transfer load between circuits and substations within the ENA.** Having an additional substation within the ENA as well as three additional 12 kV distribution circuits would increase the number of substations and distribution circuits available to draw power from during abnormal conditions, thus improving operational flexibility. These facilities would also facilitate the scheduling of planned maintenance outages.
- **Alleviate the anticipated service delivery voltage problems as the forecasted demand in the Bear Valley Springs and Stallion Springs areas grows beyond what can be reliably served by the existing 12 kV distribution circuits from the existing Cummings Substation.** Due to the higher than expected load growth in the Cummings Valley (3-4 percent per year in the last 5 years), SCE has had to drop load, resulting in multiple rolling power outages in the communities of Bear Valley Springs and Stallion Springs. The proposed Banducci Substation would be located closer to these loads and the new 12 kV distribution circuits would be shorter and would serve less load than the existing configured circuits, thereby improving overall voltage to SCE's customers in these communities.
- **Meet the Proposed Project needs while minimizing environmental impacts.**
- **Design and construct the Proposed Project in conformance with SCE's approved engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.**

4.9.2 Purpose and Need

Currently, the Cummings 66/12 kV Substation on Highline Road at Adelante Street west of Tehachapi serves the entire ENA. Equipment includes a set of three single phase transformers that reduces voltage from 66 kV to 12 kV and three 12 kV distribution circuits with a total capacity of 24.4 MVA. The amount of electrical load that can be served in the ENA is limited to the maximum amount of electrical power that Cummings 66/12 kV Substation can deliver. In the past five years, the area has seen load growth of approximately 3 to 4 percent per year, primarily within the communities of Bear Valley Springs and Stallion Springs. Figure 4-1 (Project Location) provides an overview of the Proposed Project area, including the ENA and the existing Cummings and Monolith Substations.

Until late July 2007, the maximum operating limit of the transformers at Cummings Substation was 19.5 MVA, when peak demand in the ENA grew to 21.8 MVA in 2006 and 23.6 MVA in 2007. On July 25, 2006, SCE had to drop approximately 3.6 MVA of load, which resulted in multiple rolling power outages. SCE has increased Cummings Substation's maximum operating limit to 24.4 MVA and transferred approximately 6.5 MVA of electrical demand to the existing Monolith 66/12 kV Substation, located 6.5 miles east of Cummings Substation, on Williamson Road near East Tehachapi Boulevard.

The Proposed Project would relieve Cummings Substation by transferring the load of Bear Valley Springs and Stallion Springs to the proposed Banducci 66/12 kV Substation, which would provide 56 MVA of capacity, with the potential to expand to 112 MVA if necessary. Three additional proposed 12 kV distribution circuits would be installed to help maintain reliability by increasing the capacity available from which to draw power from during normal peak and abnormal emergency conditions. Ultimate build out capacity for the proposed Banducci Substation with four transformers would be a maximum of 16 separate 12 kV distribution circuits.

4.10 Project Components

4.10.1 Banducci Substation

The proposed Banducci Substation would be a new unstaffed, automated, 66/12 kV, 56 MVA low-profile substation. The dimensions of the walled substation would be approximately 440 feet by 326 feet. The substation would have the potential to expand capacity to 112 MVA as necessary.

The substation footprint would encompass approximately 3.3 acres of an approximately 6.3-acre parcel in the unincorporated Cummings Valley area of Kern County. The proposed site is located at the south-east corner of Pelliser Road and unimproved Dale Road, as shown in Figure 4-1 (Project Location). Figure 4-2 (Proposed Banducci Substation Layout and Plan) illustrates the proposed substation equipment lay-out, which would be designed to meet California Building Code and the IEEE 693, Recommended Practices for Seismic Design of Substations.

4.10.1.1 66 kV Switchrack

The proposed 66 kV low-profile steel switchrack would be approximately 25 feet high, 82 feet wide, and 186 feet long and would have an operating and transfer bus. The switchrack would consist of eight 22-foot-wide positions:

- One switchrack position would be used to terminate the newly created Banducci-Correction-Cummings 66 kV Subtransmission Line.
- One switchrack position would be used to terminate the newly created Banducci–Kern River #1 66 kV Subtransmission Line.
- Two switchrack positions would be used to terminate the 66/12 kV transformer banks (Bank No. 1 and Bank No. 2).
- One switchrack position would be used for the 66 kV bus tie position.
- Three switchrack positions would remain vacant for future needs.

The operating and transfer buses would each be 186 feet long and would consist of two 2,156 thousand circular mils (kcmils) aluminum conductor steel reinforced (ACSR) conductors for each of the three electrical phases.

The two 66 kV subtransmission line positions and the two 66 kV transformer bank positions would each be equipped with a circuit breaker and three group-operated horizontal mount disconnect switches. Surge arresters and 66 kV potential transformers (PTs) would be installed on the line positions. The 66 kV bus tie position would be equipped with a circuit breaker and two group-operated horizontal mount disconnect switches. Three 66 kV bus PTs would be connected to the operating bus through a three-phase group-operated disconnect switch.

4.10.1.2 66/12 kV Transformers

Banducci Substation's initial transformation would consist of two 28 MVA, 66/12 kV load tap changing (LTC) transformers with adjacent group-operated disconnect switches on the high-voltage and low-voltage sides, surge arresters, and neutral current transformers. Two 12 kV underground power cables would connect the transformers to the 12 kV switchrack positions via two power cable trenches. The transformer equipment area's dimensions would be approximately 25 feet high, 113 feet long, and 42

feet wide. Based on SCE's current forecast for 2012–2021 peak demand, SCE does not foresee adding additional transformer capacity at Banducci Substation during the 10-year planning horizon.

4.10.1.3 12 kV Switchrack

The 12 kV low-profile steel switchrack would be approximately 17 feet high, 34 feet wide, and 126 feet long and would have an operating bus and a transfer bus. The 14-position switchrack would consist of the following:

- Six 12 kV positions, each equipped with a circuit breaker and either six or nine disconnect switches. Three of these positions would be assigned to 12 kV circuits, two positions would be assigned to transformer banks, and one position would be assigned to a bus tie between the operating bus and transfer bus.
- Four 12 kV positions would be equipped with three disconnect switches each.
- Four 12 kV positions would be vacant for future use.

At maximum capacity (with four transformers operating), the Banducci Substation could be built out to accommodate a maximum of 16 separate 12 kV distribution circuits.

4.10.1.4 Capacitor Banks

There would be a total of two 12 kV, 4.8 megavolt-ampere reactive (MVAR), low side capacitor banks installed at the substation. Each 12 kV capacitor bank area would be approximately 17 feet high, 27 feet long, and 13 feet wide. Each 12 kV capacitor bank would be equipped with a circuit breaker and three current-limiting reactors.

4.10.1.5 Mechanical and Electrical Equipment Room (MEER)

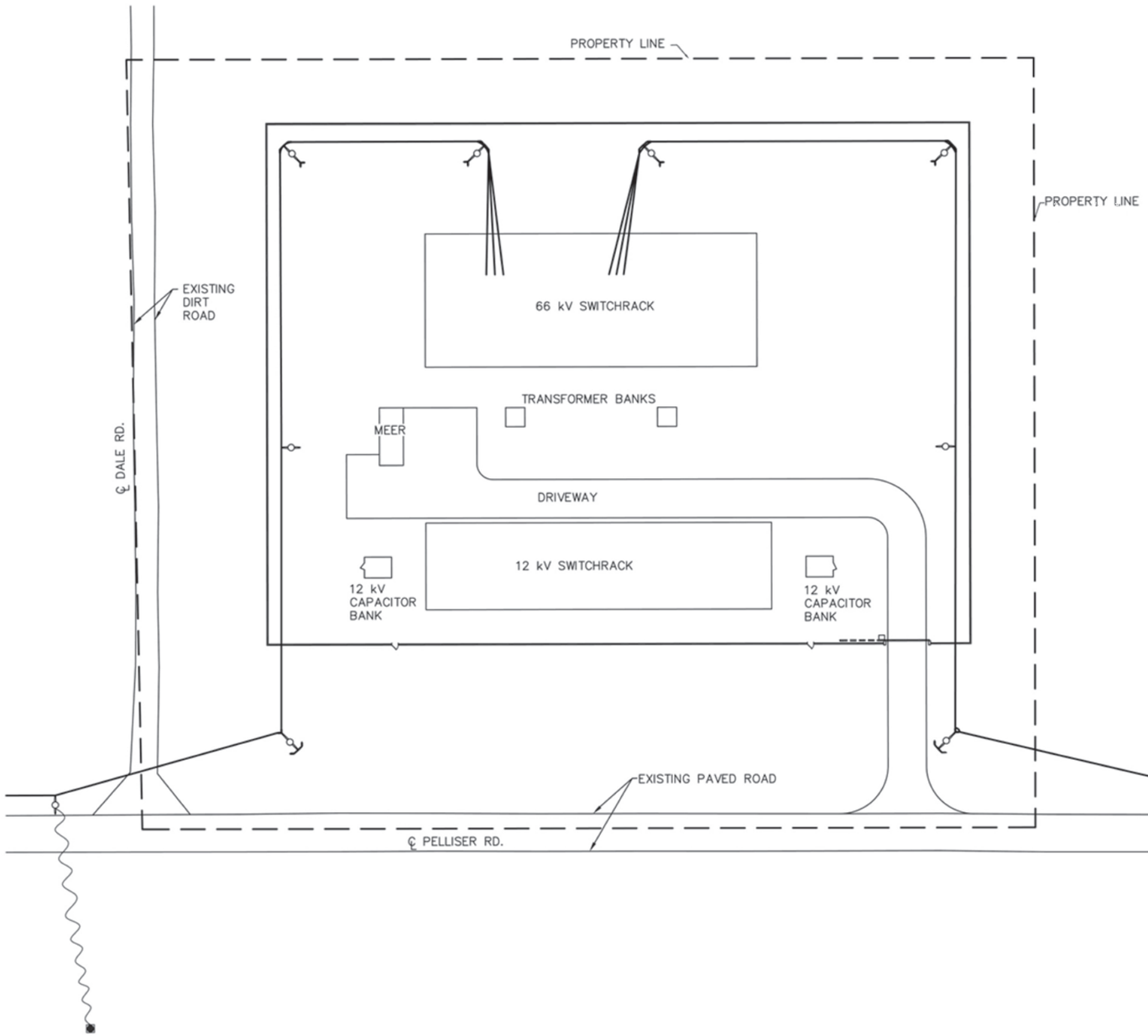
The MEER is a pre-fabricated structure approximately 10 feet high, 38 feet long, and 15 feet wide. SCE anticipates that the steel-structure MEER would have a desert-tan roof and sidewalls and that the roofline, wall joints, and doorway would have roman-bronze trim. The MEER would be equipped with heating, ventilation, and air-conditioning (HVAC) units and would house protective relaying equipment, telecommunications equipment, substation automation and control equipment, batteries, and associated equipment. Control cables would be installed in trenches to connect the MEER to the 66 kV and the 12 kV switchracks.

4.10.1.6 Perimeter and Landscaping

The substation would have a light-colored, decorative, pre-cast or concrete masonry material perimeter wall enclosing the substation on all sides. On at least three sides, this 8-foot high wall would have barbed wire affixed near the top of the inside of the perimeter enclosure. The barbed wire would not be visible from outside. Prior to commencing construction, SCE would develop an appropriate drought-resistant landscaping plan and perimeter wall design that would be submitted to Kern County with the ministerial grading permit application for the Proposed Project.

4.10.1.7 Lighting

Lighting at the proposed Banducci Substation would consist of low intensity LED (light emitting diodes) lights located in the switchracks, around the transformer banks, and in areas of the yard where operating and maintenance activities may take place during evening hours. Maintenance lights would be controlled by a manual switch and would normally be in the "off" position. The maintenance lights would be



Legend

kV – kilovolt

MEER – mechanical and electrical equipment room

Source: SCE, 2014a.

Figure 4-2
Proposed Banducci Substation Layout and Plan

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directed downward to reduce glare outside the facility. A light at the site's rolling gate would automatically turn on once the gate begins to open and would turn off shortly after the gate is closed.

4.10.1.8 Drainage

Existing drainage at the Proposed Project site slopes from southeast to northwest. As part of construction of the Proposed Project, runoff would be diverted around the enclosed bank towards the natural drainage pattern.

SCE would prepare final engineering drawings for grading and drainage and would submit these to Kern County to obtain ministerial grading permits. If required by Kern County ministerial grading or water quality standards, an earthen retention basin would be included in the site plan. SCE also would prepare a Spill Prevention Control and Countermeasure (SPCC) Plan in accordance with 40 Code of Federal Regulations (CFR) Parts 112.1-112.7, which would include features such as curbs/valves, trenches, berms, and retention ponds (if required), or other features/structures designed and installed to contain spills, should they occur.

4.10.1.9 Restroom Facilities

Currently, there is no water source adjacent to the site and no sewer service available. Therefore, a permanent stand-alone restroom equipped with self-contained water- and waste-holding tanks would be installed within the substation perimeter wall. The restroom enclosure would be a maximum of approximately 10 feet high, 14 feet long, and 14 feet wide and would be maintained by an outside service company.

4.10.2 Modifications at Cummings and Monolith Substations

At Cummings Substation, a self-contained equipment cabinet housing telecommunications equipment and the appropriate HVAC equipment would be installed within the fence line of the existing substation. The new equipment cabinet would be approximately 78 inches high, 39 inches wide, and 24 inches deep. Additional conduit would be installed to connect the fiber optic telecommunications cable to the new cabinet at Cummings Substation and to the existing communications room at Monolith Substation.

In addition, new protective relay and communication equipment would be added to the existing MEER at Monolith Substation and to the existing equipment cabinet at Cummings Substation.

4.10.3 66 kV Subtransmission Lines

4.10.3.1 Subtransmission Route

The existing Correction-Cummings–Kern River #1 66 kV Subtransmission line lies in close proximity to the proposed Banducci Substation site. The proposed 66 kV subtransmission line route would entail opening the existing Corrections-Cummings–Kern River #1 66 kV Subtransmission Line on Pelliser Road south of Dale Road and looping it into the substation. Two independent source line segments would be created by looping in the existing Correction-Cummings–Kern River #1 66 kV Subtransmission Line. These would be the new Banducci–Kern River #1 66 kV Subtransmission Line to the south and west of the substation and the new Banducci-Correction-Cummings 66 kV Subtransmission Line to the north and east. The 66 kV subtransmission line routes and the locations of removed, replaced, and new poles are shown in Figure 4-3 (Subtransmission Line Routes and Poles).

4.10.3.2 Subtransmission Structures

To loop the existing Correction-Cummings–Kern River #1 66 kV Subtransmission line into and out of the proposed substation, six new tubular steel poles (TSPs), two new TSP guy stubs, two new light-weight steel (LWS) poles, and seven new wood poles would be installed. The approximate dimensions of the proposed structure types are illustrated in Figure 4-4 (Subtransmission Structures) and summarized in Table 4-1 (Typical Subtransmission Structure Dimensions).

Table 4-1. Typical Subtransmission Structure Dimensions

Pole Type	Approximate Diameter	Approximate Height Above Ground	Maximum Auger Hole Depth	Maximum Auger Diameter
Light Weight Steel (LWS) Pole	Top 10 to 12 inches Bottom 24 to 36 inches	65–75 feet	10 feet	30 inches
Tubular Steel Pole (TSP)	Top 18 inches Bottom 36 inches	35–65 feet	NA	N/A
TSP Concrete Foundation	3 to 10 feet	18–24 inches	40 feet	10 feet

Source: SCE, 2014a.
Note: Specific pole height and spacing would be determined upon final engineering and would be constructed in compliance with CPUC General Order 95.

All 66 kV subtransmission facilities would be designed to be avian-safe in accordance with the *Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006* (Avian Power Line Interaction Committee, 2006).[1] All 66 kV subtransmission facilities would be evaluated for potential collision risk and, where determined to be high risk, lines would be marked with collision reduction devices in accordance with *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994* (Avian Power Line Interaction Committee, 1994). (SCE, 2014a)

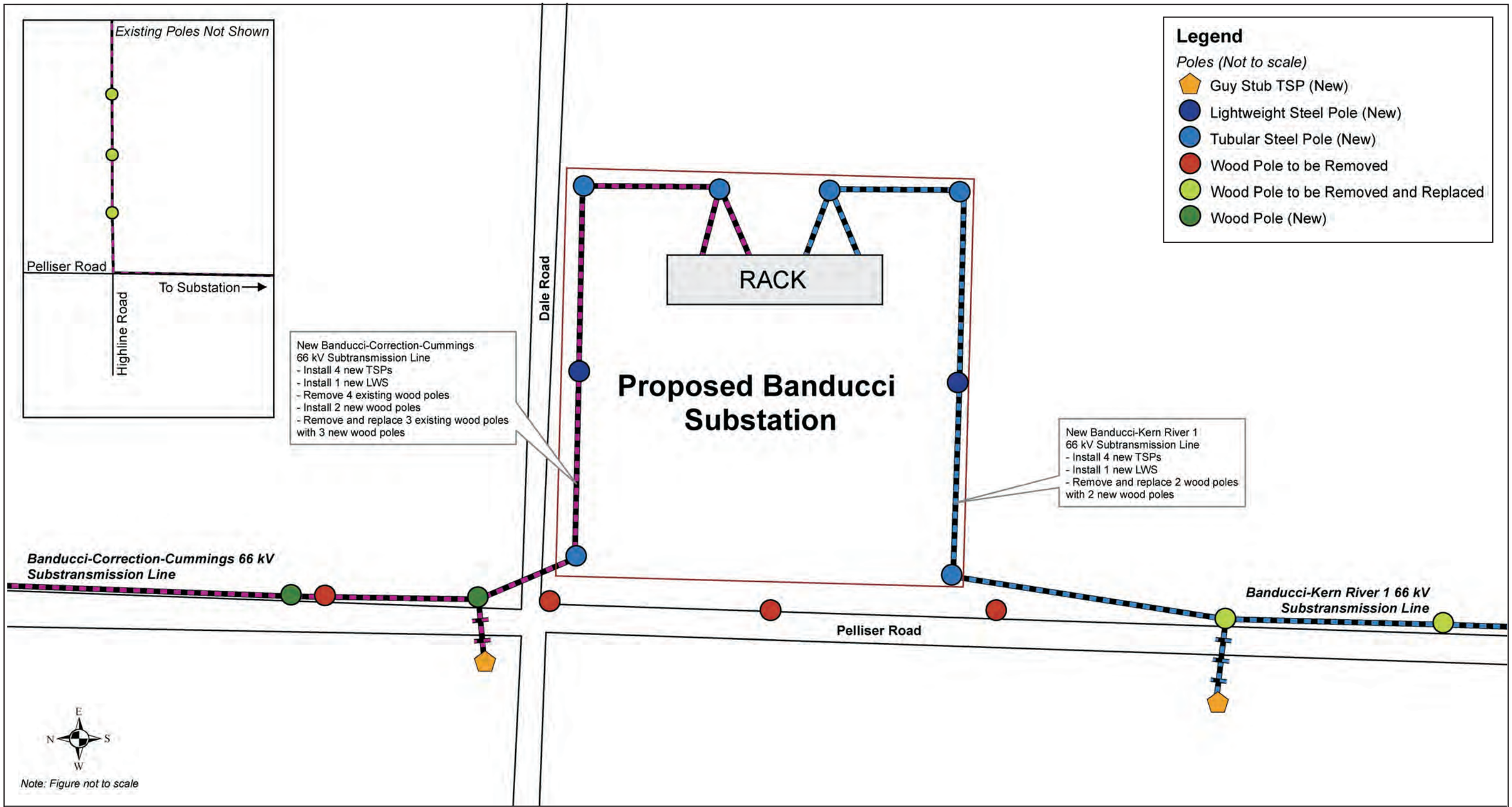
The LWS poles would be dull galvanized gray in color and installed with conductor and polymer insulators. Both of the LWS poles would be constructed with horizontal polymer post type insulators to attach the 66 kV subtransmission conductor. Four of the wood poles would be installed with horizontal post type insulators to attach the 66 kV subtransmission conductor. The other three wood poles would be installed with wood cross arms and polymer suspension insulators to attach the 66 kV subtransmission conductor. Six of the TSPs would all be dead-end structures to support the approximate 90 to 105 degree angles in the 66 kV subtransmission line. The insulators would be polymer dead-end insulators. The other two TSPs would be guy stubs to support the angle of the conductor on the wood poles.

Upon completion of the installation of the proposed TSPs, wood poles, and LWS poles outside of the proposed substation, the existing overhead distribution conductors and third-party utilities that exist at that time would be transferred to the new structures, or existing structures would be relinquished and utilities on those structures would remain in place.

4.10.4 12 kV Distribution Lines

SCE is proposing to construct three new 12 kV distribution circuits, and at ultimate build-out, the proposed substation could accommodate a total of 16 separate 12 kV distribution circuits. The first 12 kV distribution circuit would exit the proposed Banducci Substation to the northwest and extend approximately 150 feet to a new distribution vault and telecommunications manhole installed on the project parcel.

[1] *Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006* published by the Edison Electric Institute and the Avian Power Line Interaction Committee in collaboration with the Raptor Research Foundation. This document can be found at http://www.aplic.org.



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Source: SCE, 2014a.

New Banducci-Kern River 1 66kV Subtransmission Line
New Banducci-Correction-Cummings 66kV Subtransmission Line
Overhead Span Guy

Figure 4-3
Subtransmission Line Routes and Poles

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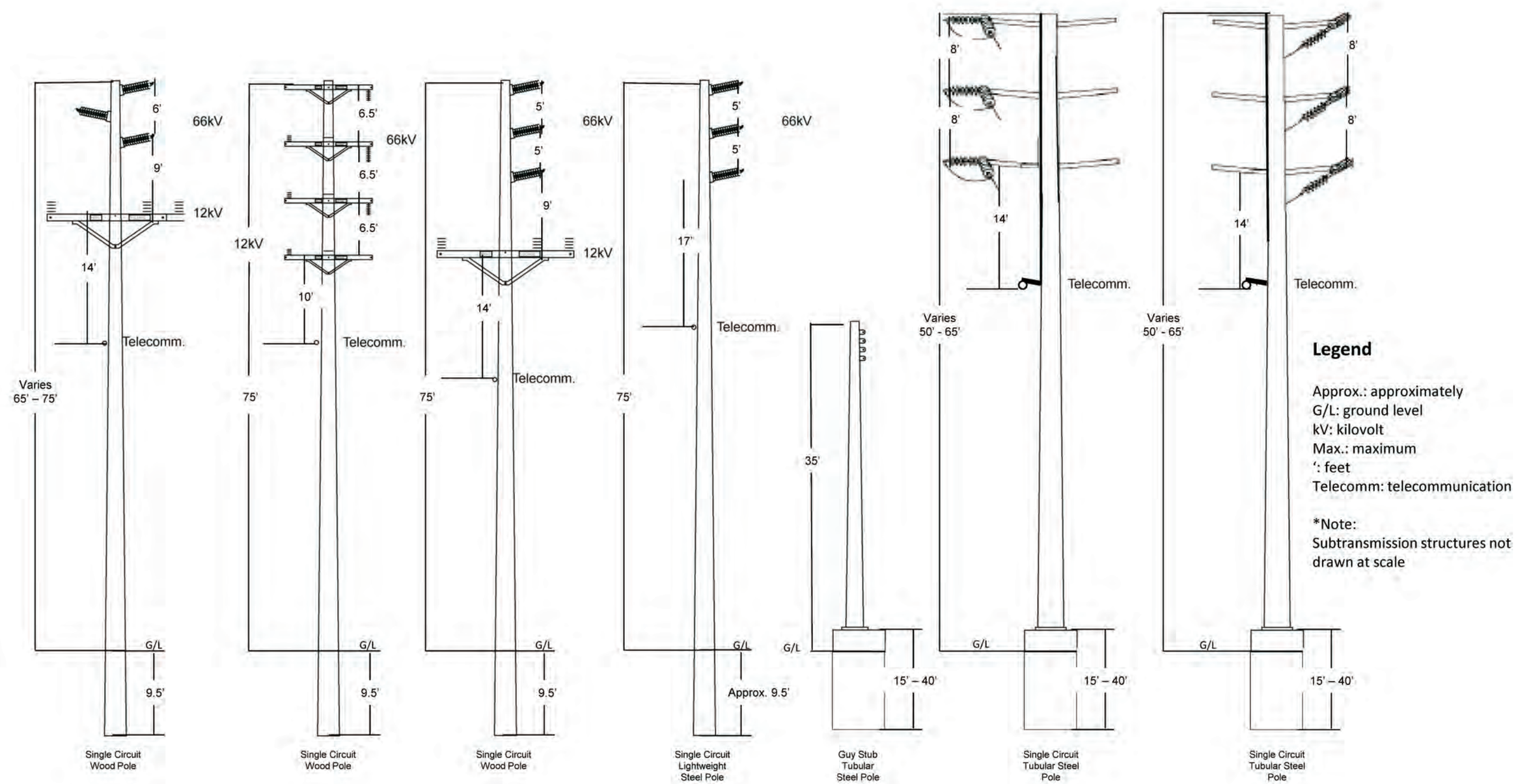

Source: SCE, 2014a.

Figure 4-4
Subtransmission Structures

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The second 12 kV distribution cable would be installed in the second duct bank and would exit the proposed Banducci Substation enclosure to the southwest for approximately 150 feet to a location where a second new distribution vault would be installed on the project parcel.

The third distribution circuit would be installed in the same duct bank as the first up to the new northern vault. The distribution cable would then continue underground for approximately 2,800 feet to the corner of Highline Road and Pelliser Road. From there, the underground distribution cable would extend east approximately 450 feet and then rise on a to-be-replaced existing wood pole with a new 12 kV overhead switch.

4.10.5 Telecommunications Lines

Telecommunications infrastructure would be added to connect the proposed Banducci Substation to SCE's telecommunications system and would provide Supervisory Control and Data Acquisition (SCADA), protective relaying, data transmission, and telephone services for the proposed Banducci Substation and associated facilities.

New telecommunications equipment would be installed within the MEER at the proposed Banducci Substation and within the existing MEER at Monolith Substation. In addition, approximately 28 miles of overhead fiber optic telecommunications cable would be installed on 751 existing poles, 39 of which are scheduled to be replaced prior to attaching new fiber optic telecommunications cable to them. The new poles would be similar in size to the existing poles. They would be buried to a depth of approximately 6 to 9 feet below the ground surface and would be 38 to 50 feet high and approximately 12 to 18 inches in diameter at ground level and would taper toward the top of the pole.

Approximately 4 miles of underground fiber optic telecommunications cable would be installed in 17 existing vaults and seven new 5 feet x 5 feet x 8 feet manholes. Overhead and underground fiber optic telecommunications cables would be installed on or in new and existing structures. The two proposed telecommunications routes are shown in Figure 4-5) (Proposed Telecommunication Routes) and are described below.

Proposed Telecommunication Route #1 is approximately 14.5 miles long and would connect the proposed Banducci Substation to the existing Cummings Substation on Highland Road and then continue to the existing Monolith Substation east of Tehachapi, as described below.

The proposed fiber optic telecommunications cable would:

- Exit the proposed Banducci Substation to the west and extend north in approximately 2,800 feet of new conduit to Highline Road.
- Continue east on Highline Road in approximately 450 feet of new conduit and then transition to an overhead position on an existing pole.
- Continue east overhead on Highline Road for approximately 6 miles then transition into an underground position from an existing pole.
- Continue east in approximately 270 feet of new conduit into the existing Cummings Substation.
- Exit the existing Cummings Substation to the east in 240 feet of new conduit, then transition to an overhead position on an existing pole.
- Continue east overhead for approximately 6.5 miles to Jameson Street.

- Continue north overhead for approximately 1 mile to an existing pole outside the existing Monolith Substation, where the fiber optic telecommunications cable would transition to an underground position.
- Continue west in approximately 160 feet of new conduit into the existing Monolith Substation.

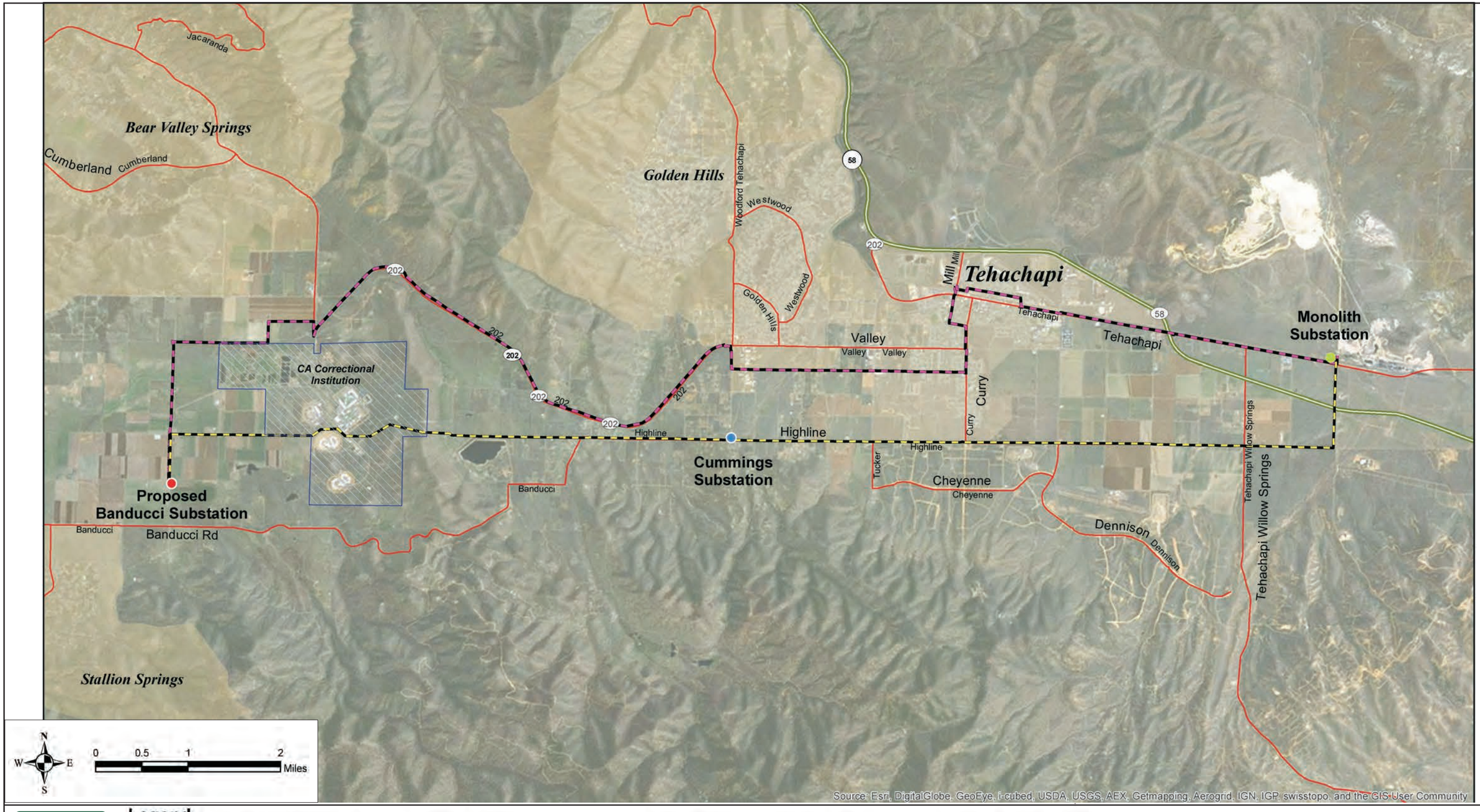
Proposed Telecommunication Route #2 is approximately 17.5 miles long and would connect the Banducci Substation to the existing Monolith Substation.

The proposed fiber optic telecommunications cable would:

- Exit the proposed Banducci Substation to the west and turn north in approximately 290 feet of new conduit and then transition to an overhead position on a new wood riser pole on Pelliser Road.
- Continue north overhead on Pelliser Road for approximately 1.5 miles.
- Continue east overhead on Giraudo Road for approximately 2 miles to West Valley Boulevard.
- Continue east on West Valley Boulevard overhead for approximately 6 miles to Woodford-Tehachapi Road, and transition to an underground position on an existing pole.
- Continue south on Woodford-Tehachapi Road underground in approximately 810 feet of proposed conduit to an existing pole, where it would transition to an overhead position.
- Continue south overhead for approximately 1,000 feet to Cherry Lane (Commercial Street).
- Continue east overhead for approximately 2.5 miles to South Curry Street.
- Continue north on South Curry Street, west on West C Street, and north on South Mill Street overhead for approximately 1 mile to an existing pole, where it would transition to an underground position.
- Continue east on West H Street underground in existing conduit for approximately 1,000 feet, then transition to an overhead position on an existing pole.
- Continue east along Tehachapi Boulevard overhead for approximately 1 mile to Dennison Road, where it would transition to an underground position on an existing pole.
- Continue east in a proposed conduit on Tehachapi Boulevard for approximately 240 feet to an existing vault.
- Continue east on Tehachapi Boulevard underground for approximately 3 miles, where it would enter Monolith Substation through an existing conduit.

4.10.6 Staging Yards

Construction of the Proposed Project would require the establishment of up to four temporary staging areas or yards. These would be used as a reporting location for workers and for vehicle and equipment parking and material storage. The yards may house construction trailers for supervisory and clerical personnel. SCE may use one or more of the yard locations shown in Figure 4-6 (Potential Staging Areas) and listed in Table 4-2.



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Source: SCE, 2014a.

Legend

- Proposed Banducci Substation
- Cummings Substation
- Monolith Substation
- CA Correctional Institution
- Proposed Telecommunications Route 1
- Proposed Telecommunications Route 2
- Freeway / Major Highway
- Major Road / Minor Highway

Figure 4-5
Proposed Telecommunication Routes

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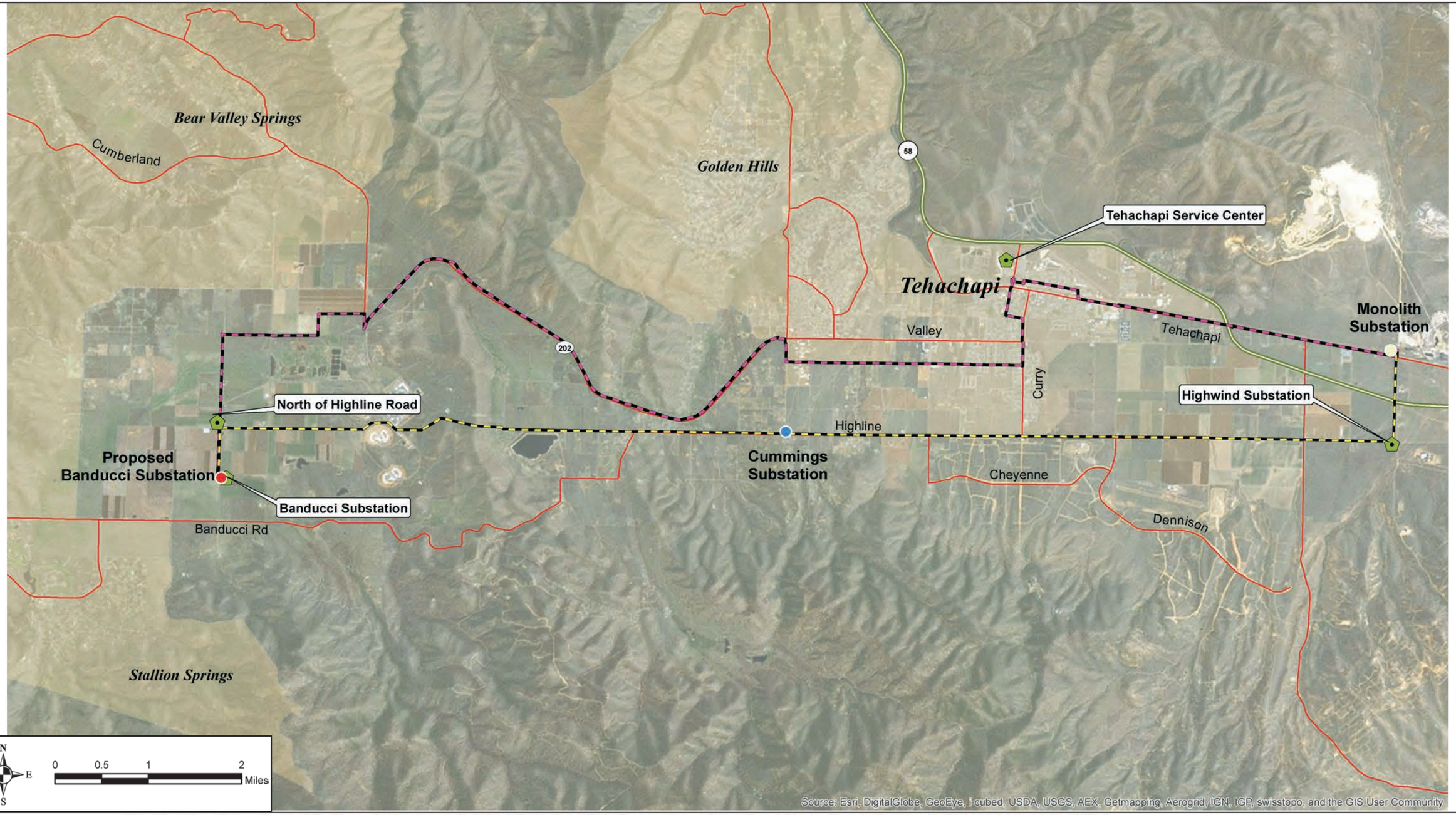

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Source: SCE, 2014a.

- Proposed Banducci Substation
- Cummings Substation
- Monolith Substation
- Proposed Telecommunications Route 1
- Proposed Telecommunications Route 2
- Freeway / Major Highway
- Major Road / Minor Highway

Staging Areas (Not to scale)

- Banducci Substation
- Tehachapi Service Center
- North of Highline Road
- Highwind Substation

Figure 4-6
Potential Staging Areas

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Table 4-2. Potential Staging Yard Locations

Yard Name	Location	Condition	Approximate Area	Project Component
Banducci Substation	Banducci Substation property	Graded property	1 acre	Substation/ Subtransmission
Tehachapi Service Center	Tehachapi Service Center in City of Tehachapi	Previously disturbed	0.5 acres	Telecommunications/ Distribution
North of Highline Road	Northwest corner of the intersection of Pelliser Road and Highline Road	Previously disturbed	1 acre	Subtransmission
Highwind Substation	Southwest corner of Steuber Road and Highline Road	Previously disturbed	1 acre	Telecommunications

Materials commonly stored at the substation construction staging area would include portable sanitation facilities, circuit breakers, disconnect switches, lightning arresters, transformers, vacuum switches, steel beams, rebar, foundation cages, conduit, insulators, conductor and cable reels, pull boxes, and line hardware.

Materials commonly stored at the subtransmission and/or telecommunications construction staging yards would include construction trailers; construction equipment; portable sanitation facilities; steel bundles; steel/wood poles; conductor reels; overhead ground wire (OHGW) or overhead optical ground wire (OPGW) reels; hardware; insulators; cross arms; signage; consumables (such as fuel and filler compound); waste materials for salvaging, recycling, or disposal; and best management practice (BMP) materials (straw wattles, gravel, and silt fences). Fuel stored at a site generally is used for small generators for power tools and is usually less than 25 gallons.

4.10.7 Project Access

During construction, the substation site and the subtransmission lines in the vicinity of the proposed Banducci Substation site would be accessed via Pelliser Road. Access to other project components would be via public access or over existing SCE land rights. The Banducci Substation Staging Yard would be accessed via Pelliser Road. The North of Highline Road and Highwind Substation Staging Yards would be accessed via Highline Road. The Tehachapi Service Center Staging Yard would be accessed via North Mill Street.

Depending on final engineering and construction requirements, temporary access rights may be acquired from private land owners to provide sufficient work space for any field activity. SCE would use overland access from the edge of paved or dirt roads to access pole locations and temporary construction areas, such as pole work areas, stringing setup-areas, and staging area locations. Overland access routes would also occur within the temporary work areas for the poles. No additional access roads or spur roads would be necessary.

4.10.8 Right-of-Way Acquisition

The Proposed Project would require the acquisition in fee of approximately 6.3 acres for the substation footprint as well as a setback to provide for future road improvements, landscaping, access, parking, subtransmission tie-in, and 12 kV distribution routes. Access to the other project components would be via public access or over existing SCE land rights. The proposed 66 kV subtransmission lines would tie into the proposed Banducci Substation from the existing 66 kV subtransmission line along Pelliser Road, which is located within the public right-of-way (ROW) where SCE holds franchise rights.

Proposed Telecommunication Route #1 is proposed primarily within existing SCE easements or franchise areas, but is subject to final engineering requirements and may require a permit from the Union Pacific Railroad (UPRR) and/or California Department of Transportation (Caltrans) to cross their facilities. Proposed Telecommunication Route #2 is anticipated to require two permits to cross over UPRR railroad facilities, a Caltrans permit, and the acquisition of approximately four private easements. See Section 4.15 (Other Permits and Approvals) of this IS/MND for a list of required permits.

4.11 Project Construction

4.11.1 Staging Yard Construction

Preparation of staging yards would include temporary perimeter fencing and, depending on existing ground conditions at the site, grubbing and/or grading to provide a level and dense surface for the application of gravel or crushed rock. Sites would be graded such that runoff would flow in the direction of the natural drainage. In addition, drainage would be designed to prevent ponding and erosive flows. The graded area would be compacted to support heavy vehicular traffic.

Staging yards may be lit for staging and security, with temporary power supplied from existing distribution facilities if they are available or a portable 49 horsepower generator if full time power is not needed. Normal maintenance and refueling of construction equipment would be conducted at these yards. All refueling and storage of fuels would be in accordance with a Storm Water Pollution Prevention Plan (SWPPP) prepared by SCE prior to construction.

4.11.2 Land Disturbance and Access

Land disturbance would include all areas affected by construction of the Proposed Project. It is estimated that the Proposed Project would permanently disturb approximately 6.44 acres and would temporarily disturb approximately 34.61 acres. The estimated amount of land disturbance for each project component is summarized in Appendix B of this IS/MND.

Activities associated with providing temporary access could include vegetation clearing, blade-grading, grubbing, mowing, and re-compacting. The number of locations where this would be required would depend on final engineering, topography, and availability of suitable terrain that would provide safe access for construction. These access locations are typically grassy areas that are relatively flat. They would not be maintained by SCE after the project construction is completed, but instead utilized on an as-needed basis for operation and maintenance.

4.11.3 Substation Construction

The 6.3-acre substation site would be graded to form a level site. The proposed substation site would be over excavated to the prescribed depth per the grading plan and the estimate 10,000 cubic yards of excavated soil would be placed as fill where needed, compacted to 90 to 95 percent compaction, and tested throughout the site to verify the compaction rate. It is estimated that approximately 10,000 cubic yards of soil also would be imported to the substation site as fill.

Once the grading elevation and soil compaction rates are verified, construction the ground grid and a permanent block wall around the proposed Banducci Substation would be installed. This would include drilling and digging of holes for the foundations and installing conduit and foundations to establish the completed ground grid. Approximately ¾ inch rockdust would be placed 4 inches deep throughout the substation except in areas to be paved. Table 4-3 lists the surface materials and their approximate square footage and volumes required for construction of the new substation.

Table 4-3. Substation Ground Surface Improvement Materials and Volumes

Element	Material	Approximate Surface Area (sq.ft.)	Approximate Volume (cu.yd.)
Site fill	Soil	270,700	20,000
Site cut	Soil		10,000
Import	Soil		10,000
Substation equipment foundations	Concrete	2,000	140
Substation drainage swales	Concrete	12,000	375
Cable trenches/duct bank	Concrete	1,900	100
66 kV bus enclosures	Asphalt concrete	4,100	75
Internal driveways	Asphalt concrete	12,800	158
	Class II aggregate base	12,800	277
External driveway	Asphalt concrete	3,000	37
	Class II aggregate base	3,000	65
Substation rock surfacing	Rock, nominal diameter 1–1.5" per SCE standard, 4" depth	143,500	1,772
Block wall foundation	Concrete	3,940	330

Source: SCE, 2014a.

Erection of the structures may also require establishment of a temporary crane pad. The crane pad would occupy an area of approximately 50 feet by 50 feet and be located adjacent to each applicable structure within the laydown/work area used for structure assembly. The decision to use a separate crane pad would be determined during final engineering for the Proposed Project and the selection of the appropriate construction methods to be used by SCE or its contractor.

New underground conduit and structures would typically be installed with a backhoe. The trench would be 12 to 18 inches wide and a minimum of 36 inches deep. Polyvinyl chloride (PVC) conduit would be placed in the trench and covered with approximately 3 inches of concrete slurry, then backfilled and compacted. For manholes and pull boxes, a hole would be excavated 8 to 9 feet deep, 7 to 8 feet long, and 7 to 8 feet wide. The manhole or pull box would be lowered into place, connected to the conduits, and backfilled with concrete slurry.

A three-man construction crew using three pick-up trucks at the site would perform installation work inside the MEER at the proposed Banducci Substation. Additionally, a three-man construction crew using three pick-up trucks would perform installation work inside the MEER at both Cummings Substation and Monolith Substation.

Section 4.11.8 provides the anticipated equipment and workforce required for the project.

4.11.4 66 kV Subtransmission Line Construction

The new subtransmission structure locations and temporary laydown/work areas would first be graded and/or cleared of vegetation as required to provide a reasonably level and vegetation free surface for structure installation. Sites would be graded such that water would run toward the direction of the natural drainage. In addition, drainage would be designed to prevent ponding and erosive water flows that could damage structure footings. The graded area would be compacted and would be capable of supporting heavy vehicular traffic.

Erection of pole structures may require the establishment of a temporary crane pad. The crane pad would occupy an approximately 50 feet by 50 feet area and adjacent to each applicable structure. It

would be within the laydown/work area used for structure assembly. The pad may be cleared of vegetation and/or graded as necessary to provide a level surface for crane operation. The decision to use a separate crane pad would be determined during final engineering for the Proposed Project and the selection of the appropriate construction methods to be used by SCE or its contractor.

4.11.4.1 Tubular Steel Pole Installation

Each TSP would require a drilled, poured-in-place, concrete footing to create the structure foundation. The hole would be drilled using truck or track-mounted excavators. Excavated material would be temporarily stored in the staging yard prior to being salvaged, recycled, or disposed. Following excavation of the footings, steel-reinforced cages would be set and concrete poured. Foundations in soft or loose soil or those that extend below the groundwater level may be stabilized with drilling mud slurry. In this instance, mud slurry would be placed in the hole during the drilling process to prevent the sidewalls from sloughing. Concrete would then be pumped to the bottom of the hole, displacing the mud slurry. Depending on site conditions, the mud slurry brought to the surface would be collected in a pit adjacent to the foundation or vacuumed directly into a truck to be reused or discarded at an appropriate off-site disposal facility.

TSPs consist of multiple sections. The pole sections would be placed in temporary laydown areas at each pole location. Depending on conditions at the time of construction, the top sections may come pre-configured with the necessary cross arms, insulators, and wire stringing hardware, or may be configured on the ground at the site or after pole installation. A crane would be used to set each steel pole base section on the prepared foundation. If existing terrain around the TSP location is not suitable to support crane activities, a temporary crane pad would be constructed within the laydown area. When the base section is secured, the subsequent section(s) of the TSP would be slipped in place on top of the base section. The pole sections may be spot welded together for additional stability. Depending on the terrain and available equipment, the pole sections also could be pre-assembled into a complete structure prior to setting the poles. TSP guy poles would be installed similar to TSP installation.

4.11.4.2 Wood Pole Installation

Each wood pole would require a hole to be excavated using an auger, backhoe, or hand tools. Excavated material would be temporarily stored in the staging yard prior to salvage, recycling, or disposal. The wood poles would be placed in a temporary laydown area at each pole location. While on the ground, (if not preconfigured) the wood poles may be configured with the necessary cross arms, insulators, and wire-stringing hardware before being set in place. The wood poles would be installed in the holes, typically by a line truck with an attached boom.

4.11.4.3 Lightweight Steel Pole Installation

Each LWS pole would require a hole to be excavated using either an auger or excavated with a backhoe. Excavated material would be temporarily stored in the staging yard prior to salvage, recycling, or disposal. LWS poles consist of separate base and top sections and may be placed in temporary laydown areas at each pole location. Depending on conditions at the time of construction, the top sections may come pre-configured with the necessary cross arms, insulators, and wire-stringing hardware, or may be configured on the ground or after pole installation. The LWS poles would be installed in the holes, typically by a line truck with an attached boom. When the base section is secured, the top section would be installed on top of the base section. Depending on the terrain and available equipment, the pole sections could also be assembled into a complete structure on the ground prior to setting the pole in place.

4.11.4.4 Pull and Tension Sites

Wire stringing activities would be conducted in accordance with SCE practices and similar to methods detailed in the Institute of Electrical and Electronics Engineers (IEEE) Standard 524-2003 (Guide to the Installation of Overhead Transmission Line Conductors). The following steps describe typical wire-stringing activities:

- *Step 1:* Planning: Determine the locations of wire pulls and wire-pull equipment set-up positions.
- *Step 2:* Sock Line Threading: A sock line (thick rope) would be threaded through wire rollers attached to cross arms. Sock line threading would continue between all structures of a particular set of spans selected for a wire pull.
- *Step 3:* Pulling: The sock line would be used to pull in the wire-pulling cable. The wire-pulling cable would be attached to the wire using a swivel joint to prevent damage to the wire and to allow the wire to rotate freely to prevent complications from twisting as the conductor unwinds off the reel.
- *Step 4:* Splicing, Sagging, and Dead-Ending: After the wire is pulled in, any required mid-span splicing would be performed. Once the splicing has been completed, the wire would be sagged to proper tension and dead-ended (secured) to structures.
- *Step 5:* Clipping-In: After the wire is dead-ended, the wire would be attached to all tangent structures.

Wire stringing and pull sites may be slightly offset and/or angled to extend outside of the right-of-way to clear unavoidable obstructions. Also, at deflection points along the 66 kV subtransmission line route, wire stringing and pull sites typically extend beyond the ROW.

The largest anticipated distance between the stringing sites would be approximately 370 feet, while the general distance between stringing sites are expected to range from approximately 75 to approximately 370 feet. Some stringing sites may overlap due to the short distance between some of the poles.

The shape and size of each pull and tension site would be determined based on site-specific local conditions.

4.11.4.5 Pole Removal

Typical pole removal includes the use of a boom truck to support the structure during dismantling and removal. Holes would be backfilled, generally by hand using native soil, compacted, and smoothed to match surrounding grade. Typical pole installation would include the use of a boom truck with an auger to first dig the required hole then set the pole.

4.11.4.6 Energizing 66 kV Subtransmission Lines

Energizing the new source lines is the final step in completing the 66 kV subtransmission line construction. The Correction–Kern River #1 section of the existing Correction-Cummings–Kern River #1 66 kV Subtransmission Line would be de-energized in order to connect the new 66 kV subtransmission line segments to the existing system. To reduce the need for electric service interruptions, de-energizing and re-energizing the existing subtransmission lines would likely occur at night when electrical demand is low. No customers would be expected to experience outages due to this action.

4.11.5 12 kV Distribution Getaway Installation

Excavation activities would generally be done using a backhoe. The anticipated dimensions for the trench would be approximately 24 inches wide and approximately 50 inches deep. Shields or trench shoring would be temporarily installed for safety to brace the walls of the trench. The conduits then

would be installed using spacers to create a duct bank consisting of two columns of three stacked 5-inch conduits apiece. The temporary shoring then would be removed. Typical distribution vaults and duct banks are shown in Figures 4-7 (Typical Distribution Line Vault) and 4-8 (Typical Distribution Line Duct Bank), respectively.

Vaults would be located at various points along the duct bank. The hole excavated for a vault would typically be 3 feet greater than the vault's width and length, as well as 4 feet deeper than the vault's height. A backhoe would be used to place the excavated soil into a dump truck to haul away.

The area of disturbance would be approximately 15 feet on either side of trench and on all sides of vaults. The conduits would be encased in concrete with a minimum encasement of 3 inches on all sides. After the concrete encasement has hardened, the trench would be backfilled with a sand, cement, and water slurry with no aggregate. Precast vaults would typically be installed and backfilled with slurry. If repaving is necessary, this work would be performed in accordance with applicable requirements.

After the work of installing the duct bank, vaults, and vent pipes has been completed, at a later date SCE's contractor or SCE's cable crews would pull in the new distribution line (three single conductor 1,000 kcmil jacketed aluminum cross-linked polyethylene (CLP) cables per circuit run in one of the 5-inch conduits in the duct bank). To accomplish this, a rodder (cable pulling truck) would set up at every other vault to pull cable in both directions. At opposite ends of every other vault, cable carousels would be set up to feed cable in both directions. Distribution crews typically would install the vault grounds, rack the cables, install any switches, transformers, or other necessary equipment, and make the appropriate cable splices and terminations. Switching would be performed to put the new equipment into service. Where applicable, SCE would secure any necessary ministerial permits from the appropriate agencies.

4.11.6 Telecommunications Facilities Installation

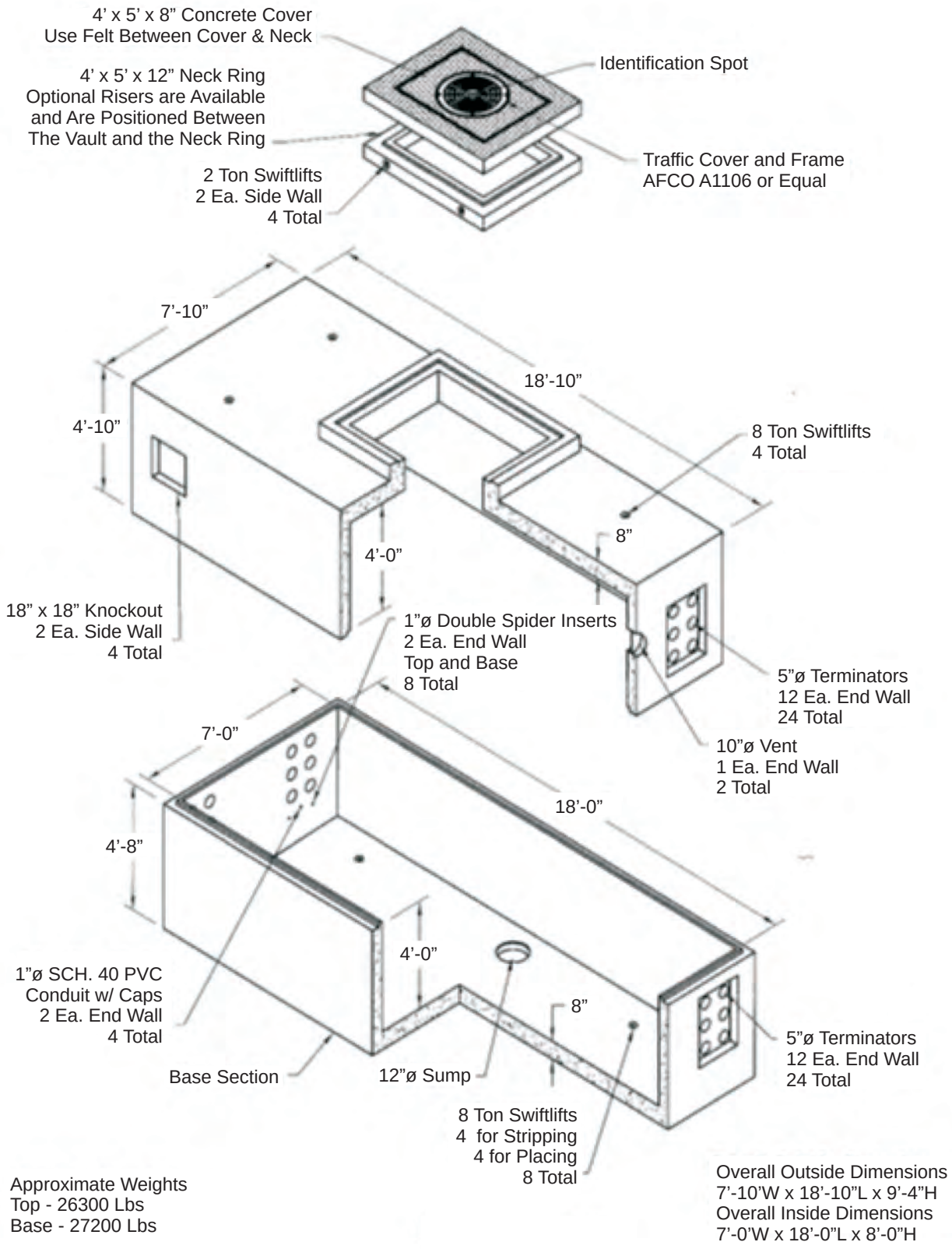
Overhead Telecommunications Facilities. Overhead fiber optic cable would be installed on overhead structures using a bucket truck and in the same manner as described in Section 4.11.4.5 (Pull and Tension Sites).

Underground Telecommunications Facilities. The fiber optic telecommunications cable would be installed throughout the length of the underground conduit and structures through an innerduct (duct installed within a conduit), which protects and identifies the cable. First, the innerduct would be pulled in the conduit from structure to structure using a pull rope and pulling machine or truck-mounted hydraulic capstan. The fiber optic cable then would be pulled inside the innerduct using the same procedure.

New underground conduit and structures typically would be installed with a backhoe. The trench would be excavated to approximately 12 to 18 inches wide and a minimum of approximately 36 inches deep. Polyvinyl chloride (PVC) conduit would be placed in the trench and covered with approximately 3 inches of concrete slurry, then backfilled and compacted. For manholes and pull boxes, a hole would be excavated approximately 8 to 9 feet deep, 7 to 8 feet long, and 7 to 8 feet wide. The manhole or pull box would be lowered into place, connected to the conduits, and backfilled with concrete slurry.

4.11.7 Cleanup and Post-Construction Restoration

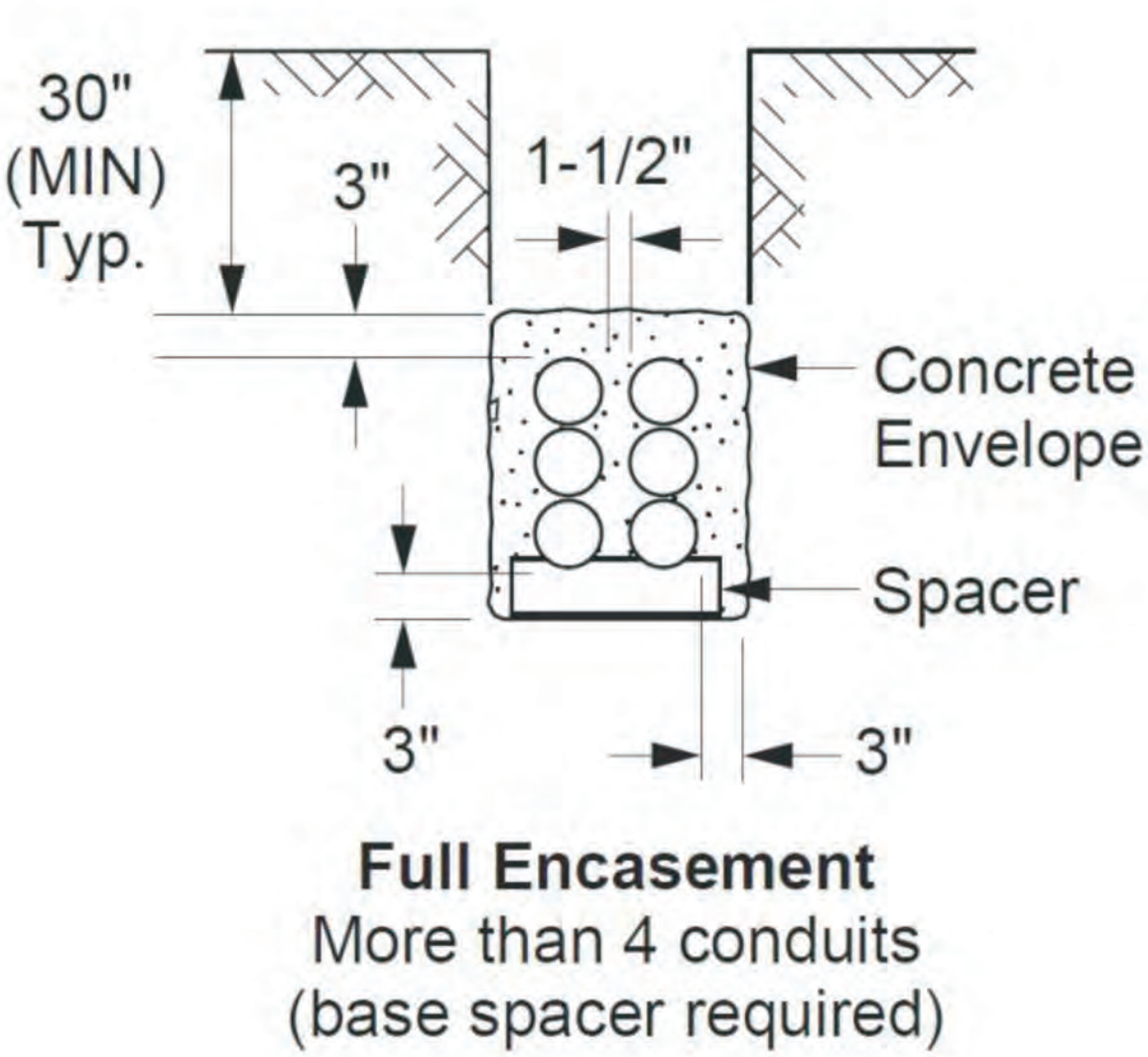
Following the completion of construction for the Proposed Project, SCE would restore all areas that would be temporarily disturbed by construction of the Proposed Project (including the material staging yards, construction setup areas, pull and tension sites, and splicing sites) to as close to pre-construction conditions as possible, or to the landowner's requirements established during lease negotiations.



Aspen Environmental Group

Source: SCE, 2014a.

Figure 4-7
Typical Distribution Line Vault



Source: SCE, 2014a.

Figure 4-8
Typical Distribution Line Duct Bank

If the restoration occurs within sensitive habitats, a habitat restoration and revegetation plan would be developed by SCE with the appropriate resource agencies and implemented after construction is complete.

4.11.8 Construction Workforce and Equipment

The number of personnel and equipment estimated to be required for construction of the Proposed Project are summarized in Table 4-4 (Construction – Typical Equipment Use). Construction would be performed by either SCE construction crews or contractors. If SCE construction crews are used they typically would be based at SCE's local facilities, such as the Tehachapi Service Center. Contractor construction personnel would be managed by SCE construction management personnel. SCE anticipates a total of approximately 50 construction personnel working on any given day. SCE anticipates that crews would work concurrently whenever possible; however, the estimated deployment and number of crew members would vary depending on factors such as material availability, resource availability, and construction scheduling.

Construction efforts would occur in accordance with accepted construction industry standards. SCE would comply with applicable local ordinances for construction activities.

Table 4-4. Construction – Typical Equipment Use

Equipment	Use	Number of Vehicles	Days per Week of Operation	Hours per Day of Operation	Duration of Use (weeks)
Substation Construction					
Survey (2 People)					
Survey trucks	Transport construction personnel	2	5	2	1
Grading (6 People)					
Dozer	Crawler for moving earth	1	5	10	6
Loader	Used to move aside soil, gravel, and sand	2	5	10	6
Grader	Scraper to grade the construction site	1	5	10	6
Water truck	Water site	2	5	10	6
4x4 Tamper	Tamp site	1	5	10	6
Tool truck	Transport tools	1	5	4	6
Pick-up truck	Transport construction personnel	4	5	2	6
Dump truck	Transport material for construction	50	5	10	3
Chain Link Fencing (4 People)					
Bobcat	Excavate and move soil, sand, or gravel	1	5	8	2
Flatbed truck	Transport large materials or equipment	1	5	4	2
Crew cab truck	Transport construction personnel	1	5	2	2
Civil (7 People)					
Excavator	Used for digging and moving foundation material	1	5	8	15
Foundation auger	Used for digging foundation	1	5	4	15
Backhoe	Excavation of foundation and materials	2	5	8	15
Dump truck	Transport material for construction	1	5	4	18
Skip loader	Shovel site	1	5	8	15
Water truck	Water site	1	5	8	15

Table 4-4. Construction – Typical Equipment Use

Equipment	Use	Number of Vehicles	Days per Week of Operation	Hours per Day of Operation	Duration of Use (weeks)
Bobcat skid steer	For scraping and moving soil, sand, and gravel	2	5	8	15
Forklift	Lift materials	1	5	4	15
17-ton crane	Lift machinery and heavy materials	1	5	4	16
Tool truck	Transport tools	1	5	4	15
Pick-up truck	Transport construction personnel	4	5	2	15
MEER (4 People)					
Pick-up truck	Transport construction personnel	2			
Stake truck	Transport medium duty cargo loads	1	5	2	16
17-ton crane	Lift materials	1	5	4	16
Electrical (8 People)					
Scissor lifts	Aerial work platform for lifting workers and materials	1	5	4	13
Manlift	Move workers to different stories	2	5	4	20
Reach forklift	Lift construction personnel and materials	1	5	2	13
15-ton crane (line truck)	Movable crane	1	5	4	13
Tool trailer	Transport Tools	1	5	8	20
Crew truck	Transport construction personnel	2	5	2	1
70-ton crane	Lift heavy materials	1	5	4	13
Wiring (2 People)					
Manlift	Lift construction personnel	1	4	2	11
Tool trailer	Transport tools	1	4	8	11
Transformers (4 People)					
Crew truck	Transport construction personnel	2			
Low bed truck	Transformers	1	5	2	1
Maintenance Crew Equipment Check (4 People)					
Maintenance truck	Maintenance	2	5	2	4
Testing (2 People)					
Crew truck/van	Transport construction personnel	1	5	2	18
Asphalting (6 People)					
Paving roller	Used to compact soil, concrete, or asphalt	1	5	4	2
Asphalt paver	Used to lay asphalt on roads	1	5	4	2
Tractor	Used to pull heavy materials or equipment	1	5	8	3
Crew truck	Transport construction personnel	2	5	2	2
Asphalt curb machine	Used to install curb in road	1	5	2	2
Stake truck	Transport medium duty cargo loads	1	5	2	2
Dump truck	Transport material for construction	1	5	4	2
Landscaping (4 People)					
Tractor	Used to pull heavy materials or equipment	1	5	8	1
Dump truck	Transport material for construction	1	5	4	1

Table 4-4. Construction – Typical Equipment Use

Equipment	Use	Number of Vehicles	Days per Week of Operation	Hours per Day of Operation	Duration of Use (weeks)
Pick-up truck	Transport construction personnel	1	5	2	1
Distribution Getaway Construction					
Civil (5 People)					
Backhoe/front loader	Excavation of foundation and materials	1	4	8	2
Dump truck	Transport material for construction	1	4	4	2
1-ton crew truck	Transport construction personnel	1	4	2	2
Cement truck	For moving and pouring cement	1	4	4	2
Paving roller	Used to compact soil, concrete, or asphalt	1	4	4	2
Asphalt paver	Used to lay asphalt on roads	1	4	4	2
Grinder	Used to grind large organic material	1	4	4	2
Vault Delivery (1 Person)					
4-ton truck with crane	Truck and crane with 25 ton capacity	1	2	4	1
Cable Pulling (7 People)					
Rodder truck	Sewer Truck	1	2	8	1
Cable carousel	Used for spooling long spans of cable	1	2	8	1
1-ton crew truck	Transport construction personnel	1	2	8	1
Cable Splicing (4 People)					
Line truck	Cable Splicing	1	4	8	2
Crew truck	Transport construction personnel	1	4	2	2
Subtransmission Construction					
Survey (4 People)					
1-ton pickup truck	Transport construction personnel	1	2	8	1
Marshalling Yard (4 People)					
1-ton truck	Transport construction personnel	3	5	3	1
Rough terrain forklift	Used to lift materials in rough terrain	1	1	6	1
Boom crane truck	Movable crane	1	1	4	1
Water truck	Water site	1	2	12	1
Semi-tractor truck	Used to pull heavy materials or equipment	1	2	7	1
Right-of-Way Clearing (5 People)					
1-ton truck	Transport construction personnel	1	1	8	1
Backhoe/front loader	Excavation of foundation and materials	1	1	6	1
Track type dozer	Right-of-Way Clearing	1	1	6	1
Motor grader	Right-of-Way Clearing	1	1	6	1
Water truck	Water site	1	1	8	1
Lowboy truck/trailer	Haul heavy equipment	1	1	4	1
Roads and Landing Work (5 People)					
1-ton truck	Transport construction personnel	1	1	8	1
Backhoe/front loader	Excavation of foundation and materials	1	1	4	1

Table 4-4. Construction – Typical Equipment Use

Equipment	Use	Number of Vehicles	Days per Week of Operation	Hours per Day of Operation	Duration of Use (weeks)
Track type dozer	Crawler for moving earth	1	1	4	1
Motor grader	Roads and Landing Work	1	1	6	1
Water truck	Water site	1	1	8	1
Drum type compactor	Roads and Landing Work	1	1	6	1
Excavator	Scraping and removing foundation materials	1	1	4	1
Lowboy truck/trailer	Haul heavy equipment	1	1	4	1
Removal of Existing Conductor (10 People)					
1-ton truck	Transport construction personnel	2	1	4	1
Manlift bucket truck	Lift construction personnel	2	1	8	1
Boom crane truck	Movable crane	2	1	8	1
Bull wheel puller	Hydrostatic cable mooring system	1	1	6	1
Sock line puller	To string cable line	1	1	6	1
Static truck/tensioner	Movable cable tensioner	1	1	6	1
Lowboy truck/trailer	Haul heavy equipment	2	1	4	1
Wood Pole Removal (10 People)					
1-ton truck	Transport construction personnel	2	1	8	1
Compressor trailer	Trailer mounted air compressor	1	1	4	1
Manlift/bucket truck	Lift construction personnel	1	1	6	1
Boom crane truck	Movable crane	1	1	6	1
Flatbed pole truck	Transport large materials or equipment	1	1	8	1
Install TSP Foundations (6 People)					
3/4-ton truck	Transport construction personnel	1	4	4	4
Boom crane truck	Movable crane	1	4	4	4
Backhoe/front loader	Excavation of foundation and materials	1	4	6	4
Auger truck	Drill mounted on a truck for drilling holes	1	4	6	4
Water truck	Water site	1	4	8	4
Dump truck	Transport material for construction	1	4	4	4
Concrete mixer truck	Mix and pour concrete	3	4	4	4
TSP Haul (4 People)					
3/4-ton truck	Transport construction personnel	1	4	8	2
Boom crane truck	Movable crane	1	4	6	2
Flatbed pole truck	Transport large materials or equipment	1	4	8	2
TSP Assembly (10 People)					
3/4- and 1-ton truck	Transport construction personnel	4	4	4	2
Compressor trailer	Trailer mounted air compressor	1	4	6	2
Boom crane truck	Movable crane	1	4	8	2
TSP Erection (10 People)					
3/4- and 1-ton truck	Transport construction personnel	4	4	4	2

Table 4-4. Construction – Typical Equipment Use

Equipment	Use	Number of Vehicles	Days per Week of Operation	Hours per Day of Operation	Duration of Use (weeks)
Compressor trailer	Trailer mounted air compressor	1	4	6	2
Boom crane truck	Movable crane	1	4	8	2
Wood/LWS Pole Haul (4 People)					
3/4-ton truck	Transport construction personnel	1	2	8	1
Boom crane truck	Movable crane	1	2	6	1
Flatbed pole truck	Transport large materials or equipment	1	2	8	1
Wood/LWS Pole Assembly (10 People)					
3/4- and 1-ton truck	Transport construction personnel	2	3	4	1
Compressor trailer	Trailer mounted air compressor	1	3	6	1
Boom crane truck	Movable crane	1	3	8	1
Install Wood/LWS Poles (10 People)					
1-ton truck	Transport construction personnel	1	3	8	1
Manlift/bucket truck	Lift construction personnel or materials	1	3	6	1
Boom crane truck	Movable crane	1	3	6	1
Auger truck	Drill mounted on a truck for drilling holes	1	3	4	1
Backhoe/front loader	Excavation of foundation and materials	1	3	8	1
Flatbed pole truck	Used for rigging and assembling a drill	1	3	8	1
Install/Transfer Conductor (10 People)					
1-ton truck	Transport construction personnel	3	4	4	1
Manlift/bucket truck	Elevation of construction personnel and materials	4	4	8	1
Boom crane truck	Movable crane	1	4	8	1
Dump truck	Transport material for construction	1	4	2	1
Wire truck/trailer	To move cable line	1	4	6	1
Sock line puller	To string cable line	1	4	6	1
Bull wheel puller	Used as a puller or a tensioner to control wire	1	4	6	1
Static truck/tensioner	Install/Transfer Conductor	1	4	6	1
Backhoe/front loader	Excavation of foundation and materials	1	4	2	1
Lowboy truck/trailer	Haul heavy equipment	2	4	4	1
Restoration/Cleanup (5 people)					
1-ton truck	Transport construction personnel	2	1	4	1
Backhoe/front loader	Excavation of foundation and materials	1	1	4	1
Motor grader	Scraper to grade the construction site	1	1	6	1
Water truck	Water site	1	1	8	1
Drum type compactor	Soil compactor	1	1	4	1
Lowboy truck/trailer	Haul heavy equipment	1	1	4	1

Table 4-4. Construction – Typical Equipment Use

Equipment	Use	Number of Vehicles	Days per Week of Operation	Hours per Day of Operation	Duration of Use (weeks)
Telecommunications Construction					
Telecom Construction Inside MEER (3 People)					
Pick-up truck	Transport construction personnel	3	5	6	6
Substructure Installation (4 People)					
Backhoe	Excavation of foundation and materials	1	5	8	7
Dump trucks	Transport material for construction	1	5	8	7
Cement truck	Mix and transport cement	1	5	8	7
Wood Pole Replacement and Transfer Facilities (6 People)					
1-ton truck	Transport construction personnel	2	5	2	8
Double bucket truck	Lift personnel	1	5	8	8
Boom truck	All construction activities	1	5	8	8
Auger truck	Drill mounted on a truck for drilling holes	1	5	4	8
Fiber Optic Cable Installation (6 People)					
Pick-up truck	Transport construction personnel	2	5	8	13
Manlift/bucket truck	Elevation of personnel and stringing wire	2	5	8	13

Source: SCE, 2014a; SCE, 2014b.

4.11.9 Construction Schedule

SCE anticipates that construction of the Proposed Project would take approximately 12 months. This does not include delays attributable to inclement weather and/or stoppages necessary to protect biological resources. Construction would commence following CPUC approval, final engineering, procurement activities, and receipt of all applicable permits.

4.12 Operation and Maintenance

The proposed Banducci Substation would be unstaffed, and electrical equipment within the substation would be remotely monitored and controlled by an automated system from SCE's Vincent Substation. SCE personnel typically would visit for electrical switching and routine maintenance. Routine maintenance would include equipment testing, monitoring, and repair. The substation would require permanent lighting for occasional use in evenings, as needed (SCE, 2014b). It is anticipated that there would be SCE personnel visiting the substation approximately two to three times per week.

The proposed subtransmission lines would be maintained in a manner consistent with CPUC General Order 165. Normal operation of the 66 kV subtransmission lines would be controlled remotely through SCE control systems. SCE inspects the energized subtransmission overhead facilities a minimum of once per year using ground and/or aerial observation. Maintenance would occur as needed and would include activities such as repairing conductors, replacing insulators, replacing poles, and access road maintenance.

4.13 Other Project-Related Activities

4.13.1 Geotechnical Studies

Prior to start of construction, SCE would conduct a geotechnical evaluation for the Proposed Project. Geotechnical site assessment and field investigation would be conducted at the substation site and new TSPs locations for the subtransmission line segments. Geotechnical studies include borings to collect soil samples for laboratory analysis and, if applicable, to determine the depth to bedrock and/or the water table. The laboratory results would be analyzed to determine the physical properties of subsurface soils, soil resistivity, and presence of hazardous materials. In addition, the results would be used for foundation design and final design of the project.

4.13.2 Environmental Surveys

After project approval, but prior to the start of construction, environmental surveys would be conducted to identify sensitive biological and cultural resources in the vicinity of the Proposed Project, including the 66 kV subtransmission line route, wire stringing locations, access roads, and staging yards. In addition, these areas would be examined for obvious signs of chemical contamination, such as oil slicks and petroleum odors. The information gathered from these surveys may be used to modify the project design to avoid sensitive resources or to implement APMs to minimize the impact to sensitive resources from project-related activities. The survey results also would be used to determine the extent to which environmental specialist construction monitoring by SCE would be required.

Biological Resource Surveys. Biological resources surveys to be completed would be as follows:

- *Sensitive plant surveys* would be conducted by a qualified botanist familiar with plants in the Cummings Valley. Surveys would focus on identifying whether state and federally listed species as well as California Native Plant Society special-status plants are present. In addition, potential habitat to support special-status plant species would be identified.

Thirty days prior to the start of ground disturbing activity, the following surveys would be conducted:

- *Clearance Surveys.* A clearance survey would be conducted no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species that may be impacted by construction activities. Clearance surveys include a field survey by a qualified botanist and wildlife biologist and would be limited to areas directly impacted by construction activities.
- *Active Nests.* Within one week prior to the start of construction in a particular area during nesting season (generally February 1 to August 31), a nesting survey would be conducted. If a nest must be moved during the nesting season, SCE would coordinate with the California Department of Fish and Wildlife and the United States Fish and Wildlife Service to obtain approval prior to moving the nest.

Cultural Resources Surveys. Most of Proposed Project areas have been surveyed for cultural resources. The unsurveyed portions of the Proposed Project would be surveyed for cultural resources prior to construction and based on final engineering, and the following actions would be taken, as necessary:

- During the surveys, any discovered archaeological resource potentially affected by construction of the Proposed Project would be evaluated for its eligibility for listing in the California Register of Historical Resources (California Register). Ideally, archaeological resources found to meet any of the California Register eligibility criteria would be avoided and preserved in place. If avoidance is not feasible, a data recovery plan would be prepared to recover scientifically consequential information from the site prior to construction of the Proposed Project. The data recovery plan would define all aspects of the

data recovery program, including a research design, description of all archaeological methods and techniques to be employed in data recovery, as well as analytical and reporting procedures and required reports. Studies and reports resulting from site recordation and data recovery would be deposited with the Southern San Joaquin Valley Information Center and other appropriate agencies. Provision would be made for the appropriate curation of any artifacts and other recovered materials at a museum or other qualified repository.

- If previously undetected archaeological resources are discovered during construction of the Proposed Project, personnel would be instructed to suspend work in the vicinity of any find, and work would be redirected to avoid impacting the resource. The resource would then be evaluated for listing in the California Register by a qualified archaeologist, and, if the resource is determined to be eligible for listing in the California Register, the resource would either be avoided or appropriate archaeological protective measures would be implemented.
- In the event that human remains are encountered during preconstruction surveys or construction and cannot be avoided, the remains would be removed in accordance with CEQA Guidelines 15064.5(d) and (e).

Any built environment resources found would be fully documented using California Department of Parks and Recreation Form 523 and supplements.

Each built environment resource potentially affected by construction of the Proposed Project would be evaluated for its eligibility for listing in the California Register. Ideally, built resources found to meet any of the California Register eligibility criteria would be avoided by the Proposed Project and preserved in place. If avoidance is not feasible, each California Register eligible resource affected by the Proposed Project would be recorded to the Historic American Building Survey/Historic American Engineering Record/ Historic American Landscape Survey standards.

4.13.3 Worker Environmental Awareness Training

Prior to construction, a Worker Environmental Awareness Program (WEAP) would be developed. A presentation would be prepared by SCE and used to train all site personnel prior to the commencement of work. A record of all trained personnel would be kept.

In addition to instruction on compliance with any additional site-specific biological or cultural resource protective measures and Proposed Project mitigation measures developed after the preconstruction surveys, all construction personnel would also receive the following:

- A list of phone numbers of SCE environmental specialist personnel associated with the Proposed Project (archaeologist, biologist, environmental coordinator, and regional spill response coordinator).
- Instruction on the Eastern Kern Air Pollution Control District (EKAPCD) fugitive dust rules.
- Instruction on what typical cultural resources look like and instruction that if discovered during construction, work is to be suspended in the vicinity of any find and the site foreman and archaeologist or environmental coordinator is to be contacted for further direction.
- Instruction on the individual responsibilities under the Clean Water Act, the project Storm Water Pollution Prevention Plan (SWPPP), site-specific Best Management Practices (BMPs), and the location of Material Safety Data Sheets for the project.
- Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination.

- A copy of the truck routes to be used for material delivery.
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the Proposed Project.
- Instruction on Ozone Precursor Control Measures.
- Direction that site vehicles must be properly muffled.

4.13.4 Traffic Control

Construction activities undertaken within public street ROW would require the use of a traffic control service, and all lane closures would be conducted in accordance with applicable requirements. These traffic control measures would be consistent with those published in the *California Joint Utility Traffic Control Manual* (SCE, 2014a).

4.14 Applicant Proposed Measures

SCE proposes to implement measures to ensure the Proposed Project would occur with minimal environmental impacts in a manner consistent with applicable rules and regulations. SCE proposes to implement these measures during the design, construction, and operation of the Proposed Project in order to avoid or minimize potential environmental impacts.

Applicant Proposed Measures (APMs) listed in Table 4-5 are considered part of the Proposed Project and are considered in the evaluation of environmental impacts (see Section 5, Environmental Analysis and Mitigation). CPUC approval would be based upon SCE adhering to the Proposed Project as described in this document, including this project description and the APMs, as well as any adopted mitigation measures identified by this Initial Study.

Table 4-5 details each APM by environmental issue area. In some cases, mitigation measures presented in Section 5 either expand upon or add detail to the APMs presented in Table 4-5, if necessary, to ensure that potential impacts would be reduced to less than significant levels.

Table 4-5. Applicant Proposed Measures (APMs)

APM Number	Issue Area
	Biological Resources
APM Bio-1	**Pre-construction Surveys and Construction 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-2	**Pre-Construction Surveys for Nesting Birds/Raptors.** SCE would conduct project-wide nesting bird surveys and remove trees and other vegetation if feasible outside of the nesting season. If a tree or pole containing a raptor nest must be removed during nesting season, or if work is scheduled to take place in close proximity to an active nest on an existing transmission tower or pole, SCE biologists would determine appropriate nesting buffers based on a project specific nesting bird management plan or consultation with the appropriate agencies.
APM Bio-3	**Burrowing Owl.** Biologists would conduct a preconstruction burrowing owl survey of the Proposed Project Study Area no more than 30 days prior to construction. Construction activities will be scheduled and planned to avoid burrowing owls and their burrows. A 250-foot buffer will be placed around active nest and the site will be avoided, where feasible. If occupied burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFW and may include collapsing burrows outside of nesting season and using exclusionary devices to reduce impacts to the burrowing owl. Biological monitors would monitor all construction activities that have the potential to impact active burrows.

Table 4-5. Applicant Proposed Measures (APMs)

APM Bio-4	**Tehachapi Slender Salamander.** If project activities would be located within oak woodlands and ravines, construction activities would avoid displacement of rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. For these areas, a biologist would be present to ensure that construction activities do not impact this species, particularly during periods of peak activity, such as rainy or wet nights with moderate temperatures.
APM Bio-5	**Avoidance of Sensitive Habitats.** SCE would minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided. If unable to avoid impacts to native vegetation, a project revegetation plan would be prepared in coordination with the appropriate agencies for areas of native habitat temporarily impacted during construction.
Paleontological Resources	
APM PA-1	**Paleontological Resources Treatment Plan.** A Paleontological Resources Treatment Plan shall be developed for construction within areas that have been identified as having a high sensitivity for paleontological resources or in areas where construction activities would exceed 10 feet in depth. The Paleontological Resources Treatment Plan would be prepared by a professional paleontologist in accordance with the recommendations of the SVP.
Hazardous Materials	
APM HAZ-1	**Fire Management Plan.** A Fire Management Plan would be developed by SCE prior to the start of construction.

4.15 Other Permits and Approvals

The CPUC is the lead agency for CEQA review of this project. In accordance with CPUC General Order No. 131-D, SCE prepared and submitted a Proponent's Environmental Assessment (PEA) as part of its application for a Permit to Construct (PTC). The CPUC has exclusive authority to approve or deny SCE's application; however, various permits from other agencies may also need to be obtained by SCE to build the Proposed Project. If the CPUC issues a PTC, it would provide overall project approval and certify compliance of the project with CEQA. In addition to the PTC, Table 4-6 summarizes the permits from other federal, State, and local agencies that may be needed for the project.

Table 4-6. Permits that May Be Required for the SCE Banducci Substation Project

Agency	Jurisdiction	Requirements
FEDERAL / STATE AGENCIES		
California Public Utilities Commission	Construction, modification, or alteration of power line facilities.	Permit to Construct (General Order No. 131-D)
California Department of Transportation	For use of California State highways for other than normal transportation purposes, including construction activities completed within the ROW.	Standard Encroachment Permit
California Office of Historic Preservation	Consultation (through CEQA review process)	Cultural resources management (if appropriate)
Regional Water Quality Control Board (RWQCB) – Regions 5 and 6	Construction activities disturbing 1 acre or more of soil must submit a Notice of Intent to comply with the terms of the general permit.	National Pollution Discharge Elimination System, General Construction Storm Water Pollution Prevention Plan (SWPPP)
California Department of Fish and Wildlife	Endangered species consultation	Consultation on State-listed species; possible impacts to threatened and endangered species

Table 4-6. Permits that May Be Required for the SCE Banducci Substation Project

Agency	Jurisdiction	Requirements
LOCAL / REGIONAL AGENCIES		
Kern County and City of Tehachapi	Building and Grading Permits and Safety Requirements	Ministerial approval for construction of new facilities
	Roadway Encroachment and/or Transportation Permit	Ministerial approval for possible closure of roads for transportation of heavy or oversized equipment and construction of facilities within public roadway right-of-way
Union Pacific Railroad	Activities in area of railroad	Encroachment permit to cross railroad facilities (telecommunications components)

4.16 Electric and Magnetic Fields Summary

4.16.1 Electric and Magnetic Fields

Recognizing that there is public interest and concern regarding potential health effects that could result from exposure to electric and magnetic fields (EMF) from power lines, this document provides information regarding EMF associated with electric utility facilities and the potential effects of the Proposed Project related to public health and safety. Potential health effects from exposure to ***electric fields*** from power lines (produced by the existence of an electric charge, such as an electron, ion, or proton, in the volume of space or medium that surrounds it) are typically not of concern since electric fields are effectively shielded by materials such as trees, walls, etc. Therefore, the majority of the following information related to EMF focuses primarily on exposure to ***magnetic fields*** (invisible fields created by moving charges) from power lines.

Magnetic fields can be reduced either by cancellation or by increasing distance from the source. Cancellation is achieved in two ways. A transmission line circuit consists of three "phases": three separate wires (conductors), usually on an overhead tower. The configuration of these three conductors can reduce magnetic fields. When the configuration places the three conductors closer together, the interference, or cancellation, of the fields from each wire is enhanced, and the magnetic field is reduced. This technique has practical limitations because of the potential for short circuits if the wires are placed too close together. Close conductor spacing can also create worker safety concerns because there is a risk of workers contacting energized conductors during maintenance. The cables used in underground high-voltage transmission lines are insulated (coated) to allow the three phases to be much closer together than on overhead lines.

This Initial Study does not consider magnetic fields in the context of CEQA and determination of environmental impact. This is because (a) there is no agreement among scientists that EMF does create a potential health risk, and therefore, (b) there are no defined or adopted CEQA standards for defining health risk from EMF. As a result, EMF information is presented for the benefit of the public and decisionmakers.

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remains inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is not sufficient evidence to conclude that EMF causes cancer. The International Agency for Research on Cancer (IARC), an agency of the World Health Organization (WHO), and the California Department of Health Services (DHS) both classified EMF as a possible carcinogen (WHO, 2001; DHS, 2002).

In addition, the 2007 WHO [Environmental Health Criteria (EHC) 238] report concluded that:

- Evidence for a link between Extremely Low Frequency (ELF, 50–60 Hz) magnetic fields and health risks is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukemia. However, "…virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level ELF magnetic fields and changes in biological function or disease status….the evidence is not strong enough to be considered causal but sufficiently strong to remain a concern."
- "For other diseases, there is inadequate or no evidence of health effects at low exposure levels."

Currently, there are no applicable regulations related to EMF levels from power lines or substations. However, following a CPUC decision from 1993 (Decision [D.]93-11-013) that was reaffirmed by the CPUC on January 27, 2006 (D.06-01-042), the CPUC requires utilities to incorporate "low-cost" or "no-cost" measures to mitigate EMF from new or upgraded electrical utility facilities up to approximately 4 percent of total project cost. To comply with this requirement, SCE has incorporated such measures to reduce magnetic field levels in the vicinity of the proposed substation and subtransmission lines.

4.16.2 EMF and the Banducci Substation Project

In accordance with Section X(A) of GO 131-D, CPUC Decision No. D.06-01-042 and SCE's EMF Design Guidelines prepared in accordance with the EMF Decision, SCE will incorporate "no cost" and "low cost" magnetic field reduction steps in the design of the proposed power line and substations modification and expansion. The design guidelines include the following measures recommended by SCE to reduce the magnetic field strength levels from electric power facilities:

For Proposed Banducci 66 kV Subtransmission Line Route Segment 1, SCE would:

- Utilize structure heights that meet or exceed SCE's EMF preferred design criteria; and
- Utilize subtransmission line construction that reduces the space between conductors compared with other designs.

For Proposed Banducci 66 kV Subtransmission Line Route Segment 2, SCE would:

- Utilize structure heights that meet or exceed SCE's EMF preferred design criteria; and
- Utilize subtransmission line construction that reduces the space between conductors compared with other designs.

For Proposed Banducci 66/12 kV Substation, SCE would:

- Place major substation electrical equipment (such as transformers, switchracks, buses and underground duct banks) away from the substation property lines; and
- Configure the transfer and operating buses with the transfer bus closest to the nearest property line.

Further information regarding EMF and the Banducci Substation Project can be found in Appendix F, Field Management Plan: Banducci 66/12 kV Substation Project, which was submitted to the CPUC as part of SCE's application (A.12-11-011). SCE's application (A.12-11-011) and Proponent's Environmental Assessment are available for public review at the CPUC Energy Division CEQA Unit and on the project website at:

http://www.cpuc.ca.gov/Environment/info/aspen/banduccisubstation/banduccisubstation.htm

5. Environmental Setting and Environmental Impacts

5.1 Aesthetics

AESTHETICS Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☑	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☑
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.1.1 Setting

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. The Aesthetics section of this IS/MND describes the existing landscape character of the project area, existing views of the project area from various on-the-ground vantage points, the visual characteristics of the proposed SCE Banducci Substation Project (Proposed Project), and the landscape changes that would be associated with the construction and operation of the Proposed Project as seen from various vantage points.

Visual Sensitivity–Visual Change Methodology

Under this methodology, the Proposed Project was viewed from various public roads and vantage points to develop an overall assessment of the existing landscape character, visual quality, and viewing conditions. Then, at representative viewpoints (Key Observation Points, or KOPs), the existing landscape was characterized (for visual quality, viewer concern, and viewer exposure) and photographed. Each of the factors considered in the evaluation of the existing landscape under the Visual Sensitivity–Visual Change methodology is discussed below.

Visual Quality is a measure of the overall impression or appeal of an area as determined by particular landscape characteristics such as landforms, rockforms, water features, and vegetation patterns, as well as associated public values. The attributes of variety, vividness, coherence, uniqueness, harmony, and pattern contribute to visual quality classifications of indistinctive (Low), common (Moderate), and distinctive (High). Visual quality is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

Viewer Concern addresses the level of interest or concern of viewers regarding an area's visual resources (rated from Low to High) and is closely associated with viewers' expectations for the area. Viewer concern reflects the importance placed on a given landscape based on the human perceptions of the intrinsic beauty of the existing landforms, rockforms, water features, vegetation patterns, and even cultural features.

Viewer Exposure describes the degree to which viewers are exposed to views of the landscape (rated Low to High). Viewer exposure considers landscape visibility (the ability to see the landscape), distance zones (proximity of viewers to the subject landscape), number of viewers (Low to High), and the duration of view (Brief to Extended). Landscape visibility can be a function of several interconnected considerations including proximity to viewing point, degree of discernible detail, seasonal variations (snow, fog, and haze can obscure landscapes), time of day, and/or presence or absence of screening features such as landforms, vegetation, and/or built structures. Even though a landscape may have highly scenic qualities, it may be remote, receiving relatively few visitors and thus, have a lower degree of viewer exposure. Conversely, a subject landscape or project may be situated in relatively close proximity to a major road or highway used by a substantial number of motorists and yet still result in relatively low viewer exposure if the rate of travel speed on the roadway is high and viewing times are brief, or if the landscape is partially screened by vegetation or other features. Often, it is the subject area's proximity to viewers, or distance zone, that is of particular importance in determining viewer exposure. Landscapes are generally subdivided into three or four distance zones based on relative visibility from travel routes or observation points. Distance zones typically include foreground, middleground, and background. The actual number of zones and distance assigned to each zone is dependent on the existing terrain characteristics and public policy and often is determined on a project-by-project basis.

Overall Visual Sensitivity is a concluding assessment as to an existing landscape's susceptibility to an adverse visual outcome (rated Low to High). A landscape with a high degree of visual sensitivity is able to accommodate only a low degree of adverse visual change without resulting in a significant visual impact. A landscape with a low degree of visual sensitivity is able to accommodate a higher degree of adverse visual change before exhibiting a significant visual impact. Overall visual sensitivity is derived from a comparison of existing visual quality, viewer concern, and viewer exposure.

Existing Landscape Setting and Viewer Characteristics

This section discusses: (1) the existing visual character of the region; (2) the existing visual quality of the Proposed Project area; (3) viewer concern; and (4) viewer exposure to the Proposed Project, leading to a rating of overall visual sensitivity. Also discussed are the existing sources of light and glare within the Proposed Project area.

***Regional Context*.** The Proposed Project area is within the Greater Tehachapi Area (GTA) in unincorporated Kern County, California. The GTA is a distinctive Specific and Community Plan area in the county with a topographical and natural diversity encompassing numerous and varied scenic and natural resources. These scenic and natural resources include vistas of mountains, valleys, lakes, agriculture, ranching, historical buildings, and oak woodlands. The Tehachapi Mountains and southern Sierra Nevada surround four main valleys: Tehachapi, Cummings, Bear, and Brite valleys. Notable peaks in the Tehachapi Mountains include Tehachapi, Double Mountain, Bear Mountain, Cummings Mountain, Black Mountain, and Sweet Ridge. Scenic resources also include various types of chaparral, woodland, and forest vegetation communities, as well as recreational areas (Kern County Planning and Community Development Department, 2010). The Proposed Project would occur in Cummings Valley and other portions of the GTA, as well as portions of the incorporated City of Tehachapi (City), which is not a part of the GTA even though it is within the GTA boundaries.

The GTA largely consists of sparsely populated rural and semirural communities. Cummings Valley is predominantly agricultural with agriculture-related facilities and rural residences. The City is a small community containing both rural and urban areas with a mix of residential, industrial, commercial, and agricultural land uses. The proposed Banducci Substation site is located within Cummings Valley, and the

two proposed fiber optic communications routes follow existing utility routes from the proposed substation site to the east through the City and then farther to the east to the existing Monolith Substation (Figures 5.1-1A and 5.1-1B).

The proposed substation site is situated within the relatively flat, circular-shaped Cummings Valley floor at an elevation of approximately 3,800 feet above mean sea level (amsl). Cummings Valley is surrounded on all sides by hills and low-lying mountain ranges with an average elevation of 4,000 to 4,400 feet amsl. The proposed substation site was used in the past for agricultural purposes. Land uses immediately surrounding the site are predominantly designated as agricultural land. A State prison, the California Correctional Institution, is located in an annexed portion of the City, east of the proposed substation site (Figure 5.1-1A and 5.1-1B).

Fiber optic communications Route 1 would connect the proposed Banducci Substation to the existing Monolith Substation to the east of the City by way of the existing Cummings Substation (Figure 5.1-1A). The route travels in a nearly direct west-east direction and is approximately 14.5 miles long. The fiber optic cable would be underground from the proposed Banducci Substation and would transition to an overhead position on existing wood poles on Highline Road for six miles until it transitions underground again before entering Cummings Substation. This portion of the route passes through agricultural, institutional (California Correctional Institution), recreational (Brite Lake Aquatic Recreation Area), and rural residential land uses and mostly travels along dirt roads. After exiting Cummings Substation, the cable again would transition to an overhead position on existing wood poles and continue overhead for 7.5 miles to an existing pole outside the existing Monolith Substation where it would once again transition underground to enter the substation (Figure 5.1-1A). This portion of the route passes through largely agricultural and rural residential land uses and travels almost exclusively along paved roadways.

Fiber optic communications Route 2 would directly connect the proposed Banducci Substation to the existing Monolith Substation east of the City (Figure 5.1-1A). This route travels in a west-east direction but meanders north and south primarily along paved roadways or railroad tracks. The fiber optic cable would be underground from the proposed Banducci Substation and would transition to an overhead position on a new wood pole on Pelliser Road (an existing wood-pole line is already present along Pelliser Road). From this position, it would travel mostly overhead on existing wood poles but would be undergrounded at times. The total approximate length of this route is 17.5 miles. In the west, the route passes through the agricultural lands of Cummings Valley and along the base of the foothills defining the northern boundary of the valley. As it continues eastward, it passes through commercial, undeveloped grassland and shrubland, rural residential, suburban residential, and urban land uses. From downtown Tehachapi, the route traverses through agricultural and undeveloped land east to the existing Monolith Substation.

***Project Viewshed, Regional Viewpoints, and Key Observation Points*.** The project viewshed is defined as the areas and locations from which the Proposed Project would be seen. The viewshed includes portions of Cummings Valley and the immediately surrounding foothills (for the proposed substation and both fiber optic communications routes) and portions of the City, as well as areas east and west of the City (both fiber optic communications routes). Many of the residences up to 1.5 miles from the proposed substation site would have at least some view of the proposed Banducci Substation (Figures 5.1-1A and 5.1-1B).

Three Regional Viewpoints that encompass both the proposed Banducci Substation site and the fiber optic communications routes were identified for landscape visibility discussion (Figure 5.1-1A). Six KOPs were selected for the Proponent's Environmental Assessment (PEA) to illustrate the existing visual setting and visual change that would be associated primarily with the proposed Banducci Substation (Figures

5.1-1A and 5.1-1B). The addition of the Route 1 and Route 2 fiber optic communications cables to existing wood-pole lines would not be noticeable to the casual viewer; therefore, the Regional Viewpoint and KOP discussions below focus primarily on the proposed Banducci Substation.

It should be noted that the first figure for each KOP (i.e., Figures 5.1-5A, 5.1-6A, etc.) presents a life-size scale image when the image is held 18 inches from the eye. That is, all of the landscape features appear the same size as they would if directly observed in the field. The second figure for each KOP (i.e., Figure 5.1-5B, 5.1-6B, etc.) presents reduced-sized images from the PEA. Reducing images creates the impression that Proposed Project components are smaller or farther away than they really would be.

Regional Viewpoint 1 – West Valley Boulevard

Regional Viewpoint 1 presents the existing view along State Route (SR) 202 overlooking Cummings Valley to the southwest (Figure 5.1-2). This view would be representative of those from the rural residences from one to 1.5 miles from the proposed substation site, particularly those in Stallion Springs (Figure 5.1-1B). However, views from Stallion Springs would be primarily limited to the residences along the northern and eastern perimeters of the residential development. This panoramic view captures the rural character of the flat-bottomed valley with its agricultural facilities, ranch and farm lands, rural residences, and existing utility infrastructure. The surrounding foothills that define the valley are visible in the background at a distance of approximately six miles. The utility line along the north (right) side of the road represents a portion of the fiber optic communications Route 2.

Regional Viewpoint 2 – Ronnie Avenue

Regional Viewpoint 2 presents the existing view of Cummings Valley to the north from Ronnie Avenue, a rural residential access road in the southern portion of the valley (Figure 5.1-3). This panoramic view captures much of the valley's rural character. Numerous existing utility poles are visible in the open landscape. The proposed Banducci Substation would be located in the open field just beyond and slightly to the left of the grouping of trees just above the corrugated, round-roofed structure in the center of the image. The distance to the proposed substation site from Regional Viewpoint 2 is approximately 0.85 miles.

Regional Viewpoint 3 – Highline Road

Regional Viewpoint 3 presents the existing view to the east on Highline Road, east of Brite Lake, west of Cummings Substation, and southwest of downtown Tehachapi (Figure 5.1-4). The view transects the rural ranching country north of the Tehachapi foothills. The utility line along the north (left) side of the road represents a portion of the fiber optic communications Route 1.

KOP 1 – Pelliser Road Viewing South

Figure 5.1-5A presents a life-size scale view of the proposed substation site from KOP 1, approximately 0.5 miles north of the site looking south toward the site from southbound Pelliser Road. The view captures a central portion of the rural Cummings Valley back-dropped by the Tehachapi Mountains. The substation would be located in an open field adjacent to, and to the east of (to the left of), Pelliser Road. The existing utility line along the east (left) side of the road represents a portion of the fiber optic communications Route 2. Figure 5.1-5B presents reduced images of the existing view and a simulation of the view with the proposed Banducci Substation. The presence of snow in the image provides a backdrop that causes the substation components to blend into the background more than they would during non-snow conditions that are more typical of the area.

Visual Quality. Moderate. The landscape is predominantly rural in character, and much of it consists of cultivated row crops. Utility infrastructure with prominent vertical forms and lines are present along Pelliser Road and other roads throughout Cummings Valley. Agricultural facilities also punctuate the flat valley floor along with scattered rural residences. Numerous rural residences are located along the base of the foothills defining the southern extent of the valley. The surrounding foothills of the Tehachapi Mountains are more natural in appearance and provide a backdrop of visual interest in contrast to the flat valley floor.

Viewer Concern. Moderate to High. Utility infrastructure is noticeable in the foreground to middle-ground views from Pelliser Road, and travelers on Pelliser Road anticipate the prominent presence of the existing utility infrastructure. However, the same travelers would perceive a substantial increase in industrial character, structure prominence, or view blockage of the higher value landscape features (e.g., the valley floor and foothills) from the proposed Banducci Substation as an adverse visual change, particularly if it diminishes the overall rural character of the valley.

Viewer Exposure. Moderate to High. The proposed Banducci Substation would be highly visible in the foreground views of travelers on Pelliser Road. The number of viewers would be moderate; the average daily traffic on Pelliser Road is 1,700 vehicle trips per day (Southern California Edison [SCE; Proponent or Applicant] 2012). The duration of view would be moderate due to the prominence of the substation components (the tallest being up to approximately 75 feet high) within an approximately 3.3-acre walled-in facility. Combining the four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate to High for viewer exposure.

Overall Visual Sensitivity. Moderate to High. For viewers in the vicinity of KOP 1, combining the equally weighted Moderate visual quality, Moderate to High viewer concern, and Moderate to High viewer exposure results in an overall rating of Moderate to High for visual sensitivity of the visual setting and viewing characteristics.

KOP 2 – Dale Road

Figure 5.1-6A presents a life-size scale view of the proposed substation site from KOP 2, approximately 0.22 miles west of the site looking east toward the site from Dale Road. The view captures a portion of the predominantly rural, agricultural landscape that comprises much of Cummings Valley. The foothills of the Tehachapi Mountains provide a backdrop to the flat valley floor. The proposed substation would be located in the open field just beyond the green, planted field. Figure 5.1-6B presents reduced images of the existing view and a simulation of the view with the Proposed Banducci Substation.

Visual Quality. Moderate. The landscape is predominantly rural in character, and much of it consists of cultivated row crops. Existing utility infrastructure with prominent vertical forms and lines are present along Dale Road and Pelliser Road. Agricultural facilities and rural residences punctuate the flat valley floor. The surrounding foothills of the Tehachapi Mountains are more natural in appearance and provide a backdrop of visual interest in contrast to the flat valley floor.

Viewer Concern. Low to Moderate. Existing utility infrastructure is noticeable in the foreground to middleground landscape viewed from Dale Road, which serves primarily as an access road for agricultural workers. Travelers on Dale Road would likely perceive an increase in industrial character, structure prominence, or view blockage of the higher value landscape features (e.g., the valley floor, foothills, and background sky) from the proposed Banducci Substation as an adverse visual change.

Viewer Exposure. Moderate. The proposed Banducci Substation would be highly visible in the foreground views of travelers on Dale Road. The number of viewers, however, would be very low as this road is used

primarily as an access road for agricultural workers. The duration of view would be moderate due to the prominence of the substation components (the tallest being up to approximately 75 feet high) within an approximately 3.3-acre walled-in facility on the flat valley floor. Combining the four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate for viewer exposure.

Overall Visual Sensitivity. Moderate. For viewers in the vicinity of KOP 2, combining the equally weighted Moderate visual quality, Low to Moderate viewer concern, and Moderate viewer exposure results in an overall rating of Moderate for visual sensitivity of the visual setting and viewing characteristics.

KOP 3 – Pelliser Road Viewing North

Figure 5.1-7A presents a life-size scale view of the proposed substation site from KOP 3, approximately 0.2 miles south of the site looking north toward the site from Pelliser Road. The view captures a portion of the predominately rural agricultural landscape that comprises much of Cummings Valley. The Tehachapi Mountains provide a backdrop to the flat valley floor. The proposed substation would be located in the open field shown in the right-center of the image. Figure 5.1-7B presents reduced images of the existing view and a simulation of the view with the proposed Banducci Substation.

Visual Quality. Low to Moderate. The landscape is predominantly rural in character, and much of it consists of cultivated row crops. Existing utility infrastructure with prominent vertical forms and lines are prevalent along Pelliser Road and the adjacent agricultural access road (Dale Road). Agricultural facilities and rural residences punctuate the flat valley floor. The foothills of the Tehachapi Mountains define the northern extent of the valley and are more natural in appearance, providing a backdrop of visual interest in contrast to the flat valley floor.

Viewer Concern. Moderate to High. Existing utility infrastructure is noticeable in the foreground to middleground landscapes viewed from Pelliser Road, and travelers on Pelliser Road anticipate the prominent presence of this utility infrastructure. However, the same travelers would perceive a substantial increase in industrial character, structure prominence, or view blockage of the higher value landscape features (e.g. the valley floor and foothills) from the proposed Banducci Substation as an adverse visual change, particularly if it diminishes the overall rural character of the valley.

Viewer Exposure. Moderate to High. The proposed Banducci Substation would be highly visible in the foreground views of travelers on Pelliser Road. The number of viewers would be moderate; the average daily traffic on Pelliser Road is 1,700 vehicle trips per day (SCE, 2012). The duration of view would be moderate due to the prominence of the substation components (the tallest being up to approximately 75 feet high) within an approximately 3.3-acre walled-in facility on the flat valley floor. Combining the four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate to High for viewer exposure.

Overall Visual Sensitivity. Moderate. For viewers in the vicinity of KOP 3, combining the equally weighted Low to Moderate visual quality, Moderate to High viewer concern, and Moderate to High viewer exposure results in an overall rating of Moderate for visual sensitivity of the visual setting and viewing characteristics.

KOP 4 – Highline Road

Figure 5.1-8A presents a life-size scale view of the proposed substation site from KOP 4, approximately 0.64 miles northeast of the site looking to the southwest toward the site from Highline Road. The view is across agricultural fields south of Highline Road and east of Pelliser Road. The proposed substation

would be located in front of, and to the right of, the grouping of trees in the left-center of the image. Figure 5.1-8B presents reduced images of the existing view and a simulation of the view with the proposed Banducci Substation. The presence of snow in the image provides a backdrop that causes the substation to blend into the background more than it would during non-snow conditions that are more typical of the area.

Visual Quality. Moderate. The landscape is predominantly rural in character with row crops, scattered agricultural facilities, and rural residences. Existing utility infrastructure with prominent vertical forms and lines are noticeable adjacent to the proposed substation site. The foothills of the Tehachapi Mountains to the south provide a backdrop of visual interest in contrast to the flat valley floor.

Viewer Concern. Moderate to High. This portion of Highline Road provides local access for a very few nearby rural residences and agricultural operations. Although travelers on Highline Road and the adjacent residents anticipate the presence of the existing, distant utility infrastructure, they would perceive a substantial increase in industrial character, structure prominence, or view blockage of the higher value landscape features (e.g., the valley floor and foothills) from the proposed Banducci Substation as an adverse visual change, particularly if it diminishes the overall rural character of the valley.

Viewer Exposure. Moderate. The proposed Banducci Substation would be moderately visible in the middleground views of travelers on Highline Road and adjacent residents. The number of traveling viewers, however, would be very low as this road is used primarily as local access for nearby rural residences and agricultural operations. The duration of view for residents would be moderate to extended due to their stationary views of the proposed substation site. Combining the four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate for viewer exposure.

Overall Visual Sensitivity. Moderate. For viewers in the vicinity of KOP 4, combining the equally weighted Moderate visual quality, Moderate to High viewer concern, and Moderate viewer exposure results in an overall rating of Moderate for visual sensitivity of the visual setting and viewing characteristics.

KOP 5 – Pelliser Road Viewing South

Figure 5.1-9A presents a life-size scale view of the proposed substation site from KOP 5, approximately 0.1 miles north of the site looking south toward the site from Pelliser Road. The view is across an agricultural field, and the substation would be located just beyond Dale Road (the light-colored, thin, horizontal line that traverses the center of the image from right to left). Figure 5.1-9B presents reduced images of the existing view and a simulation of the view with the proposed Banducci Substation. It should be noted that KOP 5 would be more appropriately located on the west side of Pelliser Road in the proper travel lane for a south-southeast view. In so doing, the existing Low to Moderate visual quality (discussed below) would be more obvious because the roadside utility poles would appear much more prominent in the foreground field of view.

Visual Quality. Low to Moderate. The landscape is predominantly rural in character, and much of it consists of cultivated row crops. Existing utility infrastructure with prominent vertical forms and lines is prevalent along Pelliser Road and Dale Road. The foothills of the Tehachapi Mountains define the southern extent of the valley and are more natural in appearance, providing a backdrop of visual interest in contrast to the flat valley floor.

Viewer Concern. Moderate to High. Existing utility infrastructure is noticeable in the foreground to middleground views from Pelliser Road, and travelers on Pelliser Road anticipate the prominent presence of this utility infrastructure. However, the same travelers would perceive a substantial increase in

industrial character, structure prominence, or view blockage of the higher value landscape features (e.g., the valley floor and foothills) from the proposed Banducci Substation as an adverse visual change, particularly if it diminishes the overall rural character of the valley.

Viewer Exposure. Moderate to High. The proposed Banducci Substation would be highly visible in the foreground views of travelers on Pelliser Road. The number of viewers would be moderate; the average daily traffic on Pelliser Road is 1,700 vehicle trips per day (SCE, 2012). The duration of view would be moderate due to the prominence of the substation components (the tallest being up to approximately 75 feet high) within an approximately 3.3-acre walled-in facility on the flat valley floor. Combining the four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate to High for viewer exposure.

Overall Visual Sensitivity. Moderate. For viewers in the vicinity of KOP 5 and the proposed substation site, combining the equally weighted Low to Moderate visual quality, Moderate to High viewer concern, and Moderate to High viewer exposure results in an overall rating of Moderate for visual sensitivity of the visual setting and viewing characteristics.

KOP 6 – Near Bailey Road

Figure 5.1-10A presents a life-size scale view of the proposed substation site from KOP 6, approximately 0.33 miles southeast of the site looking northwest toward the site from a residential access road off of, and to the west of, Bailey Road. This panoramic view is to the northwest across an agricultural field; two rural residences are located in the immediate vicinity of this KOP. The proposed substation would be located in the field in the center of the image to the left of the large, white, agricultural facilities. Figure 5.1-10B presents reduced images of the existing view and a simulation of the view with the proposed Banducci Substation.

Visual Quality. Moderate. The landscape is predominantly rural in character with row crops and scattered agricultural facilities and rural residences. Existing utility infrastructure and large, agricultural facilities with prominent vertical forms and lines are noticeable adjacent to the proposed substation site. The foothills of the Tehachapi Mountains to the north and west provide a backdrop of visual interest in contrast to the flat valley floor.

Viewer Concern. Moderate to High. Bailey Road provides local access for rural residences and agricultural operations and is considered representative of views from residences off of Bailey and Banducci roads. Although residents anticipate the presence of the existing, distant utility infrastructure, they would likely perceive an increase in industrial character, structure prominence, or view blockage of the higher value landscape features (e.g., the valley floor and foothills) from the proposed Banducci Substation as an adverse visual change, particularly if it diminishes the overall rural character of the valley.

Viewer Exposure. Moderate. The proposed Banducci Substation would be moderately visible in the foreground views of travelers on Bailey Road and from nearby residences. The number of viewers, however, would be very low as this is only a local access road, and the number of residences is limited. The duration of view would be moderate to extended for residents, however, due to their stationary views of the site. Combining the four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate for viewer exposure.

Overall Visual Sensitivity. Moderate. For viewers in the vicinity of KOP 6, combining the equally weighted Moderate visual quality, Moderate to High viewer concern, and Moderate viewer exposure results in an overall rating of Moderate for visual sensitivity of the visual setting and viewing characteristics.

Existing Sources of Light and Glare. The proposed Banducci Substation site is agricultural land that is not a source of light and glare. Scattered structures and residences, as well as the California Correctional Institution, are located near the proposed substation site and serve as existing sources of light and glare in the area. Along the proposed fiber optic communications routes, there are existing residences, commercial buildings, and other structures, along with vehicle headlights, that serve as sources of existing light and glare in those areas. Overall, light and glare within the Proposed Project area are minimal.

Regulatory Background

The regulatory framework provided in this section identifies State, regional, or local statutes, ordinances, or policies that protect or enhance public scenic resources in the Proposed Project area. The Proposed Project would not result in the disturbance or conversion of existing federally owned or operated land areas. Therefore, there are no federal visual resources regulations, policies, plans, or guidelines that pertain to the Proposed Project.

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

California Streets and Highways Code. The California Scenic Highway Program preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of these corridors. The California Department of Transportation (Caltrans) designates scenic highway corridors and establishes the highways that are eligible for the program. The California Streets and Highways Code includes a list of highways that are either eligible for designation or are designated as an "Officially Designated State Scenic Highway" (Caltrans, 2014). Currently, there are no Officially Designated State Scenic Highways within Kern County. As such, the Proposed Project is not within the viewshed of any designated scenic highway.

The Scenic Highway Program does, however, identify portions of SR-14 north of Mojave and SR-58 east of Mojave as "Eligible State Scenic Highways" (Caltrans, 2014). The proposed Banducci Substation site is located approximately 25 miles west and approximately 25 miles northwest of those portions of SR-14 and SR-58, respectively. The nearest proposed fiber optic communication facility is located 13 miles west and 13 miles northwest of the nearest Eligible State Scenic Highway portions of SR-14 and SR-58, respectively.

Kern County General Plan. Kern County recognizes the importance of aesthetic resources and has developed policies to protect visually sensitive areas while minimizing impacts from the light and glare of new development projects as outlined in the Kern County General Plan (Kern County Planning and Community Development Department, 2004). Specifically, Section 1.10.7 of the General Plan lists these two policies:

- Policy 47. Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.
- Policy 48. Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

Kern County Zoning Ordinance. Section 19.81 of the Kern County Zoning Ordinance is titled the Outdoor Lighting Ordinance or "Dark Sky Ordinance." This ordinance provides principles for ensuring that the

"natural dark skies" that are considered part of the existing character of Kern County are maintained (Kern County, 2012). The Dark Sky Ordinance states that "excessive illumination can create a glow that may obscure the night sky and excessive illumination or glare may constitute a nuisance" (Kern County, 2012).

Greater Tehachapi Area Specific and Community Plan. The GTA is the collection of unincorporated communities located in eastern Kern County along SR-58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (Kern County Planning and Community Development Department, 2010) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The Proposed Project is located within the GTA Specific and Community Plan Area. The following policies from the GTA Specific and Community Plan are applicable to aesthetic resources.

General Land Use and Development

- Policy LU.7 "Dark Sky" principles of lighting control shall be required in all new development.

Conservation and Open Space (Scenic and Natural Resources)

- Policy COS.18 Discourage new ridgeline development, including structure elevations that protrude above major ridgelines.
- Policy COS.23 Comply with dark sky lighting guidelines as established by the Kern County Zoning Ordinance to preserve nighttime views, prevent light pollution, and minimize impacts on wildlife.

Applicant Proposed Measures

No Applicant Proposed Measures are proposed for aesthetic resources.

5.1.2 Environmental Impacts and Mitigation Measures

Visual Impact Assessment Methodology

The factors considered in determining impacts to visual resources included: (1) scenic quality of the Proposed Project area; (2) available visual access and visibility, and frequency and duration that the landscape is viewed; (3) viewing distance and degree to which Proposed Project components would dominate the view of the observer; (4) resulting contrast of the Proposed Project components or activities with existing landscape characteristics; (5) the extent to which Proposed Project features or activities would block views of higher value landscape features; and (6) the level of public interest in the existing landscape characteristics and concern over potential changes.

An adverse visual impact occurs within public view when: (1) an action perceptibly changes existing features of the physical environment so that they no longer appear to be characteristic of the subject locality or region; (2) an action introduces new features to the physical environment that are perceptibly uncharacteristic of the region and/or locale; or (3) aesthetic features of the landscape become less visible (e.g., partially or totally blocked from view) or are removed. Changes that seem uncharacteristic are those that appear out of place, discordant, or distracting and can result from project component size, scale, or character relative to existing landscape features and the placement of project components relative to developed features. The degree of the visual impact depends upon how noticeable the adverse

change may be. The noticeability of a visual impact is a function of the characteristics of project features, context, and viewing conditions (angle of view, distance, primary viewing direction, and duration of view).

Impacts to visual resources within the Proposed Project area could result from various activities including substation construction, installation of the cable loops, structure replacement, landform modification, and Proposed Project operation or the presence of the built facilities. The approach to impact assessment is discussed below.

Under the Visual Sensitivity-Visual Change methodology, field analysis at each KOP included assessment of visual contrast, project dominance, and view blockage. Subsequently, a conclusion was made regarding the extent of overall visual change, and taken together with the existing landscape's visual sensitivity, the level of probable visual impact significance was determined. A visual simulation was prepared for the PEA for each KOP. The preliminary impact was determined based on further evaluation of each KOP. A conclusion on initial impact significance was then reached. The impact situation was further evaluated against the application of feasible mitigation measures, if necessary, in an effort to reduce the visual impact. A final conclusion on impact significance was then reached.

Visual Contrast describes the degree to which a project's visual characteristics or elements (consisting of form, line, color, and texture) differ from the same visual elements present in the existing landscape. The degree of contrast can range from Low to High. The presence of forms, lines, colors, and textures in the landscape similar to those of a project's indicates a landscape more capable of accepting those project characteristics than a landscape where those elements are absent. This ability to accept alteration is often referred to as visual absorption capability and typically is inversely proportional to visual contrast.

Project Dominance is a measure of a feature's apparent size relative to other visible landscape features and the total field of view. A feature's dominance is affected by its relative location in the field of view and the distance between the viewer and the feature. The level of dominance can range from Subordinate to Dominant.

View Blockage or ***Impairment*** describes the extent to which any previously visible landscape features are blocked from view as a result of a project's scale and/or position. Blockage of higher quality landscape features by lower quality project features causes adverse visual impacts. The degree of view blockage can range from None to High.

Overall Visual Change is a concluding assessment as to the degree of change that would be caused by a project. Overall visual change is derived by combining the three equally weighted factors of visual contrast, project dominance, and view blockage. Overall visual change can range from Low to High.

Under the Visual Sensitivity–Visual Change method, the determination of which aesthetic changes cross a threshold of "substantial adverse effect" or degradation, and the degree of impact significance that results, is a function of overall visual sensitivity and visual change. Table 5.1-1, below, illustrates the general interrelationship between visual sensitivity and visual change and is used as a consistency check between individual KOP evaluations. Actual parameter determinations (e.g., visual contrast, project dominance, and view blockage) are based on an analyst's experience and site-specific circumstances.

While the interrelationships presented in Table 5.1-1 are intended as guidance only, it is reasonable to conclude that lower visual sensitivity ratings paired with lower visual change ratings generally will correlate well with lower degrees of impact significance when viewed in the field. Conversely, higher visual sensitivity ratings paired with higher visual change ratings will tend to result in higher degrees of visual impact.

Implicit in this rating methodology is the acknowledgment that for a visual impact to be considered significant two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers; and (2) the perceived incompatibility of one or more elements or characteristics of a project tends toward the high extreme, leading to a substantial reduction in visual quality.

Table 5.1-1. Visual Impact Significance Criteria

Visual Sensitivity	Visual Change				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	Minor and Less than Significant [1]	Minor and Less than Significant	Less than Significant[2]	Less than Significant	Less than Significant
Low to Moderate	Minor and Less than Significant	Less than Significant	Less than Significant	Less than Significant	Potentially Significant [3]
Moderate	Less than Significant	Less than Significant	Less than Significant	Potentially Significant	Potentially Significant
Moderate to High	Less than Significant	Less than Significant	Potentially Significant	Potentially Significant	Significant [4]
High	Less than Significant	Potentially Significant	Potentially Significant	Significant	Significant

1 - **Minor and Less than Significant** – Impacts are visible but are considered minor and Less than Significant in the context of existing landscape characteristics and viewing opportunities.
2 - **Less than Significant** – Impacts are perceived as negative but do not exceed environmental thresholds.
3 - **Potentially Significant** – Impacts are perceived as negative and may exceed environmental thresholds depending on project- and site-specific circumstances. Implementation of effective mitigation may reduce a significant impact to a Less than Significant level.
4 - **Significant** – Impacts exceed environmental thresholds. Implementation of effective mitigation may reduce a significant impact to a Less than Significant level.

In addition, a project is evaluated for conformance with applicable regulations and policies. Adopted expressions of public policy pertaining to visual resources are given weight in determining both visual quality and viewer concern.

Project Visual Description

The Proposed Project would add utility infrastructure to that already existing in the Proposed Project area and would include a new electric substation, construction of two new 66 kV subtransmission line segments (one that would enter and one that would exit the new electric substation), and installation of new fiber optic communications cables along two routes.

The new substation would be located within a perimeter wall enclosing an approximately 3.3-acre site on an approximately 6.3-acre parcel of agricultural land in the largely agricultural Cummings Valley. The proposed substation's perimeter wall would be eight feet high and constructed of light-colored, decorative or pre-cast concrete masonry material. A band of at least three strands of barbed wire would be affixed near the top of the wall inside of the proposed substation and would not be visible from the outside. Existing wood utility poles occur along Pelliser and Dale roads bordering the proposed substation site to the west and north, respectively.

Construction of two new 66 kV subtransmission line segments into and out of the proposed substation would involve the placement of eight new tubular steel poles (TSPs); two new lightweight steel poles (LWSs); and removal, removal and replacement, and installation of new, wood poles. Steel poles are not currently present in the landscape of Cummings Valley. The same types of wood poles (i.e., replaced and new poles), however, are already present in Cummings Valley, including along Pelliser and Dale roads.

The two new LWS poles would be direct buried inside the proposed substation's perimeter wall and would extend approximately 65 to 75 feet above ground level. The diameter of the LWS poles would typically be 2 to 3 feet at ground level, tapering to approximately 10 to 12 inches in diameter at the top. The LWS poles would be galvanized and be of a dull gray color.

A total of eight TSPs would be installed. Four of the proposed TSPs would be located inside the proposed substation's perimeter wall: two would be approximately 65 feet in height, and two would be approximately 55 feet in height. Two more TSPs would be located outside the proposed substation's perimeter wall but still on SCE property. Both of these TSPs would be approximately 65 feet in height. The last two TSPs would be used for self-supporting guy stubs and would be approximately 35 feet in height. These guy stubs would be located on the west side of Pelliser Road across from the proposed substation site. The eight new TSP structures, including arm attachments, would be constructed entirely of galvanized steel and would be a dull gray color. The diameter of the TSPs would range from approximately 18 to 36 inches, and the TSPs would be bolted to concrete foundations that would be approximately 3 to 10 feet in diameter. The foundations would extend underground with approximately 18 to 24 inches of concrete visible above ground.

The new fiber optic communications cables would be hung on existing wood poles along two proposed routes (Figure 5.1-1A), as follows:

- Fiber optic communications Route 1 travels in a nearly direct west-east direction and is approximately 14.5 miles long. The fiber optic cable would be underground from the proposed Banducci Substation and would transition to an overhead position on existing wood poles on Highline Road for six miles until it transitions underground again before entering Cumming's Substation. After exiting Cumming's Substation, the cable would transition to an overhead position on existing wood poles again where it would continue for 7.5 miles to an existing pole outside the existing Monolith Substation where it would once again transition underground to enter the substation (Figure 5.1-1A).
- Fiber optic communications Route 2 travels in a west-east direction but meanders north and south primarily along paved roadways or railroad tracks. The fiber optic cable would be underground from the proposed Banducci Substation and would transition to an overhead position on a new wood pole on Pelliser Road (an existing wood-pole line is already present along Pelliser Road). From this position, it would travel mostly overhead on existing wood poles but would be undergrounded at times. The total approximate length of this route is 17.5 miles.

Aesthetics Impacts

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

LESS THAN SIGNIFICANT. The Conservation and Open Space chapter (Scenic and Natural Resources) of the GTA Specific and Community Plan has a policy to discourage new development on ridgelines (or that protrudes above major ridgelines). Both of the proposed fiber optic communications routes occur along existing wood utility poles with the exception of 39 new replacement wood poles that would have the same appearance and height as those being replaced. Although some poles would extend above the horizon when viewed from inferior (lower) viewpoints along the roads adjacent to the fiber optic routes, this is

an existing impact that would not change with the Proposed Project. The proposed Banducci Substation would occur on agricultural land in the flat bottom of Cummings Valley; it would not be on a ridgeline or protrude above a major ridgeline. The Proposed Project, therefore, would not have a substantial adverse effect on a scenic vista. The impact would be less than significant, and no mitigation is proposed.

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

NO IMPACT. The California Scenic Highway Program identifies portions of SR-14 north of Mojave and SR-58 east of Mojave as "Eligible State Scenic Highways" (Caltrans, 2011). The proposed Banducci Substation site is located approximately 25 miles west and approximately 25 miles northwest of those portions of SR-14 and SR-58, respectively. The nearest proposed fiber optic communications facility is located 13 miles west and 13 miles northwest of the nearest Eligible State Scenic Highway portions of SR-14 and SR-58, respectively. The Proposed Project, therefore, would not be visible from the eligible portions of these highways, would not diminish the aesthetic value of lands adjacent to such highways, and would have no effect on the California Scenic Highway Program. No mitigation is proposed.

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

LESS THAN SIGNIFICANT DURING CONSTRUCTION. During construction, equipment, personnel, and activities would be seen by various viewers in the immediate vicinity of the proposed Banducci Substation site, at subtransmission wire pull and tension sites, along the fiber optic cable routes, and at up to four temporary staging areas or yards. These viewers would include nearby residents and travelers on local roads. View durations from these vantage points would vary from Moderate to Extended. However, construction activities would be temporary, and cable installation would be transient with limited viewing opportunities of any given location or segment. As a result, the temporary visual impacts associated with Proposed Project construction would be less than significant, and no mitigation is proposed.

LESS THAN SIGNIFICANT DURING OPERATION. The Proposed Project was evaluated from six representative KOPs. The following paragraphs discuss the visual impacts from the proposed Banducci Substation site that would be experienced at each KOP. The addition of a fiber optic communications cables to existing utility lines along Route 1 and Route 2 would not be noticeable to the casual viewer and the 39 new replacement wood poles would have the same appearance and height as the existing poles. Therefore, the visual impact from the fiber optic communications cables would be less than significant, and no mitigation is proposed for that Project component.

KOP 1 – Pelliser Road Viewing South

Figure 5.1-5A presents a life-size scale view of the proposed substation site from KOP 1, approximately 0.5 miles north of the site looking south toward the site from southbound Pelliser Road. The proposed substation would be located adjacent to, and to the east of (to the left of), Pelliser Road in an open, agricultural field. Figure 5.1-5B presents the reduced PEA images of the existing view and a simulation of the view with the proposed Banducci Substation. The presence of snow in the image provides a backdrop that causes the substation to blend into the background more than it would during non-snow conditions that are more typical of the area.

The substation would be located immediately adjacent to existing utility lines along Pelliser Road and Dale Road. Approaching from the north on Pelliser Road, the proposed substation would be viewed through existing roadside utility infrastructure, and at a viewing distance of 0.5 miles and greater, the proposed substation would not appear visually prominent. It would, however, introduce some additional

industrial character into the landscape. When viewed from KOP 1, the visual contrast between the structural forms, lines, colors, and textures of the substation against the existing landscape would be Low to Moderate. From this vantage point, the Proposed Project structures would appear Subordinate relative to the foreground utility poles and background foothills (project dominance). The degree of view blockage of the valley floor and foothills would be Low. The overall visual change would be Low when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate to High visual sensitivity, the resulting visual impact would be less than significant. In addition, the Applicant is proposing a perimeter wall and landscaping for the substation to filter views for the surrounding community and other potential sensitive receptors. This proposed substation screening would soften the structural contrast and reduce the visible industrial character of the facility.

KOP 2 – Dale Road

Figure 5.1-6A presents a life-size scale view of the proposed substation site from KOP 2, approximately 0.22 miles west of the site looking east toward the site from Dale Road. The view captures a portion of the predominantly rural, agricultural landscape that comprises much of Cummings Valley. The Tehachapi Mountains provide a backdrop to the flat valley floor. Figure 5.1-6B presents the reduced PEA images of the existing view and a simulation of the view with the proposed Banducci Substation.

The proposed substation would be highly visible and central in views to the east from KOP 2 and Dale Road. The new proposed facility would appear structurally complex and exhibit industrial character. The visual contrast between the structural forms, lines, colors, and textures of the substation against the existing landscape would be Moderate. From KOP 2 and similar vantage points, the Proposed Project structures would appear Co-dominant relative to the adjacent utility poles and background foothills (project dominance). Although the facility would blend somewhat with the mottled background of the valley floor and foothills, the structures would cause Low to Moderate view blockage of those features (and slight skylining from the top of one steel pole [i.e., the pole would extend slightly above the foothill on the horizon]). The overall visual change would be Moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate visual sensitivity, the resulting visual impact would be less than significant.

KOP 3 – Pelliser Road Viewing North

Figure 5.1-7A presents a life-size scale view of the proposed substation site from KOP 3, approximately 0.2 miles south of the site looking north toward the site from Pelliser Road. The view captures a portion of the predominately rural agricultural landscape that comprises much of Cummings Valley. The Tehachapi Mountains provide a backdrop to the flat valley floor. Figure 5.1-7B presents the reduced PEA images of the existing view and a simulation of the view with the proposed Banducci Substation.

The proposed substation would be highly visible along Pelliser Road and central in views to the north and northeast when viewing from KOP 3. The proposed substation would appear structurally complex and exhibit industrial character. The visual contrast between the structural forms, lines, colors, and textures of the substation against the existing landscape would be Moderate to High. From KOP 3 and similar vantage points, the Proposed Project structures would appear Co-dominant relative to the foreground utility poles and background foothills (project dominance). Although the facility would blend somewhat with the mottled background of the Tehachapi foothills, the structures would cause Low to Moderate view blockage of the valley floor and foothills. The overall visual change would be Moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined.

In the context of the existing landscape's Moderate visual sensitivity, the resulting visual impact would be less than significant.

KOP 4 – Highline Road

Figure 5.1-8A presents a life-size scale view of the proposed substation site from KOP 4, approximately 0.64 miles northeast of the site looking to the southwest toward the site from Highline Road. The view is across agricultural fields south of Highline Road and east of Pelliser Road. The proposed substation would be located in front of, and to the right of, the grouping of trees in the left-center of the image. Figure 5.1-8B presents the reduced PEA images of the existing view and a simulation of the view with the proposed Banducci Substation. The presence of snow in the image provides a backdrop that causes the substation to blend into the background more than it would during non-snow conditions that are more typical of the area.

The proposed substation would be located immediately adjacent to existing utility lines along Pelliser Road and Dale Road. Viewed from Highline Road and adjacent residences at a viewing distance of approximately 0.64 miles, the proposed substation would introduce some industrial character into the landscape, although the visual contrast with the existing landscape would be Low to Moderate. The proposed substation would not appear visually prominent (Subordinate project dominance), and view blockage of the valley floor and foothills would be Low. The overall visual change would be Low when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate visual sensitivity, the resulting visual impact would be less than significant.

KOP 5 – Pelliser Road Viewing South

Figure 5.1-9A presents a life-size scale view of the proposed substation site from KOP 5, approximately 0.1 miles north of the site looking south toward the site from southbound Pelliser Road. The view is across an agricultural field, and the proposed substation would be located just beyond Dale Road. Figure 5.1-9B presents the reduced PEA images of the existing view and a simulation of the view with the proposed Banducci Substation.

The proposed substation would be highly visible along Pelliser Road and central in views to the south and southeast when approaching from the north and viewing from KOP 5. The proposed substation would appear structurally complex and exhibit industrial character. The visual contrast between the structural forms, lines, colors, and textures of the substation against the existing landscape would be Moderate to High. From KOP 5 and similar, close-in vantage points, the Proposed Project structures would appear Co-dominant relative to the adjacent utility poles and background foothills (project dominance). As previously mentioned, the prominence of the existing roadside utility poles would appear much more obvious if KOP 5 were more appropriately situated on Pelliser Road, and not on the northbound shoulder. While the perimeter wall would blend somewhat with the background of the valley floor and Tehachapi foothills, the proposed substation and its taller project components would cause Moderate view blockage of those features. The overall visual change would be Moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate visual sensitivity, the resulting visual impact would be less than significant.

KOP 6 – Near Bailey Road

Figure 5.1-10A presents a life-size scale view of the proposed substation site from KOP 6, approximately 0.33 miles southeast of the site looking northwest toward the site from a residential access road off of,

and to the west of, Bailey Road. Two rural residences are located in the immediate vicinity of this KOP. The proposed substation would be located in the field in the center of the image to the left of the large, white, agricultural facilities. Figure 5.1-10B presents the reduced PEA images of the existing view and a simulation of the view with the proposed Banducci Substation.

The proposed substation would be located immediately adjacent to existing utility lines along Pelliser Road and Dale Road. Viewed from the residential access road and residences southeast of the site (at a distance of approximately 0.33 miles), the new structures would introduce some additional industrial character into the landscape. The visual contrast between the structural forms, lines, colors, and textures of the substation against the existing landscape would be Moderate, but the proposed substation would not appear visually prominent (Subordinate to Co-Dominant project dominance), and the view blockage of the valley floor and foothills would be Low. The overall visual change would be Low to Moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate visual sensitivity, the resulting visual impact would be less than significant.

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

LESS THAN SIGNIFICANT. The new steel poles and substation components (e.g., switchracks) may reflect light during the day. However, SCE's proposals to: (a) dull the galvanized finish of the new steel poles to reduce glare, (b) install a perimeter screen wall, and (c) install landscaping to filter views of the site from residences and adjacent roads, should sufficiently reduce the potential for daytime structural glare such that any resulting visual impact would be less than significant.

The wooden replacement poles for the proposed fiber optic telecommunication cable installation would not generate glare. The new fiber optic telecommunication cables that would be installed have a small diameter and would not represent a new source of glare.

Lighting at the proposed Banducci Substation has the potential to adversely affect nighttime views in the immediate substation vicinity. Proposed substation lighting would consist of LED (light emitting diodes), low-intensity lights located in the switchracks, around the transformer banks, and in areas of the yard where operation and maintenance activities may take place during evening hours for emergency/scheduled work. Maintenance lights would be controlled by a manual switch and would normally be in the "off" position. The maintenance lights would be directed downward to reduce glare outside the facility. A light indicating the operation of the rolling gate would automatically turn on once the gate begins to open and would turn off shortly after the gate is closed. With these lighting controls, in combination with the substation screening provided by the perimeter wall and landscaping (discussed above), it is expected that the nighttime lighting impacts caused by the proposed substation would be less than significant.

There would be no nighttime lighting (and therefore, glare) associated with the fiber optic communications cable routes, and no mitigation is proposed for that project component.

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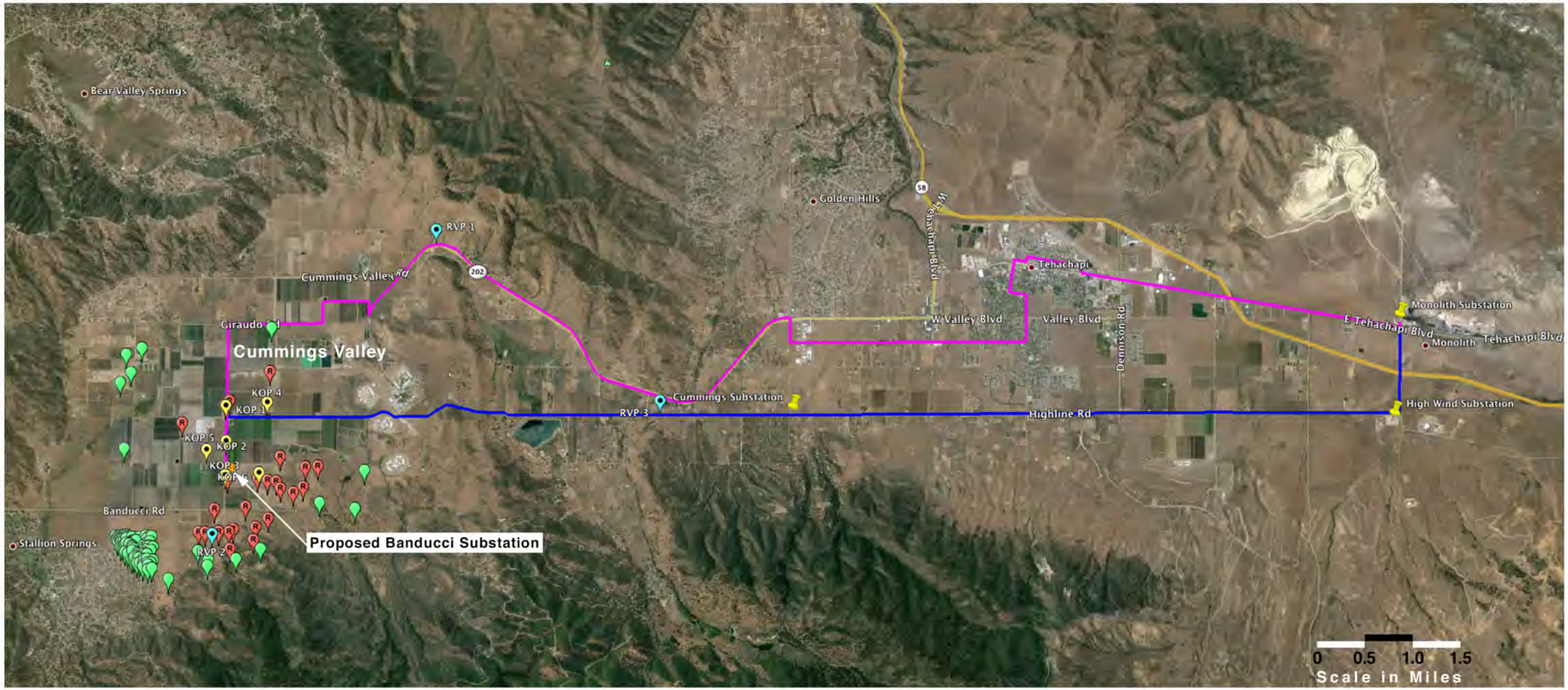

LEGEND

- Key Observation Point (KOP)
- Regional Viewpoint (RVP)
- Proposed Banducci Substation
- Fiber Optic Communications Route 1
- Residence Less Than One Mile from Proposed Substation
- Residence 1 to 1.5 Miles from Proposed Substation
- Fiber Optic Communications Route 2

This modified Google Earth image presents a **Regional Viewpoint Map** that encompasses both the proposed substation development area (Cummings Valley) and the fiber optic communications routes (to the east). The map indicates the location of Key Observation Points selected for detailed analysis and several Regional Viewpoints used for additional landscape visibility discussion. The locations of residences in the vicinity of the proposed substation site are also indicated with red and green symbols.	**VIEWPOINT MAP** **REGIONAL**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-1A**

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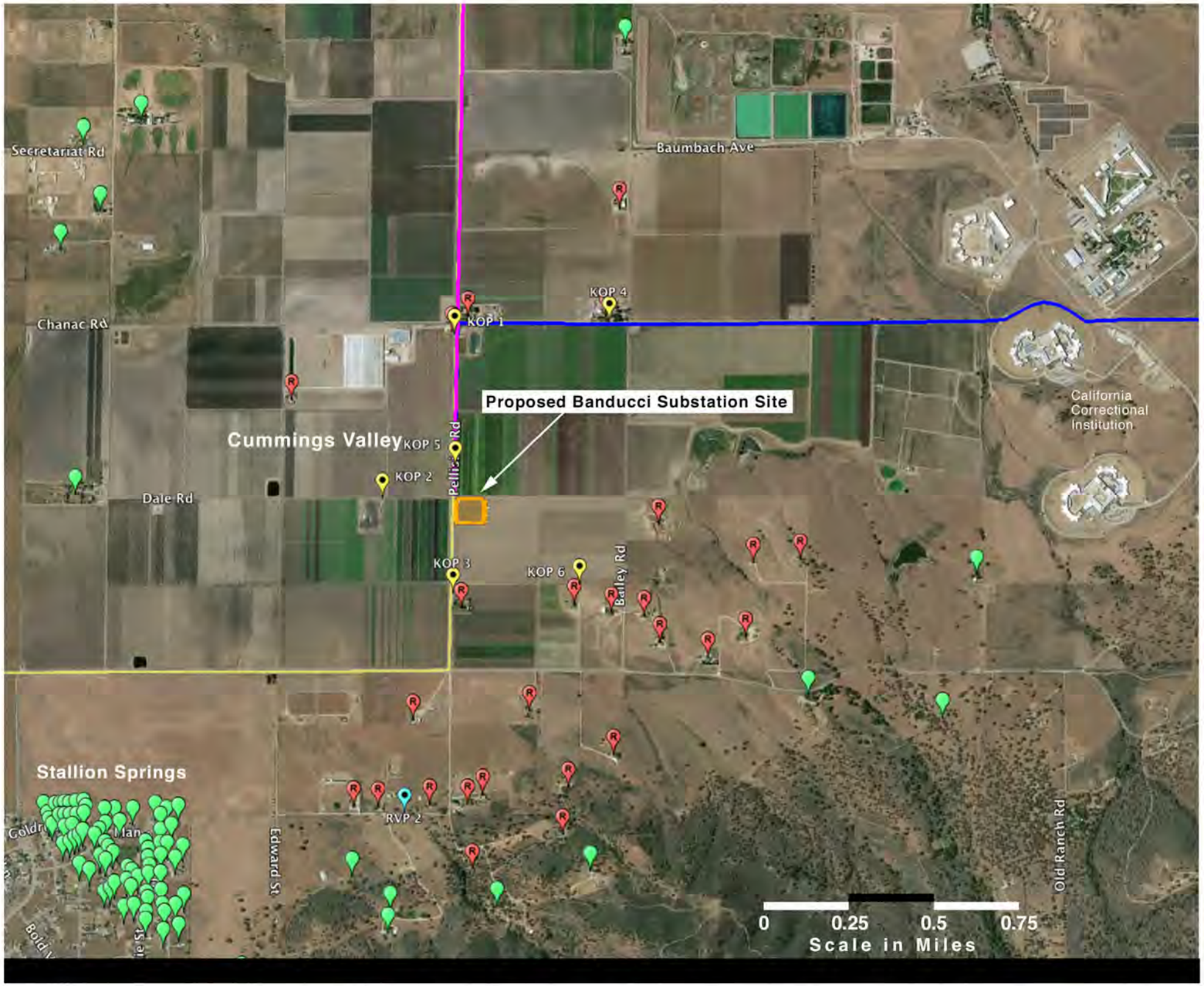

LEGEND

- Key Observation Point (KOP)
- Regional Viewpoint (RVP)
- Proposed Banducci Substation Site
- Fiber Optic Communications Route 1
- Fiber Optic Communications Route 2
- Residence Less Than 1 Mile from Proposed Substation Site
- Residence 1 to 1.5 Miles from Proposed Substation Site

This modified Google Earth image presents a map of the Cummings Valley **Key Observation Points (KOPs)**. The six KOP locations are indicated with yellow symbols. The 26 rural residences within one mile of the proposed substation site are indicated with red symbols, and the numerous residences within 1 to 1.5 miles of the site are indicated with green symbols. However, substation site visibility from Stallion Springs is primarily limited to the residences along the north and east perimeters of the residential development.

VIEWPOINT MAP

CUMMINGS VALLEY

SCE Banducci Substation Project
MND / Initial Study
Aesthetics
Figure 5.1-1B

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This image presents the **existing view** from **Regional Viewpoint 1,** along **SR 202,** in the northeastern portion of Cummings Valley. The view is to the southwest and overlooks Cummings Valley. This panoramic view captures much of the rural character of the valley and encompasses the flat valley bottom, dispersed agricultural facilities, ranch and farm lands, rural residences, numerous utility facilities, and surrounding hills that define the valley extent. The viewing distance across the valley in this image is approximately six miles.	**Regional Viewpoint 1** **West Valley Blvd.** **Viewing Southwest**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-2**

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This image presents the **existing view** from **Regional Viewpoint 2,** on **Ronnie Avenue,** a rural residential access road in the southern extent of Cummings Valley. This panoramic view overlooks the valley to the north and captures much of the valley's rural character. Numerous utility poles are visible in the open landscape. The proposed substation would be located in the open field just beyond and slightly to the left of the grouping of trees in the center of the image. The viewing distance would be approximately 0.85 mile.	**Regional Viewpoint 2** **Ronnie Avenue** **Viewing North**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-3**

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This image presents the **existing view** from **Regional Viewpoint 3,** on **Highline Road,** east of Brite Lake, west of Cummings Substation, and southwest of downtown Tehachapi. This view to the east is down Highline Road as it transects the rural ranching country north of the Tehachapi foothills. The utility line along the north (left) side of the road in the image is a portion of the fiber optic communications Route 1.	**Regional Viewpoint 3** **Highline Road** **Viewing East**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-4**

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This image presents the **existing view** from **Key Observation Point (KOP) 1,** on southbound **Pelliser Road,** approximately 0.5 mile north of the proposed substation site in Cummings Valley. The view is to the south down Pelliser Road and captures a central portion of the rural Cummings Valley back-dropped by the Tehachapi Mountains. The proposed substation would be located adjacent and to the east (left) of Pelliser Road in an open agricultural field. The utility line on the left is a portion of the fiber optic communications Route 2.	**KOP 1** **Pelliser Road** **Viewing South**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-5A**

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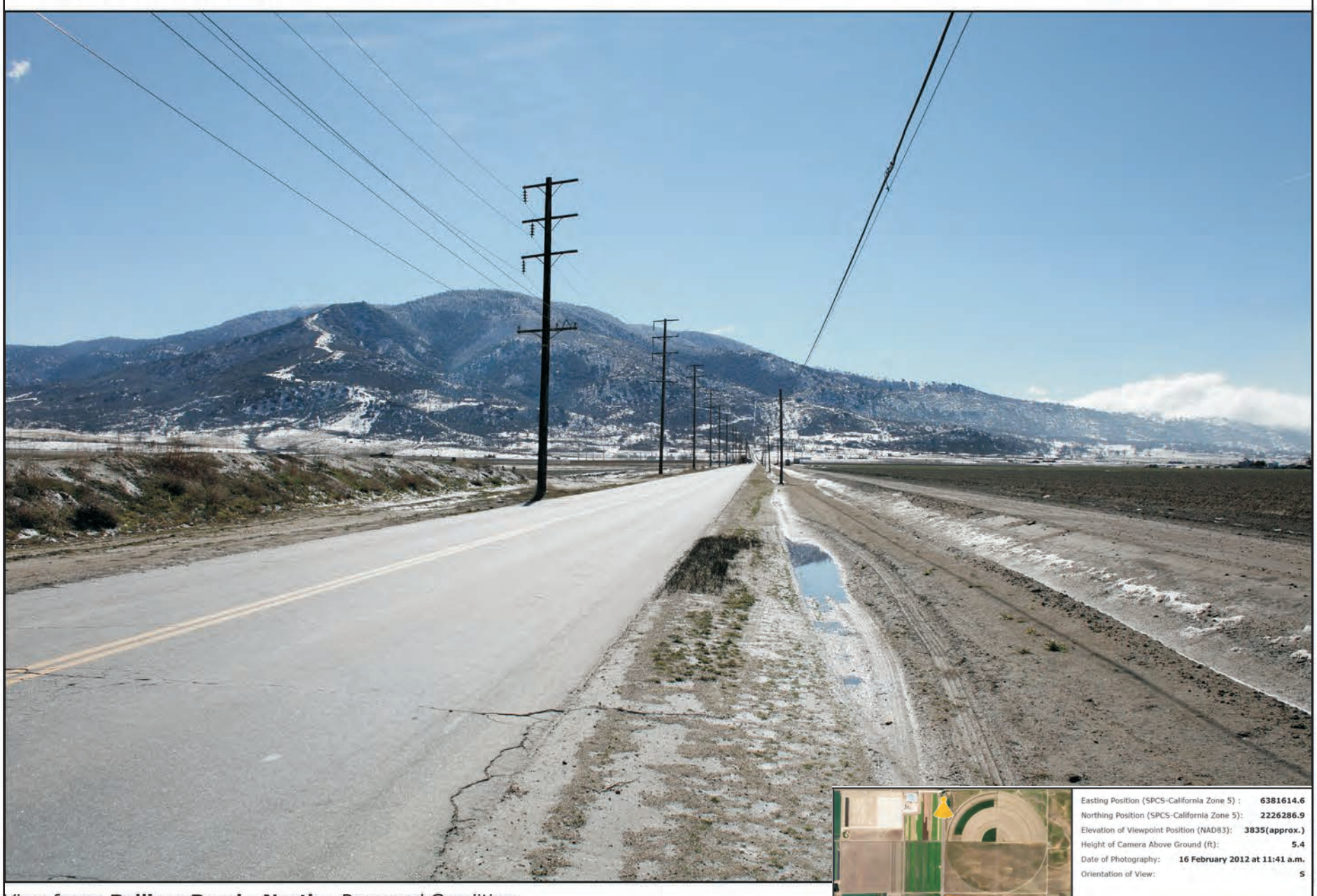
View from: **Pelliser Road - North -** Existing Condition



Easting Position (SPCS-California Zone 5) :	6381614.6
Northing Position (SPCS-California Zone 5):	2226286.9
Elevation of Viewpoint Position (NAD83):	3835(approx.)
Height of Camera Above Ground (ft):	5.4
Date of Photography:	16 February 2012 at 11:41 a.m.
Orientation of View:	S

Viewpoint Location

Substation Location

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

View from: **Pelliser Road - North -** Proposed Condition

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.1-5B

KOP 1 - View from Pelliser Road - North

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This image presents the **existing view** from **KOP 2,** on **Dale Road,** approximately 0.22 mile west of the proposed substation site. The view is to the east down Dale Road and captures a portion of the predominantly rural agricultural landscape that comprises much of Cummings Valley. The rolling to angular northern foothills of the Tehachapi Mountains provide a backdrop to the flat valley floor. The proposed substation would be located in the open field just beyond the green, planted field.	**KOP 2** **Dale Road** **Viewing East**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-6A**

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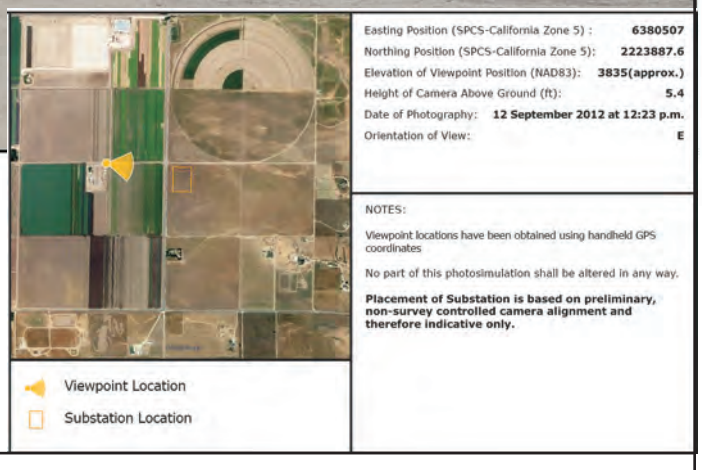
View from: **Dale Road -** Existing Condition

View from: **Dale Road -** Proposed Condition



Easting Position (SPCS-California Zone 5) : 6380507
Northing Position (SPCS-California Zone 5): 2223887.6
Elevation of Viewpoint Position (NAD83): 3835(approx.)
Height of Camera Above Ground (ft): 5.4
Date of Photography: 12 September 2012 at 12:23 p.m.
Orientation of View: E

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.1-6B
KOP 2 - View from Dale Road

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This image presents the **existing view** from **KOP 3,** on **Pelliser Road,** approximately 0.2 mile south of the proposed substation site. The view is to the north along Pelliser Road and captures a portion of the predominantly rural agricultural landscape that comprises much of Cummings Valley. The rolling to angular northern extent of the Tehachapi Mountains provides a backdrop to the flat valley floor. The proposed substation would be located in the open field shown in the right-center of the image.	**KOP 3** **Pelliser Road** **Viewing North**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-7A**

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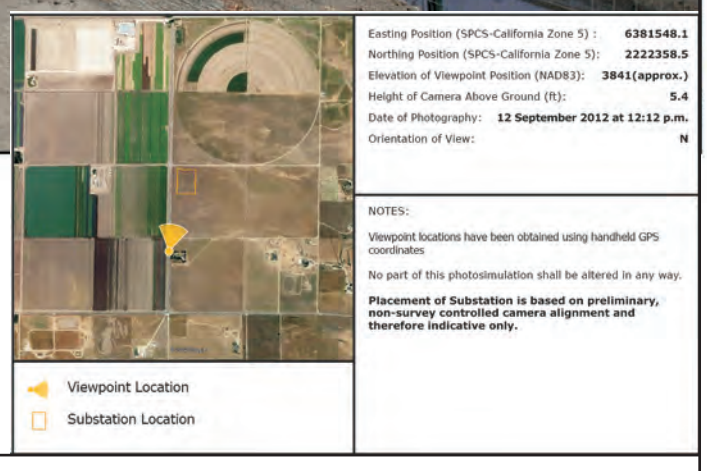
View from: **Pelliser Road - South -** Existing Condition

View from: **Pelliser Road - South -** Proposed Condition



Easting Position (SPCS-California Zone 5) : **6381548.1**
Northing Position (SPCS-California Zone 5): **2222358.5**
Elevation of Viewpoint Position (NAD83): **3841(approx.)**
Height of Camera Above Ground (ft): **5.4**
Date of Photography: **12 September 2012 at 12:12 p.m.**
Orientation of View: **N**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.1-7B

KOP 3 - View from Pelliser Road - South

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This image presents the **existing view** from **KOP 4,** on **Highline Road,** approximately 0.64 mile northeast of the proposed substation site. The view is to the southwest across agricultural fields south of Highline Road and east of Pelliser Road. The rolling to angular foothills of the Tehachapi Mountains provide a backdrop to the flat valley floor. The proposed substation would be located in front of and to the right of the grouping of trees in the left-center of the image.	**KOP 4** **Highline Road** **Viewing Southwest**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-8A**

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View from: **Highline Road -** Existing Condition

View from: **Highline Road -** Proposed Condition

Viewpoint Location
Substation Location

Easting Position (SPCS-California Zone 5) :	6383632
Northing Position (SPCS-California Zone 5):	2226558.1
Elevation of Viewpoint Position (NAD83):	3851(approx.)
Height of Camera Above Ground (ft):	5.4
Date of Photography:	16 February 2012 at 11:27 a.m.
Orientation of View:	SW

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.1-8B
KOP 4 - View from Highline Road

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This image presents the **existing view** from **KOP 5,** on **Pelliser Road,** approximately 0.1 mile north of the proposed substation site. The view is to the south across a corner of an agricultural field, immediately east of Pelliser Road. The rolling to angular foothills of the Tehachapi Mountains provide a backdrop of visual interest in contrast to the flat valley floor. The proposed substation would be located in the immediate foreground, adjacent to and just beyond Dale Road (the light horizontal line in the center of the image above).	**KOP 5** **Pelliser Road** **Viewing South**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-9A**

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View from: **Pelliser Road North -** Existing Condition

View from: **Pelliser Road North -** Proposed Condition

Easting Position (SPCS-California Zone 5) : **6381596.6**
Northing Position (SPCS-California Zone 5): **2224406.6**
Elevation of Viewpoint Position (NAD83): **3834(approx.)**
Height of Camera Above Ground (ft): **5.4**
Date of Photography: **12 September 2012 at 12:54 p.m.**
Orientation of View: **SSE**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.1-9B

KOP 5 - View from Pelliser Road - North

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This image presents the **existing view** from **KOP 6,** on a residential access road off of and to the west of **Bailey Road,** approximately 0.33 mile southeast of the proposed substation site. This panoramic view is to the northwest across an open agricultural field. Two rural residences are located in the immediate vicinity of this viewpoint. This view across Cummings Valley is back-dropped by a portion of the northern foothills of the Tehachapi Mountains The proposed substation would be located in the open field in the center of the image above).	**KOP 6** **Near Bailey Road** **Viewing Northwest**	**SCE Banducci Substation Project** **MND / Initial Study** **Aesthetics** **Figure 5.1-10A**

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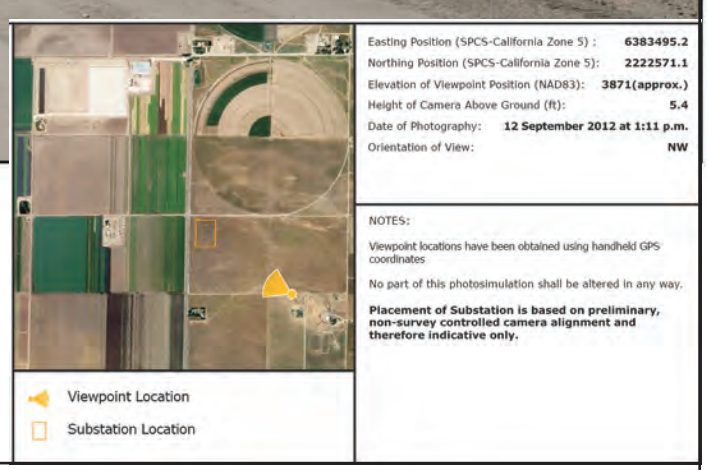
View from: **Southeast of Site -** Existing Condition

View from: **Southeast of Site -** Proposed Condition



Easting Position (SPCS-California Zone 5) :	**6383495.2**
Northing Position (SPCS-California Zone 5):	**2222571.1**
Elevation of Viewpoint Position (NAD83):	**3871(approx.)**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**12 September 2012 at 1:11 p.m.**
Orientation of View:	**NW**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.1-10B
KOP 6 - View from Southeast of Site

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5.2 Agriculture and Forestry

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

Significance criteria established by CEQA Guidelines, Appendix G.

5.2.1 Setting

Regional

Agriculture is vital to Kern County's economy (Kern County, 2009). Agricultural production in Kern County generated over six billion dollars in 2012 (Kern County, 2013). The County's most valuable crops were grapes, almonds, milk, citrus, and pistachios; those five crops generated over four billion dollars.

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to assess the location, quantity, and quality of agricultural lands and conversion of these lands to other uses. FMMP data are used in elements of some county and city general plans, in regional studies on agricultural land conversion, and in environmental documents as a way of assessing project-specific impacts on farmland. The FMMP classifies agricultural land as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land (DOC, 2014). Descriptions of these farmland classifications are included in the Regulatory Background section below. Prime Farmland has the best combination of physical and chemical features to support ongoing agricultural production; to be designated as Prime Farmland, farmland must have been irrigated in the four years prior to FMMP mapping.

According to the FMMP, there are 2.7 million acres of agricultural land in Kern County. This includes almost 609,000 million acres of Prime Farmland. Approximately 52 percent of the inventoried land in Kern County is used for agriculture, and 12 percent is classified as Prime Farmland. Between 2008 and 2010, the County lost over 17,000 acres of Prime Farmland. Table 5.2-1 shows the acres of FMMP-inventoried agricultural land in Kern County in 2008 and 2010.

Table 5.2-1. Acres of Farmland in Kern County, Farmland Mapping and Monitoring Program

Category	2010 Acres	2008 Acres
Prime Farmland	608,789	626,217
Farmland of Statewide Importance	213,465	216,347
Unique Farmland	91,830	96,657
Farmland of Local Importance	0	0
Important Farmland Total	914,084	939,221
Grazing Land	1,827,391	1,807,069
Agricultural Land Total	2,741,475	2,746,290

Source: DOC, 2010

Local

The proposed Banducci Substation site is located in the unincorporated Cummings Valley area of Kern County. The proposed telecommunications components would be largely located east of Cummings Valley, including in the City of Tehachapi. Much of Cummings Valley, including the majority of land surrounding the Proposed Project Study Area, is currently used for agriculture. Under the Kern County General Plan, the proposed Banducci Substation site is designated as Intensive Agriculture and the areas where the proposed telecommunications routes would be located are designated as Residential, Incorporated Cities, Resource Agriculture, and Intensive Agriculture. Both the General Plan and Zoning Ordinance allow for the development of a utility substation within these land use designations (Kern County, 2009).

A variety of crops have been produced at the Banducci Substation site. The past ten years of commodity permit data from the proposed Banducci Substation site and adjacent sites are shown in Table 5.2-2 (Recent Agricultural Use). Please note that although a permit was granted, the particular crop may have not been produced that year.

Table 5.2-2. Recent Agricultural Use at Banducci Substation Site and Adjacent Agricultural Areas (based on County agricultural commodity permits)

Year	Parcels that Include Substation Site	Adjacent Agricultural Sites
2013	Arugula, lettuce leaf, mustard, spinach, and Swiss chard	Arugula, lettuce leaf, mustard, spinach, Swiss chard, collard, kale, daikon, and radish
2012	Arugula, lettuce leaf, mustard, spinach, and Swiss chard	Arugula, lettuce leaf, mustard, spinach, Swiss chard, and leek
2011	Fallow	Beet, dandelion, Swiss chard, cabbage, broccoli, and carrot
2010	Fallow	Broccoli and lettuce leaf
2009	Potato	Kale, collard, arugula, mustard, lettuce leaf, spinach, Swiss chard, dandelion green, and beet
2008	Turf/sod and onion dry etc.	Leek, onion dry etc., cauliflower, broccoli, kale, collard, arugula, daikon, turnip, and mustard

Table 5.2-2. Recent Agricultural Use at Banducci Substation Site and Adjacent Agricultural Areas (based on County agricultural commodity permits)

Year	Parcels that Include Substation Site	Adjacent Agricultural Sites
2007	Turf/sod	Collard, lettuce leaf, broccoli, leek, onion green, mustard, daikon, kale, arugula, and radish
2006	Turf/sod	Lettuce leaf, broccoli, and radish
2005	Turf/sod	Daikon, kale, collard, mustard, radish, arugula, Swiss chard, dandelion, dill, onion green, beet, and spinach
2004	Turf/sod	Swiss chard, cilantro, dandelion green, dill, rye, lettuce leaf, onion green, broccoli, arugula, collard, daikon, kale, mustard, and radish

Source: SCE, 2014

The Williamson Act (also known as the California Land Conservation Act of 1965) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The contracted land is then restricted to agricultural and compatible uses through a rolling-term, 10-year contract between the private land owner and the local government. The proposed Banducci Substation site is not enrolled in a Williamson Act contract; however, there are several Williamson Act contracts in the vicinity. Figure 5.2-1 shows FMMP-designated Prime Farmland and Williamson Act lands in the project area.

Regulatory Background

Federal

Federal Farmland Protection Policy Act. The Farmland Protection Policy Act (7 USC Section 4201 et seq.; see also 7 CFR part 658) is overseen by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS). The Farmland Protection Policy Act is intended to "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The Act applies to projects and programs that are sponsored or financed in whole or in part by the federal government.

Federal Definition of Prime Farmland. According to the federal definition in the Code of Federal Regulations Title 7 (Agriculture) Section 657.5(a)(1), Prime Farmland is "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses." The NRCS uses the following classifications for agricultural land: Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Unique Farmland, and Not Prime Farmland.

The NRCS Web Soil Survey provides soil data and information produced by the National Cooperative Soil Survey. The NRCS Web Soil Survey has soil maps and data available online for more than 95 percent of the nation's counties. The USDA has been publishing soil surveys since 1899. Published soil surveys for California counties are dated from 1900 to 2014 (NRCS, 2014).

State

Land Conservation Act of 1965 (Williamson Act). The Williamson Act is intended to help preserve farmland. In creating the Act, the legislature noted that "the preservation of the maximum amount of the limited supply of agricultural land is necessary to the conservation of the State's economic resources, and is necessary not only to the maintenance of the agricultural economy of the State, but also for the assurance of adequate, healthful and nutritious food for future residents of this State and nation" (Gov-

ernment Code Section 51220). The Act enables participating local governments to enter into land conservation contracts with private landowners. Williamson Act contracts restrict specific parcels of land to agricultural and open space uses for a minimum term of ten years in return for reduced property tax assessments. The Williamson Act program is locally administered by counties (and some cities) to ensure compliance with the Williamson Act (Government Code Sections 51200–51207), local uniform rules, and individual contracts. The California Department of Conservation provides guidance and oversight to local governments to ensure consistency with the government code. Starting in 1972, the State provided counties with partial replacement of foregone local property tax revenues (Open Space Subvention Act). These subvention payments were suspended in 2009 due to State-level budget constraints.

As defined in the Williamson Act (California Government Code Section 51201), "Prime agricultural land" means any of the following:

- All land that qualifies for rating as class I or class II according to NRCS Land Capability Classification;
- Land which qualifies for rating 80 through 100 in the Storie Index Rating (Grade One: Excellent);
- Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA;
- Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than $200 per acre; or
- Land which has returned from the production of unprocessed agricultural plant products an annual gross value of not less than $200 per acre for three for three of the previous five years.

Local governments have discretion to determine uses compatible with Williamson Act enrollment (Government Code Section 51238-51238.1). Government Code Section 51201(e) requires that for a use to be compatible with Williamson Act enrollment, it must not disrupt the purpose of the Williamson Act contract. To be a compatible use under the Williamson Act, a project must not:

- Significantly compromise agricultural capability on affected parcel or other contracted lands;
- Displace or impair agriculture on affected parcel or other contracted parcels, unless directly related to the production of a commercial agricultural product; or
- Result in significant removal of adjacent contracted land.

The typical method for withdrawing from a Williamson Act contract is filing a notice of non-renewal, which can be initiated by either the contracting agency or the landowner. Under this process, the contract is ended after a nine-year non-renewal period during which taxes gradually increase every year. However, under some circumstances, contracts may also be canceled if it is determined to be in the public interest or consistent with the purposes of the Williamson Act (Government Code Section 51282(a) and (b)).

Farmland Mapping and Monitoring Program. The California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to identify important agricultural lands and track the conversion of agricultural land to other uses. Through the FMMP, the California Department of Conservation (DOC) maintains statewide maps of agricultural lands. The maps cover 98 percent of the State's private lands (DOC, 2014b). The Department of Conservation updates farmland mapping using aerial photos. In order to qualify as Prime Farmland or Farmland of Statewide Importance, land must have been irrigated during the previous four years in addition to having prime soil characteristics.

The list below includes the agricultural categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are referred to as "Important Farmland."

- Prime Farmland. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Unique Farmland. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

State Definitions of "Forest Land" and "Timberland." "Forest land" is "land that can support, under natural conditions, 10 percent native tree cover of any species, including hardwoods, and that allows for the preservation or management of forest-related resources such as timber, aesthetic value, fish and wildlife, biodiversity, water quality, recreational facilities, and other public benefits" (California Public Resources Code Section 12220(g)). Timberland is defined in Public Resources Code Section 4526 as "Land, other than land owned by the federal government and land designated by the board 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."

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan. The goals of the General Plan's Land Use, Open Space, and Conservation Element include directing new urban development to areas that will not conflict with petroleum extraction, agriculture, rangeland, or mineral resources.

- Resource Goal 2: Protect areas of important mineral, petroleum, and agricultural resource potential for future use.

- Resource Goal 3: Ensure that the development of resource areas minimally impact neighboring resource lands.
- Resource Goal 4: Encourage safe and orderly energy development within the County, including research and demonstration projects, and become actively involved in the decision and actions of other agencies as they affect energy development in Kern County.
- Resource Goal 5: Conserve prime agriculture lands from premature conversion to non-agricultural uses.
- Resource Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.
- Resource Policy 7: Areas designated for agricultural use, which include Class I and II and other enhanced agricultural soils with surface-water delivery systems, should be protected from incompatible residential, commercial, and industrial subdivision and development.
- Resources Policy 9: When evaluating General Plan amendment proposals to change an Intensive Agriculture designation, the County shall consider the level of interference with surrounding agricultural operations, the public services available, demonstrated need for a project, soil suitability for agriculture, and other contiguous non-agricultural uses.
- Resource Policy 12: Areas identified by the NRCS that possess high range-site value should be conserved either for Extensive Agriculture uses or as a Resource Reserve.
- Resource Policy 15: Agriculture and other resource uses will be considered as consistent uses in areas reserved for Mineral and Petroleum Resource use in the General Plan.

Municipal Code Chapter 19.12—Exclusive Agriculture District. Activities in the Exclusive Agriculture District are limited primarily to agriculture and other uses compatible with agriculture. Kern County considers utility and communications facilities, resource extraction, and energy development to be compatible activities within agricultural districts. Utility and communications facilities include: transmission lines and supporting towers, poles, utility substations, and underground facilities for gas, water, electricity, telephone, or telegraph service. The resource extraction and energy development uses compatible with agricultural districts include permitted solar energy generators that occupy no more than one acre, and small wind energy systems that meet specific criteria.

Municipal Code Chapter 19.14—Limited Agriculture District. The purpose of the Limited Agriculture District is to designate areas suitable for a combination of residential development, agricultural, and other compatible uses. Among the compatible uses are utility and communications facilities, resource extraction, and energy development uses. These uses are similar to those in the Exclusive Agriculture District, with the exception of utility substations and wind-driven electrical generators.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

5.2.2 Environmental Impacts and Mitigation Measures

This analysis is based on review of the Kern County General Plan (Kern County, 2009); GTASCP (Kern County, 2010); FMMP farmland mapping; and Williamson Act data; and site reconnaissance by Aspen staff.

Applicant Proposed Measures

There are no applicant proposed measures for agricultural and forestry resources.

Agriculture and Forestry Impacts

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-agricultural use?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Construction of the proposed substation would convert 6.3 acres of Prime Farmland to non-agricultural use. This represents 0.001 percent of the 608,789 acres of Prime Farmland in Kern County. Temporary staging yards would not result in any permanent conversion of Important Farmland. The proposed telecommunications routes are on existing SCE utility easements and would not change the use of the land. Most of the area covered by the proposed telecommunications routes is designated as Urban and Built-Up Land or as Grazing Land. Small portions of the telecommunications routes are designated as Prime Farmland, but the telecommunications infrastructure would not substantially interfere with the use of this land for agricultural production. Although the substation would convert only a small amount of Prime Farmland, this loss would still be potentially significant. Mitigation Measure AG-1 would require that SCE coordinate closely with surrounding farmers regarding construction activities to avoid interfering with agricultural operations to the extent feasible. Mitigation Measure AG-2 requires compensatory mitigation for the loss of Prime Farmland. With the implementation of these measures, impacts would be less than significant.

Mitigation Measures for Conversion of Important Farmland

MM AG-1 **Minimize Impacts to Agricultural Resources.** For project components sited on or adjacent to Important Farmland, SCE shall:

- Minimize paving and ground-disturbing activities to the maximum extent practical within agricultural fields to retain agricultural soil characteristics.
- Notify adjacent agricultural operations of construction schedules at least 30 days in advance of the start of construction-related activities. The announcement shall: (1) describe where and when construction is planned; and (2) provide contact information for a point of contact for complaints about impacts to adjacent agricultural resources related to construction activities.

Prior to commencing ground disturbing activities, the Applicant shall submit a copy of the template used for the notification letter and a list of the landowners notified to the CPUC. The Applicant shall document all complaints and strategies for resolving complaints in regular reporting to the CPUC.

MM AG-2 **Compensate for Loss of Prime Farmland.** If Prime Farmland (as designated by the California Department of Conservation's Farmland Mapping and Monitoring Program) is converted to non-agricultural use, SCE shall mitigate for the loss of farmland through

permanent preservation of off-site farmlands of equal or greater quality at a 1:1 ratio. Prior to the start of ground disturbance, SCE shall provide evidence to the CPUC that an Agricultural Conservation Easement has been granted in perpetuity to the local jurisdiction or an Agricultural Land Trust.

The Agricultural Land Trust must either: (A) demonstrate that it: (1) has adopted the Land Trust Alliance's Standards and Practices; (2) has substantial experience creating and stewarding Agricultural Conservation Easements; and (3) has a stewardship endowment to help pay for its perpetual stewardship obligations; or (B) be approved by the CPUC.

Prior to the commencement of ground disturbing activities, the applicant shall also provide appropriate funds (as determined by the CPUC) to compensate for reasonable administrative costs incurred by the easement holder, including an endowment to cover the cost of monitoring and enforcing the easement in perpetuity.

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

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Banducci Substation would be located on land zoned as Exclusive Agriculture, as are portions of the telecommunications routes. The substation site is not enrolled in a Williamson Act contract, but portions of the telecommunications routes pass through Williamson Act lands. Although the proposed substation would convert the site to non-agricultural use, the Exclusive Agriculture zoning district permits development of utility substations, transmission lines and supporting poles, and underground facilities for gas, water, electricity, telephone, or telegraph service owned and operated by a public utility company or other company under the jurisdiction of the CPUC.

The telecommunications infrastructure would be compatible with continued agricultural use and is allowed under both the Exclusive Agriculture zoning and the Williamson Act. Section 51238 of the Williamson Act indicates that, unless local jurisdictions declare otherwise, the erection, construction, alteration, or maintenance of gas, electric, water, or communications facilities is compatible with Williamson Act contracts. Although the substation and telecommunications infrastructure are legally allowed within the Exclusive Agriculture zone and Williamson Act lands, Mitigation Measure AG-1 (Minimize Impacts to Agricultural Resources) would be required to ensure that conflicts with the agricultural uses protected by these designations are less than significant. With the implementation of this measure impacts would be less than significant.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

NO IMPACT. The proposed Banducci Substation site is in a predominantly rural area that is not within or near any lands zone as forest land, timberland, or designated Timberland Production Zones. The proposed telecommunications routes are in rural areas and within the City of Tehachapi; these areas are also not forest or timberland. Therefore, construction and operation of the Proposed Project would have no impact.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

NO IMPACT. The Proposed Project will not affect any forest land. There would be on impact related to conversion of forest land to non-forest use.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Direct conversion of designated Farmland to non-agricultural use is discussed in 5.2.2(a) above. In addition to the conversion of Prime Farmland for construction of the Banducci Substation, project activities could affect agricultural operations within the telecommunications routes and adjacent to the project corridor. These impacts could include (1) disruption of agricultural activities or damage to equipment, crops, and livestock from increased traffic; (2) water and soil contamination; (3) suppression of plant growth by fugitive dust; (4) soil erosion; and (5) the spread of weeds. Mitigation Measure AG-1 (Minimize Impacts to Agricultural Resources) requires coordination with surrounding agricultural operations to minimize disruption. Mitigation Measure B-3 (Minimize Noxious Weeds) in Section 5.4 (Biological Resources) would reduce the potential for project activities to spread weeds. With the implementation of these measures, impacts would be less than significant.

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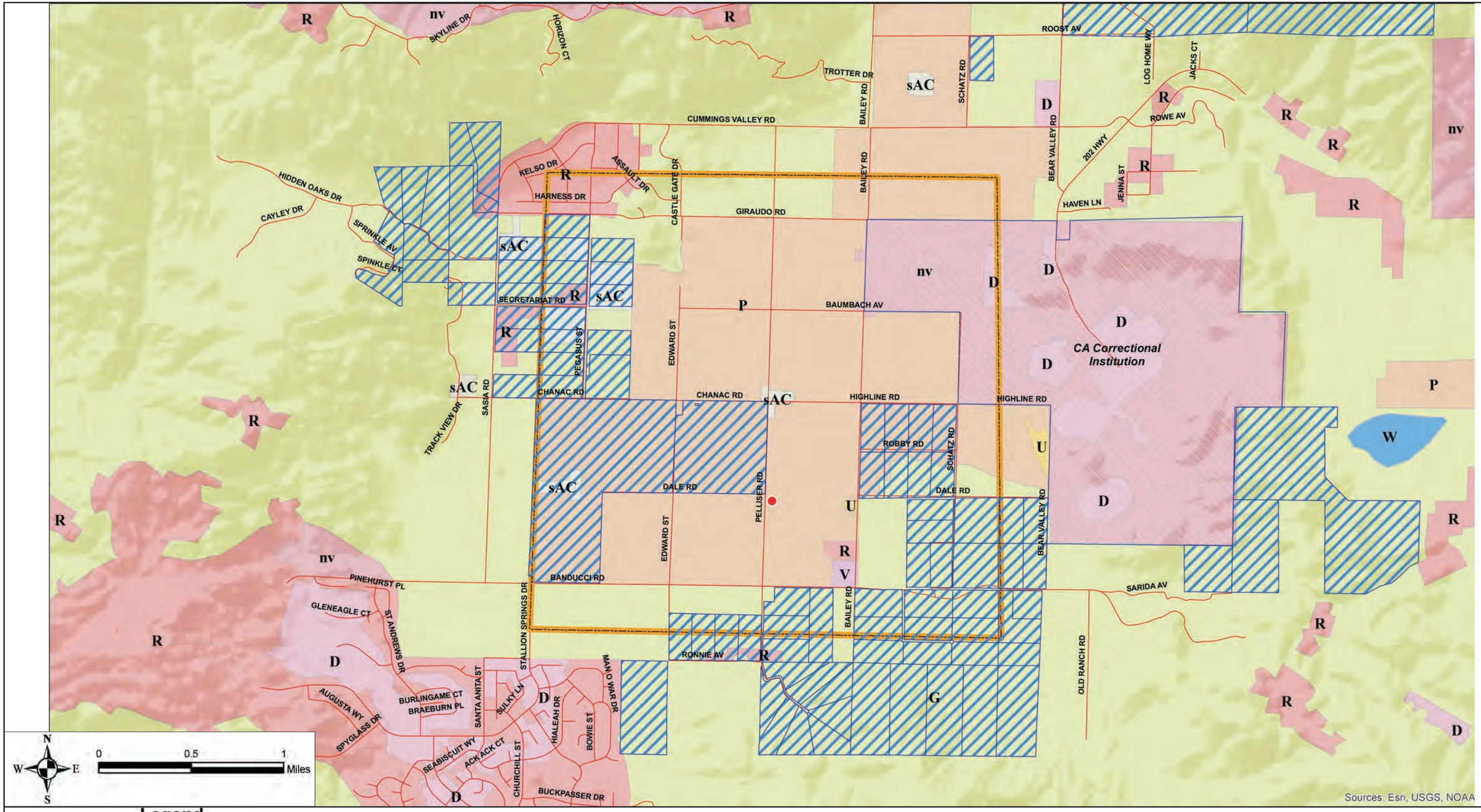

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Road
- (D) Urban and Built-Up Land
- (G) Grazing Land
- (P) Prime Farmland
- (R) Rural Residential Land
- (U) Unique Farmland
- (V) Vacant or Disturbed Land
- (W) Water
- (nv) Nonagricultural and Natural Vegetation
- (sAC) Semi-Agricultural and Rural Commercial Land
- Williamson Act Properties

Source: SCE, 2014.

Figure 5.2-1
Prime Farmland and Williamson Act Land

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5.3 Air Quality

AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☑	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☑	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☑	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.3.1 Setting

Criteria Pollutants. Air quality is determined by measuring ambient concentrations of criteria pollutants. Air pollutants are those pollutants for which acceptable levels of exposure can be determined and for which standards have been set. The degree of air quality degradation is then compared to the current National and California Ambient Air Quality Standards (NAAQS and CAAQS). Unique meteorological conditions in California and differences of opinion by medical panels established by the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (U.S. EPA) cause considerable diversity between State and Federal standards currently in effect in California. In general, the CAAQS are more stringent than the corresponding NAAQS. The standards currently in effect in California are shown in Table 5.3-1.

Table 5.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone	1-hour 8-hour	0.09 ppm 0.070 ppm	— 0.075 ppm
Respirable Particulate Matter (PM_{10})	24-hour Annual Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 —
Fine Particulate Matter ($PM_{2.5}$)	24-hour Annual Mean	— 12 µg/m^3	35 µg/m^3 12.0 µg/m^3
Carbon Monoxide (CO)	1-hour 8-hour	20 ppm 9.0 ppm	35 ppm 9 ppm
Nitrogen Dioxide (NO_2)	1-hour Annual Mean	0.18 ppm 0.030 ppm	100 ppb 0.053 ppm
Sulfur Dioxide (SO_2)	1-hour 24-hour Annual Mean	0.25 ppm 0.04 ppm —	75 ppb 0.14 ppm 0.030 ppm

Notes: ppm=parts per million; ppb=parts per billion; µg/m3= micrograms per cubic meter; "—" =no standard
Source: CARB, 2013 (http://www.arb.ca.gov/research/aaqs/aaqs2.pdf).

Attainment Status and Air Quality Plans. The U.S. EPA, CARB, and the local air district classify an area as attainment, unclassified, or nonattainment. The classification depends on whether the monitored ambient air quality data show compliance, insufficient data available, or non-compliance with the ambient air quality standards, respectively. The Proposed Project would be located within Kern County, under the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD). The site would be about four miles east of the boundary of, and generally downwind from, the San Joaquin Valley Air Pollution Control District.

Table 5.3-2 summarizes attainment status for the criteria pollutants in the EKAPCD under both the federal and state standards.

Table 5.3-2. Attainment Status for Eastern Kern APCD

Pollutant	Federal Designation	State Designation
Ozone (1-hour)	No federal standard	Nonattainment (moderate)
Ozone (8-hour)	Nonattainment	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassified
CO	Attainment	Unclassified
NO_2	Unclassified	Attainment
SO_2	Unclassified	Attainment

Source: EKAPCD, 2012a. http://www.kernair.org/Documents/EKAPCD%20Attainment%20Info%207-31-12.pdf

Toxic Air Contaminants. Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another's.

TACs are not subject to ambient air quality standards but are regulated by each local air district using a risk-based approach. If projected emissions of a specific air toxic compound from a proposed new or stationary modified source suggest a potential public health risk, then each applicant is subject to a health risk assessment for the source in question. Such an assessment also evaluates the chronic and acute hazards and the potential increased cancer risk stemming from exposure to a change in airborne TACs. Mobile sources powered by diesel fuel emit diesel particulate matter (DPM), which is classified as a TAC because many toxic compounds adhere to diesel exhaust particles. Statewide programs for mobile sources and diesel-fired equipment set mandatory exhaust standards for manufacturers of these engines and require equipment owners or operators to register portable equipment.

Regulatory Background

Federal Clean Air Act (CAA) and California Clean Air Act. The NAAQS (Table 5.3-1) were originally established by U.S. EPA for criteria air pollutants in 1970, with a mandate for periodic updating of the standards. Criteria pollutants are the most prevalent air pollutants known to be hazardous to human health. The relevant local air district rules and regulations that enable the demonstration of attaining the standards are incorporated into the State Implementation Plan (SIP) from each local air quality management plan, as needed for each nonattainment pollutant.

Each local air district has the responsibility to develop the necessary regional air quality management plan for attaining and maintaining the ambient air quality standards. Each air district also has the authority to issue permits through its rules and regulations by requiring that new stationary sources be subject to New Source Review (NSR). The NSR program ensures that the new stationary sources would not interfere with progress to attain the ambient air quality standards. No new stationary sources would be associated with the Proposed Project or subject to permitting. Emissions from mobile and portable sources and temporary activities (such as construction) are managed through a range of State and federal programs that control mobile sources, motor vehicle emissions, and emissions from equipment powered by diesel engines.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program. The California CAA mandates CARB to achieve the maximum degree of emission reductions from all off-road mobile sources in order to attain the State ambient air quality standards. Off-road mobile sources include construction and farming equipment. Tier 1, Tier 2, and Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996, 2001, and 2006 respectively. Tier 4 or Interim Tier 4 standards apply to all off-road diesel engines model year 2012 or newer. In addition, equipment can be retrofitted to achieve lower emissions using the CARB-verified retrofit technologies. The engine standards and ongoing rulemaking jointly address NOx emissions and toxic particulate matter from diesel combustion (DPM).

CARB In-Use Off-Road Diesel-Fueled Fleet Regulation. The regulations for in-use off-road diesel equipment are designed to reduce NOx and DPM from existing fleets of equipment. CARB expects to gradually enforce this rule with emissions performance requirements for large fleets starting on July 1, 2014 and for small fleets starting on January 1, 2019 (according to CARB Mail-Out #MSC 14-1, February 2014). Depending on the size of the fleet, the owner would need to ensure that the average emissions performance of the fleet meets certain state-wide standards. In lieu of improving the emissions performance of the fleet, electric systems can be installed to replace diesel equipment in the fleet average calculations. Presently, all equipment owners are subject to a five-minute idling restriction in the rule (13 California Code of Regulations, Chapter 10, Section 2449).

CARB Portable Equipment Registration Program. This program allows owners or operators of portable engines and associated equipment commonly used for construction or farming to register their units under a statewide portable program that allows them to operate their equipment throughout California without having to obtain individual permits from local air districts.

CARB Airborne Toxic Control Measures (ATCM). Diesel engines on portable equipment and vehicles are subject to various ATCM that dictate how diesel sources must be controlled statewide. For example, the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour (13 California Code of Regulations, Chapter 10, Section 2485). Diesel engines used in portable equipment fleets also are subject to stringent DPM emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (17 California Code of Regulations Section 93116). Certain stationary compression-ignition engines running on diesel fuel, including emergency standby engines, must also control particulate matter emissions by installing verified add-on equipment (17 California Code of Regulations Sections 93115.4 and 93115.6).

Kern County General Plan. The Land Use, Open Space, and Conservation Element (Chapter 1 of the Kern County General Plan) identifies General Provisions including the following policies to protect air quality in Kern County:

- Policy 18. The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- Policy 19. In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that: (a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and (b) The benefits of the Proposed Project outweigh any unavoid-

able significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.

- Policy 20. The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.
- Policy 21. The County shall support air districts' efforts to reduce PM10 and PM2.5 emissions.

EKAPCD Prohibitions (Regulation IV). EKAPCD Rule 401 and Rule 402 limit the emissions of visible particulate matter and wind erosion or fugitive dust from material handling and hauling, bulk storage, earthmoving, construction, and demolition. These rules prohibit any emissions of fugitive dust from construction, demolition, or other operations that remain visible in the atmosphere beyond the property line of the site of the source, except along roadways. Rule 419 prevents public nuisances.

EKAPCD Guidelines for Implementation of CEQA. The following thresholds of significance were adopted by the Kern County Air Pollution Control District Board of Directors in 1999 and remain applicable within the EKAPCD (EKAPCD, 1999). A project would have a significant air quality impact on the environment, if it would:

- Emit criteria air pollutants levels exceeding the trigger levels in EKAPCD Rule 210.1 of: 15 tons per year of PM10; 27 tons per year of SOx; or 25 tons per year of VOC or NOx;
- Emit more than 137 pounds per day of NOx or VOC from motor vehicle trips (indirect sources only);
- Cause or contribute to an exceedance of any California or National Ambient Air Quality Standard;
- Exceed the District health risk public notification thresholds; or
- Be inconsistent with adopted federal and state Air Quality Attainment Plans.

Applicant Proposed Measures

There are no applicant proposed measures for air quality.

5.3.2 Environmental Impacts and Mitigation Measures

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

LESS THAN SIGNIFICANT. The EKAPCD is the primary agency responsible for managing local air quality and administering other California and federal air pollution control programs ensuring attainment and maintenance of the ambient air quality standards. Generally, a project may be inconsistent with the applicable air quality management plan or attainment plan if it could cause population and/or employment growth or growth in vehicle-miles traveled in excess of the growth forecasts included in the attainment plan. The proposed Banducci Substation would not create any notable employment; the substation would not be staffed. Local SCE personnel would visit the substation approximately two to three times per week, generally based from the City of Tehachapi and the SCE Tehachapi Service Center, about 14 miles from the proposed substation site. Regional air quality plans and emissions inventories anticipate some growth, and this anticipated growth includes the construction of some new infrastructure, such as the Proposed Project.

Conducting project construction and operational activities in compliance with applicable EKAPCD rules and regulations would ensure that activities are consistent with EKAPCD efforts to achieve attainment and maintenance of the standards. Project-related emissions occurring in compliance with these rules and regulations would not conflict with or obstruct implementation of any applicable air quality plan. This impact would be less than significant, and no mitigation is required.

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

DURING CONSTRUCTION, *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. Emissions during the construction phase would include criteria air pollutants that could contribute to existing or projected violations of the ambient air quality standards for ozone and PM10. Construction of the proposed substation, subtransmission line segments, and other project facilities would result in air pollutant emissions from construction equipment and material handling at the various work areas and from off-site motor vehicle trips carrying workers and materials. Motor vehicles, off-road equipment, and other construction equipment would directly emit criteria air pollutants and toxic air contaminants.

The Proposed Project would develop a 3.3-acre substation, subtransmission line segments, and 30 miles of fiber optic cable on poles and in conduit. Approximately 50 construction personnel would be working on any given day over an anticipated schedule of 12 months. The equipment and workforce are itemized and detailed in Table 4-4 (Construction – Typical Equipment Use).

During construction, emissions would be generated at the proposed substation site, at staging yards, along the subtransmission line and fiber optic line work areas, and along the roadways used to access these locations. Construction emissions would be caused by exhaust from vehicles and equipment (e.g., ozone precursors [volatile organic compounds and NOx], CO, and particulate matter [PM10 and PM2.5]) and fugitive dust/particulate matter from ground-disturbing activities and travel on unpaved roads. Diesel and gasoline-powered construction equipment at work sites would include dozers, loaders, graders, backhoes, augers (drill rigs), lifts, a crane, and haul trucks for lifting, delivery, concrete, water, and work crews. Outside of work sites, exhaust emissions would be caused by vehicles transporting equipment and supplies to the sites, trucks removing debris or importing fill, and workers commuting to and from work sites. Table 5.3-3 (Estimated Construction Emissions) summarizes the estimated total construction emissions.

Table 5.3-3. Estimated Construction Emissions (tons)

Project Sources	NOx	VOC	SO_2	PM_{10}	$PM_{2.5}$
Banducci Substation Construction					
Off-road construction equipment	4.76	0.36	0.005	8.37	1.38
Off-site motor vehicles	0.685	0.035	0.002	0.263	0.075
Fugitive dust	—	—	—	6.62	0.99
Distribution Getaway Installation					
Off-road construction equipment	0.14	0.01	0.000	0.19	0.05
Off-site motor vehicles	0.002	0.000	0.000	0.002	0.001
Fugitive dust	—	—	—	0.18	0.03
Subtransmission Line Segment Installation					
Off-road construction equipment	1.13	0.19	0.001	2.91	0.47
Off-site motor vehicles	0.004	0.000	0.000	0.001	0.000
Fugitive dust	—	—	—	2.80	0.42

Table 5.3-3. Estimated Construction Emissions (tons)

Project Sources	NOx	VOC	SO_2	PM_{10}	$PM_{2.5}$
Telecommunication Construction					
Off-road construction equipment	0.58	0.04	0.001	2.86	0.45
Off-site motor vehicles	0.016	0.002	0.000	0.038	0.010
Fugitive dust	—	—	—	2.84	0.43
Total Construction Emissions	**7.32**	**0.64**	**0.01**	**27.07**	**4.31**
Significance Threshold (tons per year)	**25**	**25**	**27**	**15**	**None**

Note: Based on anticipated construction schedule of 12 months; using CARB OFFROAD2011 and EMFAC2011.
Source: SCE, 2014a and 2014b. (Appendix C of Air Quality Technical Report [PEA Appendix C]; and Response to CPUC Data Request T-2 Amended).

Emissions for each type of activity and each type of source are calculated based on the various components of the Proposed Project and types of equipment specified in the Project Description (Section 4.11). The emission estimates rely on factors from the CARB OFFROAD2011 and EMFAC2011 models and U.S. EPA emission factors (SCE, 2014a). Construction-related emissions would be spread over a development schedule of one year. Based on the construction activity forecast, PM10 could be emitted at levels exceeding the threshold for the construction duration of the Proposed Project.

Project construction activities would need to be conducted in compliance with applicable EKAPCD rules and regulations. EKAPCD Rule 402 requires use of Reasonably Available Control Measures to minimize fugitive dust emissions, and examples of these measures appear as suggestions tabulated in EKAPCD Rule 402. The EKAPCD also provides suggested construction mitigation measures that should be used where applicable and feasible (EKAPCD, 2012b). Undertaking project construction without implementing the feasible and recommended dust control measures could disrupt EKAPCD efforts to attain the PM10 CAAQS and maintain the NAAQS, resulting in a significant impact.

Mitigation is available to ensure that project construction activities would be conducted in a manner consistent with EKAPCD Rule 402 and that the dust control measures recommended by EKAPCD are made enforceable. Implementation of Mitigation Measure AQ-1 (Implement EKAPCD Dust Control Measures) would ensure that construction does not violate the ambient air quality standards for PM10 or contribute substantially to existing violations. Implementing the mitigation would reduce construction-related emissions to levels that would not substantially contribute to any air quality violations, and this impact would be less than significant.

Mitigation Measure for Construction-Phase Air Quality

MM AQ-1 **Implement EKAPCD Dust Control Measures.** SCE shall implement the following measures during site preparation and construction:

- All soil excavated or graded should be sufficiently watered or treated with non-toxic soil stabilizers to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
- All clearing, grading, earth moving and excavation activities should cease: during periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown; or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.

- All fine material transported offsite should be sufficiently watered, treated with non-toxic soil stabilizers, or securely covered to prevent excessive dust.
- If more than 5,000 cubic yards of fill material will be imported to or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed.
- Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times.
- Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
- Where acceptable to the fire department, weed control should be accomplished by mowing instead of discing, thereby, leaving the ground undisturbed and with a mulch covering.
- Once initial leveling has ceased all inactive soil areas within the construction site should either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission.
- All active disturbed soil areas should be sufficiently watered or treated with non-toxic soil stabilizers to prevent excessive dust, but no less than twice per day.
- Onsite vehicle speed should be limited to 15 mph.
- All areas with vehicle traffic should be paved, treated with dust palliatives, or watered a minimum of twice daily.
- Streets adjacent to the project site should be kept clean and accumulated silt removed.
- Access to the site should be by means of an apron into the project from adjoining surfaced roadways. The apron should be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of the vehicles, a grizzly or other such device should be used on the road exiting the project, immediately prior to the pavement, in order to remove most of the soil material from the vehicle's tires.

DURING OPERATION, *LESS THAN SIGNIFICANT*. There would be very limited emissions resulting from equipment used in operation and maintenance of the proposed substation and related facilities. During operations, emissions would result from vehicles used for periodic visits, inspections, and routine maintenance or as needed during an emergency. Local SCE personnel would visit the substation approximately two to three times per week, usually based from the City of Tehachapi, which is about 15 miles from the proposed substation site. Each substation visit would involve about 60 miles traveled, and each inspection of the subtransmission line would involve about 72 miles traveled (SCE, 2014a). Because the substation would not be staffed, there would be no vehicular emissions associated with regular commuting to and from the substation. Estimated operational emissions are shown in Table 5.3-4 (Emissions During Operations).

Table 5.3-4. Emissions During Operations (lb/day)

Project Sources	NOx	VOC	SO_2	PM_{10}	$PM_{2.5}$
Subtransmission Line Inspection	0.02	0.006	0.001	0.007	0.003
Substation Site Visit	0.02	0.005	0.0004	0.006	0.003
Typical Operations, Total Emissions	**0.04**	**0.011**	**0.001**	**0.014**	**0.006**
Significance Threshold (lb/day)	**137**	**137**	**None**	**None**	**None**

Source: SCE, 2014a. (Appendix D of Air Quality Technical Report [PEA Appendix C]).

As shown in Table 5.3-4, the typical daily emissions during operation of the Proposed Project would be well below the applicable significance thresholds. Therefore, the air quality impact from the operational phase of the project would be less than significant.

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

DURING CONSTRUCTION, LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Proposed Project would occur in a region that is nonattainment for ozone and PM10, as Table 5.3-2 shows. Concurrent construction of other projects in close proximity to project activities could result in increased local air quality impacts for the duration of simultaneous construction activities; however, this would be limited to the circumstances of an approved or proposed project occurring in the same timeframe and location as the project. Simultaneous construction activities occurring in close proximity to the proposed work sites would also need to comply with EKAPCD rules regarding dust control. Table 5.3-3 shows that construction-related ozone precursors would not be at a cumulatively considerable level. With Mitigation Measure AQ-1 (Implement EKAPCD Dust Control Measures), the Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutants for which the project region in is nonattainment.

DURING OPERATION, LESS THAN SIGNIFICANT. Operational emissions would result from limited vehicle use related to periodic maintenance, repair, and inspection of the project components. The associated emission levels (Table 5.3-4) would be below the EKAPCD thresholds, and these emissions would not result in a cumulatively considerable net increase of any criteria pollutant.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT. Sensitive receptors include residential areas, schools, day care centers, and other places where people reside, including prisons. The proposed substation site would be approximately 1.6 miles from the nearest location of sensitive receptors, the California Correctional Institution; the nearest residential development would be in the community of Stallion Springs, approximately 2 miles from the site. Three residences are within 0.5 miles of the substation site, with the nearest being 0.25 miles to the south on Pellister Road.

Construction of subtransmission and telecommunication facilities would occur near sensitive receptors along the linear routes of these project components. Installing these utilities could expose sensitive receptors to construction-related emissions (Table 5.3-3), including emissions of DPM and other toxic air contaminants common to diesel equipment exhaust, which would expose receptors to increased health risk and hazards. The construction-related emissions would be short-term, and no single location would be exposed to increased pollutant concentrations for more than a few days as construction crews move along the linear routes. Although overall substation and other project-related construction would require one year, construction at any one work site would last a much shorter time. The limited duration

and limited quantities of construction emissions ensure that no individual receptor would be exposed to substantial pollutant concentrations.

During project operations, emissions would result from limited use of vehicles for routine maintenance, repair, and inspection (see Table 5.3-4) that would not expose sensitive receptors to substantial concentrations of air pollutants.

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

LESS THAN SIGNIFICANT. The project would not include any sources likely to create objectionable odors. Project construction would involve the temporary use of vehicles and construction equipment and materials, including solvents or coatings, that may generate intermittent, minor odors. Emissions of this nature would occur briefly during construction and would cease as the construction activity would move through phases and between work areas. There would be no notable impact of objectionable odors affecting a substantial number of people. This impact would be less than significant.

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5.4 Biological Resources

BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☑	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☑	☐	☐
c. Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☑	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☑	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.4.1 Setting

This section describes the biological resources that occur in the Proposed Project area. It includes a description of the existing biotic environment, including common plants and wildlife, sensitive habitats, and special-status species and their locations in relation to the Proposed Project. Section 5.4.2 presents an analysis of potential impacts to biological resources and, where necessary, specifies mitigation measures to reduce potential impacts to less-than-significant levels.

The Proposed Project would be located within the Tehachapi, Brite, and Cummings Valleys in eastern Kern County, California. Elevations in the area range from approximately 3,820 to 4,300 feet above mean sea level. The eastern half of the project study area largely is within limits of the City of Tehachapi while the western half mostly is within rural and agricultural areas of unincorporated Kern County. The majority of the Proposed Project would be located adjacent to roads such as Highline Road, Valley Boulevard, Tehachapi Boulevard, and Pelliser Road. Existing and proposed ROWs within the project study area primarily occur within developed, agricultural, or previously disturbed land.

The proposed Banducci Substation would be located on property with a history of agricultural use. The proposed 66 kV subtransmission lines would exit the substation property and enter a public street right-of-way (ROW). The proposed telecommunication routes would pass through rural and urban areas with a mix of residential, commercial, and agricultural land uses.

Reconnaissance-level field surveys of botanical, wetland, and wildlife resources, and focused surveys for burrowing owl (*Athene cunicularia*) and raptors were conducted by Plegadis, LLC (Plegadis) in December

2010 and March through July 2011. Areas included in these surveys are referred to in this analysis as the "project study area." Areas within five miles of the Proposed Project are referred to as the "Project vicinity." Results of the surveys were presented in the Biological Resources Technical Report for the Banducci Substation and Associated Facilities (Plegadis, 2012).Unless otherwise noted, biological resource information presented in this section is summarized from that report.

For the proposed subtransmission and telecommunications alignments, the project study area consisted of a 100-foot wide corridor (50 feet on either side of the centerline). For the proposed substation, the project study area consisted of the substation site and 50 feet beyond the boundaries of the site. The project study area is shown in Figures 5.4-1a through 5.4-1j (Vegetation in the Project Study Area).

In addition to the Biological Resources Technical Report, biological databases and other sources were reviewed for this analysis. Sources included the following:

- Proponent's Environmental Assessment for the Banducci Substation Project (SCE, 2014);
- California Department of Fish and Wildlife (CDFW; formerly known as the California Department of Fish and Game) RareFind 3.1.1 California Natural Diversity Database (CNDDB) (CDFW, 2014);
- California Special Animals List (CDFG, 2011);
- California Native Plant Society (CNPS) online version of the Inventory of Rare and Endangered Plants of California (CNPS, 2014);
- The Jepson eFlora (2014) database of California plants; and
- Aerial and street-level photographs (Google, 2014).

Vegetation community nomenclature follows the Preliminary Description of the Terrestrial Natural Communities of California (Holland, 1986). Taxonomic conventions follow Jepson eFlora (2014) for plants and a Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG, 2008) for wildlife.

Vegetation Communities

Seven vegetation communities or land cover types are found in the project study area; see Figures 5.4-1a through 5.4-1j (Vegetation in the Project Study Area). The acreage of each vegetation community is provided in Table 5.4-1; anticipated project impacts to each vegetation community are summarized in Table 5.4-2. One additional vegetation community (riparian) is not found in the study area, but is nearby. No impacts to riparian vegetation are anticipated.

Table 5.4-1. Approximate Acreage of Vegetation Communities and Other Land Cover Types Within the Project Study Area.

Vegetation and Land Cover Type	Area (acres)
Non-Native Grassland	302
Developed	280
Rubber Rabbitbrush	275
Agricultural and Rural Lands	232
Blue Oak Woodland	54
Foothill Pine-Oak Woodland	1
Big Sagebrush Scrub	1
TOTAL	**1,145**

Table 5.4-2. Summary of Estimated Vegetation Community Impacts in Acres.

Construction Type (Impact Type)	Agriculture	Blue Oak Woodland	Developed	Grassland	Rubber Rabbitbrush	Rural	TOTAL
Banducci Substation (Permanent)	6.22	0.00	0.00	0.00	0.00	0.00	**6.22**
General Disturbance (Temporary)	0.05	0.00	0.63	0.79	0.23	0.23	**1.92**
Structure Work Area (Temporary)	0.29	0.57	1.29	1.72	0.86	1.00	**5.74**
Telecom Stringing Site (Temporary)	0.48	0.00	0.83	0.41	0.21	0.34	**2.27**
Telecom Trench Disturbance (Temporary)	2.95	0.00	0.00	0.00	0.00	0.00	**2.95**
Yard (Temporary)	3.74	0.00	0.50	0.00	1.00	0.00	**5.24**
TOTAL (Permanent)	**6.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.22**
TOTAL (Temporary)	**7.51**	**0.57**	**3.24**	**2.93**	**2.30**	**1.58**	**18.12**
GRAND TOTAL[1]	**13.72**	**0.57**	**3.24**	**2.93**	**2.30**	**1.58**	**24.34**

[1]Slight discrepancies in totals are due to rounding error.

Blue Oak Woodland. Blue oak (*Quercus douglasii*) is native and endemic to California and dominates nearly half of all oak woodlands in the state (Pavlik et al., 1991). Blue Oak Woodland is a climax community of variable canopy cover and understory that ranges from open savannahs (often at lower elevations) to fairly dense woodlands with shrubby understories (Holland, 1986). Although blue oak is the dominant species, it often occurs with foothill pine (*Pinus sabiniana*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizenii*). This vegetation type occurs in well-drained soils below 3,000 to 4,000 feet (Holland, 1986).

Blue Oak Woodland is listed in the CNDDB as a rare and threatened vegetation community with restricted range (CDFW, 2014). Blue Oak Woodland occurs along Proposed Telecommunications Route 2 from the Tehachapi city limits west to Cummings Valley along Valley Boulevard and Highline Road, and along Proposed Telecommunications Route 1 within the California Correctional Institution property. Native species of oaks within this habitat may be protected under the County's oak tree conservation ordinance.

Foothill Pine-Oak Woodland. Foothill Pine-Oak Woodlands are dominated by foothill pine and blue oak (Holland, 1986). These woodlands have a diverse mix of hardwoods, conifers, and shrubs, and widely variable overstories. Blue oak is usually the more abundant species, although foothill pine is taller. Other plant species that commonly occur within this habitat include California buckeye (*Aesculus californica*), coast live oak, black oak (*Quercus kelloggii*), toyon (*Heteromeles arbutifolia*), and coffeeberry (*Frangula* [*Rhamnus*] *californica*). Foothill Pine-Oak Woodlands occur in well-drained, rocky or exposed sites along ridges or canyons with poor or shallow soils usually below 6,000 feet (Holland, 1986). Native species of oaks within this habitat may be protected under the County's oak tree conservation ordinance.

The CNDDB does not specifically list Foothill Pine-Oak Woodland as a sensitive vegetation community (CDFW, 2014). However, it is likely to intergrade with Blue Oak Woodland in the study area, and for the purposes of this analysis also will be considered as a rare and threatened vegetation community with restricted range. The distribution of this community within the project study area is restricted to the south-central portion of the alignment of Proposed Telecommunication Route 1.

Big Sagebrush Scrub. Great Basin sagebrush (*Artemisia tridentata*) is a gray-leaved, soft woody shrub that grows up to 5 feet tall, but is typically closer to 3 feet in height. It can occur in a variety of conditions, but often occurs in fine-textured soils with a high water table (Holland, 1986). Under certain conditions, Great Basin sagebrush grows as a dominant shrub that comprises Big Sagebrush Scrub. Distributed widely along the eastern Sierra Nevada Mountain Range, this vegetation type also occurs in scattered localities along the margins of the Mojave and Sonoran Deserts at elevations between 4,000 and 9,000 feet. Other plant species that commonly occur within this vegetation type include cheatgrass (*Bromus tectorum*), rubber rabbitbrush (*Ericameria nauseosa* [*Chrysothamnus nauseosus*]), California juniper (*Juniperus californicus*), singleleaf pinyon (*Pinus monophylla*), Sandberg's bluegrass (*Poa secunda*), common sandaster (*Lessingia filaginifolia*), and antelope bush (*Purshia tridentata* var. *glandulosa*). The CNDDB lists Big Sagebrush Scrub as apparently secure within California, but factors exist to cause some concern (i.e., some threat or somewhat restricted habitat). This community has a very narrow distribution in the westernmost portion of the project study area between Proposed Telecommunications Routes 1 and 2.

Rubber Rabbitbrush Scrub. Rabbitbrush scrub is a vegetation type that is generally less than 3 feet tall and is dominated by rubber rabbitbrush. It is typically associated with areas subject to frequent disturbance. Rubber rabbitbrush occurs in large relatively open fields with fine-textured soils with a high water table. Within the study area, the Rubber Rabbitbrush community is common in fallow agricultural fields and pasture lands, such as those found near Monolith and Cummings Valley. The CNDDB lists Rabbitbrush Scrub as secure within California (CDFW, 2014). This community occurs in various places within Proposed Telecommunications Routes 1 and 2.

Non-native Annual Grassland. Non-native grassland, also referred to as California annual grassland, consists of a dense to sparse cover of annual grasses and forbs between 0.5 to 1.5 feet tall. Although it has a strong component of non-native species, this vegetation type can support native species, including special-status species. In years with sufficient rainfall, this habitat often is associated with showy annual wildflower species. Germination occurs at the start of the late fall rains and growth, flowering, and seed-set occur from winter through spring. Senescence occurs in early summer. This habitat occurs on fine-textured, usually clay, soils that are moist or water-logged in the winter and very dry during the summer. It is usually found below 3,000 feet but reaches 4,000 feet in the Tehachapi Mountains. The dominant species are variable in this community, but it is locally composed of non-native grass and forb species, such as red brome (*Bromus madritensis* ssp. *rubens*), cheatgrass (*Bromus tectorum*), slender wild oats (*Avena barbata*), short-pod mustard (*Hirschfeldia incana*), and yellow starthistle (*Centaurea solstitialis*), and native species such as six weeks fescue (*Vulpia octoflora*), California poppy (*Eschscholtzia californica*), common sandaster, doveweed (*Croton* [*Eremocarpus*] *setigerus*), and purple needlegrass (*Stipa* [*Nassella*] *pulchra*). The CNDDB does not list non-native grassland as a sensitive vegetation community. This community is widely distributed throughout the project study area.

Agricultural and Rural Land. Agricultural and Rural Land is defined here as land used for the production of food and fiber, the feeding and maintenance of livestock, and housing in very low density. The interface between this and other vegetation types may be a transition zone between natural and semi-natural areas and can be characterized as open space. Such areas may support agricultural crops, such as alfalfa (*Medicago sativa*) or barley (*Hordeum vulgare*), non-native grassland, or ornamental trees and plants, but also are often characterized by the presence of ruderal plants, such as telegraph weed (*Heterotheca grandiflora*) or annual sunflower (*Helianthus annuus*). Locally, these areas occasionally support native communities such as oak woodlands or native grasses such as purple needlegrass. Within the project study area, Agricultural and Rural Land is most common near the existing Monolith Substation and in Brite and Cummings Valleys. It is the dominant vegetation found on the proposed Banducci Substation site.

Developed. Developed lands include urban areas that have been largely built up and are generally devoid of native vegetation. Urban areas may include vacant lots with California annual grassland and ruderal vegetation similar to that of Agricultural and Rural Land, but often supporting a greater number of ornamental plants commonly used for landscaping. This land use is prevalent in the City of Tehachapi and immediately surrounding areas in the eastern half of the project study area.

Riparian. Riparian areas include the emergent vegetation found along perennial and ephemeral riverine water courses. Vegetation associated with Riparian areas includes trees such as willows (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), and western sycamore (*Platanus racemosa*). Other emergent species such as Baltic rush (*Juncus balticus*), sedges (*Carex* spp.), and nutgrass (*Cyperus* spp.), common cattail (*Typha latifolia*), and bulrush (*Schoenoplectus* [*Scirpus*] spp.) also may occur.

Riparian vegetation is absent from the project study area, but occurs along watercourses, such as Brite Creek, which cross the Proposed Telecommunication Routes west of Tehachapi. Small patches of willow riparian vegetation near, but downstream of the Proposed Telecommunication Routes, would probably be considered special-status vegetation.

Open Water. Open water refers to all areas that support perennial or near perennial water. Such areas typically lack vegetation due to a lack of light penetration. Floating plants such as duckweed (*Lemna* spp.), water buttercup (*Ranunculus aquatilis*), and mosquito fern (*Azolla filiculoides*) can occur under certain conditions. This mapped type includes inland depressions, ponds, lakes, reservoirs, and stream channels containing standing water, such as the reservoirs along the south- and north-central portions of the Proposed Telecommunications Routes.

Jurisdictional Waters

Proposed Telecommunications Routes 1 and 2 cross several drainage features, including Brite Creek and several unnamed streams. Brite Creek connects to Tehachapi Creek, which is classified as waters of the United States under the Federal Clean Water Act (CWA). The Federal CWA limits federal jurisdiction to "navigable waters," which it defines as "waters of the United States." Waters of the United States are further subdivided into seven categories, two of which are wetlands and adjacent wetlands (33 CFR §§ 328.3[a] and [a][7]). In places, Brite Creek supports facultative hydrophytes (plants that normally grow in water) that may indicate the presence of jurisdictional wetlands subject to the CWA and the specific rules that apply to wetlands. Wetlands are defined under 33 CFR Part 328.3 (b) as "[T]hose areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, prevalence of vegetation typically adapted for life in saturated soil conditions."

Common Wildlife

During surveys in the project study area, invertebrates observed included several common species of butterflies and ants. No amphibians were observed, but amphibian species likely to occur within the project study area include western toad (*Anaxyrus boreas*) and Pacific tree frog (*Pseudacris regilla*). Three reptile species were observed. The most common of these was side-blotched lizard (*Uta stansburiana*), an abundant species throughout southern California. Western whiptail (*Cnemidophorus tigris*) and gopher snake (*Pituophis melanoleuca*) also were observed, but far less frequently. Other reptiles likely to be found in the project study area include glossy snake (*Arizona elegans*) and California king snake (*Lampropeltis getulus*).

Common birds observed during surveys included resident and wintering species. Among the common resident species in open areas were red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco spar-*

verius), common raven (*Corvus corax*), and western meadowlark (*Sturnella neglecta*). Among the common resident scrub and woodland bird species are western scrub jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), California towhee (*Melozone crissalis*), California quail (*Callipepla californica*), and northern mockingbird (*Mimos polyglottos*). Wintering bird species included white-crowned sparrow (*Zonotrichia leucophrys*) and yellow-rumped warbler (*Dendroica coronata*). Migratory and nesting species detected included Vaux's swift (*Chaetura vauxi*), Say's phoebe (*Sayornis saya*), and lark sparrow (*Condestes grammacus*).

Signs (burrows, dens, tracks, or scat) of several mammal species were observed. This included natal dens and scat for coyote (*Canis latrans*), scat and tracks for black-tailed jackrabbit (*Lepus californicus*) and Audubon's cottontail (*Sylvilagus auduboni*), and tail drags and burrows for a number of small rodents. Other mammals detected by sign or direct observation included mule deer (*Odocoileus hemionus*), Botta's pocket gopher (*Thomomys bottae*), Beechey ground squirrel (*Spermophilus beecheyi*), striped skunk (*Mephitis mephitis*), American badger (*Taxidea taxus*), and bobcat (*Felis rufus*). Two pronghorn antelope (*Antilocapra americana*), members of a locally reintroduced experimental herd, were observed south of the Monolith Substation near Tehachapi–Willow Springs Road.

Wildlife Movement

The Proposed Project is located within a mix of urban, agricultural, and residential areas. Adjacent open space, agricultural, and low-density development are prevalent on the western half of the project study area. Although no specific wildlife corridors have been mapped in the immediate vicinity of the Proposed Project, natural open space and low-density development in the project study area is contiguous with off-site habitats to the north and south. Open space contiguous with the Proposed Project provides opportunities for movement of mammals with large home ranges, such as mule deer, bobcat, mountain lion and pronghorn antelope. Moreover, the Tehachapi Mountains are recognized as an important wildlife connectivity area that links the Sierra Nevada to the north and the Sierra Madre to the west (Beier et al., 2006; Penrod et al., 2006; Block et al., 1992).

Special-status Plants and Animals

Special-status species are those listed as threatened or endangered under the federal or state endangered species acts, species proposed for listing, California species of special concern, and other species that have been identified by the USFWS, CDFW, or another agency as unique or rare. Table 5.4-3 identifies the special-status species that were reported to occur or potentially occur in the vicinity of the Proposed Project, based on field surveys and searches of the CNDDB, CNPS's Inventory of Rare and Endangered Plants, and other resources.

No special-status plants were detected during the biological surveys of the project study area conducted in 2010 and 2011. Of the 26 special-status plants documented in the region by the CNDDB, 13 have potentially suitable habitat within the project study area, ranges that overlap the project study area, or documented occurrences within five miles. Twelve of these species are CRPR List 1B or 2B; one is a rare plant listed under the California Native Plant Protection Act. Based on more detailed analysis, seven of these species may occur and six are unlikely to occur in the project study area (see Table 5.4-3).

Four special-status wildlife species, Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), prairie falcon (*Falco mexicanus*), and American badger were detected during biological surveys. Other special-status wildlife species may occur in the Project vicinity or the project study area, including the state-listed threatened Tehachapi slender salamander (*Batrachoseps stebbinsi*).

Critical habitat. The USFWS may designate critical habitat for a species listed as threatened or endangered under the Endangered Species Act (ESA). Critical habitat is a designation that indicates areas that have the physical and biological features believed to be essential to the conservation of the species and may require special management considerations or protection (USFWS, 2013). No designated critical habitat overlaps the project study area. There is designated critical habitat for California condor located approximately 3 miles southwest of the project study area. There is no other designated critical habitat within 10 miles of the project study area; see Figure 5.4-2 (Critical Habitat and Other Special Management Areas).

Conservation planning. The eastern portion of the Proposed Project is located within the area covered by the Desert Renewable Energy Conservation Plan (DRECP); see Figure 5.4-2. The DRECP is a proposed State Natural Community Conservation Plan (NCCP) and federal Habitat Conservation Plan (HCP) intended to protect and conserve desert ecosystems while allowing for appropriate development of renewable energy projects. The DRECP has not yet been approved and no estimated date of approval is available (DRECP, 2012).

Table 5.4-3. Special-status Species that Occur or Potentially Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Project Vicinity
Plants			
Baja navarretia *Navarretia peninsularis*	1B.2	Lower montane coniferous forest, chaparral; open areas; 5000–8000 feet elevation.	May occur. Study area is at the lower end of elevation range, habitat is marginally suitable along Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley.
Big Bear Valley woollypod *Astragalus leucolobus*	1B.2	Montane coniferous forests, pebble plains, pinyon-juniper woodlands; often associated with dry pine woods, gravelly knolls among sagebrush, or stony lake shores in the pine belt; 5500–8250 feet elevation.	May occur. Study area is mostly below the lower elevation limits of this species' range and habitat is marginally suitable along Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley.
Calico monkeyflower *Mimulus pictus*	1B.2	Broad-leafed upland forest, cismontane woodland; bare ground around gooseberry bushes or granite rock outcrops; 1000-4200 feet elevation.	Unlikely to occur. No suitable habitat in study area, but somewhat suitable habitat between Tehachapi City limits and Cummings Valley.
Coulter's goldfields *Lasthenia glabrata ssp. coulteri*	1B.1	Coastal salt marshes, playas, vernal pools; alkaline soils in playas, sinks, and grasslands; up to 3900 feet elevation.	Unlikely to occur. Suitable habitat probably lacking. Documented occurrence from this area in 1905 likely extirpated.
Delicate bluecup *Githopsis tenella*	1B.3	Mesic sites in chaparral, cismontane woodlands; 3600–6200 feet elevation.	May occur. Marginally suitable habitat present along Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley.
Golden violet *Viola purpurea ssp. aurea*	2B.2	Dry, sandy slopes in Great Basin scrub, pinyon-juniper woodland; 2700–5900 feet elevation.	Unlikely to occur. Suitable habitat probably lacking. Documented occurrences near the study area referenced on Figure 4.4-5 of the Biological Technical Report no longer appear in the CNDDB and may have been in error.

Table 5.4-3. Special-status Species that Occur or Potentially Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Project Vicinity
Madera leptosiphon *Leptosiphon serrulatus*	1B.2	Cismontane woodlands, lower montane coniferous forests; dry slopes, often on decomposed granite; 260–5200 feet elevation.	May occur. No suitable habitat in study area, but somewhat suitable habitat between Tehachapi City limits and Cummings Valley.
Pale yellow heterotricha *Layia heterotricha*	1B.1	Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland; alkaline or clay soils in open areas; 900–5000 feet elevation.	May occur. Marginally suitable habitat present on the easternmost undeveloped portions of Proposed Telecommunications Routes 1 and 2.
Palmer's mariposa lily *Calochortus palmeri var. palmeri*	1B.2	Meadows and seeps in chaparral and lower montane coniferous forest; requires vernally moist places; 2000–7400 feet elevation.	Unlikely to occur. No suitable habitat in the study area, but somewhat suitable habitat occurs nearby between Tehachapi City limits and Cummings Valley.
Round-leaved filaree *California macrophylla*	1B.1	Cismontane woodlands, valley and foothill grasslands; often associated with clay soils; below 4000 feet elevation.	May occur. Suitable habitat occurs along much of the study area.
Spanish needle onion *Allium shevockii*	1B.3	Pinyon-juniper woodland, upper montane coniferous forest; grows in soil pockets on rock outcrops and talus slopes; 6600–7500 feet elevation.	Unlikely to occur. No suitable habitat in study area, but somewhat suitable habitat occurs nearby between Tehachapi City limits and Cummings Valley.
Tehachapi monardella *Monardella linoides ssp. oblonga*	1B.3	Montane coniferous forests, pinyon-juniper woodland; dry slopes, disturbed roadsides in decomposed granitic soils; 5600–8100 feet elevation.	May occur. Marginally suitable habitat along Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley.
Tracy's eriastrum *Eriastrum tracyi*	SR, 3.2	Chaparral, cismontane woodlands; gravelly shale or clay; often in open areas; 1000–2500 feet elevation.	Unlikely to occur. The study area is above known elevation range. Marginally suitable habitat present along Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley. Documented occurrence is from 1910, exact location unknown.
Amphibians			
Tehachapi slender salamander *Batrachoseps stebbinsi*	**ST**	Valley-foothill hardwood-conifer, valley-foothill riparian; wet talus slopes, log-strewn hillsides; steep, north-facing slopes.	May occur. Potential habitat occurs along Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley.
Yellow-blotched salamander *Ensatina eschscholtzii croceator*	SSC	Forest, shady canyons, oak woodlands, old chaparral; requires surface detritus (logs, rocks) for cover and old rodent burrows or other underground retreats.	May occur. Documented occurrences within 5 miles. Suitable habitat probably lacking.
Reptiles			
Coast horned lizard *Phrynosoma coronatum blainvillii*	SSC	Scrubby, open habitats. Requires native ants as food source.	May Occur. Suitable habitat occurs throughout Proposed Telecommunications Routes 1 and 2, with the best habitat occurring west of the City of Tehachapi and east of Cummings Valley.

Table 5.4-3. Special-status Species that Occur or Potentially Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Project Vicinity
Birds			
Burrowing owl *Athene cunicularia*	SSC	Grassland, shrub steppe, savannah, agricultural, old fields, clearings.	May occur. Suitable habitat occurs within proposed subtransmission and telecommunications routes and at the substation site.
California condor *Gymnogyps californianus*	**FE, SE**	Rocky scrubland, oak savannah, coniferous forest; cliffs, large trees used for nesting.	May occur. The study area is within the species range. Condors may forage in the study area, but are not expected to nest there.
California horned lark *Eremophila alpestris actia*	WL	Variety of open, sparse, and low-growing habitats; normally on flat ground.	May occur. Suitable foraging and nesting habitat occurs in the flat and undeveloped portions of the Subtransmission and Telecommunications alignments. Suitable foraging habitat occurs on the substation site, although farming activity likely precludes nesting there. Horned larks (*E. alpestris*) observed during biological surveys.
Cooper's hawk *Accipiter cooperii*	WL (nesting)	Nests and forages in woodlands and semi-open habitats; preys mainly on small birds.	Occurs. One Cooper's hawk observed on Valley Boulevard north of the Proposed Telecommunications route and just west of the Tehachapi City limits in April 2011.
Ferruginous hawk *Buteo regalis*	WL (wintering)	Forages over grasslands, agricultural areas, and scrublands; winters in southern California, does not breed in this region.	Occurs. Occurs in grasslands, scrublands, and agricultural areas near Tehachapi and in the Antelope Valley. Foraging habitat occurs throughout most of the undeveloped portions of the study area. One ferruginous hawk observed flying over the Monolith Substation in March 2011, likely a migrating or wintering bird and not a nesting individual.
Golden eagle *Aquila chrysaetos*	BGEPA, FP, WL	Nests on cliff faces or in large trees or tall artificial structures such as transmission towers; feeds on small mammals, birds, and reptiles.	May occur. Suitable foraging habitat exists throughout the undeveloped portions of the study area. No nesting habitat occurs within the study area.
Merlin *Falco columbarius*	WL (wintering)	Winter visitor; open country, from coasts to prairies to desert scrub.	May occur. suitable foraging habitat occurs in the undeveloped portions of the study area.
Mountain plover *Charadrius montanus*	**FPT,** SSC (wintering)	Winters locally in small flocks on dry, barren ground, smooth dirt fields, and shortgrass prairies.	May occur. No breeding occurrences have been documented in or near the study area. Wintering birds may use the flat and undeveloped portions of the Subtransmission and Telecommunications alignments as foraging habitat.

Table 5.4-3. Special-status Species that Occur or Potentially Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Project Vicinity
Prairie falcon *Falco mexicanus*	WL (nesting)	Grasslands, desert, scrub, agricultural lands, dry, open areas with cliffs and bluffs for nesting; feeds on birds, mammals, and reptiles.	Occurs. Documented occurrences at several locations near the study area. Observed east of Tehachapi Willow Springs Road, south of the Monolith Substation. No nesting habitat, but suitable foraging habitat throughout the undeveloped portions of the study area.
Swainson's hawk *Buteo swainsoni*	**ST**	Grassland, agricultural lands; nests in the nearby San Joaquin and Antelope Valleys. No record of nesting in Tehachapi.	May occur. Suitable foraging habitat occurs throughout the study area, but this species is unlikely to nest here.
Tricolored blackbird *Agelaius tricolor*	SSC (nesting colony)	Feeds in a variety of habitats; breeds near freshwater, preferably in emergent marsh areas with tall, dense cattails or willow thickets.	May occur. Suitable foraging habitat throughout the undeveloped portions of the study area, but no nesting habitat present.
White-tailed kite *Elanus leucurus*	FP	Low elevation grassland, agricultural land, wetland, oak-woodland, and oak-savannah, riparian areas adjacent to open areas; nest in the upper portions of trees and large shrubs.	May occur. Suitable foraging habitat occurs throughout the study area. Suitable nesting habitat occurs near undeveloped and rural portions of Proposed Telecommunications Routes 1 and 2.
Yellow warbler *Dendroica petechia brewsteri*	SSC (nesting)	Low, open-canopy riparian, wetlands, prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging, also nests in suitable montane canyon habitats, including those in desert mountains.	May occur. Foraging habitat present, but no suitable nesting habitat within the study area. Suitable nesting habitat may occur near the study area along Proposed Telecommunications Routes 1 and 2 between the Tehachapi City Limits and Cummings Valley.
Mammals			
American badger *Taxidea taxus*	SSC	Grassland, shrubland, mountain meadow, and open stages of most habitats with dry soil.	Occurs. This species may forage within undeveloped portions of the study area.
Hoary bat *Lasiurus cinereus*	SSC	Generally roosts in woodlands with dense foliage.	May occur. Suitable foraging habitat throughout the study area; suitable roosting habitat along the Proposed Telecommunications Routes 1 and 2, west of the City of Tehachapi and east of Cummings Valley.
San Joaquin pocket mouse *Perognathus inornatus inornatus*	SA	Grasslands, blue oak savanna with friable soils.	May occur. Documented occurrences within 5 miles. Suitable habitat probably lacking in study area.
Tehachapi pocket mouse *Perognathus alticolis inexpectatus*	SSC	Native and non-native grasslands, Joshua tree woodland, pinyon-juniper woodland, yellow pine woodland, oak savannah.	May occur. Suitable habitat on undeveloped portions of Proposed Telecommunications Routes 1 and 2 west of the Tehachapi City limits and south of the Monolith Substation.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC	Desert scrub, mixed conifer forest, pinyon-juniper woodland, pine forest.	May occur. Suitable foraging habitat throughout the study area; suitable roosting habitat adjacent to the study area.
Tulare grasshopper mouse *Onychomys torridus tularensis*	SSC	Hot, arid valleys, desert scrub in southern San Joaquin Valley.	May occur. Documented occurrences within 5 miles. Suitable habitat probably lacking in study area.

Definitions Regarding Potential Occurrence:

Occurs:	Species or sign of its presence observed on the site
May occur:	Species or sign not observed on the site, but conditions suitable for occurrence
Unlikely to occur:	Species or sign not observed on the site, conditions marginal or unsuitable for occurrence

STATUS CODES:

FT	Federally Threatened
FC	Federal Candidate
FPT	Federal Proposed for listing as threatened
BGEPA	Bald and Golden Eagle Protection Act
SE	State Endangered
ST	State Threatened
SC	State Candidate
SSC	California Species of Special Concern
SR	California Rare Plant
FP	Fully Protected
WL	Watch List
SA	Special Animal
CNPS	California Native Plant Society Listing
1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3	Plants about which we need more information – a review list
4	Plants of limited distribution – a watch list
.1	Seriously threatened in California (high degree/immediacy of threat)
.2	Fairly threatened in California (moderate degree/immediacy of threat)
.3	Not very threatened in California (low degree/immediacy of threats or no current threats known)

Regulatory Background

Federal Regulatory Background

Federal Endangered Species Act (ESA). The federal ESA protects plants and wildlife that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service. Section 9 of the ESA prohibits the take of listed fish and wildlife, where "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). 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 United States Code [USC] 1538). Section 10 of the ESA allows for issuance of incidental take permits to private parties provided a Habitat Conservation Plan (HCP) is developed. The private party initiates consultation with USFWS or NOAA Fisheries through consultation to discuss target species in the project area. The private party then prepares an HCP assessing the potential for the project to adversely affect federally listed species and presenting the measures that will be undertaken to avoid and minimize such impacts.

Migratory Bird Treaty Act (16 USC Sections 703–711). The Migratory Bird Treaty Act (MBTA) of 1918 protects all migratory birds, including active nests and eggs. Birds protected under the MBTA include all native waterfowl, shorebirds, hawks, eagles, owls, doves, and other common birds such as ravens, crows, sparrows, finches, swallows, and others, including their body parts (for example feathers and plumes), active nests, and eggs. A complete list of protected species is found at 50 CFR 10.13. Enforcement of the provisions of the MBTA is the responsibility of USFWS.

Bald and Golden Eagle Protection Act (16 USC 668-668c).The Bald and Golden Eagle Protection Act (BGEPA), enacted in 1940, and amended several times since then, prohibits anyone without a permit issued by the Secretary of the Interior from "taking" bald eagles (*Haliaeetus leucocephalus*), including their parts, nests, or eggs. In 1962, Congress amended the act to also cover golden eagles (*Aquila chrysaetos*).

Clean Water Act (CWA) Sections 401 and 404. The purpose of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." The definition of "waters of the United States" 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 ground water 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 7b).

The U.S. Army Corps of Engineers (USACE) issues permits based on guidelines established under Section 404 of the CWA. Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States," including wetlands, without a permit from USACE. The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may under Section 404(c) veto a USACE permit.

Section 404 of the CWA imposes restrictions on and requires permits for any action that places fill material in, dredges material from, or results in flooding of wetlands or other waters of the United States. In accordance with EPA regulations issued under Section 404(b)(1), the permitting of fill will not be approved unless the following conditions are met: no practicable, less environmentally damaging alternative to the action exists; the activity does not cause or contribute to violations of state water quality standards (as described under Section 401 of the CWA); the activity does not jeopardize federally listed threatened or endangered species or sensitive cultural resources (as required by 33 CFR Part 320.3e and g); the activity does not contribute to significant degradation of waters of the United States; and all practicable and appropriate steps have been taken to minimize potential adverse impacts to the aquatic ecosystem (40 CFR Part 230.10).

The Federal CWA and California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act) regulate discharge of surface water by the Proposed Project. These laws establish the Regional Water Quality Control Board (RWQCB) as the responsible agency for protecting water quality within California. The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.," including wetlands (isolated and non-isolated). Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. Section 401 permitting from the RWQCB is required to obtain Section 404 permits under the CWA from the USACE.

Desert Renewable Energy Conservation Plan (DRECP)

Executive Order S-14-08 established a target of obtaining 33 percent of the State's electricity from renewable resources by 2020. In response to this Order, the California Energy Commission (CEC), CDFW, Bureau of Land Management (BLM), and the USFWS have begun preparing the Desert Renewable Energy Conservation Plan (DRECP). The plan area encompasses the Mojave and Colorado Desert regions in California, including a portion of Kern County.

The DRECP is a proposed State Natural Community Conservation Plan (NCCP) intended to provide for effective protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy projects. The plan proponents anticipate that it will provide long-term endangered species permit assurances to renewable energy developers and provide a process for conservation funding to implement the DRECP. It also will serve as the basis for one or more of the HCPs under the ESA. The DRECP has not yet been approved and no estimated date of approval is available (DRECP, 2012).

State Regulatory Background

California Endangered Species Act (CESA). Sections 2050-2098 of the California Fish and Game Code (CFGC) prohibit the take of state-listed endangered and threatened species unless specifically authorized by CDFW. The state definition of "take" is to hunt, pursue, catch, capture, or kill a member of a listed species or attempt to do so. CDFW administers CESA and authorizes take through permits or memorandums of understanding issued under Section 2081 of CFGC, or through a consistency determination issued under section 2080.1. Section 2090 of CFGC requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species.

Fully Protected Species CFGC Sections 3511, 4700, 5050, and 5515. CFGC designates certain animal species as "fully protected" under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish). Incidental take permits are available for such species only if they are covered under a Natural Community Conservation Plan (CFGC Sec. 2835.).

Native Plant Protection Act of 1973 (CFGC Sections 1900-1913). The Native Plant Protection Act of 1973 includes provisions that prohibit the taking of endangered or rare native plants from the wild and a salvage requirement for landowners. CDFW administers the Native Plant Protection Act of 1973 and generally regards as rare many plant species included on Ranks 1A, 1B, and 2, and sometimes Ranks 3 and 4, of the CNPS *Inventory of Rare and Endangered Vascular Plants of California*.

California Protection for Birds (CFGC Section 3503 et seq.). CFGC Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3513 makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of birds protected under the Migratory Bird Treaty Act. Section 3503.5 makes in unlawful to take possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey), or to take, possess or destroy the nest or eggs of such birds.

California Species of Special Concern. "Species of Special Concern" is a designation assigned by the CDFW to species it considers at risk, but the designation has no formal legal status. Species of Special Concern meet one or more of the following criteria: (1) is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role; (2) is listed as federally, but not State, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed; (3) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; (4) has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status. "Species of Special Concern" is an administrative designation intended to focus attention on at-risk species during environmental review and conservation planning. CDFW maintains lists of Species of Special Concern, including a list of California Bird Species of Special Concern.

Lake or Streambed Alteration Agreements – California Fish and Game Code Sections 1600-1616. Under these sections of the Fish and Game Code, an applicant is required to notify CDFW prior to constructing a project that would divert, obstruct, or change the natural flow, bed, channel, or bank of a river, stream, or lake. Preliminary notification and project review generally occur during the environmental review process. When a fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Lake or Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project. CDFW jurisdiction is determined to occur within the waterbody of

any natural river, stream, or lake. The term "stream," which includes creeks and rivers, is defined in Title 14, CCR, Section 1.72.

Local Regulatory Background

The Kern County General Plan (Kern County, 2009a) identifies the federal, State, and local statutes, ordinances, or policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any project that could affect biological resources.

The Land Use, Open Space, and Conservation Element of the Kern County General Plan provides for a variety of land uses to ensure future economic growth while also ensuring the conservation of the county's agricultural and natural resources. Section 1.10 (General Provisions) provides goals, policies, and implementation measures that typically apply to discretionary projects.

Section 1.10.10 Oak Tree Conservation

- Policy 65. Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.
- Policy 66. Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Implementation Measure KK. The following applies to discretionary development projects (General Plan Amendment, zone change, conditional use permit, tract maps, parcel maps, precise development plan) that contains oak woodlands, which are defined as development parcels having canopy cover by oak trees of at least ten percent (10%), as determined from base line aerial photography or by site survey performed by a licensed or certified arborist or botanist. If this study is used in an Environmental Impact Report, then a Registered Professional Forester (RPF) shall perform the necessary analysis.

a. Development parcels containing oak woodlands are subject to a minimum canopy coverage retention standard of thirty percent (30%). The consultant shall include recommendations regarding thinning and diseased tree removal in conjunction with the discretionary project.

b. Use of aerial photography and a dot grid system shall be considered adequate in determining the required canopy coverage standard.

c. Adjustments below thirty percent (30%) minimum 272 canopy standard may be made based on a report to assess the management of oak woodlands.

d. Discretionary development, within areas designated as meeting the minimum canopy standard, shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed or certified arborist or botanist.

Implementation Measure LL. The following applies to development of parcels having oak tree canopy cover of less than ten percent (10%), but containing individual oak trees equal to or greater than a 12-inch diameter trunk at 4.5 feet breast height.

a. Such trees shall be identified on plot plans.

b. Discretionary development shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed or certified arborist or botanist.

c. Specified tree removal related to the discretionary action may be granted by the decision making body upon showing that a hardship exists based on substantial evidence in the record.

Kern County Energy Element of the General Plan. The Kern County General Plan provides the policy under the Energy Element of the General Plan (Chapter 5) that encourages new transmission lines to be sited or configured to avoid or minimize collision and electrocution hazards to raptors.

Applicant Proposed Measures

As part of the Proposed Project, SCE has identified Applicant Proposed Measures (APMs) that it would implement during construction and/or operation of the Proposed Project to reduce or avoid impacts to biological resources. SCE would conduct the design, construction, operation, and maintenance of the Proposed Project in accordance with its APMs. The APMs for biological resources are listed in Table 5.4-4.

Table 5.4-4. Applicant Proposed Measures – Biological Resources.

APM	Description
APM BIO-1	**Pre-construction Surveys and Construction 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-2	**Pre-Construction Surveys for Nesting Birds/Raptors.** SCE would conduct project-wide nesting bird surveys and remove trees and other vegetation if feasible outside of the nesting season. If a tree or pole containing a raptor nest must be removed during nesting season, or if work is scheduled to take place in close proximity to an active nest on an existing transmission tower or pole, SCE biologists would determine appropriate nesting buffers based on a project specific nesting bird management plan or consultation with the appropriate agencies.
APM BIO-3	**Burrowing Owl.** Biologists would conduct a preconstruction burrowing owl survey of the Proposed Project Study Area no more than 30 days prior to construction. Construction activities will be scheduled and planned to avoid burrowing owls and their burrows. A 250-foot buffer will be placed around active nest and the site would be avoided, where feasible. If occupied burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFW and may include collapsing burrows outside of nesting season and using exclusionary devices to reduce impacts to the burrowing owl. Biological monitors would monitor all construction activities that have the potential to impact active burrows.
APM BIO-4	**Tehachapi Slender Salamander.** If project activities would be located within oak woodlands and ravines, construction activities would avoid displacement of rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. For these areas, a biologist would be present to ensure that construction activities do not impact this species, particularly during periods of peak activity, such as rainy or wet nights with moderate temperatures.
APM BIO-5	**Avoidance of Sensitive Habitats.** SCE would minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided. If unable to avoid impacts to native vegetation, a project revegetation plan would be prepared in coordination with the appropriate agencies for areas of native habitat temporarily impacted during construction.

5.4.2 Environmental Impacts and Mitigation Measures

a. 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 species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special-Status Plants

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. If special-status plants are present within the project corridor they could be directly impacted by removal of vegetation or by trampling or crushing during construction activities. Indirect impacts to special-status plants could result from alterations in existing topography and hydrology, sedimentation and erosion, soil compaction, fugitive dust (which could affect plant photosynthesis and respiration), exposure to hazardous substances accidentally released by vehi-

cles or other equipment, disruptions to seed banks from ground disturbance, or the colonization of non-native, invasive plant species. Ongoing operational impacts could include trampling or crushing of special-status plants by vehicular or foot traffic and the introduction of non-native, invasive plants.

Construction of the proposed Banducci Substation would not have substantial adverse effects on special-status plant species and would not result in loss of native habitat. The proposed Banducci Substation site is on agricultural land that is unlikely to support suitable habitat for any such species. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources. Therefore, construction and operation of the proposed Banducci Substation site would have a less than significant impact on special-status plant species.

The proposed new 66 kV subtransmission line poles on Pelliser Road south of Dale Road and pole replacements on Highline Road would be constructed on agricultural land and non-native grassland. Agricultural land is unlikely to support suitable habitat for special-status plant species. Non-native grassland may support native plant species, including special-status species. Construction activities along the proposed 66 kV subtransmission line would have the potential for temporary impacts to special-status plants and their habitats.

Suitable habitat for special-status plants is present along Proposed Telecommunication Route 2 where extant native vegetation exists on West Valley Boulevard west of the Tehachapi city limits to Cummings Valley. Suitable habitat for special-status plants is present along Proposed Telecommunications Route 1 on patches of extant native vegetation along Highline Road and the easternmost segment of this route within the California Correctional Institution. Construction activities along the Proposed Telecommunications Routes would have the potential for temporary impacts to special-status plants and their habitats.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), SCE commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-5 (Avoidance of Sensitive Habitats) specifies that SCE would minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided. APM BIO-5 also states that if native vegetation cannot be avoided, SCE will prepare a revegetation plan for areas of native habitat affected during construction.

APMs alone would not reduce potential impacts to special-status plants to a less-than-significant level because they do not address a number of concerns. These include training workers to understand and abide by environmental restrictions, taking precautions to minimize the introduction of invasive weeds, conducting pre-construction special-status species surveys, or specific actions to be taken if special-status plant species are found. In addition to APM BIO-1 and APM BIO-5, Mitigation Measure B-1 (Perform Biological Resource Surveys), Mitigation Measure B-2 (Establish Special-status Plants Buffers), Mitigation Measure B-3 (Minimize Noxious Weeds), Mitigation Measure AQ-1 (Implement EKAPCD Dust Control Measures), Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]), Mitigation Measure H-2 (Identify Pesticide/Herbicide Contamination), and Mitigation Measure HYD-1 (Develop a Stormwater Pollution Prevention Plan and Implement BMPs) are required. With implementation of these measures, impacts to special-status plant species from construction and operation of the Proposed Project would be less than significant.

Mitigation Measures for Impacts to Special-Status Plants

MM B-1 **Perform Biological Resource Surveys and Construction Monitoring.** After project approval, but within 30 days prior to the start of construction, updated biological resource surveys shall be conducted confirming special-status or listed biological resources, if any, in the vicinity of the Proposed Project, including the 66 kV subtransmission line route, telecommunication line route, wire stringing locations, access roads, and staging yards. Updated survey results, including a map of biological resources identified, shall be provided to the CPUC for review and verification prior to construction. Prior to submitting the first survey report, SCE shall consult with the CPUC regarding the preferred format.

During construction, any special-status or listed species identified shall be reported to the CPUC within 24 hours. SCE shall provide a report documenting biological surveys conducted, construction activities observed, biological resources identified, and compliance with APMs and MMs to the CPUC on a weekly basis. Maps of special-status or listed biological resources identified during project surveys and monitoring activities shall be provided to the CPUC on a weekly basis.

- Sensitive plant surveys shall be conducted by a qualified botanist, approved by the CPUC, familiar with plants in the Cummings Valley. Field surveys will be conducted at the appropriate time of year to locate and identify the target species. Surveys will focus on identifying whether state and federally listed species as well as California Native Plant Society special-status plants are present. In addition, potential habitat to support special-status plant species and sensitive vegetation communities will be identified.
- Clearance surveys shall be conducted no more than 7 days prior to the start of construction in a particular area to identify potential plant and animal species that may be affected by construction activities. Clearance surveys will include a field survey by a qualified botanist and wildlife biologist and will include 500-feet beyond the border of any proposed project disturbance areas (where these areas are legally accessible). Clearance surveys will be submitted to the CPUC for review and verification prior to construction.

Biological monitors shall monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique biological resources to ensure such resources are avoided to the extent feasible.

MM B-2 **Establish Special-status Plants Buffers.** If special-status plants are found during field surveys, a buffer shall be established around the plants or plant populations within which no construction work is permitted unless the CPUC determines that such work may proceed without significantly impacting the special-status and listed species. The size of the buffer shall be adequate to ensure that plants are not significantly disturbed and shall be determined by a qualified biologist. Construction monitors shall ensure that work crews are aware of the buffer and related work restrictions.

If special-status plants cannot be avoided, SCE shall coordinate with the CPUC, CDFW, and USFWS to determine whether construction and operation impacts of the Proposed Project would be significant. Impacts to special-status plants will be considered significant if listed threatened or endangered species would be directly or indirectly affected; or plants presumed extinct in California (California Rare Plant Rank [CRPR] 1A) would be

directly or indirectly affected; or ten (10) percent or more of a local occurrence of CRPR 1B or CRPR 2 species would be directly or indirectly affected.

In the event any of the above are triggered, SCE shall coordinate with the CPUC, CDFW, and USFWS to design and implement appropriate mitigation measures. These measures may include, but would not be limited to:

- **Avoidance**. Project construction would be adjusted as necessary to avoid or minimize impacts to special-status plants and provide a minimum 25-foot buffer area surrounding each avoided occurrence, where no project activities will take place.
- **Off-site Compensation.** SCE would provide compensation lands to protect off-site special-status plant occurrence(s). Compensation lands would protect acreage, habitat suitability, and overall numbers of each special-status plant at no less than a 1:1 ratio or levels comparable to the project's impacts. In addition, the applicant will provide funding for long-term conservation management of the compensation land. The applicant will prepare a Compensation Plan, identifying the proposed compensation lands, proposed habitat improvements and long-term management, and specific legal mechanism for long-term preservation (e.g., holder of conservation easement or fee title). The Conservation Plan will be subject to review and approval by the CPUC in consultation with the CDFW and, upon approval, will be implemented in full. In cases where a federally or state-listed threatened or endangered species may be affected, the Conservation Plan will conform to applicable conditions under any CESA or federal ESA Incidental Take Permit, Biological Opinion, or other consultation documents. Where a Habitat Conservation Plan or similar conservation instrument is applicable, then participation in that plan may constitute compliance with this habitat compensation requirement.
- **Salvage**. In instances where salvage and relocation for special-status or listed species is feasible, SCE will consult with a qualified conservation and horticulture institute (such as Rancho Santa Ana Botanic Garden in Claremont, California) to design a Salvage and Relocation Plan, to be reviewed and approved by the CPUC in consultation with CDFW prior to disturbance of any occupied special-status plant habitat. The Plan will include at minimum: (a) collection/salvage measures for plants or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plants or seed banks; (c) location of the proposed recipient site, and detailed site preparation and plant introduction technique; (d) details for topsoil storage, as applicable; (e) time of year that the salvage and replanting or seeding will occur and the methodology of the replanting; (f) a description of the irrigation method(s), if used; (g) success criteria; and (h) a detailed monitoring program, commensurate with the Plan's goals.
- **Horticultural propagation and off-site introduction**. If salvage and relocation is not believed to be feasible for special-status plants, then the applicant will develop and implement an appropriate propagation and relocation strategy, based on the life history of the species affected. The strategy will include at minimum: (a) collection/salvage measures for plant materials or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the strategy's goals.

MM B-3 **Minimize Noxious Weeds.** Precautions shall be taken to minimize the introduction of any invasive weeds. Construction vehicles and equipment shall be clean before they arrive at work areas in the project corridor. Any landscaping involving vegetation other than trees and shrubs shall consist of native seed mix or other ecologically appropriate, non-invasive plants. Only weed-free straw or mulch shall be used.

Special-Status Wildlife

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Banducci Substation site and 66 kV Sub-transmission line include agricultural land that contains suitable foraging habitat (but not suitable nesting habitat) for ferruginous hawk, prairie falcon, golden eagle, Swainson's hawk, mountain plover, northern harrier, white-tailed kite, merlin, California condor, and American badger.

Construction of the substation is expected to result in the permanent loss of up to 6.3 acres of foraging habitat. This habitat loss is relatively minor, 0.05 percent of the over 13,000 acres of potential habitat for these species in the region. In addition, no impacts to nesting habitat would be expected to occur. Therefore, the impacts of habitat loss to these species would be considered adverse, but less than significant.

Construction of the subtransmission line segments is expected to result in the temporary loss of up to 6.5 acres of foraging habitat.[1] Along the subtransmission line route, the expected 6.5-acre habitat impact area is only approximately 0.05 percent of the 13,000-acre area of potential habitat for these species in the region, and there would be no impacts to nesting habitat. Therefore, impacts of habitat loss to these species would be considered adverse but less than significant.

The Proposed Telecommunications Routes 1 and 2 provide suitable habitat and/or foraging habitat for Cooper's hawk, ferruginous hawk, prairie falcon, coast horned lizard, tricolored blackbird, golden eagle, Swainson's hawk, mountain plover, northern harrier, yellow warbler, white-tailed kite, merlin, California condor, Townsend's big-eared bat, hoary bat, and American badger. Construction activities along the proposed telecommunications routes would have the potential to impact these species and their habitat. Without mitigation these impacts could be significant.

Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

Trash left in the work areas may affect special-status wildlife by attracting potential predators, such as common ravens and domestic dogs. Microtrash, particularly small metal items, represents a potential threat to California condors. Condors may take small items back to their nest where the chick(s) can ingest them, potentially causing mortality. Project-related activities, excavations, or materials may pose a hazard to wildlife. Wildlife, including special-status species, may be trapped in excavations or materials, or injured by project-related activities. Without mitigation these impacts could be significant.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), SCE commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-2 (Pre-construction Surveys for Nesting

[1] The 6.5 acres of temporary impacts anticipated for subtransmission line segments construction is a conservative estimate that does not take into account the fact that some temporary impacts associated with this component of the project would also occur on the same disturbed area already accounted for at the proposed substation site.

Birds/Raptors) specifies that SCE will conduct nesting bird surveys and remove trees and other vegetation outside the nesting season if feasible. The measure also states that if a tree or pole containing a raptor nest must be removed during nesting season or work will take place in proximity to an active nest on an existing transmission tower or pole, a biologist will determine appropriate buffers based on a project-specific nesting bird management plan or consultation with the appropriate agencies.

APMs alone would not reduce potential impacts to special-status wildlife to a less-than-significant level because they do not address training workers to understand and abide by environmental restrictions, conducting pre-construction special-status species surveys, specific actions to be taken if special-status wildlife species are found, removal of trash and microtrash, securing excavations to prevent wildlife entrapment or injury, or reducing the likelihood of electrocution of large birds. In addition to APM BIO-1 and APM BIO-2, Mitigation Measure B-1 (Perform Biological Resource Surveys), Mitigation Measure B-4 (Manage Trash and Microtrash), Mitigation Measure B-5 (Prevent Wildlife Entrapment), Mitigation Measure B-6 (Survey for and Avoid Burrowing Owl), Mitigation Measure B-7 (Survey for and Avoid or Relocate Tehachapi Slender Salamander), Mitigation Measure B-8 (Halt Construction when California Condor Present), Mitigation Measure B-9 (Prepare Nesting Birds Management Plan and Conduct Surveys), and Mitigation Measure B-10 (Follow APLIC Guidelines) are required. In addition, Mitigation Measure AQ-1 (Implement EKAPCD Dust Control Measures), Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]), Mitigation Measure H-2 (Identify Pesticide/Herbicide Contamination), Mitigation Measure HYD-1 (Develop a Stormwater Pollution Prevention Plan and Implement BMPs) would reduce potential impacts to wildlife. With implementation of these measures, impacts to special-status wildlife species from construction and operation of the Proposed Project would be less than significant.

Mitigation Measures for Impacts to Special-Status Wildlife

MM B-4 **Manage Trash and Microtrash.** Trash and microtrash shall be removed from work areas daily. Construction monitors shall conduct daily sweeps of work areas to ensure all trash and microtrash has been collected and removed. Microtrash in the form of construction materials such as nuts and bolts or other small materials must be secured at the end of each work day in secured, closed containers.

MM B-5 **Prevent Wildlife Entrapment.** SCE shall ensure that all potential wildlife pitfalls (trenches, bores, portable water tanks, and other excavations) have been backfilled or securely covered at the end of each workday. If backfilling or covering is not feasible, these potential pitfalls will be sloped at a 3:1 ratio at the ends as wildlife escape ramps. The biological monitor shall inspect all potential pitfalls no fewer than three times daily throughout and at the end of each workday.

All pipes or other construction materials or supplies shall be covered or capped in storage or laydown areas. No pipes or tubing is to be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials shall be inspected for wildlife before it is moved, buried, or capped.

Should native wildlife become trapped in excavations, materials, or other project-related situation, the biological monitor shall remove it (if feasible and safe) or immediately contact CDFW and the CPUC. Any native wildlife encountered shall be allowed to leave the area unharmed.

If injured native wildlife is found on or near Project access roads, work areas, or the ROW, whether or not the injuries are obviously project-related, SCE shall contact and work

with a local wildlife rehabilitator, animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. SCE shall bear the costs of veterinary treatment and rehabilitation for any native injured wildlife found on or near Project access roads, work areas, or the ROW and any native wildlife injured by Project-related activities.

Dead animals of non-special-status species found on Project access roads, work areas, or the ROW shall be reported to the appropriate local animal control agency within 24 hours or a biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found on Project roads, work areas, or the ROW shall be reported to the appropriate agency within 24 hours, and if required, the carcass handled according to agency guidelines.

Burrowing owl

The burrowing owl is a California Species of Special Concern and is protected under the MBTA and CFGC. Due to its behavior, often taking cover within a burrow to escape threats (rather than fleeing), special measures to prevent burrowing owl take are needed on any project site where it may occur.

Surveys for burrowing owl conducted in 2010 and 2011 did not detect evidence of burrowing owl on or near the proposed Banducci Substation site, proposed 66 kV subtransmission line route, or proposed telecommunication routes. Although some suitable habitat for this species occurs on the Proposed Project site, and this species may occur occasionally as a migrant or winter visitor, the Proposed Project site is subject to frequent farming activities that preclude the presence of the species at some locations. Post-construction operation of the Proposed Project would consist of minor maintenance and emergency repairs. These would result in less than significant impacts to biological resources.

During construction, a number of protective measures would apply. In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), SCE commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-3 (Burrowing Owl) specifies that SCE will conduct pre-construction burrowing owl surveys, monitor construction activities that may affect active burrows, and avoid burrowing owl burrows if feasible. If avoidance is not feasible, a relocation strategy will be developed in conjunction with CDFW.

APMs alone would not reduce potential construction impacts to burrowing owls to a less-than-significant level because they do not address training workers to understand and abide by environmental restrictions or provide sufficient detail regarding the specific actions to be taken if burrowing owls are found. In addition to the APMs, Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]) in Section 5.8 (Hazards and Hazardous Materials) and Mitigation Measure B-6 (Survey for and Avoid Burrowing Owl) are required. With implementation of APM BIO-1, APM BIO-3, and these mitigation measures, impacts to burrowing owl from construction of the Proposed Project would be less than significant.

Mitigation Measure for Impacts to Burrowing Owl

MM B-6 **Survey for and Avoid Burrowing Owl.** This mitigation measures supersedes APM BIO 3 (Burrowing Owl). Preconstruction surveys for burrowing owl shall be conducted in project areas within 30 days of construction. If any ground disturbing activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), avoidance measures shall include a no construction buffer zone of a minimum distance of 250 feet, consistent with the Staff Report on Burrowing Owl Mitigation (CDFG, 1995). SCE shall

comply with CDFW burrowing owl mitigation guidelines as detailed in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012) or more recent updates, if available.

Construction activities shall be scheduled and planned to avoid burrowing owls and their burrows. If occupied burrows cannot be avoided, an appropriate relocation strategy shall be developed in conjunction with CDFW. Biological monitors shall monitor all construction activities that have the potential to impact active burrows.

Tehachapi slender salamander

The Tehachapi slender salamander is a state-listed threatened species. In 2001, the USFWS reviewed available information on the Tehachapi slender salamander and determined that it did not warrant federal listing. This species is a completely terrestrial amphibian. Preferred habitat is talus (rock debris) slopes in moist canyons and ravines in oak and mixed woodlands. This species forages in leaf litter under surface debris such rocks, logs, or bark. It is nocturnal and active during moist periods (November to May), retreating to underground niches or moist seeps during drier periods. The small and localized nature of Tehachapi slender salamander populations makes them highly susceptible to habitat disturbance (CDFG, 2005; Dudek and ICF, 2012; USFWS, 2011).

Limited habitat for the state-listed Tehachapi slender salamander occurs along the Proposed Telecommunication Route 1 between the Tehachapi city limits and Cummings Valley and on Proposed Telecommunications Route 2 within the California Correctional Institution. Construction activities along the proposed telecommunications routes would have the potential to impact the Tehachapi slender salamander. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), SCE commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-4 (Tehachapi Slender Salamander) specifies that project activities in oak woodlands and ravines would avoid displacement of rocks, logs, bark, and other debris in thick leaf litter near talus slopes, and a biologist would monitor construction in these areas.

APMs alone would not reduce potential impacts to Tehachapi slender salamander to a less-than-significant level because they do not address training workers to understand and abide by environmental restrictions, specify pre-construction surveys, or ensure compliance with CESA requirements. In addition to APMs, Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]) in Section 5.8 (Hazards and Hazardous Materials), Mitigation Measure B-1 (Perform Biological Resource Surveys), and Mitigation Measure B-7 (Survey for and Avoid or Relocate Tehachapi Slender Salamander) are required. With implementation of these measures, impacts to Tehachapi slender salamander from construction and operation of the Proposed Project would be less than significant.

Mitigation Measure for Impacts to Tehachapi Slender Salamander

MM B-7 **Survey Requirements and Avoidance Relocation Measures for Tehachapi Slender Salamander.** This mitigation measure supersedes APM BIO 4 (Tehachapi Slender Salamander).

Pre-construction surveys and avoidance measures shall be implemented for Tehachapi slender salamander subject to applicable permit requirements. For construction activities involving ground disturbance in or directly adjacent to occupied or suitable habitat for the Tehachapi slender salamander, preconstruction surveys shall be conducted by a quali-

fied biologist, approved by the CPUC, prior to disturbance to determine if Tehachapi slender salamander individuals are present in the disturbance zone. If visual searches are used for pre-construction surveys, they shall be conducted no earlier than 72 hours prior to disturbance, and if pitfall trapping is used, it shall be conducted no earlier than 5 days prior to disturbance.

If Tehachapi slender salamanders are located, individuals within the disturbance zone shall be captured and relocated to the closest suitable habitat area containing talus, as and to the extent required by USFWS and/or CDFW in applicable permits or habitat conservation plans. If project activities are located within oak woodlands and ravines, construction activities shall avoid displacement of rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. Biological monitors shall monitor all construction activities in occupied or suitable Tehachapi slender salamander habitat to ensure that construction activities do not impact this species.

When occupied habitat for Tehachapi slender salamander is directly impacted by construction activities involving ground disturbance, a habitat restoration plan shall be developed for the Tehachapi slender salamander that specifies, at a minimum, the following: (1) the location of creation, enhancement, or restoration planting sites; (2) a complete description of the hardscape (e.g., talus, rocks, and logs) to be installed and where hardscape materials will be deposited, along with desired leaf and litter cover; (3) a description of how the existing typical hydrologic regime will support Tehachapi slender salamander habitat; (4) the quantity and species of plants to be planted; (5) planting procedures, including the use of soil preparation and irrigation; (6) methods for the removal of non-native plants; (7) a schedule and action plan to maintain and monitor the creation/enhancement/ restoration area; (8) a list of criteria (e.g., growth, percent plant cover, plant diversity, debris, and hardscape) and performance standards by which to measure success of the creation/enhancement/restoration; and (9) contingency measures in the event that creation/enhancement/restoration efforts are not successful. Performance standards shall be defined by a site-specific pre-construction study of known locations occupied by Tehachapi slender salamander, including evaluation of specific cover; distance to water; water inundation levels; percent canopy cover; percent shrub and grass cover; presence of talus, boulder, log, or other refugia; and other factors. The restoration plan performance standard under this mitigation measure is to create, restore, or enhance areas so that Tehachapi slender salamanders can naturally colonize these areas or Tehachapi slender salamanders within the disturbance zone can be successfully relocated to these areas. The plan shall be prepared by SCE and submitted to the CPUC and the resource agencies for approval prior to ground disturbance activities that would have an impact on occupied habitat for the Tehachapi slender salamander.

Pre-construction survey methods, avoidance measures, and final mitigation requirements for this species shall be established by USFWS and CDFW. Permit applications submitted to CDFW shall include, at a minimum, the applicable mitigation measures from this document.

California condor

Designated critical habitat for California condor is located approximately 3 miles southwest of the Project study area. According to the PEA (SCE, 2014), SCE engaged in informal discussions with the USFWS regarding the potential for impacts to California condors from the Proposed Project. On June 22, 2011,

SCE met with the USFWS and discussed the low likelihood of the Proposed Project causing take of condors. USFWS stated condors occur in the mountains close to the Proposed Project, but are not likely to use the Proposed Project area due to a lack of suitable habitat. Therefore, USFWS determined that the Proposed Project construction activities would not be likely to result in a "take," and additional actions to avoid impacts to condors (such as line marking or undergrounding of facilities) would not be necessary.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), SCE commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. With implementation of APM BIO-1 (Pre-construction Surveys and Construction Monitoring), Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]) in Section 5.8 (Hazards and Hazardous Materials), Mitigation Measure B-1 (Perform Biological Resource Surveys), Mitigation Measure B-4 (Manage Trash and Microtrash), Mitigation Measure B-5 (Prevent Wildlife Entrapment), and Mitigation Measure B-8 (Halt Construction when California Condor Present), impacts to California condor from construction and operation of the Proposed Project would be less than significant.

Mitigation Measure for Impacts to California Condor

MM B-8 **Halt Construction when California Condor Present.** SCE shall retain a qualified biologist with demonstrated knowledge of California condor identification to monitor all construction activities within the project area. If a California condor is present in any project work area (except flying over), construction activities shall be halted in that area (and within 500 feet of the condor) and the animal shall be allowed to leave the area on its own. All condor sightings in the project area will be immediately reported to the USFWS, CDFW, and the CPUC. Construction may resume upon the departure of the California condor and verification by a qualified biologist.

Nesting birds

Birds, nests, and nestlings are generally protected under the MBTA and CFGC, regardless of other conservation designations. Thus, mortality of nesting birds (including eggs or nestlings), regardless of other conservation status, may violate state and federal regulations.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), SCE commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-2 (Pre-construction Surveys for Nesting Birds/Raptors) specifies that SCE will conduct nesting bird surveys and remove trees and other vegetation outside the nesting season if feasible. The measure also states that if a tree or pole containing a raptor nest must be removed during nesting season or work will take place in proximity to an active nest on an existing transmission tower or pole, a biologist will determine appropriate buffers based on a project-specific nesting bird management plan or consultation with the appropriate agencies.

APMs alone would not reduce potential impacts to nesting birds to a less-than-significant level because they do not address training workers to understand and abide by environmental restrictions or provide sufficient detail regarding nesting bird surveys or the specific actions to be taken if active nests are found. In addition, Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]), Mitigation Measure B-1 (Perform Biological Resource Surveys), and Mitigation Measure B-9 (Prepare Nesting Birds Management Plan and Conduct Surveys) are required.

Mitigation Measure for Impacts to Nesting Birds

MM B-9 **Prepare Nesting Birds Management Plan and Conduct Surveys.** This mitigation measure supersedes APM BIO 2 (Pre-construction Surveys for Nesting Birds/Raptors).

Clearing of any vegetation (including agricultural fields and grasslands), site preparation in open or barren areas, or other project-related activities that may adversely affect breeding birds shall be scheduled outside the nesting season as feasible. Nesting season is generally February 1 to August 31, but varies with region, environmental factors, and species.

Within one week (7 days) prior to the start of construction in a particular area during nesting season, a nesting survey shall be conducted within project disturbance areas and a 500-foot buffer surrounding all project disturbance areas (wherever legal access is available). At a minimum, nesting surveys shall be conducted from February 1 to August 31. A qualified biologist will determine if nesting activity is occurring either prior to or after this February-August period and nesting surveys will be performed accordingly.

If an active nest is found, a buffer shall be established around the nest in which no construction work is permitted. The size of the buffer will be adequate to ensure that the nest, nesting birds, and chicks (including fledglings and precocial chicks) are not disturbed. For nests of raptors and special-status bird species, the size of the buffer will be determined based on a project-specific nesting bird management plan approved by the appropriate resource agencies or consultation with the appropriate resource agencies. For all other nests, the size of the buffer will be determined by a qualified biologist. Construction monitors will ensure that work crews are aware of the buffer and related work restrictions. The buffer zone will remain in place until the young have fledged and are no longer dependent on the nest or the nest is no longer active, as determined by a qualified biologist.

An active nest is defined as a nest with eggs or chicks, or as otherwise defined by CDFW

If an active nest must be moved during the nesting season, SCE shall coordinate with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to obtain approval prior to moving the nest.

Prior to the start of construction, SCE shall prepare a draft Nesting Bird Management Plan, in consultation with the CPUC, describing measures to detect birds that may nest on and adjacent to the project site or facilities and to avoid impacts to or take of those birds or their nests during project construction. The draft Nesting Bird Management Plan shall be submitted to the CPUC for review and approval in consultation with USFWS and CDFW. The Nesting Bird Management Plan will be finalized by SCE prior to issuance of CPUC's Notification to Proceed.

The Nesting Bird Management Plan will describe avoidance measures, such as buffer distances from active nests, based on the specific nature of project activities, noise, or other disturbance of those activities, the bird species and conservation status, and other pertinent factors. The Plan will specify species' (or groups of species) appropriate buffer distances based on tolerance of human activities. Standard nest buffers shall be 300 feet, and 500 feet for raptor species, or as specified in the CPUC-approved Nesting Bird Management Plan.

Other Protected Species

Raptors and other large aerial perching birds, including those afforded state and/or federal protection, are susceptible to distribution line electrocution. Because raptors and other large perching birds often perch on tall structures that offer views of potential prey, the design characteristics of towers and poles are a major factor in raptor electrocutions (APLIC, 1996). Electrocution occurs when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a bird attempts to perch on a tower or pole with insufficient distance between these elements.

The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 60 kV. The electrocution of state and/or federally protected bird species would constitute a significant impact. Potential impacts to birds resulting from electrocution by distribution lines may be mitigated by incorporating the construction design recommendations provided in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC, 2006). Mitigation Measure B-10 (Follow APLIC Guidelines) requires that overhead portions of the proposed distribution lines be constructed according to the Avian Powerline Interaction Committee's (APLIC) "raptor-friendly" guidelines, which would prevent bird mortality from electrocution, thereby reducing impacts to less than significant.

Mitigation Measure for Impacts to Other Protected Species

MM B-10 **Follow APLIC Guidelines.** Design, install, and maintain distribution lines and all electrical components in accordance with the Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 to reduce the likelihood of electrocutions of large birds. Specifically, the phase conductors should be separated by a minimum of 60 inches. Where adequate separation is not feasible, avian protection materials should be used to cover electrical equipment (APLIC, 2006). Before construction begins, SCE shall submit a plan to the CPUC documenting that project design is consistent with APLIC guidelines.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Banducci Substation site contains an agricultural drainage ditch, potentially under the jurisdiction of the CDFW pursuant to the California Fish and Game Code. No other riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS occurs on or within the proposed Banducci Substation site.

The proposed 66 kV subtransmission line routes would be located on road shoulders in non-native grassland, disturbed, and agricultural areas. The Proposed Telecommunications Routes would be located on road shoulders in non-native grassland, disturbed, and agricultural areas with limited native vegetation. Riparian vegetation is absent from the study area, but occurs along watercourses, such as Brite Creek, which cross the Proposed Telecommunication Routes west of Tehachapi. Sensitive natural communities that are present and may be affected by the proposed 66 kV subtransmission line or Telecommunications Routes are Big Sagebrush Scrub, Blue Oak Woodland, and Foothill Pine-Oak Woodland.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), the applicant commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-5 specifies that SCE would

minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided.

APMs alone would not reduce potential impacts to sensitive natural communities to a less-than-significant level because they do not address training workers to understand and abide by environmental restrictions, taking precautions to minimize the introduction of invasive weeds, or compensation for loss of habitat. In addition, Mitigation Measure B-1 (Perform Biological Resource Surveys), Mitigation Measure B-2 (Establish Special-status Plants Buffers), Mitigation Measure B-3 (Minimize Noxious Weeds), and Mitigation Measure B-11 (Replace or Offset Sensitive Habitat Loss) are required. Mitigation Measure AQ-1 (Implement EKAPCD Dust Control Measures), Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]), Mitigation Measure H-2 (Identify Pesticide/Herbicide Contamination), and Mitigation Measure HYD-1 (Develop a Stormwater Pollution Prevention Plan and Implement BMPs) would also reduce impacts on sensitive natural communities. With implementation of these measures, impacts to sensitive natural communities from construction and operation of the Proposed Project would be less than significant.

Mitigation Measure for Loss of Sensitive Habitat

MM B-11 **Replace or Offset Sensitive Habitat Loss.** This mitigation measures augments APM BIO-5 (Avoidance of Sensitive Habitats). In the case of any conflict between Mitigation Measure B-11 and APM BIO-5, Mitigation Measure B-11 supersedes the APM.

Native vegetation in Big Sagebrush Scrub, Blue Oak Woodland, and Foothill Pine–Oak Woodland vegetation communities and aquatic features in construction sites shall be flagged for avoidance prior to construction activities. If avoidance is not feasible, SCE shall implement one or both of the following measures to offset or compensate for those impacts.

- **On-site Restoration.** If sensitive vegetation communities or habitat that may support special-status plants or animals are removed or degraded due to temporary project impacts, the applicant shall prepare and implement an Ecological Restoration Plan, to restore any temporary habitat loss within five (5) years of initial disturbance. The Plan will be subject to review and approval by the CPUC, in coordination with CDFW. The Ecological Restoration Plan's goal will be to replace habitat values that are damaged or degraded by the project. The plan will include: (a) soil or substrate preparation measures, such as recontouring, decompacting, or imprinting; (b) provisions for soil or substrate salvage and storage; (c) plant material collection and acquisition guidelines, including guidelines for salvaging, storing, and handling seed, cuttings, or rooted plants from the project site, as well as obtaining materials from commercial nurseries or collecting from outside the project area; (d) time of year that the planting or seeding will occur and the methodology of the planting; (e) an irrigation plan or alternate measures to ensure adequate water; (f) quantitative success criteria, to reflect yearly progress and final completion; (g) a detailed monitoring program to evaluate conformance with the success criteria; and (h) contingency measures to remediate the restoration site if success criteria are not met.
- **Compensation.** If sensitive vegetation communities or habitat that may support special-status species are removed or degraded, resulting in long-term or permanent project impacts (i.e., impacts lasting more than five [5] years), the applicant will provide for long-term habitat replacement by acquiring and protecting compensation land that

will provide habitat value equivalent or greater than habitat removed for the project. Compensation may include off-site habitat restoration or other habitat improvements as needed, to replace habitat components affected by the project. In addition, the applicant will provide funding for long-term conservation management of the compensation land. The applicant will prepare a Compensation Plan, identifying the proposed compensation lands, proposed habitat improvements and long-term management, and specific legal mechanism for long-term preservation (e.g., holder of conservation easement or fee title). The Conservation Plan will be subject to review and approval by the CPUC in consultation with the CDFW. After approval, the Conservation Plan must be implemented in full. In cases where a federally or state-listed threatened or endangered species may be affected, the Conservation Plan will conform to applicable conditions under any CESA or federal ESA Incidental Take Permit, Biological Opinion, or other consultation documents. Where a Habitat Conservation Plan or similar conservation instrument is applicable, then participation in that plan may constitute compliance with this habitat compensation requirement.

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Banducci Substation site contains no federally protected wetlands as defined in Section 404 of the CWA. Therefore, construction and operation of the proposed Banducci Substation would result in no impacts to federally protected wetlands. The proposed Banducci Substation site contains an agricultural drainage ditch, potentially under the jurisdiction of the CDFW pursuant to the California Fish and Game Code.

No federally protected wetlands as defined by Section 404 of the CWA are present on the proposed 66 kV subtransmission line routes. Construction and operation of the proposed subtransmission line would not have a substantial adverse effect on federally protected wetlands.

Hydrophytic vegetation present in certain drainages and tributaries to Brite Creek is likely to meet the definition of wetland under Section 404 of the CWA, such as those that cross the Proposed Telecommunications Route 2 along West Valley Boulevard, west of the City of Tehachapi. Construction activities would have the potential to impact these hydrologic features.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), the applicant commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-5 specifies that SCE would minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided.

APMs alone would not reduce potential impacts to federally protected wetlands to a less-than-significant level because they do not address training workers to understand and abide by environmental restrictions or taking precautions to minimize the introduction of invasive weeds, and do not require a jurisdictional delineation or ensure compliance with state and federal regulations. In addition, Mitigation Measure B-1 (Perform Biological Resource Surveys), Mitigation Measure B-3 (Minimize Noxious Weeds), and Mitigation Measure B-12 (Delineate Jurisdictional Wetlands and Waters) are required. Mitigation Measure AQ-1 (Implement EKAPCD Dust Control Measures), Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]), Mitigation Measure H-2 (Identify Pesticide/

Herbicide Contamination), and Mitigation Measure HYD-1 (Develop a Stormwater Pollution Prevention Plan and Implement BMPs) would also reduce potential impacts on protected wetlands. With implementation of APM BIO-1, APM BIO-5, and these mitigation measures, impacts to federally protected wetlands from construction and operation of the Proposed Project would be less than significant.

Mitigation Measure for Impacts to Wetlands

MM B-12 **Delineate Jurisdictional Wetlands and Waters.** Prior to the start of construction, a jurisdictional delineation shall be conducted to describe the type and extent of waters of the United States, including wetlands, and/or waters of the State within the proposed impact area. The presence or absence of wetlands shall be verified through an analysis of any hydrological conditions, hydrophytic vegetation, and hydric soils pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008). SCE shall provide copies of delineation reports to the CPUC.

Prior to any impacts to jurisdictional areas, permits/agreements from the USACE, the CDFW, and the RWQCB shall be obtained for direct and indirect impacts to areas within these agencies' jurisdictions. SCE would implement all measures required by the permits/agreements as issued by the resource agencies, potentially including constraints on proposed activities and restoration of disturbed jurisdictional areas and/or replacement as determined by the resource agencies. Copies of permits issued shall be provided to the CPUC.

d. 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 corridors, or impede the use of wildlife nursery sites?

LESS THAN SIGNIFICANT. Although no specific wildlife corridors have been mapped near the Proposed Project, natural open space and low-density development in the project study area is contiguous with offsite habitats to the north and south. Open space contiguous with the Proposed Project provides opportunities for movement of mammals with large home ranges, such as mule deer, bobcat, mountain lion, and pronghorn antelope. Moreover, the Tehachapi Mountains are recognized as an important wildlife connectivity area that links the Sierra Nevada to the north and the Sierra Madre to the west (Beier et al., 2006; Penrod et al., 2006; Block et al., 1992).

The proposed Banducci Substation site is on agricultural land and is surrounded by similar land in every direction. Agricultural land contains limited native vegetation that would be suitable for native or migratory species in the substation area. Construction and operation of the proposed Banducci Substation would not interfere substantially with migratory wildlife, established wildlife corridors, or native wildlife nursery sites. Therefore, construction and operation of the proposed Banducci Substation would have a less than significant impact on wildlife movement, and no mitigation is required.

The proposed 66 kV subtransmission line routes and the Proposed Telecommunications Routes 1 and 2 would not obstruct or impede wildlife movement and would therefore not interfere substantially with migratory wildlife, established wildlife corridors, or native wildlife nursery sites. Construction activities could interfere with wildlife movement within the project corridor; however, these impacts would be temporary and would not interfere with biological connectivity or impede access to nursery sites. Therefore, construction and operation of the proposed 66 kV subtransmission line routes and the proposed telecommunications routes would have a less than significant impact on wildlife movement, and no mitigation is required.

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

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Kern County General Plan includes policies regarding the conservation and protection of oak trees and oak woodlands. See Regulatory Background in Subsection 5.4.1.

Construction and operation of the proposed Banducci Substation would not conflict with any local policies or ordinances protecting biological resources. Additionally, the proposed Banducci Substation site contains no native trees; therefore, construction and operation of the proposed Banducci Substation site would not conflict with any tree preservation policies or ordinances.

Construction and operation of the proposed 66 kV subtransmission line routes would not conflict with any local policies or ordinances protecting biological resources. Additionally, the Proposed 66 kV subtransmission line routes contain no native trees; therefore, construction and operation of this portion of the Proposed Project would not conflict with any tree preservation policies or ordinances.

Although located on road shoulders in non-native grassland, disturbed, and agricultural areas with limited native vegetation, several oak trees occur within the Proposed Telecommunications Route 2 on West Valley Boulevard west of the Tehachapi city limits and on Proposed Telecommunications Route 1 within the California Correctional Institution property. Construction and operation of the Project may impact these oak trees.

In APM BIO-1 (Pre-construction Surveys and Construction Monitoring), the applicant commits to biological monitoring of construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided. APM BIO-5 specifies that SCE would minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided.

APMs alone would not reduce potential conflicts with local ordinances to a less-than-significant level because they do not address tree trimming and removal or ensure compliance with local tree protection ordinances. In addition, Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]), Mitigation Measure B-1 (Perform Biological Resource Surveys), and Mitigation Measure B-13 (Identify Trees Affected by Project) are required. With implementation of APM BIO-1, APM BIO-5, and these mitigation measures, conflicts with local ordinances from construction and operation of the Proposed Project would be less than significant.

Mitigation Measure for Conflicts with Local Policies or Ordinances Protecting Trees

MM B-13 **Identify Trees Affected by Project.** Prior to construction, SCE shall identify any trees covered by tree protection local policies or ordinances that may be affected by construction of the Proposed Project and consult with applicable jurisdictional agencies prior to any tree alteration, removal, or other impacts. Impacts include trimming or removal of the tree; any construction activities within the dripline of the tree; any trenching or excavation that may damage tree roots, and any other project-related activities that may cause damage to the tree or as specified by local policies or ordinances protecting trees.

If operation of the Proposed Project requires tree trimming to the extent that would require a tree alteration or removal permit as a requirement of a local policy or ordi-

nance protecting trees, SCE shall consult with the local agency and a local agency certified arborist consistent with CPUC General Order No. 131 D.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan?

NO IMPACT. The proposed Banducci Substation, 66 kV subtransmission line routes, and Telecommunications Routes would not be located within an adopted HCP, NCCP, or other approved local, regional, or State HCP area. No conflicts with such plans are anticipated. The eastern portion of the study area is within the area covered by the Desert Renewable Energy Conservation Plan (DRECP). However, the DRECP has not yet been approved and no estimated date of approval is available (DRECP, 2012).

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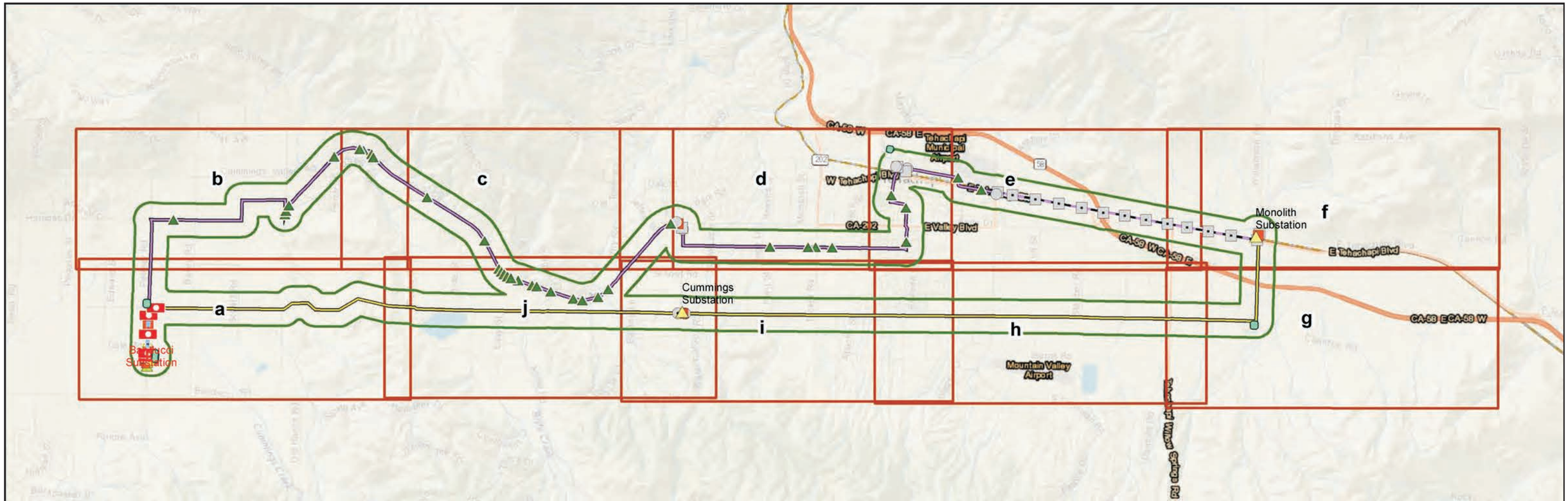

Map Page Extent
Mapping Limits

Proposed Staging Areas
Yard_ID
Staging Area
Staging Area Location
Existing Substations
Proposed Substation Area
Proposed Distribution Vault
Proposed Distribution Line

Distribution Disturbance
Type
General Disturbance
Vault

Proposed Telecom Structures
Status & Structure Type
Existing Man Hole
Existing Vault
Existing Pole
Existing Riser Pole
New Man Hole
Replace Pole

Proposed Telecom Routes
Route_No, Install_Type
Route 1 Underground
Route 1 Overhead
Route 2 Underground
Route 2 Overhead

Proposed Telecom Disturbance
NAME
General Disturbance
Telecom Stringing Site
Structure Work Area

Proposed Sub Trans Structures
Status & Structure Type
New LWS
New TSP
New TSP Guy Stub
New Wood Pole
Remove Wood Pole
Replace Wood Pole

Proposed Sub Trans Lines
Line Name
Banducci-Correction-Cummings
Banducci-Kern River 1
Overhead Span Guy

Proposed Sub Trans Disturbance
TYPE
Structure Work Area
Wire Setup Site

Aspen Environmental Group

0 0.5 1 2 3 4 Mile

Source: SCE, 2014b.

Figure 5.4-1
Vegetation: Index Map

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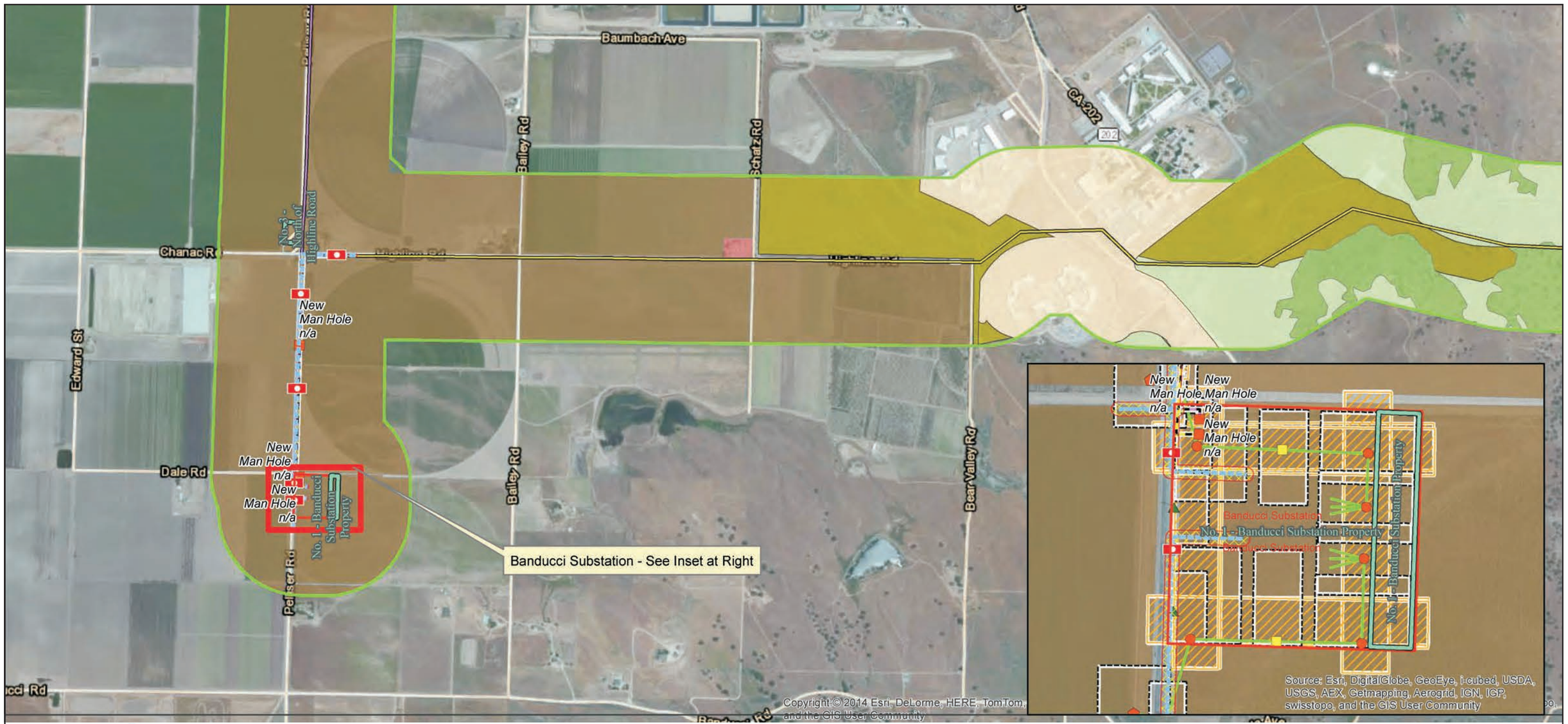

Mapping Limits
Agriculture
Great Basin Sagebrush
Riparian
Foothill Pine-Oak Woodland
Blue Oak Woodland
Developed
Grassland
Open Water
Rubber Rabbitbrush
Rural

Aspen Environmental Group

Source: SCE, 2014b.

0 0.125 0.25 0.5 0.75 1 Miles

Figure 5.4-1a
Vegetation

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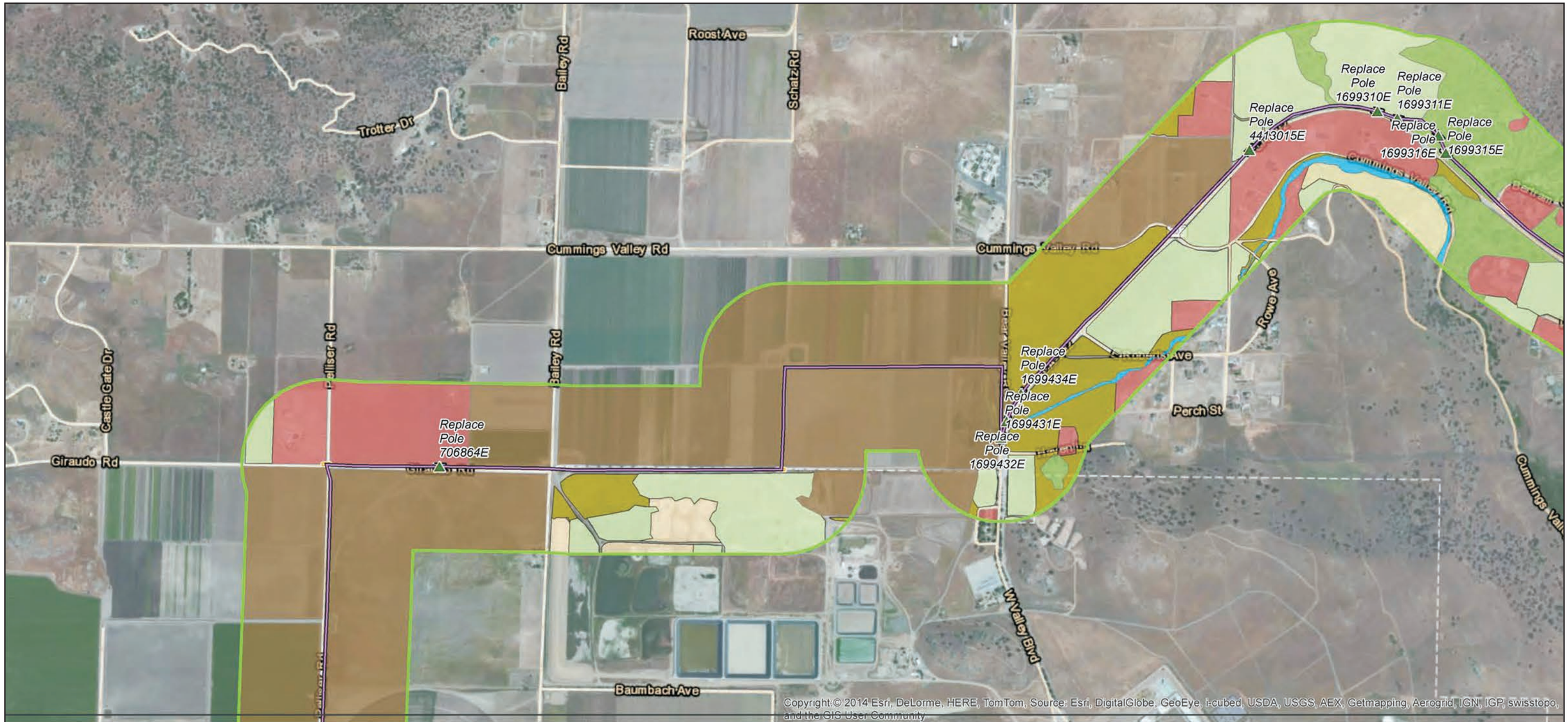

- Mapping Limits
- Agriculture
- Great Basin Sagebrush
- Riparian
- Foothill Pine-Oak Woodland
- Blue Oak Woodland
- Developed
- Grassland
- Open Water
- Rubber Rabbitbrush
- Rural

Aspen Environmental Group

Source: SCE, 2014b.

0 0.125 0.25 0.5 0.75 1 Miles

Figure 5.4-1b
Vegetation

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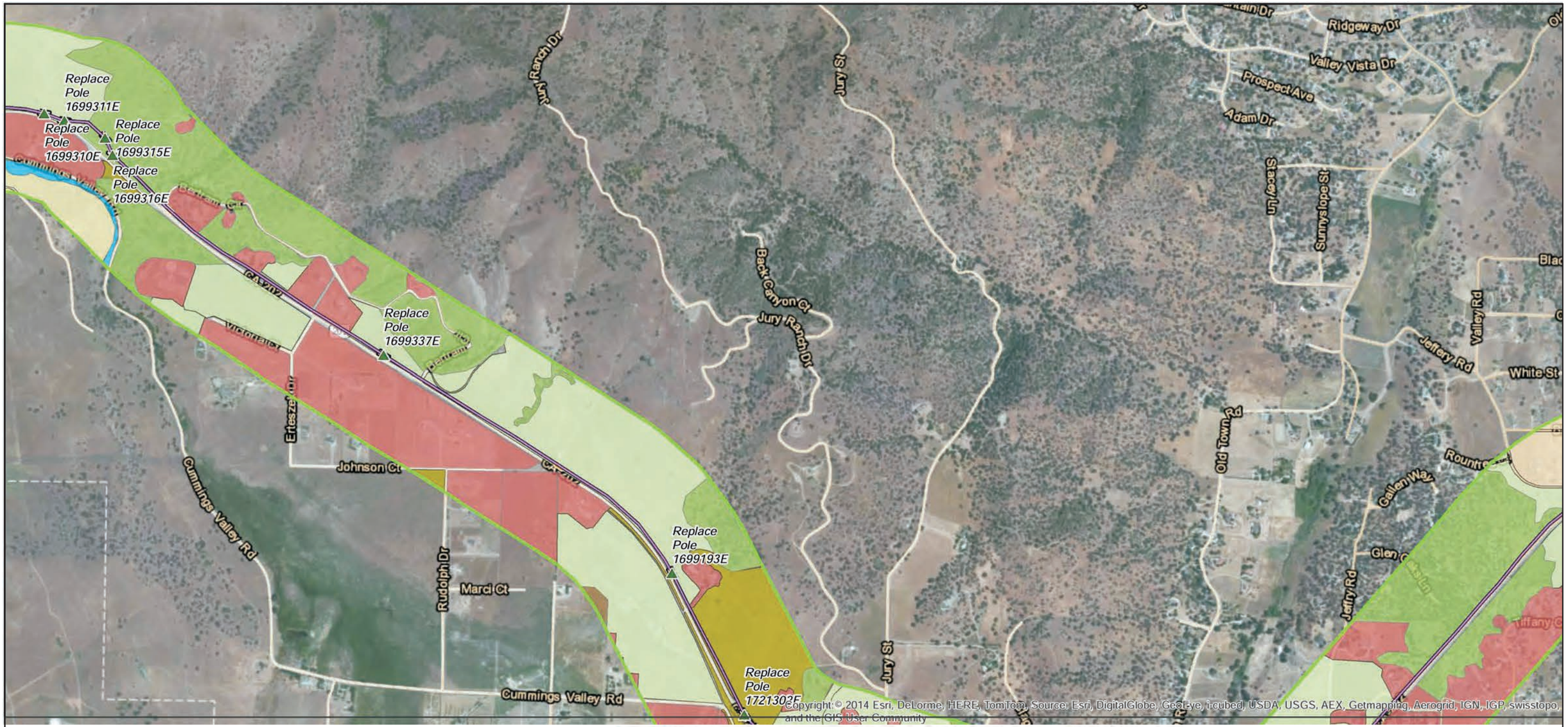

Source: SCE, 2014b.

Figure 5.4-1c
Vegetation

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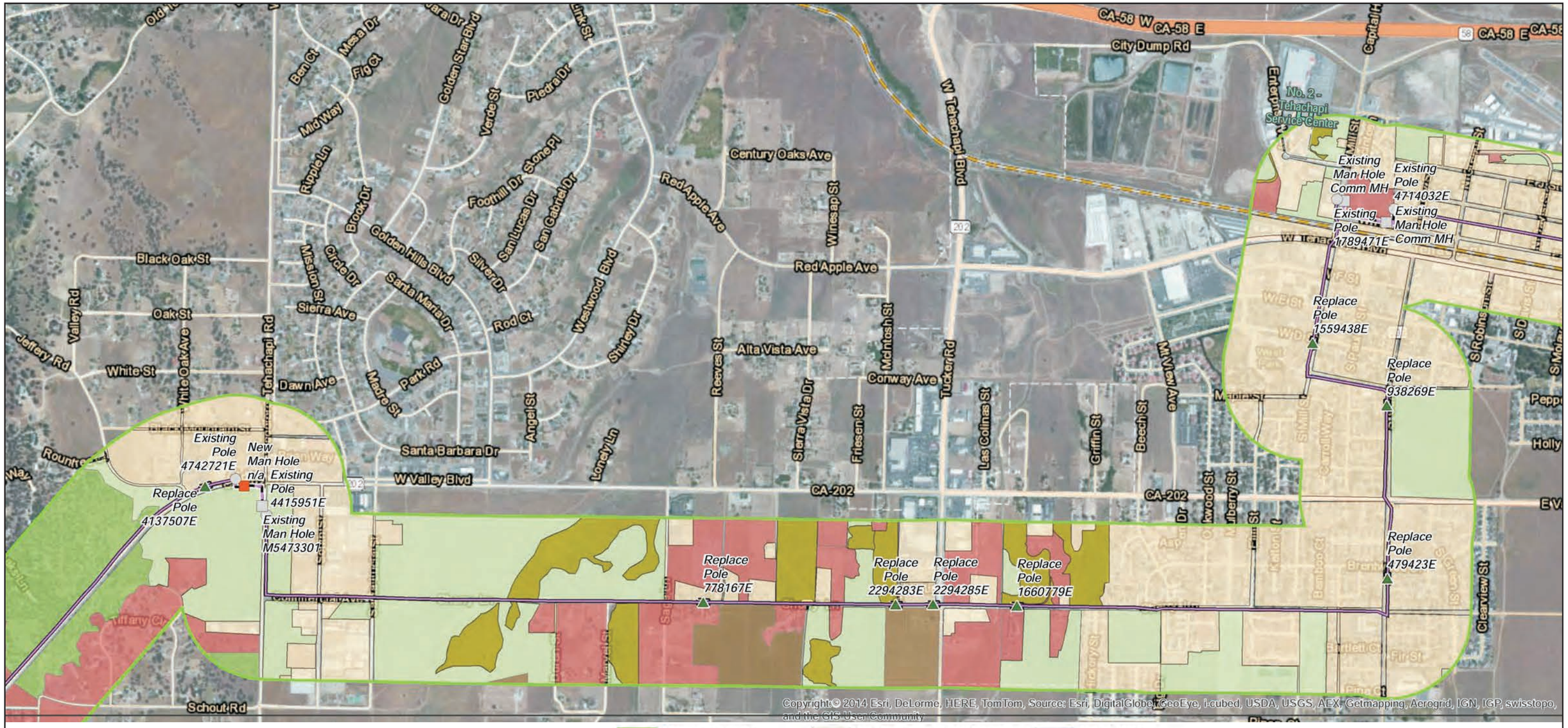

Aspen Environmental Group

Source: SCE, 2014b.

0 0.125 0.25 0.5 0.75 1 Miles

Figure 5.4-1d
Vegetation

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- Mapping Limits
- Agriculture
- Great Basin Sagebrush
- Riparian
- Foothill Pine-Oak Woodland
- Blue Oak Woodland
- Developed
- Grassland
- Open Water
- Rubber Rabbitbrush
- Rural

Aspen Environmental Group

0 0.125 0.25 0.5 0.75 1 Miles

Source: SCE, 2014b.

Figure 5.4-1e
Vegetation

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Source: SCE, 2014b.

Figure 5.4-1f
Vegetation

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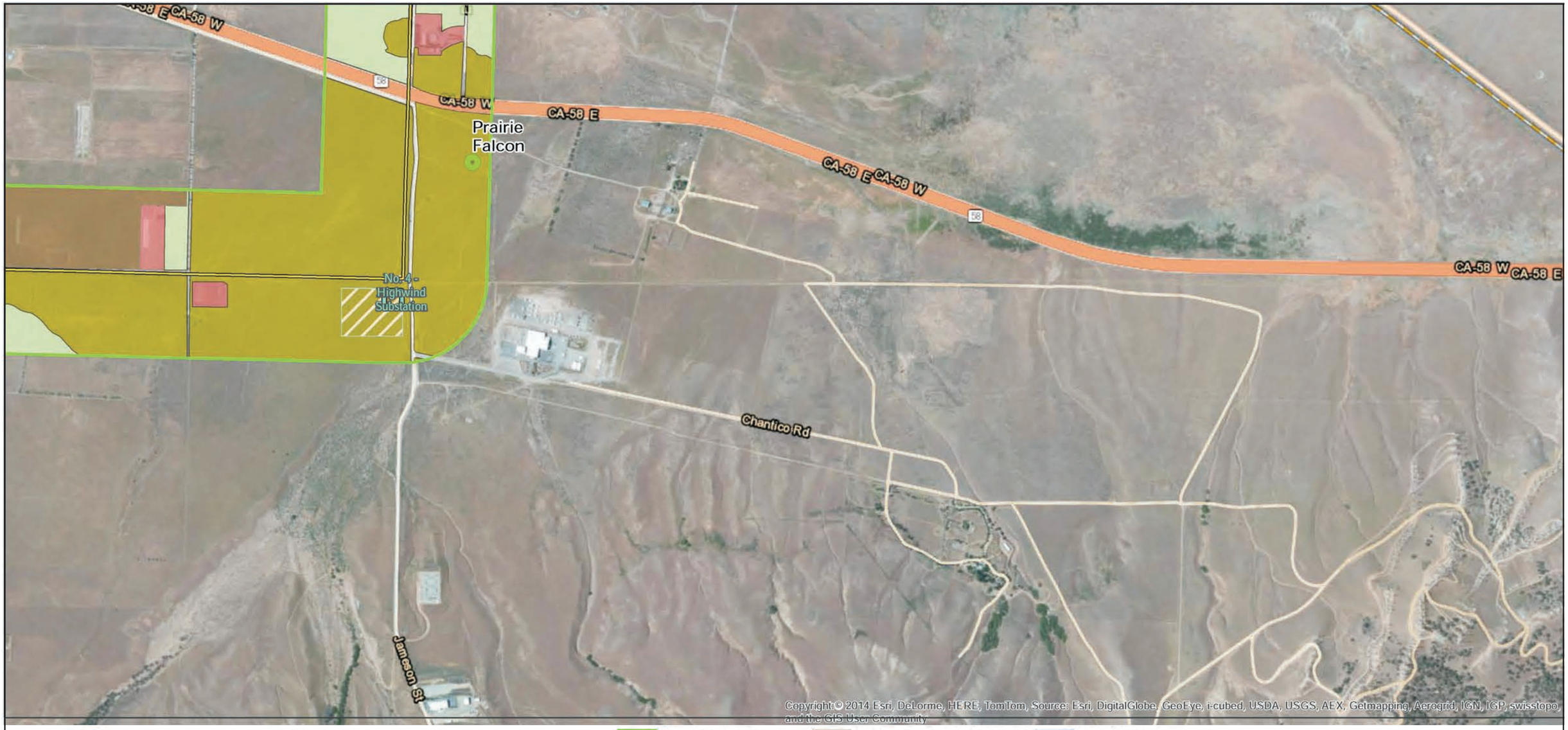

Source: SCE, 2014b.

Figure 5.4-1g
Vegetation

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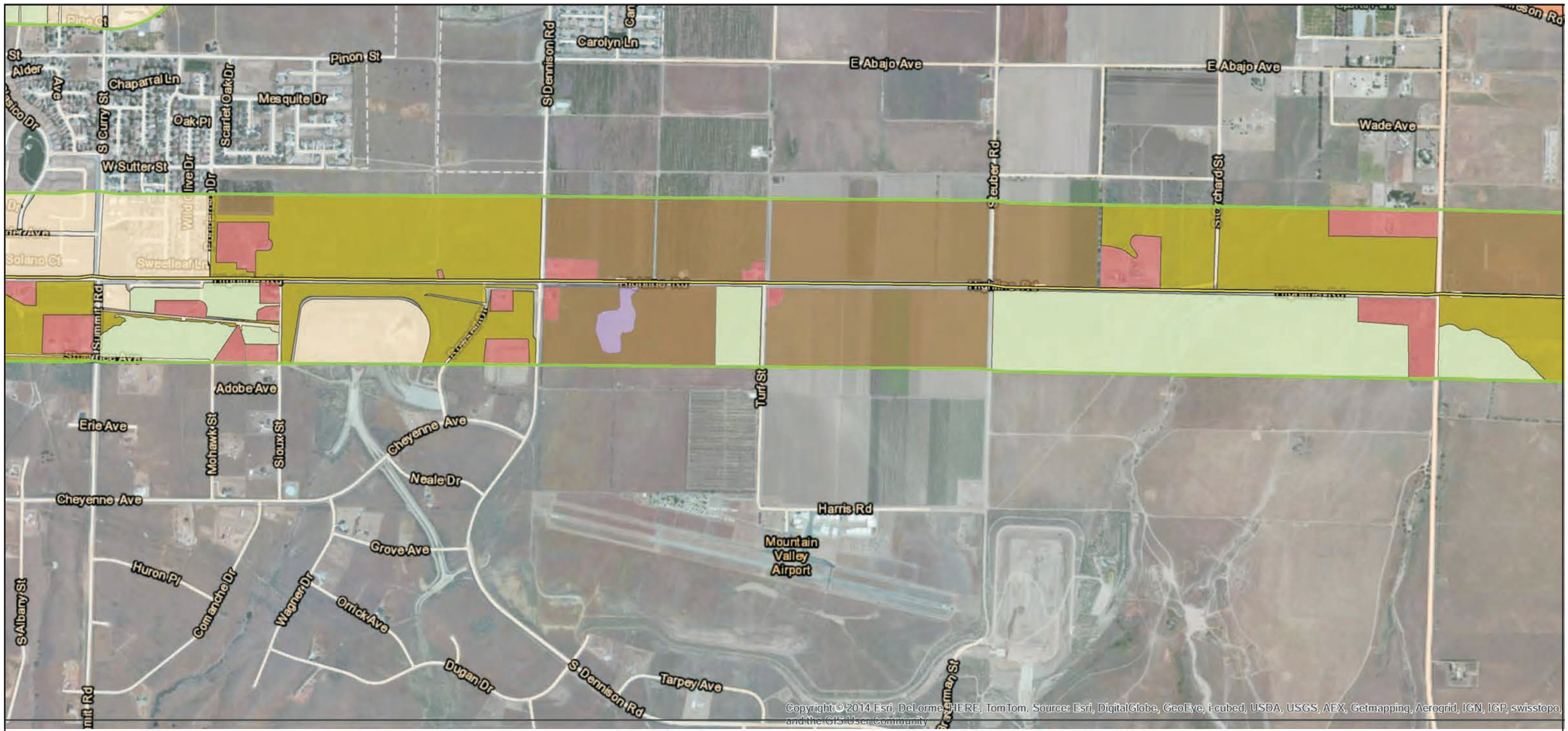

- Mapping Limits
- Agriculture
- Great Basin Sagebrush
- Riparian
- Foothill Pine-Oak Woodland
- Blue Oak Woodland
- Developed
- Grassland
- Open Water
- Rubber Rabbitbrush
- Rural

Aspen Environmental Group

0 0.125 0.25 0.5 0.75 1 Miles

Source: SCE, 2014b.

Figure 5.4-1h
Vegetation

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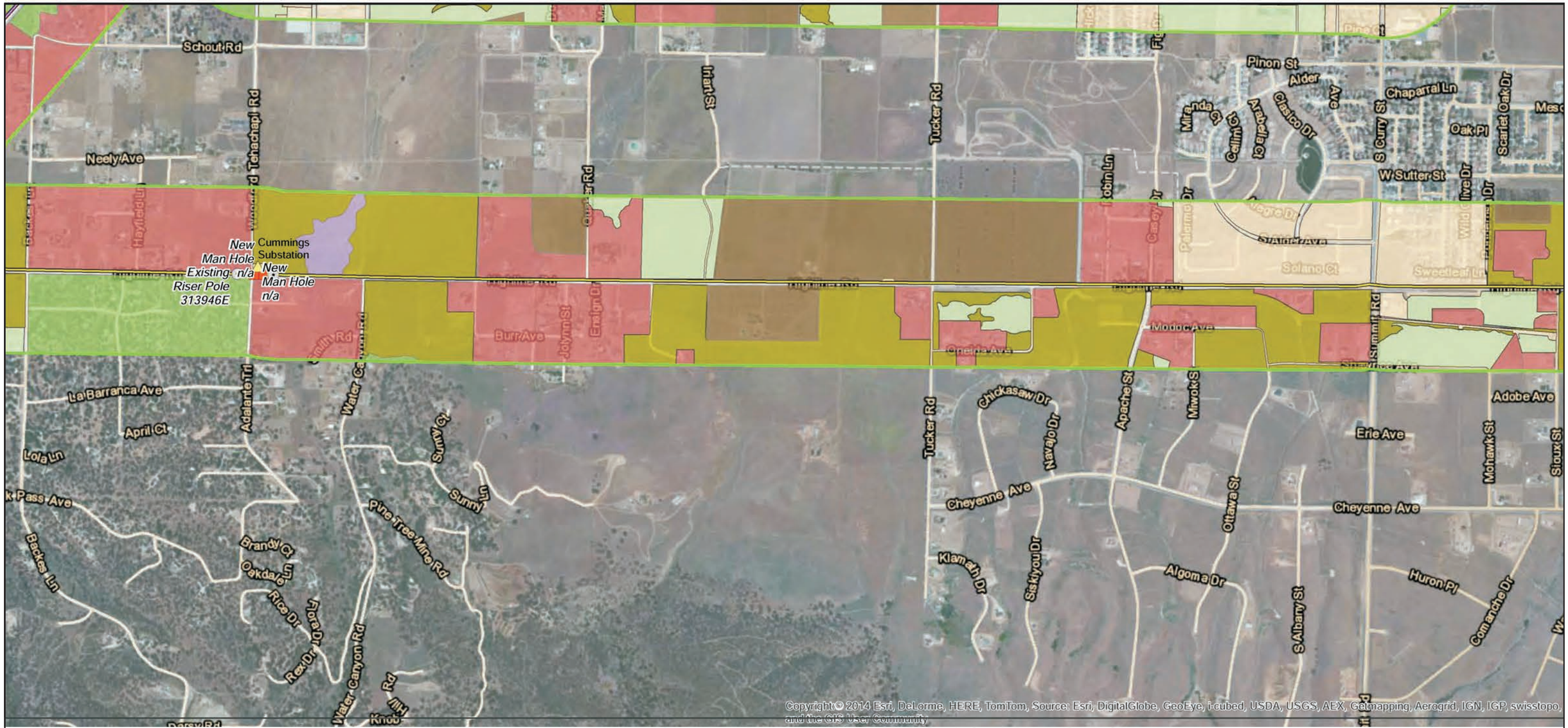

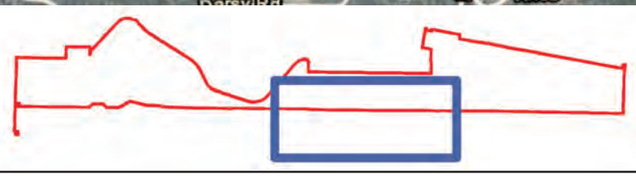

Mapping Limits
Agriculture
Great Basin Sagebrush
Riparian
Foothill Pine-Oak Woodland
Blue Oak Woodland
Developed
Grassland
Open Water
Rubber Rabbitbrush
Rural

Aspen Environmental Group

0 0.125 0.25 0.5 0.75 1 Miles

Source: SCE, 2014b.

Figure 5.4-1i
Vegetation

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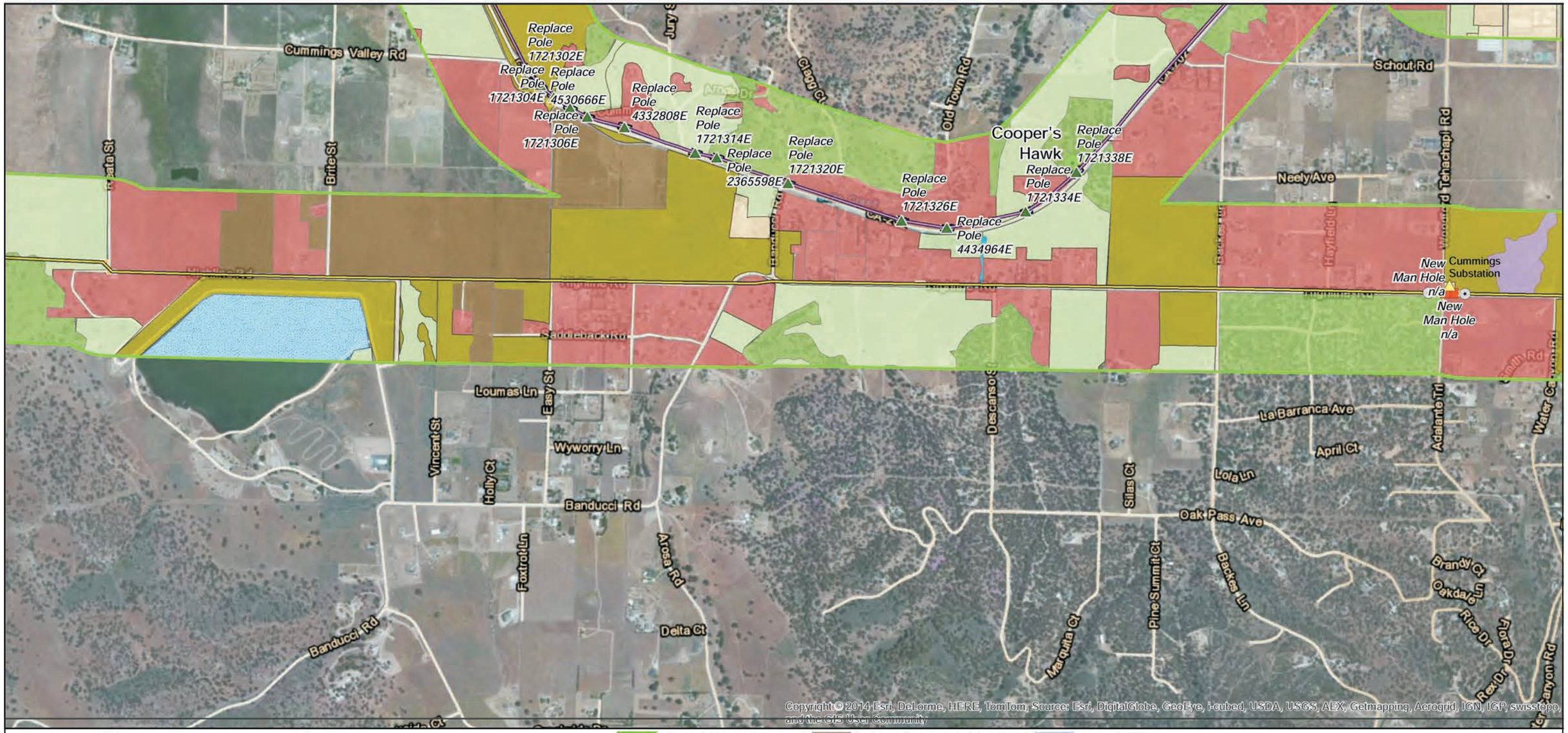

- Mapping Limits
- Agriculture
- Great Basin Sagebrush
- Riparian
- Foothill Pine-Oak Woodland
- Blue Oak Woodland
- Developed
- Grassland
- Open Water
- Rubber Rabbitbrush
- Rural

Aspen Environmental Group

0 0.125 0.25 0.5 0.75 1 Miles

Source: SCE, 2014b.

Figure 5.4-1j
Vegetation

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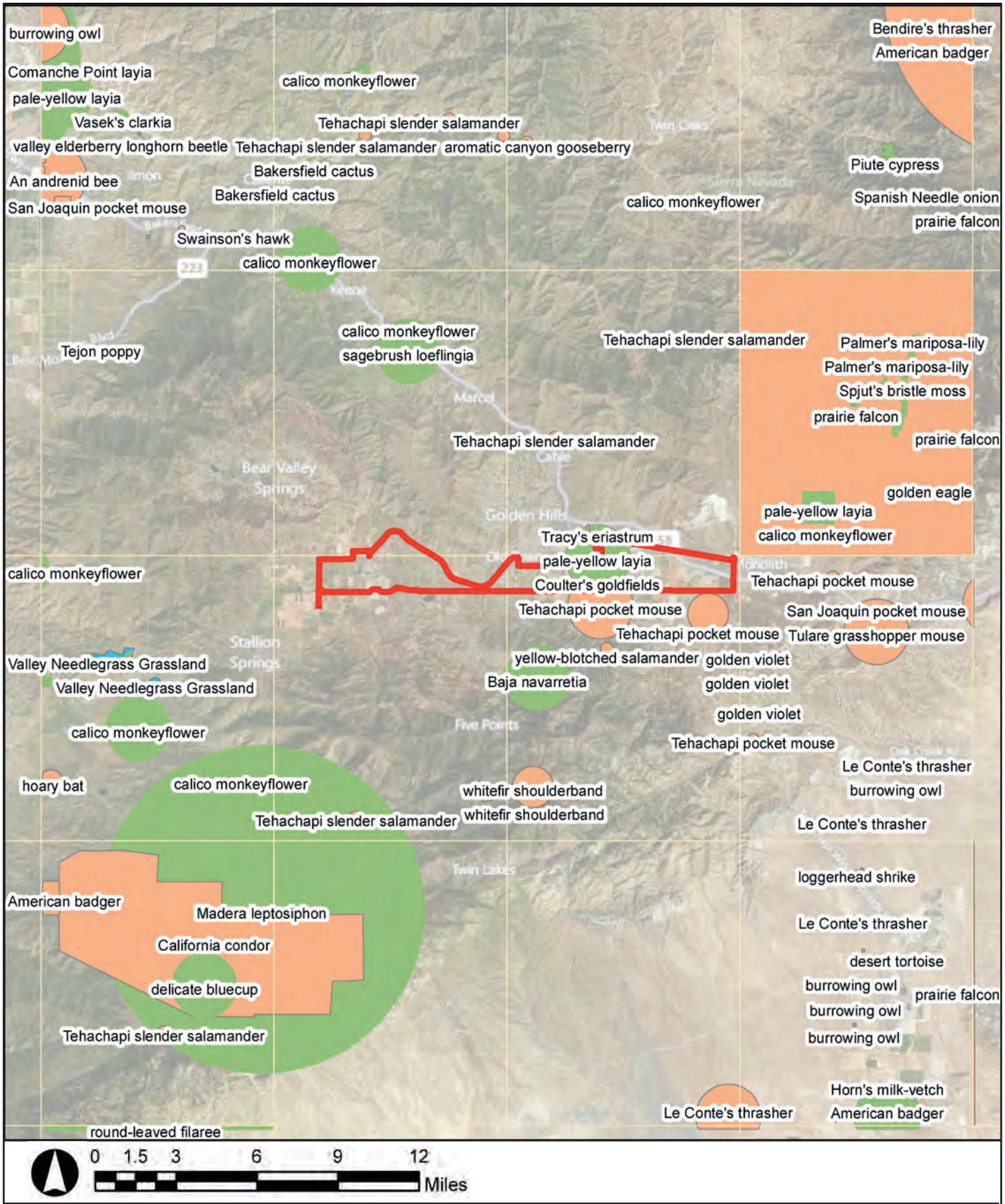

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.4-2
Critical Habitat and Other Special Management Areas

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5.5 Cultural Resources

CULTURAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☑	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☑	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☑	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.5.1 Setting

This section describes the cultural resources that occur in the area of the Proposed Project. The following setting information is derived largely from the *Phase I Cultural Resources Assessment of Telecommunications Lines, Subtransmission Extension Lines, and Proposed Substation Locations for the Banducci 66/12kV "B" Substation Project* report (Orfila, 2011) and summarizes the prehistoric, ethnohistoric, and historical setting for the Proposed Project Area.

Prehistory

The cultural chronology provided below comes primarily from Moratto (1984). Moratto identified the Sierran crest as "a boundary between the ethnographic Tübatulabal on the west slope and the Numic Kawaiisu and Panamint of the Great Basin" (Moratto, 1984). Given the geographic placement of the Kawaiisu territory (as identified by Zigmond, 1981) between the southern Sierra Nevada and the Mojave Desert, it is highly probable that cultural phases specific to those two regions would be present in the archaeological record for the study area as well. The Proposed Project Area is approximately twelve miles from the southern edge of Tübatulabal territory and the environmental resources of the area are consistent with those found in the Sierra Nevada. As such, the cultural chronology presented below is that of the southern Sierra Nevada (Orfila, 2011:13).

Paleoindian (8,000 to 10,000 BP). The earliest agreed upon archaeological culture in the New World is Clovis, typified by a particular type of fluted projectile point. These points are generally viewed as representing a Big Game Hunting Tradition, which exploited large Pleistocene animals such as mammoth and bison (Orfila, 2011:13). The term Paleoindian is a catchall to refer to material belonging to the Fluted Point Tradition or earlier, including any remains belonging to a Pre-projectile Point Period.

Lake Mojave Period (8,000 to 6,000 BP). Following the Paleoindian Period is the Lake Mojave Period, which is associated with the Early Holocene occupation of lakeside environments. The hallmark of the period is the presence of Lake Mojave or Silver Lake projectile points found near old lakeshores. Hunting and use of lake resources presumably formed the subsistence base during this period. No Lake Mojave Period sites are known in the immediate vicinity of the Project Area (Orfila, 2011:14).

Pinto Period (7,000 to 4,000 BP). Sites from the Pinto Period sites are identified by the presence of Pinto series projectile points. The Pinto Period reflects an occupation of the desert after the rain created Pleistocene lakes dried up, with a focus on stream and spring habitats. The Pinto Period appears to be a cultural pattern developed in response to this drying out, along with a climatic change toward an overall

drier environment. It is possible that the Pinto Period developed directly from the Lake Mojave Period at the end of the Pleistocene (Orfila, 2011:14).

Pinto sites in the western and central Mojave Desert, such as the Pinto Basin, Stahl site, Awl site and Rogers Ridge, contained diverse artifact assemblages. Artifacts from this period include Pinto series projectile points, leaf-shaped points and knives, domed and elongated scrapers, flake scrapers, drills, and engraving tools, as well as millingstones and handstones. Previous research has demonstrated the exploitation of hares, rabbits, deer, sheep, and pronghorn, along with reptiles and rodents. Milling stones also were introduced during this period, suggesting a move toward a broader and more diverse diet (Orfila, 2011:14).

Gypsum Period (4,000 to 1,500 BP). The Gypsum Period is marked by the presence of Gypsum and Elko series projectile points (dart points), although Humboldt Concave Base points also occur. Very little is known regarding the subsistence base or social organization of Gypsum Period populations, as few sites dating to this period have been excavated. Archaeological remains dating from the Gypsum Period are relatively uncommon in the Mojave Desert. The Gypsum Period appears to represent a somewhat cooler and wetter time in the desert (Orfila, 2011:15).

Gypsum Period sites in the western and central Mojave Desert include Newberry Cave, Rose Spring, Hinkley, and Ord Shelter, and others. Although Gypsum Period site assemblages have some similarities to those of the Pinto Period, there are also distinct differences between the two (Orfila, 2011:15).

Artifact assemblages from Gypsum Period sites include medium to large stemmed and notched projectile points, such as Elko Eared, Elko Corner-notched, Gypsum, and Humboldt Concave Base forms. There also is evidence of specialized ritual items, such as quartz crystals, paint, and rock art. Large numbers of bifaces (two-sided stone tools) also have been recovered from Gypsum Period sites. In addition, milling implements became more common during this time as compared to the Pinto Period. Faunal assemblages have contained large amounts of artiodactyl (even-toed hoofed animals) remains (including mountain sheep), as well as hares, rabbits, rodents, and tortoise. During this time, tree crops, such as mesquite beans and acorns, began to be used, as evidenced by the introduction of the mortar and pestle (Orfila, 2011:15).

Rose Spring Period (1,500 to 800 BP). The Rose Spring Period is thought to represent a return to more moderately moist conditions, with settlement and subsistence likely focused on lake resources. Sites dating to this period are relatively common in the western Mojave Desert. The marker artifact for this period is the Rose Spring series projectile point, which appears to reflect the introduction of the bow and arrow to the area, replacing dart points used in conjunction with the atlatl (spear thrower) (Orfila, 2011:15).

Rose Spring sites in the western and central Mojave Desert include those at Saratoga Springs, Rose Spring, Cottonwood Creek, Coso Junction Ranch, Koehn Lake, and Cantil, among others. During this period, there appears to have been a major increase in population, as demonstrated by the presence of large villages, dramatic differences in artifact assemblages, and well-developed middens (refuse heaps) (Orfila, 2011:15).

Other than Rose Spring points, other artifacts common to these sites are Eastgate series points, knives, drills, stone pipes, bone awls, a wide variety of milling equipment (including manos, metates, mortars, and pestles), marine shell artifacts, and large quantities of obsidian. There also is evidence of architecture in the form of wickiups, pithouses, and other structures. Medium to small animals, such as hares, rabbits, and rodents, were the primary game, with less emphasis on larger game. A variety of botanical remains has also been documented, such as pinyon and juniper (Orfila, 2011:15).

Late Prehistoric Period (800 BP to Historic Contact). The Late Prehistoric Period (sometimes referred to as the Protohistoric Period), is characterized by Desert series (Desert Side-notched and Cottonwood) projectile points for use with bows and arrows. This period presumably reflects the late prehistory of the ethnographic groups inhabiting the region. The Late Prehistoric Period was much drier than the Rose Spring or Gypsum periods, with an apparent change in subsistence and settlement focused on streams, springs, and wells (Orfila, 2011:15,16).

Sites containing Late Prehistoric Period components in the western and central Mojave Desert include Oro Grande, Afton Canyon, Coso Hot Springs, Cottonwood Creek, Coso Junction Ranch, Cantil, and Rose Spring, as well as a few sites associated with the Rogers/Rosamond lake system on Edwards Air Force Base. Some of these sites were major villages with associated cemeteries, as well as special purpose and seasonal sites (Orfila, 2011:16).

Artifacts from this period include Desert series projectile points, brown ware ceramics, shell and steatite (soapstone) beads, slate pendants, incised stones, and a variety of millingstones (including manos, metates, mortars, and pestles). There was also a reduction in the use of obsidian as compared to the Rose Spring Period, with a parallel shift to macrocrystalline stone, including locally available cherts. Animal remains include hares, rabbits, deer, rodents, reptiles, and tortoise. Little is known of botanical resources of this time, but remains from archaeological contexts have included mesquite and juniper (Orfila, 2011:16).

Ethnography

The greater Tehachapi area is located between the southern San Joaquin Valley and the western Mojave Desert. The extreme western Mojave Desert was claimed by the Kawaiisu during the ethnographic period. The Kawaiisu occupied the Sierra Nevada south of the Kern River and into the northern Tehachapi Mountains just south of Tehachapi Pass. They also claimed portions of the western Mojave Desert, including the Project Area, although it seems that these areas were used only briefly during the ethnographic period. Kroeber (1925) estimated that there were about 500 Kawaiisu just prior to European contact (Orfila, 2011:16).

The Yokuts lived to the west of the Kawaiisu, in the San Joaquin Valley. The Kawaiisu often ventured into the San Joaquin Valley to trade and interact, and to conduct game drives. The Tübatulabal and the Owens Valley Paiute lived to the north of the Kawaiisu. The Panamint Shoshone lived in the desert to the east and north of the Kawaiisu, while the Kitanemuk lived to the south of them (Orfila, 2011:16).

The social organization of the Kawaiisu was centered on the family. Although there were no formal political groupings (at least during the ethnographic period), the position of chief (or headman) was conferred “simply through tacit acknowledgment of the people about him” (Zigmond, 1986). The qualifications for chief depended upon wealth, and might be passed from father to son, although such status was not automatically inherited, as “acceptance was dependent upon personal endowment” (Zigmond, 1986; Orfila, 2011:16).

The Kawaiisu economy was one of hunting and gathering. No agriculture was practiced, but there is evidence of tobacco plant pruning to stimulate growth and of burning wild seed fields to improve plant yields in the following year. Acorns were a major staple, but many other plants were used as well. Zigmond (1981) identified over 250 taxa of plants used by the Kawaiisu. Of that number, 120 were used for food, 100 for medicine, 90 for miscellaneous purposes, and 40 for ritual activity. Most of these plants were gathered in the mountains; with fewer plants collected from the desert. Numerous animals were hunted, including deer, chuckwalla, and bighorn sheep. Pronghorn and rabbits were hunted commu-

nally. While little is known of Kawaiisu material culture, ethnographic data indicate that it was varied and complex (Orfila, 2011:16,17).

Many groups passed through or used the western Mojave Desert from time to time. Along with the Owens Valley Paiute, the Kitanemuk, and the Yokuts, these undoubtedly included the Chumash, Mojave, Chemehuevi, Vanyume, and others. Relations between Kawaiisu and other groups were generally friendly, although there were intermittent hostilities, particularly with the Yokuts. Trade was conducted with a number of groups, including the Western Shoshone of Little Lake, with whom the Kawaiisu traded acorns for obsidian and salt. Intertribal game drives were conducted primarily with the Chumash, Yokuts, and the Tübatulabal (Orfila, 2011:17).

Regional History

The Tehachapi Mountains and western Mojave Desert sustained growing communities of European- and Asian-Americans following the gold rush of the 1840s and the introduction of the railroad to the mountain range. Considered by many to be the first European to discover the Tehachapi Valley, Padre Francisco Garcés arrived in San Joaquin Valley in 1776. Noted travelers to this area prior to settlement included Jedediah Smith, Ewing Young, Kit Carson, and John C. Fremont. In 1853, surveyors led by Lieutenant Robert S. Williamson entered the area to find a suitable route for a railroad (Orfila, 2011:17).

Following the initial discovery in 1849 of gold in the California hills and the Kern River Rush of 1854, prospectors began to enter the Tehachapi Valley in search of wealth and prosperity. Gold was discovered in the Grizzly and Water Canyons, south of Tehachapi. By the time the Southern Pacific Railroad arrived in the Tehachapi Valley in 1876, there were two small towns: Williamsburg (1867) and Greenwich (1875). Williamsburg (Old Town) was named after the first resident, James Williams. The town of Tehachapi, originally named Summit Station (1876) then Tehachapi Summit, was the pinnacle of railroad construction before the descent into the Mojave Desert. The first business to open was a saloon followed by a restaurant with hotels, liveries, feed lots, and stores (Orfila, 2011:17).

Brite Valley, where a portion of the telecommunications fiber optic cable would be located, was named for John and Amanda Brite, who purchased a majority of Brite Valley in the 1850s. The Brites are remembered locally as the first permanent settlers in the small valley. The original home was adobe and served as the home for their family of fifteen, and was followed by a two-story Victorian home, built in 1892. The Brites built and operated a lumber mill, and Brite's sons branched into the livestock business. The remains of Brite family ranch buildings are visible northwest of the intersection of Cummings Valley Road and Reata Street (Orfila, 2011:18).

Cummings Valley, located to the southeast of the Project Area, was named for George Cummings, an Austrian by birth, who first entered the valley while herding cattle in 1849 or 1850. He returned in 1854 and established a cattle ranch, which incorporated the former Hart Ranch. The *Pacific Rural Press* of May 5, 1877, reported that Cummings had 2,000 fruit trees on his farm. The former site of the Cummings Valley School is located on the northwest corner of Pelliser and Highline Road. The ca. 1910 school building, constructed of concrete and wood, was a total loss from the 1952 White Wolf earthquake (7.7 Richter) (Orfila, 2011:18).

Banducci Road, which lies south of the Project Area, was named after the Banducci family who arrived in 1900. Angelo and Jane Banducci purchased a ranch in the Cummings Valley where they farmed, raised livestock, and made charcoal. An experienced midwife, Jane established a thriving practice in Cummings Valley. The original Banducci Road followed the bottom of the canyon (Water Canyon along Cummings Creek), and was used until the county constructed a new road in 1930 (Orfila, 2011:18).

Geologic Setting

Paleontological resources are the evidence of once-living organisms as preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces left by them (trackways, imprints, burrows, etc.). In general, fossils are greater than 5,000 years old (older than Middle Holocene) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks formed under certain conditions (SVP, 2010).

The *Southern California Edison Banducci Substation and Telecommunications Routes Project – Paleontological Resources Assessment* (Smith, 2011) describes the geology of the Project area as follows.

The Project area is located within the Sierra Nevada geomorphic province. The Sierra Nevada is a 400-mile-long westward-tilted fault block that is 50–80 miles wide. This province is characterized by an eastern escarpment that is steep and high and a gentle western slope (about 2 degrees) that disappears under the sediments of the Great Valley geomorphic province, located to the west. The Sierra Nevada is characterized by extensive exposures of granitic rock from the Sierra Nevada Batholith as well as metamorphic rocks. The Project is located at the southern end of the Sierra Nevada and immediately north of the Mojave Desert geomorphic province, separated by the Garlock Fault and the Transverse Ranges geomorphic province (Smith, 2011:5).

Specifically, the Project is located within the Tehachapi Mountains. The Tehachapi Mountains were primarily formed by movement along the Garlock Fault located to the south. The alignment of the telecommunications lines passes through three gently sloping valleys from west to east known as Cummings Valley, Brite Valley, and Tehachapi Valley. According to the geology map compiled by Dibblee (2008), the majority of the Project is located within sediments composed of Quaternary alluvium from the Holocene (less than 11,700 years). However, there are exposures of older Quaternary alluvium from the middle to late Pleistocene (1.8 million–11,700 years ago) as well as a few exposures of Late Jurassic to early Cretaceous (approximately 160–100 million years ago) igneous rocks (primarily diorite and granite) and Precambrian (greater than 541 million years ago) metamorphic schist (Smith, 2011:5).

Regulatory Background – Cultural Resources

State

California Environmental Quality Act. The Proposed Project is subject to compliance with CEQA, as amended. Therefore, cultural resource management work conducted as part of the Proposed Project is to comply with the CEQA Statute and Guidelines, which direct lead agencies to first determine whether cultural resources are "historically significant" resources. CEQA requires that impacts that a project may have on cultural resources be assessed and requires mitigation if significant (or "unique") cultural resources are to be impacted (Section 21083.2 [a-1] and Appendix K). Generally, a cultural resource is considered "historically significant" if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets the requirements for listing on the California Register of Historical Resources (CRHR) under any one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Title 14 CCR, § 15064.5).

The statutes and guidelines specify how cultural resources are to be managed in the context of projects, such as the Proposed Project. Briefly, archival and field surveys must be conducted, and identified cultural resources must be inventoried and evaluated in prescribed ways. Prehistoric and historical archaeological resources, as well as historical resources such as standing structures and other built-environment features, deemed "historically significant" must be considered in project planning and development. As well, any proposed project that may affect "historically significant" cultural resources must be submitted to the SHPO for review and comment prior to project approval by the responsible agency and prior to construction.

If a Lead Agency determines that an archaeological site is a historical resource, the provisions of California Public Resources Code (CPRC) §21084.1 and CEQA Guidelines §15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site is to be treated in accordance with the provisions of PRC §21083 regarding unique archaeological resources. The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of a project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines §15064[c][4]).

If human remains of any kind are found during construction activities, CEQA Guidelines Section 15064.5(e) and Assembly Bill 2641 are to be followed. These require that all construction activities cease immediately and the County Coroner and a qualified archaeologist must be notified. The coroner will examine the remains and determine the next appropriate action based on his or her findings. If the coroner determines the remains to be of Native American origin, the Native American Heritage Commission (NAHC) must be notified. The NAHC will then identify a most-likely descendant to be consulted regarding treatment and/or reburial of the remains.

Native American Heritage Commission. Section 5097.91 of the CPRC established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the CPRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County has a General Plan that gives "long-range guidance to those County officials making decisions affecting the growth and resources of the unincorporated Kern County jurisdiction" (Kern County, 2009). Section 1.10.3, *Archaeological, Paleontological, Cultural, and Historical Preservation*, of the General Plan states that the "County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors."

Regulatory Background – Paleontological Resources

Paleontological remains are recognized as nonrenewable resources significant to our culture and as such are protected under provisions of CEQA, the Antiquities Act of 1906, and subsequent related legislation, and policies. Specifically, in Section V(c) of Appendix G of the CEQA Guidelines, the "Environmental Checklist Form," the question is posed: "Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" In order to determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged).

The January 1, 1979, Clean Water Grant Program for the Protection and Preservation of Cultural Resources (California State Water Resources Control Board, Revision 6-11) defined cultural resources to include paleontological values and provided guidelines for preservation, summarizing some of the applicable legislation. Data recovery techniques are discussed (Section 7.4). Griswold E. Petty, the Acting Associate Director of the BLM, stated in a memorandum:

> *There is no universally accepted definition for a significant scientific paleontological resource. A definite determination can only be made by a qualified, trained paleontologist. Using the following guidelines, a paleontological resource is of significant scientific and educational value if it:*
>
> 1. *Provides important information of the evolutionary trends among organisms, relating living inhabitants of the earth to extinct organisms.*
> 2. *Provides important information regarding development of biological communities or interaction between botanical and zoological biotas.*
> 3. *Demonstrates unusual or spectacular circumstances in the history of life.*
> 4. *Is in short supply and in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and is not found in other geographic locations.*
>
> *All vertebrate fossils have been categorized as being of significant scientific value"* (Petty, 1978 memorandum, emphasis added).

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically or stratigraphically important; and that add to an existing body of knowledge in specific areas stratigraphically, taxonomically, or regionally. They include fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy, and assemblages of fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species.

Approach to Analysis of Cultural Resources and Previous Cultural Resources Studies

Between May 2010 and July 2011, five cultural resource records searches were conducted at the Southern San Joaquin Valley Information Center (SSJVIC), housed at California State University, Bakersfield. The records searches included an examination of all previously documented cultural resources within a one-half mile radius centered on the Proposed Project Area. The records search materials contain information collected from the California Historical Resources Information System that includes the locations of previous cultural resource surveys and prehistoric and historic sites as well as listings in the NRHP, CRHR, California Historic Landmarks, and California Points of Historic Interest (Orfila, 2011).

In January 2013, archival research was undertaken at the Tehachapi branch of the Kern County Public Library, the Tehachapi Museum, and at the Tehachapi Unified School District office. In addition, digital copies of historic USGS Topographic Series maps and desktop satellite imagery were reviewed, as were the Bureau of Land Management General Land Office (GLO) maps, and the Kern County Assessor's Office records. Several local historians were informally interviewed concerning the Banducci Parcel, including Jon Hammond and Roxanne Sasia. Both are long-time residents in the Tehachapi area. Photographs also were taken of the proposed staging areas (Greenberg, 2013).

Sixty-four previous cultural studies have been conducted within a one-half mile radius of the Proposed Project Area; 28 of which involved portions of the Proposed Project Area. While 32 previously documented cultural resources have been identified within a one-half mile radius of the Proposed Project Area, no previously recorded cultural resources were identified as being within the Proposed Project Area (Orfila, 2011).

The first Cummings Valley School, built in 1873, was located within the parcel to be used for Staging Yard No. 3. The school collapsed during a 1952 earthquake. The school was demolished and removed in the early 2000s. Historical aerial imagery shows the school structure, the water pump and associated 10 by 30- foot structure, and the asphalt pavement from 1995 to 2005. By August 2006, only the water tank and the asphalt pavement remained (Greenberg, 2013).

Archaeological Field Survey Results

The Proposed Project Area includes the 6.3-acre substation site and a total of 30 miles of fiber optic telecommunication routes with a 30-meter buffer on either side of the routes (60-meter-wide survey corridor). Cultural resource field surveys of the Proposed Project Area were conducted in March, July, December 2011, and January 2013 (Orfila, 2011; Greenberg, 2013). With the exception of approximately 1.25 miles, the Proposed Project Area, was subjected to a pedestrian survey (15-meter transects). Approximately 1.25 miles of the Proposed Project, located within the California Correctional Facility in Cummings Valley, was surveyed using a vehicle (windshield survey) (Orfila, 2011:21). Survey limitations included portions of the Proposed Project Area obscured by paved roads and fenced corrals containing animals (Orfila, 2011:21).

Four newly identified historic-era sites were documented during the field surveys. No prehistoric sites or isolated artifacts were identified during the field surveys. Detailed descriptions of the previously unrecorded cultural resources within the Proposed Project area are provided below. None of the newly discovered cultural resources were evaluated for CRHR eligibility during the study. Table 5.5-1 lists cultural resources within the Proposed Project Area, associated Project activities, and their CRHR eligibility potential.

Site P-15-009613/CA-KER-8362H is a stone and concrete cistern and the remains of a chimney constructed of brick and mortar. The purpose of the 20-foot diameter cistern is unknown, but the chimney appears to be the remains of a historical period structure (Orfila, 2011:22). The site is located across from the Cummings Valley Substation within the existing Correction-Cummings–Kern River #1 66 kV subtransmission line Right-of-Way (ROW) and the proposed Telecommunications Route 1.

Site P-15-014996/CA-KER-8361H is the remnants of ranch buildings. The site includes a metal barn/shed in poor condition. There is a corral adjacent to the structure. The remainder of the site is littered with rusting farming/ranching materials and equipment (Orfila, 2011:23). The northern boundary of the site is located within the existing Correction-Cummings–Kern River #1 66 kV subtransmission line ROW and the proposed Telecommunications Route 1.

Site P-15-014995 is a 65- to 70-year old structure known as the Ranch Motel. During the post-World War II period, as the economy improved and more individuals invested in family vehicles and family trips, the establishment of motor hotels, or motels, allowed travelers to overnight in a reserved hotel room and have their car parked outside. Previously, hotels were large, multi-story facilities in major cities. With the military base(s) in the Mojave, plus the growing local economy (agriculture and mining), Tehachapi had a need for hotel space. Motels were less expensive to construct and offered easier placement on the landscape. The sixteen-unit motor lodge also has manager's quarters that function as the office for the facility. The neon sign outside the facility is original. As of 2011, the motel was still in operation (Orfila, 2011:24). The eastern boundary of the site is located within an existing subtransmission line ROW and the proposed Telecommunications Route 2.

Site P-15-014997 is the Douglas Gasoline Station. The Douglas Gasoline Station was a popular independent gas station. Currently abandoned, the wooden station (1500 sq.ft.) is located 18 feet south of the road. The remains of the iconic Flying Heart logo of the Douglas Gasoline Company still stand at the northeast corner of the station property. While the exact date of the structure and signage is unknown, based on a review of travel brochures of the period, it is estimated to date from the 1940s to 1960s (Orfila, 2011:24). The northern boundary of the site is located within an existing subtransmission line ROW and the proposed Telecommunications Route 2.

Table 5.5-1. Cultural Resources within the Proposed Project Area

Site Number	Site Description	Project Area	Proposed Project Activity	CRHR Eligibility
P-15-009613 (CA-KER-8362H)	Cistern and Chimney	Proposed Telecommunications Route 1	Installation of fiber optic cable into new underground conduit	Undetermined
P-15-014996 (CA-KER-8361H)	Metal Barn/Shed on Abandoned Farm/Ranch	Proposed Telecommunications Route 1	Installation of fiber optic cable on existing overhead structures	Undetermined
P-15-014995	The Ranch Motel	Proposed Telecommunications Route 2	Installation of fiber optic cable on existing overhead structures; pole replacement	Potentially Eligible
P-15-014997	Douglas Gasoline Station	Proposed Telecommunications Route 2	Installation of fiber optic cable on existing overhead structures	Potentially Eligible

Native American Consultation

SCE requested a search of the Sacred Lands File maintained by the Native American Heritage Commission (NAHC) on June 22, 2011. The Sacred Lands File search revealed that no known sacred Native American cultural resources were identified within the Proposed Project Area. The NAHC suggested that SCE consult with 11 Native American tribes and communities and Native American individuals who hold special interest in the Proposed Project Area and provided a list of those individuals (SCE, 2014a).

SCE sent certified letters on July 9, 2011 to the 11 Tribal entities and individuals on the NAHC list. The letter described the Proposed Project, the cultural resource survey, and background research that had been completed at that time. Recipients were requested to reply with information they were able to share regarding any Native American resources that may be affected by the Proposed Project. The Tejon Indian Tribe responded on August 17, 2011, stating that the Tribe had no conflict with the Proposed Project, but asked to be notified should any sites or artifacts be discovered during the Proposed Project (SCE, 2014a).

Additional follow-up letters and correspondence were sent on April 4, 2012, to the same 11 tribal entities and individuals describing updated information regarding the cultural surveys performed since

the initial letter. The Tübatulabal Tribe and the Tejon Indian Tribe responded that they had no conflict with the Proposed Project. In June 2012, phone calls were made to those Tribal entities and individuals that had not responded. Three additional comments were received via phone. Charlie Cook, representative for the Tehachapi Indian Tribe, questioned who would be monitoring during construction and stated that he had a "concern about preservation" of sites. He also asked to be kept updated on the Project (SCE, 2014b). Dee Dominguez, Chairperson of the Kitanemuk & Yowlumne Tejon Indians, stated that she had no comments regarding the project (SCE, 2014b). John Valenzuela, Chairperson of the San Fernando Band of Mission Indians, stated that he had no comments. He asked to be kept updated on the project and to contact him if anything was found during the project (SCE, 2014b).

Approach to Analysis of Paleontological Resources and Previous Paleontological Resources Studies

Methods Used to Identify Paleontological Resources

The Society of Vertebrate Paleontology's (SVP) guidelines (1995, 2010) provide uniform procedures for mitigating impacts to paleontological resources within sediments that are likely to contain resources. These guidelines call for supervision of all phases of mitigation by a professional paleontologist; monitoring for and salvage of paleontological resources during excavation; screen washing of sediments to recover small fossil specimens (if applicable); preparation of all collected specimens to a point of stabilization and identification; curation, including identification and cataloging of specimens; submission of all collected fossils for permanent storage in an institution, such as a museum, with the ability to retrieve specimens for additional studies; and preparation of a final report that details the methods and results of monitoring, including geology, what specimens were recovered, and the significance of any finds.

Paleontological Sensitivity is determined only after a field survey of the rock unit in conjunction with a review of available literature and paleontologic locality records. In cases where no subsurface data are available, sensitivity may be determined by subsurface excavation. The SVP (1995, 2010) provides the following definitions of sensitivity:

Paleontological Potential is the potential for the presence of significant nonrenewable paleontological resources. All sedimentary rocks, some volcanic rocks, and some metamorphic rocks have the potential for the presence of significant nonrenewable paleontological resources. The SVP has only three categories of sensitivity: high, low, and undetermined. The determination of a rock unit's degree of paleontological potential is first founded on a review of pertinent geological and paleontological literature and on locality records of specimens deposited in institutions. This preliminary review may suggest particular areas of known high potential. If a geographic area or geological unit is classified as having undetermined potential for paleontological resources, studies must be undertaken to determine whether that rock unit has a sensitivity of either high or low. The field survey may extend outside the defined project area to areas where rock units are better exposed. Each of the potentials is defined below in more detail.

- **High Potential.** Rock units from which vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a potential for containing significant nonrenewable fossiliferous resources. These units include, but are not limited to, sedimentary formations and some volcanic formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (1) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical, and (2) the importance of recovered evidence for new and significant

taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways, are also classified as significant.

- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils. Such units will be poorly represented by specimens in institutional collections. These deposits generally will not require protection or salvage operations.
- **Undetermined Potential.** Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

If an area is determined to have a high potential for containing paleontologic resources, the SVP recommends that a program to mitigate impacts be developed. In areas of high sensitivity, a pre-excavation survey also is recommended to locate surface concentrations of fossils that may need special salvage methods.

A paleontological locality search was conducted through the Natural History Museum of Los Angeles County (LACM). It included a review of the area geology and any known paleontological resources recovered from the surrounding area, as well as the geologic units that will likely be encountered during excavation activities associated with the Proposed Project. As geologic formations and units can be exposed over large geographic areas but contain similar lithologies and fossils, the literature review and fossil locality search included areas well beyond the Proposed Project area (Smith, 2011).

The purpose of the locality search was to establish the status and extent of previously recorded paleontological resources within and adjacent to the Proposed Project area. In addition, the paleontological sensitivity of the geologic deposits expected to be encountered within the proposed Project area could be determined. A paleontological pedestrian survey of the proposed Project area has not been conducted (Smith, 2011).

Results and Evaluation of Known Paleontological Resources

According to the locality search letter from the LACM dated July 14, 2011, the proposed Project area contains sediments of younger Quaternary alluvium (Holocene) within the Cummings Valley, Brite Valley, and Tehachapi Valley that were deposited as basinal fan and fluvial deposits from the surrounding Tehachapi Mountains. However, the LACM also states that there are some surficial exposures of older Quaternary deposits in the western area of the Tehachapi Valley that are Pleistocene in age (2.6 million to 11,700 years B.P.). The LACM states that these older Pleistocene sediments also underlie the Holocene deposits exposed elsewhere at an unspecified depth and that there are a few exposures of igneous and metamorphic rocks in the elevated and more mountainous portions of the proposed Project area, such as the area between the Cummings Valley and Brite Valley and Brite Valley and Tehachapi Valley. The LACM collections contain one fossil locality within the proposed Project area, LACM 3722, located within the City of Tehachapi. This locality yielded a fossil horse (*Equus* sp.) and was found during excavation associated with installation of a sewer line. Sediments mapped on the surface in this area are Holocene alluvium, and although not stated it is likely that this fossil was found at a depth greater than 10 feet beneath the surface. The next closest LACM localities from similar sediments are LACM 5942–5953, from pipeline excavations in Holocene and Pleistocene alluvium for a project located east of Palmdale along Avenue S, approximately 40 miles to the southeast. At these localities, small vertebrate fossils were found, including gopher snake (*Pituophis* sp.), king snake (*Lampropeltis* sp.), leopard lizard (*Gam-*

belia wislizenii), cottontail rabbit (*Sylvilagus* sp.), pocket mouse (*Chartodipus* sp.), kangaroo rat (*Dipodomys* sp.), and pocket gopher (*Thomomys* sp.) (Smith, 2011).

The Holocene alluvium is between 0 to 11,700 years old and is generally considered too young to contain fossils; however, these sediments can exist as a very thin veneer on top of older sediments that can contain fossils. Pleistocene alluvium ranges from 2.6 million to 11,700 years in age. Fossils have been collected in similar deposits from excavations for roads, housing developments, and quarries within California and include remains of elephants, horses, bison, camels, saber tooth cats, deer, and sloths. The potential exists to encounter similar fossils in most Pleistocene alluvium. The igneous and metamorphic rocks within the proposed Project area do not contain fossils (Smith, 2011).

Based on the fossil records from similar sediments in the area, and the results of the locality search at the LACM, shallow excavations in the younger alluvium that is exposed within the valleys over most of the proposed Project area is unlikely to encounter paleontological resources; however, deeper excavation in these areas may contact the Pleistocene sediments that could contain paleontological resources. In addition, any excavation in the Pleistocene deposits on the western side of the Tehachapi Valley has the potential to encounter paleontological resources, both at the surface and subsurface (Smith, 2011).

Applicant Proposed Measures

SCE has committed to the following measure to ensure that there would be no impacts to paleontological resources (SCE, 2014a). This APM is listed in Table 5.5-2.

Table 5.5-2. Applicant Proposed Measures – Paleontological Resources

APM	Description
APM PA-1	**Paleontological Resources Treatment Plan.** A Paleontological Resources Treatment Plan shall be developed for construction within areas that have been identified as having a high sensitivity for paleontological resources or in areas where construction activities would exceed 10 feet in depth. The Paleontological Resources Treatment Plan would be prepared by a professional paleontologist in accordance with the recommendations of the SVP.

5.5.2 Environmental Impacts and Mitigation Measures

a. Would the project cause a substantial adverse change in the significance of an historical resource as defined in §15064.5 [§15064.5 generally defines* historical resource *under CEQA]?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. As shown in Table 5.5-1, there are four cultural resources within the Proposed Project area. None of these resources have been formally evaluated for CRHR eligibility, because impacts can be avoided. All four resources (P-15-009613/CA-KER-8362H, P-15-014996/CA-KER-8361H, P-15-014995, and P-15-014997) are located within the proposed subtransmission line and fiber optic telecommunications route corridors. Two of the resources, the Metal Barn/ Shed on Abandoned Farm/Ranch (P-15-014996/CA-KER-8361H) and the Douglas Gasoline Station (P-15-014997), are within areas where no ground-disturbing work is proposed and would not be impacted by the Proposed Project. The Ranch Motel (P-15-014995) is located within proposed Telecommunications Route 2. While installation of the fiber optic cable will be on existing poles, one wood pole adjacent to the Ranch Motel is proposed for removal and replacement. The construction associated with the removal and replacement of the existing pole is considered to pose a low risk of disturbance to this known resource. In addition, the Ranch Motel is a standing structure that is currently an operating and functioning facility and will be avoided during any construction activities associated with the Proposed Project. The Cistern and Chimney (P-15-009613/CA-KER-8362H) is located within proposed Telecommu-

nications Route 1 where new underground conduit is proposed. Trenching and ground disturbance would be confined to specific areas that have been previously disturbed or areas considered to have a decreased likelihood for containing buried cultural materials. In addition, the cistern and chimney will be avoided during any construction activities associated with the Proposed Project. Mitigation Measure C-1 (Avoid known cultural resources) provides more detail on how resources would be avoided and would ensure that impacts are reduced to a less-than-significant level.

Mitigation Measure for Impacts to Known Cultural Resources

MM C-1 **Avoid Known Cultural Resources.** Where feasible, all impacts to sites identified in the preliminary cultural resource inventories shall be avoided and protected. Wherever a pole, access road, equipment, etc., must be placed or accessed within 100 feet of a recorded, reported, or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an Environmentally Sensitive Area (ESA) (without disclosure of the exact nature of the environmental sensitivity [i.e., the ESA is not identified as an archaeological site]). Construction equipment shall then be directed away from the ESA, and construction personnel shall be directed not to enter the ESA. Archaeological monitoring of Project construction shall occur in all areas of ground disturbing activity that occur within 100 feet of a cultural resource ESA.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. There are no known significant archaeological resources within the Proposed Project area. However, unknown and potentially significant buried resources could be inadvertently unearthed during ground-disturbing activities associated with construction of the Proposed Project. Although the potential for buried resources is considered to be low, owing to geomorphological conditions within direct impact areas, destruction of potentially significant cultural resources without mitigation would be a significant impact. Implementation of Mitigation Measure C-2 (Conduct cultural resources surveys), Mitigation Measure C-3 (Treat previously unidentified cultural resources appropriately), and Mitigation Measure C-4 (Train Construction Personnel Regarding Cultural and Paleontological Resources) would reduce this impact to a less-than-significant level because workers would recognize possible buried cultural resources and any previously unrecorded or unknown archaeological resource discovered during the course of construction would be subsequently avoided or provided proper treatment.

Mitigation Measures for Impacts to Unknown Archaeological Resources

MM C-2 **Conduct Cultural Resources Surveys.** Prior to construction, and based on final engineering, cultural resource surveys would be conducted in areas of the Area of Direct Impact (ADI) that have not been previously surveyed for the Proposed Project. No work shall be conducted in the previously un-surveyed areas until approval has been received by the CPUC. Supplemental cultural resource surveys of all new areas that would be affected shall be conducted by a qualified professional archaeologist. Any identified cultural resource would be documented and evaluated for its eligibility for listing in the CRHR. A supplemental technical report shall be provided to the CPUC discussing the supplemental surveys, documented and evaluated cultural resources, potential impacts, and avoidance and minimization measures. Ideally, cultural resources found to meet any of the CRHR eligibility criteria would be avoided and preserved in place. If avoidance is not feasible, then SCE and CPUC shall develop and implement appropriate mitigation

measures to reduce any impacts to a less-than-significant level and all ground disturbing activities would be monitored by a qualified archaeologist.

MM C-3 **Treat Previously Unidentified Cultural Resources Appropriately.** If previously unidentified cultural resources are unearthed during construction of the Proposed Project, construction work in the immediate area of the find shall be halted and directed away from the discovery until a qualified professional archaeologist assesses the significance of the resource. The archaeologist, in consultation with SCE and the CPUC, shall make the necessary plans for evaluation of the CRHR-eligibility of find(s) and for the assessment and mitigation of impacts if the finds are found to be historically significant according to CEQA (CEQA Guidelines Section 15064.5 (a)).

SCE shall develop a Cultural Resources Treatment Plan (CRTP) for all known and newly discovered cultural resources within the Project ADI, including procedures for protection and avoidance of ESAs, evaluation and treatment of the unexpected discovery of cultural resources including Native American burials; provisions and procedures for Native American consultation; detailed reporting requirements by the Project Archaeologist; curation of any cultural materials collected during the Project; and requirements to specify that archaeologists and other discipline specialists meet the Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP).

Implementation of the CRTP shall ensure that known and recorded cultural resources will be avoided during construction. Specific protective measures shall be defined in the CRTP to reduce the potential adverse impacts on any presently undetected cultural resources to less-than-significant levels. The CRTP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction.

MM C-4 **Train Construction Personnel Regarding Cultural and Paleontological Resources.** Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained, by a qualified archaeologist, regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and paleontological resources, and protection of all archaeological and paleontological resources during construction. SCE shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of cultural or paleontological materials. All personnel shall be instructed that unauthorized removal or collection of artifacts is a violation of State law and unauthorized collection or disturbance of fossils is prohibited. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits or fossils. SCE shall provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA and anticipated procedures to treat unexpected discoveries. A record of all trained personnel shall be kept and provided to the CPUC as requested.

c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. One fossil locality (LACM 3722) has been noted within the Proposed Project area. The majority of the area consists of low-sensitivity younger Quater-

nary alluvium (Holocene) sediments; however, these sediments can exist as a very thin veneer on top of older Pleistocene sediments that can contain fossils. Therefore, the potential exists for unique paleontological resources to be encountered within the Project area during ground-disturbing construction activities exceeding 10 feet in depth. Potential adverse impacts on these resources include, but are not limited to, destruction by construction equipment and Project-related vehicles, increased weathering and erosion, unauthorized collection of fossils by Project personnel, and vandalism. SCE has committed to APM PA-1, in which a Paleontological Resources Treatment Plan shall be developed and implemented during construction within areas that have been identified as having a high sensitivity for paleontological resources or in areas where construction activities would exceed 10 feet in depth. Mitigation Measure C-4 (Train Construction Personnel Regarding Cultural and Paleontological Resources), Mitigation Measure C-5 (Develop Paleontological Resources Management Plan), and Mitigation Measure C-6 (Monitor construction for paleontology) provide more detail on how these activities would be implemented and would ensure that impacts are reduced to a less-than-significant level.

Mitigation Measures for Impacts to Paleontological Resources

MM C-5 **Develop a Paleontological Resources Management Plan.** Prior to construction, SCE shall retain a qualified paleontologist to prepare a Paleontological Resources Management Plan (PRMP). The PRMP shall identify construction impact areas where significant paleontological resources may be encountered and the depths at which those resources are likely to be discovered. The Plan shall outline a coordination strategy to ensure that all construction disturbance in high sensitivity sediments or exceeding 10 feet in depth would be monitored full-time by qualified professionals. The Plan shall also detail methods of recovery; post-excavation preparation and analysis of specimens; final curation of specimens at a recognized, accredited facility; data analysis; and reporting, in the event that paleontological resources are encountered during construction.

MM C-6 **Monitor Construction for Paleontology.** Based on the paleontological sensitivity assessment and Paleontological Resource Management Plan consistent with Mitigation Measure C-5 (Develop a Paleontological Resource Management Plan), SCE shall ensure that full-time construction monitoring is conducted by the Paleontological Resource Monitor in areas determined to have high sensitivity. Sediments of moderate or undetermined sensitivity shall be monitored by a Paleontological Resource Monitor on a part-time basis (as determined by the Qualified Paleontologist). Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. The monitor may also screen sediments to check for the presence of microvertebrates if they are believed to be present. In the event that a paleontological resource is discovered, the monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance, and collected. Mitigation Measure C-6 does not apply to any drilling construction activities.

MM C-7 **Conduct Curation and Final Reporting.** All significant fossils collected will be prepared in a properly equipped paleontology laboratory to a point ready for curation no more than 45 days after all fieldwork is completed. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to an accredited museum repository for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of SCE.

At the conclusion of laboratory work and museum curation of any discovered paleontological resources, a final report will be prepared and submitted to the CPUC describing the results of the paleontological resource monitoring efforts associated with the project. The report will include a summary of the field and laboratory methods, an overview of the project area geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. A copy of the report will also be submitted to the designated museum repository.

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. No human remains are known to be located within the Proposed Project area. However, there is always the possibility that unmarked burials may be unearthed during construction. In the unlikely event of an accidental discovery of any human remains, Mitigation Measure C-8 (Treat human remains appropriately) would be implemented. Health and Safety Code Section7050.5, CEQA Section 15064.5(e), and Public Resources Code Section 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Mitigation Measure for Disturbance of Human Remains

MM C-8 **Treat Human Remains Appropriately.** If human remains are unearthed during construction activities, construction work within 100 feet of the discovery shall be halted and directed away from the discovery until the county coroner can determine whether the remains are those of a Native American. If they are those of a Native American, the following would apply:

- The coroner shall contact the Native American Heritage Commission.
- If discovered human remains are determined to be Native American remains, and are released by the coroner, these remains shall be left in situ and covered by fabric or other temporary barriers.
- The human remains shall be protected until SCE, the landowner, and the Native American Heritage Commission come to a decision on the final disposition of the remains.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).

5.6 Geology and Soils

GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic groundshaking?	☐	☐	☑	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☑	☐	☐
iv) Landslides?	☐	☐	☐	☑
b. Result in substantial soil erosion or the loss of topsoil?	☐	☑	☐	☐
c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☑	☐
d. Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial risks to life or property?*	☐	☐	☑	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.6.1 Setting

This section describes geologic, seismic, and soil conditions and analyzes environmental impacts related to geologic and seismic hazards as they pertain to the implementation of the Proposed Project. The discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from Project construction and operation. In addition, existing laws and regulations relevant to geologic and seismic hazards are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with the implementation of the Proposed Project.

Baseline geologic, seismic, and soils information were collected from published and unpublished literature, GIS data, and online sources for the Proposed Project site and surrounding area. Data sources included the following: the Proponent's Environmental Assessment, geologic literature from the U.S. Geological Survey and California Geological Survey, geologic and soils GIS data, and online reference materials. The study area was defined as the locations of Proposed Project components and the areas of Tehachapi, Brite, and Cummings Valleys immediately adjacent to the Proposed Project for most geologic and soils issue areas. The study area related to seismically induced ground shaking includes significant regional active and potentially active faults within 50 miles of the Proposed Project.

Regional Geologic Setting

The Proposed Project components and the existing Correction-Cummings–Kern River 66 kV Subtransmission line are located in and across the Tehachapi Valley, Brite Valley, and Cummings Valley. These valleys are located at the eastern edge of the Tehachapi Mountains, which are at the southern end of the Sierra Nevada geomorphic province. The Sierra Nevada geomorphic province is dominated by the north-south trending Sierra Nevada range, a tilted fault block nearly 400 miles long, which grades into the Tehachapi Mountains. The Tehachapi Mountains are an east-west trending mountain range at the southern end of the Sierra Nevada, separating the Great Valley and the Mojave Desert. The Tehachapi Mountains have been sheared into this east-west trend by left-lateral fault movement of the Garlock fault, which runs near the southern boundary of the range. The mountains are bounded on the north by the White Wolf fault and the San Joaquin Valley and on the south by the Garlock fault and the Mojave Desert.

Local Geology

Geologic units underlying the Proposed Project consists primarily of Holocene alluvium in the Cummings, Brite, and Tehachapi Valleys, with smaller areas of Pleistocene older alluvium underlying parts of the telecommunication routes in the western Tehachapi Valley, and Mesozoic granitic rocks consisting of hornblende-biotite quartz diorite and Paleozoic metasedimentary rocks consisting of schist and marble underlying parts of the telecommunication routes along and crossing the hills bounding Brite Valley (Dibblee, 2008). Holocene alluvium underlies all areas of planned ground disturbance for the Proposed Project in the Cummings Valley, including construction of the proposed Banducci Substation, excavation for new subtransmission structures, trenching for underground portions of Telecommunication Route 1, and excavation for replacement poles along Telecommunication Route 2. Where Telecommunication Route 2 crosses and is adjacent to the hills bounding Brite Valley, areas of proposed ground disturbance for installation of replacement poles for Route 2 include a mix of Holocene alluvium, Mesozoic hornblende-biotite quartz diorite, and Paleozoic schist and marble. The Holocene alluvium along Route 2 in the Brite Valley area likely shallowly overlies the older bedrock. In the western Tehachapi Valley, areas of ground disturbance are underlain by Pleistocene older alluvium along Telecommunication Route 1 for trenching for new underground cable into Cummings Substation and along Route 2 for excavation for replacement poles and trenching for a new underground section of telecommunication cable. The remainder of the ground disturbance areas in the Tehachapi Valley area are underlain by Holocene alluvium, including areas of excavation for replacement poles along Route 2 and trenching at Monolith Substation for a new underground section of Route 1 where it enters the substation.

Soils

Soils within the Proposed Project area reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of human modification. The Proposed Project is located in a mix of undeveloped desert/grassland, agricultural, rural residential land, and developed city area. The National Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database for Kern County, California, Southeastern Part was reviewed to identify soil units and characteristics underlying the Proposed Project (NRCS, 2006). Five main soil associations/complexes are mapped as underlying soil in disturbance areas of the Proposed Project, listed in approximate order of prevalence: Steuber, Havala, Tehachapi, Walong, and Xerothents. The proposed Banducci Substation area is underlain by the Steuber association. In the Proposed Project area these soils all consist primarily of sandy loam. The major components of the Steuber, Havala, and Tehachapi soil associations are all primarily deep well drained soils formed on alluvial fans, stream terraces, and floodplains. The Walong soils are moderately deep well drained soils formed in colluvium weathered from granitic rocks. The Xerothents are shallow soils formed in colluvium and weathered granitic rock.

The general description and select physical characteristics of hazards of erosion, and shrink/swell potential for these soils were reviewed to evaluate potential hazards to the Proposed Project related to unsuitable soil conditions. Table 5.6-1 presents the general susceptibility of the soil associations underlying the Proposed Project to sheet and rill erosion,[1] wind erodibility, and shrink-swell potential. Each association is made up of numerous soil units, therefore the table presents a general potential for these characteristics to occur in the association based on the major soil components of these associations.

Table 5.6-1. Key Characteristics of Soils Underlying the Proposed Project

Soil Association	Susceptibility to Sheet and Rill Erosion[1]	Wind Erodibility[2]	Shrink-Swell Potential[3]
Steuber	Low	Low to Moderate	Low
Havala	Low	Low to Moderate	Low to Moderate
Tehachapi	Moderate	Low to Moderate	Low to Moderate
Walong	Low	Moderate	Low
Xerothents	Low	Low	Low to Moderate

1 - Based on Erosion factor K (used by the NRCS in the Universal Soil Lose Equation), which indicates the susceptibility of a soil to sheet and rill erosion. Values of K range from 0.02 to 0.69 with higher values being more susceptible to sheet and rill erosion.

2 - Soils are assigned to wind erodibility groups based on their susceptibility to wind erosion, soils assigned to group 1 are the most susceptible and soils assigned to group 8 are the least susceptible.

3 - Linear extensibility is the method used by the NRCS to determine the shrink-swell potential of soils. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3 percent, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed in areas with expansive soils.

Potential soil erosion hazards vary depending on the use, conditions, and textures of the soils. The properties of soil that influence erosion by rainfall and runoff are ones that affect the infiltration capacity of a soil, and those that affect the resistance of a soil to detachment and being carried away by falling or flowing water. Additionally, soils on steeper slopes would be more susceptible to erosion due to the effects of increased surface flow (runoff) on slopes where there is little time for water to infiltrate before runoff occurs. Soils containing high percentages of fine sands and silt and that are low in density, are generally the most erodible. As the clay and organic matter content of these soils increases, the potential for erosion decreases. Clays act as a binder to soil particles, thus reducing the potential for erosion.

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Changes in soil moisture could result from a number of factors, including rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Soils with moderate to high shrink-swell potential would be classified as expansive soils.

Slope Stability

Important factors that affect the slope stability of an area include the steepness of the slope, the relative strength of the underlying rock material, and the thickness and cohesion of the overlying colluvium and alluvium. The steeper the slope and/or the less strong the rock, the more likely the area is susceptible to landslides. The steeper the slope and the thicker the colluvium, the more likely the area is sus-

[1] Sheet and rill erosion is the removal of soil from the land surface by the action of rainfall and runoff. Sheet erosion occurs when water runs over a large uniform area picking up and distributing soil particles. Rill erosion occurs as concentrated surface runoff begins to remove soil along concentrated zones which numerous small, but conspicuous, water channels or tiny rivulets.

ceptible to debris flows. Another indication of unstable slopes is the presence of old or recent landslides or debris flows.

The Proposed Project components traverse flat to relatively flat topography and no known landslides occur in the immediate project vicinity, therefore landslides and other slope failures would not occur.

Seismicity

The seismicity of the project area is dominated by the intersection of the north-northwest trending San Andreas Fault zone and the east-west trending Garlock fault zone. Both systems are responding to strain produced by the relative motions of the Pacific and North American Tectonic Plates. This strain is relieved by right-lateral strike-slip faulting on the San Andreas and related faults, left-lateral strike slip on the Garlock fault zone, and by vertical, reverse-slip or left-lateral strike-slip displacement on faults in the Sierra Nevada and Transverse Ranges. The effects of this deformation include mountain building; basin development, deformation of Quaternary marine terraces, widespread regional uplift, and generation of earthquakes. The Tehachapi Mountains and surrounding area contain numerous faults of varying ages and activity. These faults can be classified as historically active, active, potentially active, or inactive, based on the following criteria (CGS, 1999):

- Faults that have generated earthquakes accompanied by surface rupture during historic time (approximately the last 200 years) and faults that exhibit aseismic fault creep are defined as Historically Active.
- Faults that show geologic evidence of movement within Holocene time (approximately the last 11,000 years) are defined as Active.
- Faults that show geologic evidence of movement during the Quaternary (approximately the last 1.6 million years) are defined as Potentially Active.
- Faults that show direct geologic evidence of inactivity during all of Quaternary time or longer are classified as Inactive.

Although it is difficult to quantify the probability that an earthquake will occur on a specific fault, this classification is based on the assumption that if a fault has moved during the Holocene epoch, it is likely to produce earthquakes in the future. Since periodic earthquakes accompanied by surface displacement can be expected to continue in the study area through the lifetime of the Proposed Project, the effects of strong groundshaking and fault rupture are of primary concern to safe operation of the Proposed Project components. The Project area will be subject to ground shaking associated with earthquakes on faults of the San Andreas, Garlock, and Transverse Ranges fault systems. Active faults of the San Andreas system are predominantly strike-slip faults accommodating translational movement. The predominant active faults in the Project area are the San Andreas and Garlock faults.

The Project area will be subject to ground shaking associated with earthquakes on faults of the San Andreas and Garlock systems, and other regional faults. Figure 5.6-1 (Regional Active Faults and Historic Earthquakes) shows locations of active and potentially active faults (representing possible seismic sources) and earthquakes greater than magnitude 5.0 in the region surrounding the Proposed Project. Active and potentially active faults within 50 miles of the Project alignments that are significant potential seismic sources relative to the Proposed Project are presented in Table 5.6-2.

Table 5.6-2. Significant Active and Potentially Active Faults within 50 miles of the Proposed Project

Fault Name	Distance[1] (miles)	Closest Project Component(s)	Estimated Maximum Magnitude[2]
Garlock fault zone	3.4	Southeast of Proposed Telecommunication Route 1	7.3
White Wolf fault zone	8.7	Northwest of Proposed Telecommunication Route 2	7.2
Plieto fault zone	19.6	Southwest of Proposed Banducci Substation	7.1
San Andreas fault zone	24.5	Southwest of Proposed Banducci Substation	7.0–7.6[3]
Lenwood-Lockhart fault zone	34.7	East of Monolith Substation	7.5
Southern Sierra Nevada fault	36.9	Southeast of Monolith Substation	7.5

1 - Fault distances measured from USGS GIS Quaternary fault data (USGS and CGS, 2010).
2 - Maximum Earthquake Magnitude – the maximum earthquake that appears capable of occurring under the presently known tectonic framework, magnitude listed is "Ellsworth-B" magnitude from USGS OF08-1128 (Documentation for the 2008 Update of the United States National Seismic Hazard Maps) unless otherwise noted.
3 - Range of Magnitude for San Andreas fault zone represents varying potential rupture scenarios with single or multiple segments rupturing in various combinations.

The closest fault to the site, the Garlock fault zone, is a major active (Holocene), east to northeast-striking left lateral strike-slip fault that forms the boundary between the Tehachapi Mountains, Sierra Nevada, and Basin and Range province on the north and the Mojave Desert province to the south. The Garlock fault zone is divided into three sections, with the central section being the closest to the Proposed Project. Although, no earthquakes have produced surface rupture on the Garlock fault in historic times, there have been a few large earthquakes recorded along the Garlock fault zone, with the most recent being a magnitude (M) 5.7 earthquake near the town of Mojave on July 11, 1992 (SCEDC, 2014).

The next closest fault to the Proposed Project is the White Wolf fault zone. This fault zone is an active, east to northeast-striking left lateral reverse range front fault that dips to the southeast located on the northwest flank of the Tehachapi Mountains. This fault was responsible for the July 21, 1952 M 7.3 Kern County Earthquake. The Kern County Earthquake resulted in the death of 12 people, damage to hundreds of buildings in Kern County, and over $50 million in property damage. It was felt as far away as Reno and San Diego.

Fault Rupture

Fault rupture is the surface displacement that occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture and displacement almost always follows preexisting faults, which are zones of weakness, however not all earthquakes result in surface rupture (i.e., earthquakes that occur on blind thrusts do not result in surface fault rupture). Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. In addition to damage caused by ground shaking from an earthquake, fault rupture is damaging to buildings and other structures due to the differential displacement and deformation of the ground surface that occurs from the fault offset, leading to damage or collapse of structures across this zone.

While the closest fault to the project site is the active Garlock fault, no known active or potentially active faults are mapped crossing or immediately adjacent to any project components. Therefore there is little to no potential for primary fault rupture to impact the project site.

Ground Shaking

An earthquake is classified by the amount of energy released, which traditionally has been quantified using the Richter scale. Recently, seismologists have begun using a Moment Magnitude (M) scale because

it provides a more accurate measurement of the size of major and great earthquakes. For earthquakes of less than M 7.0, the Moment and Richter Magnitude scales are nearly identical. For earthquake magnitudes greater than M 7.0, readings on the Moment Magnitude scale are slightly greater than a corresponding Richter Magnitude. Review of earthquake data for the project area indicates that approximately 35 earthquakes of greater than magnitude 5.0 have occurred within 50 miles of the Proposed Project, including the M 7.3 Kern County Earthquake and its numerous aftershocks (NCEDC, 2014).

The intensity of the seismic shaking, or strong ground motion, during an earthquake is dependent on the distance between the Project area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the Project area. Earthquakes occurring on faults closest to the Project area would most likely generate the largest ground motion. The intensity of earthquake induced ground motions can be described using peak site accelerations, represented as a fraction of the acceleration of gravity (g). The USGS National Seismic Hazards (NSH) Maps were used to estimate approximate peak ground accelerations (PGAs) in the Proposed Project area (USGS, 2014). The NSH Maps depict peak ground accelerations with a 2 percent probability of exceedance in 50 years, which corresponds to a return interval of 2,475 years and for a maximum considered earthquake. The estimated approximate peak ground acceleration from large earthquakes for the project area is approximately 0.5 to 0.6 g, which corresponds to moderate to strong ground shaking.

Liquefaction. Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong groundshaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects (Youd and Perkins, 1978). In addition, densification of the soil resulting in vertical settlement of the ground can also occur.

In order to determine liquefaction susceptibility of a region, three major factors must be analyzed. These include the density and textural characteristics of the alluvial sediments, the intensity and duration of groundshaking, and the depth to groundwater.

A review of the California Department of Water Resources (DWR) Water Data Library and the Tehachapi-Cummings County Water District Watermaster Reports for Cummings and Tehachapi Valleys indicates that water levels in the Cummings, Brite, and Tehachapi Valley areas is generally greater than 100 feet below ground surface (DWR, 2014 and TCCCWD, 2014a & 2014b), however local wells within Cummings and Tehachapi Valleys do exhibit shallower water levels ranging from near artesian conditions with levels just below ground surface (bgs) to approximately 30 to 40 feet bgs. Due to the varying groundwater depths in Cummings and Tehachapi Valleys in the vicinity of the Proposed Project and the presence of potentially liquefiable Holocene alluvium underlying project components, there is a potential that the project components would be subject to liquefaction-related phenomena in the event of a large regional earthquake.

Seismic Slope Instability. The other form of seismically induced ground failure which may be caused by an earthquake is seismically induced landslides. Landslides triggered by earthquakes have been a significant cause of earthquake damage. In southern California large earthquakes such as the 1971 San Fernando and 1994 Northridge earthquakes triggered landslides that were responsible for destroying or damaging numerous structures, blocking major transportation corridors, and damaging life-line infrastructure. Areas that are most susceptible to earthquake-induced landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to

existing landslide deposits. However, as the Proposed Project components would be in flat to relatively flat topography and are not located immediately adjacent to steep slopes, earthquake induced slope instability is not likely to affect the Proposed Project.

Regulatory Background

Federal

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the Waters of the U.S. The CWA authorizes the Public Health Service to prepare comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries and improving the sanitary condition of surface and underground waters with the goal of improvements to and conservation of waters for public water supplies, propagation of fish and aquatic life, recreational purposes, and agricultural and industrial uses. The Proposed Project construction would disturb a surface area greater than one acre; therefore, under Clean Water Act regulations, SCE would be required to obtain a National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity. Compliance with the NPDES would require that the Applicant submit a Storm Water Pollution Prevention Plan (SWPPP).

State

The International Building Code (IBC) is published by the International Code Council (ICC), the scope of this code covers major aspects of construction and design of structures and buildings, except for three-story one- and two-family dwellings and town homes. The International Building Code has replaced the Uniform Building Code as the basis for the California Building Code and contains provisions for structural engineering design. The 2015 IBC addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs.

The California Building Code, Title 24, Part 2 (CBC, 2013) provides building codes and standards for design and construction of structures in California. The 2013 CBC is based on the 2012 International Building Code with the addition of more extensive structural seismic provisions. The 2013 CBC remains in effect through 2016. Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972, Public Resources Code (PRC), sections 2621–2630 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. While this act does not specifically regulate transmission and telecommunication lines; it does help define areas where fault rupture is most likely to occur. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geologic explorations in order to determine whether building setbacks should be established.

The Seismic Hazards Mapping Act (the Act) of 1990 (Public Resources Code, Chapter7.8, Division 2, sections 2690–2699.) directs the California Department of Conservation, Division of Mines and Geology [now called California Geological Survey (CGS)] to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by

identifying and mitigating seismic hazards. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

California Public Utilities General Order 95 (GO95) and General Order 128 (GO128) contain State of California rules formulated to provide uniform requirements for overhead electrical line construction and underground electrical supply and communication systems, respectively, to insure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead electrical lines and underground electrical supply and communication systems and to the public. GO95 and GO128 are not intended as complete construction specifications, but to embody requirements which are most important from the standpoint of safety and service. Construction shall be according to accepted good practice for the given local conditions in all particulars not specified in the rules. GO95 applies to all overhead electrical supply and communication facilities which come within the jurisdiction of the California Public Utilities Commission, located outside of buildings, including facilities that belong to non-electric utilities, as follows: Construction and Reconstruction of Lines, Maintenance of Lines, Lines Constructed Prior to This Order, Reconstruction or Alteration, Emergency Installation, and Third Party Nonconformance. GO128 applies to (a) all underground electrical supply systems used in connection with public utility service; when located in buildings, the vaults, conduit, pull boxes or other enclosures for such systems shall also meet the requirements of any statutes, regulations or local ordinances applicable to such enclosures in buildings; and (b) all underground communication systems used in connection with public utility service located outside of buildings. GO128 applies to the following activities related to underground electrical supply and communication systems: Construction and Reconstruction of Lines, Maintenance, Systems Constructed Prior to These Rules, Reconstruction or Alteration, and Third Party Nonconformance.

The Institute of Electrical and Electronics Engineers (IEEE) 693 "Recommended Practices for Seismic Design of Substations" was developed by the Substations Committee of the IEEE Power Engineering Society, and approved by the American National Standards Institute and the IEEE-SA Standards Board. This document provides seismic design recommendations for substations and equipment consisting of seismic criteria, qualification methods and levels, structural capacities, performance requirements for equipment operation, installation methods, and documentation. This recommended practice emphasizes the qualification of electrical equipment. IEEE 693 is intended to establish standard methods of providing and validating the seismic withstand capability of electrical substation equipment. It provides detailed test and analysis methods for each type of major equipment or component found in electrical substations. This recommended practice is intended to assist the substation user or operator in providing substation equipment that will have a high probability of withstanding seismic events to predefined ground acceleration levels. It establishes standard methods of verifying seismic withstand capability, which gives the substation designer the ability to select equipment from various manufacturers, knowing that the seismic withstand rating of each manufacturer's equipment is an equivalent measure. Although most damaging seismic activity occurs in limited areas, many additional areas could experience an earthquake with forces capable of causing great damage. This recommended practice should be used in all areas that may experience earthquakes.

Local

Kern County. The Kern County General Plan, the Kern County Zoning Ordinance, and the Kern County Code of Building Regulations include policies for the avoidance of geologic hazards and/or the protection of unique geologic features. The Safety Element (Chapter 4) of the Kern County General Plan (County of

Kern, 2009) provides policies and measures to minimize injuries and loss of life and reduce property damage from seismic and geologic hazards. The main policy relevant to the Proposed Project is "The County shall encourage extra precautions be taken for the design of significant lifeline installations, such as highways, utilities, and petrochemical pipelines." Proper design of the Project facilities, including any and all mitigation measures outlined in this document, would comply with this policy and would be consistent with the Safety Element.

Greater Tehachapi Area Specific and Community Plan (GTASCP). The Greater Tehachapi Area (GTA) is a collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin valley and the Mojave Desert that includes the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Chapter 5 of the GTASCP, The Safety Element, contains a discussion of the existing safety concerns within the GTA and the policies and implementation measures, if necessary, to mitigate any adverse safety concerns. The identified safety concerns provide direction for developing goals and policies to protect the GTA from adverse safety impacts through subsequent development implementation within the Plan.

Applicant Proposed Measures

No APMs related to geology and soils hazards have been proposed by SCE.

5.6.2 Environmental Impacts and Mitigation Measures

a. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

NO IMPACT. None of the Proposed Project components are located across or immediately adjacent to active or potentially active fault and thus would not be subject to damage due to fault rupture.

ii) Strong seismic ground shaking?

LESS THAN SIGNIFICANT. The majority of the Proposed Project area is located in an area mapped as likely to experience moderate to strong ground shaking in the event of a large earthquake. The area has historically experienced minor to moderate groundshaking due to earthquakes that have occurred in the region. Although the Proposed Project is located in an area that may experience moderate to strong groundshaking due to large local or regional earthquakes, the proposed Banducci Substation would be designed as required by the Institute of Electrical and Electronic Engineers per guidelines in IEEE 693 (Recommended Practices for Seismic Design of Substations), and the new structures for the Proposed Project's new 115 kV subtransmission line segments, new poles, and new underground substructures for Telecommunications Routes 1 and 2 would be designed as required by CPUC General Orders 95 and 128 (overhead electrical line construction requirements and underground electrical supply and communication systems requirements, respectively). Design of these new structures to these guidelines and standards would reduce any potential damage from groundshaking to these features to less than significant.

The remainder of the Proposed Project consists of the installation of fiber optic telecommunications cables on the existing poles and in existing underground conduit of Routes 1 and 2, with 39 poles being replaced along Route 2 as part of the Proposed Project. These 39 poles are being replaced to ensure wind loading

design loading criteria are met with the additional weight of the fiber optic telecommunication cable. The existing and new poles would be and have been designed to a wind loading standard that generally also exceeds seismic loading criteria, thus reducing the risk of a pole failing during a seismic event. It is not expected that the addition of the fiber optic cable to the existing and replacement poles or within the existing and new underground conduit would add substantial instability to the existing structures or create instability in the new structures; the potential for earthquake-induced groundshaking damage to the existing and new poles and conduit along most of the fiber optic telecommunications routes would not change from the current conditions, resulting in a less-than-significant impact.

iii) Seismic-related ground failure, including liquefaction?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The portions of the Proposed Project located within loose, Holocene alluvial sediments of Cummings and Tehachapi Valleys, where there is a potential for shallow groundwater, may be subject to liquefaction in the event of strong ground shaking. The proposed Banducci Substation and related structures, the new subtransmission structures, and the new segments of underground conduit and replacement poles for the telecommunications routes located in areas with potentially liquefiable Holocene alluvial sediment could potentially suffer liquefaction-related damage in a large earthquake if not properly designed. As required by required by the Institute of Electrical and Electronic Engineers per guidelines in IEEE 693 (Recommended Practices for Seismic Design of Substations) and CPUC General Orders 95 and 128 these structures would be designed to withstand seismic loading; however, to ensure that impacts associated with seismically induced ground failures or liquefaction would be less than significant, Mitigation Measure G-1 (Conduct geotechnical investigations for liquefaction) shall be implemented prior to final project design to ensure that people or structures are not exposed to hazards associated with earthquake-induced liquefaction.

Generally, the addition of fiber optic telecommunication cable along existing and new poles and conduit in these potentially liquefiable areas is not expected to add substantial instability to the existing or new structures because they do not meet CPUC GO95 wind loading requirements and/or SCE design standards with the addition of the fiber optic cable. The potential for liquefaction-related damage to the existing poles along most of the transmission/fiber optic telecommunications alignments would not change from the current conditions with the addition of the fiber optic cable, resulting in a less-than-significant impact for this portion of the Proposed Project.

Mitigation Measure for Seismic-related Ground Failure and Liquefaction

MM G-1 **Conduct Geotechnical Investigations for Liquefaction.** Because seismically induced liquefaction-related ground failure has the potential to damage or destroy Project components, the design-level geotechnical investigations to be performed by the SCE shall include investigations designed to assess the potential for liquefaction to affect the new Project structures and replacement poles within Cummings and Tehachapi Valleys in areas with potential liquefaction-related impacts. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the Project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables to allow ground deformations without damage to structures. Study results and proposed solutions to mitigate liquefaction shall be provided to the CPUC for review and approval at least 60 days before final Project design.

iv) Landslides?

NO IMPACT. The Proposed Project components are on and traverse flat to relatively flat topography and no known landslides occur in the immediate project vicinity, therefore landslides and other slope failures would not occur, thus there would be no impact related to landslides or slope instability.

b. Would the project result in substantial soil erosion or the loss of topsoil?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Increased rates of soil erosion are not expected to result from the installation of structures for the new proposed subtransmission line segments or replacement of the 39 existing wood poles on Telecommunication Route 2 due to the limited amount of surface ground disturbance anticipated for construction of these features. Additionally, installation of the fiber optic telecommunication cable in areas of existing overhead structures is not expected to create substantial ground disturbance that would cause increased levels of soil erosion.

Areas of trenching and grading for the Proposed Banducci Substation, and for installation of the new underground substructures for the fiber optic telecommunications cables along Telecommuncations Routes 1 and 2 would present the highest risk of adverse impacts. The soils in these areas with the highest ground disturbance for the Proposed Project have low to moderate susceptibility for sheet and rill erosion and low to moderate wind erodibility. However, Mitigation Measure G-2 provides for a Stormwater Pollution Prevention Plan (SWPPP), which would be required in accordance with the Clean Water Act. Implementation of Mitigation Measure HYD-1 (Develop Stormwater Pollution Prevention Plan and Implement Best Management Practices) in Section 5.9 (Hydrology and Water Quality) would limit erosion from the construction sites and would result in a less-than-significant impact.

c. Would the project be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

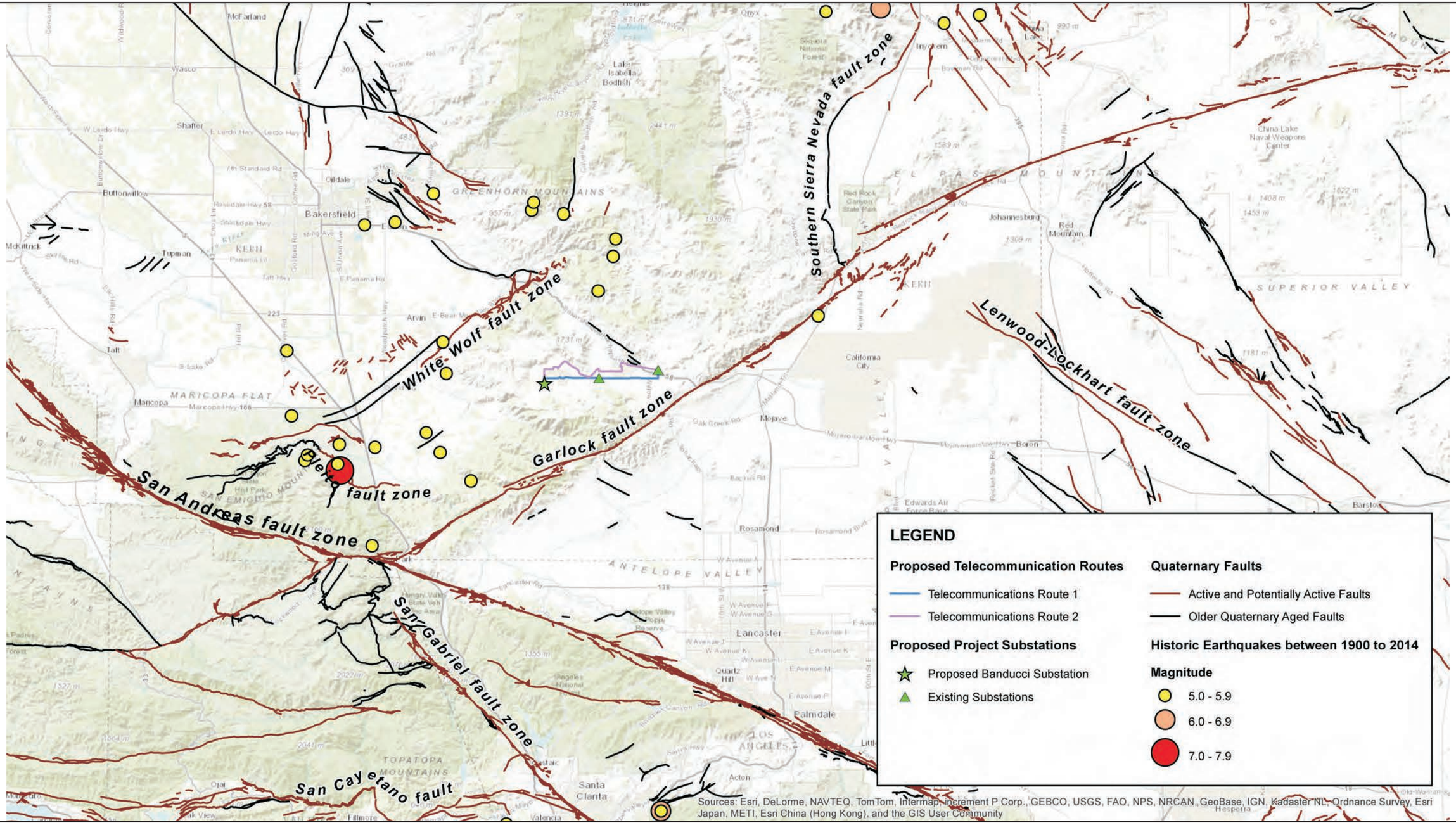
LESS THAN SIGNIFICANT. As discussed above in item a.(iii) – Liquefaction, portions of the Proposed Project where new project structures would be constructed in the Cummings and Tehachapi Valleys are located in areas with potentially liquefiable alluvial sediment and could potentially suffer liquefaction-related damage; however, implementation of Mitigation Measure G-1 (Conduct geotechnical investigations for liquefaction) prior to final project design would ensure that people or structures are not exposed to hazards associated with earthquake-induced liquefaction, reducing the impact to less than significant. Additionally, as discussed above in item a.(iv) – Landslides, there would be no impact from landslides as the Proposed Project is located on and traverses flat to gently sloping terrain and would not be subject to landslides.

d. 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?

LESS THAN SIGNIFICANT. Most of the Proposed Project's new structures (the Banducci Substation, new subtransmission structures, and the new underground segment of Telecommunication Route 1 near the substation) are underlain by the Steuber soil association, which has a low potential for expansion. Therefore, these project components would not be subject to damage related to expansive soils. The remaining project structures (replacement poles and new underground structures) are located in soils with low to moderate expansion potential and could potentially be subject to damage related to expansive soils. However, these structures would be designed to meet CPUC General Order 95 and 128 requirements, which would reduce the impact to less than significant.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

NO IMPACT. There is no sewer service available at the proposed Banducci Substation site. A permanent stand-alone restroom equipped with self-contained water- and waste-holding tanks would be installed within the substation perimeter wall. No septic system would be installed at this site. No other components of the Proposed Project would require new connections to a sewer or septic system. Thus, there would be no impact from disposal of wastewater.



Source: SCE, 2014.

Figure 5.6-1
Regional Active Faults and Historic Earthquakes

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5.7 Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.7.1 Setting

Globally, temperature, precipitation, sea level, ocean currents, wind patterns, and storm activity are all affected by the presence of greenhouse gas (GHG) pollutants in the atmosphere. In contrast to air quality, that is of regional or local concern, human-caused emissions of GHGs are linked to climate change on a global scale. GHGs allow ultraviolet radiation to enter the atmosphere and warm the Earth's surface and prevent some infrared radiation emitted by the Earth from escaping back into space. Human activity contributes to emissions of six primary GHGs: carbon dioxide (CO_2) CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6).

The largest anthropogenic source of GHGs is fossil fuel combustion, which results primarily in CO_2 emissions. Other GHG emissions tracked by State inventories occur in much smaller quantities. However, the global warming potential of CH_4 is about 25 times that of CO_2 (CARB, 2014a). The use of sulfur hexafluoride (SF_6) in power transformers and circuit breakers at power plants, switchyards, and substations also poses a concern, because this pollutant can slowly escape from the equipment, and it has an extremely high global warming potential (one pound of SF_6 has the equivalent warming potential of approximately 22,800 pounds of CO_2). When quantifying GHG emissions, the different global warming potentials of GHG pollutants are usually taken into account by normalizing their rates to an equivalent CO_2 emission rate (CO2e).

When California first formalized a strategy for achieving GHG reductions in 2008, the State produced approximately 487 million metric tons of CO_2 equivalent (MMTCO2e), an amount equal to about 537 million tons (CARB, 2014b). (One metric ton (MT) equals 1,000 kilograms, which is 2,204.6 pounds or about 1.1 short tons.) In 2012, California's emissions were approximately 459 MMTCO2e (CARB, 2014b) or less than one percent of the 49,000 MMTCO2e emitted globally (IPCC, 2014).

Regulatory Background

U.S. EPA GHG Mandatory Reporting Program (40 CFR Part 98). This rule requires mandatory reporting of GHG emissions for industrial facilities and power plants that emit more than 25,000 MTCO2e per year. Currently, there are no federal regulations limiting GHG emissions from projects such as the Proposed Project.

California Global Warming Solutions Act of 2006 (Assembly Bill 32). This law (AB 32, Chapter 488, Statutes of 2006) requires CARB to adopt a Statewide greenhouse gas emissions limit equivalent to the Statewide GHG emissions levels in 1990, to be achieved by 2020. A longer range GHG reduction goal was set in June 2005 by California Executive Order S-3-05, which requires an 80 percent reduction of greenhouse gases from 1990 levels by 2050.

AB 32 directs the CARB to develop regulations and a mandatory reporting system to track and monitor GHG emissions levels. In passing AB 32, the California Legislature found that:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*

CARB adopted the 2020 Statewide target and mandatory reporting requirements initially in December 2007 and the AB 32 Scoping Plan in December 2008 (CARB, 2008). In 2014, CARB updated the target and adopted the First Update to the Climate Change Scoping Plan (CARB, 2014a). Enforceable cap-and-trade rules became effective in 2013 for a wide range of large industrial and fossil-fuel burning sources, including electricity generation facilities. In 2015, the program expands to cover GHG emissions from all of the California economy.

Steps taken by the CPUC to address climate change include the requirements imposed on utilities under the Electricity Greenhouse Gas Emission Standards Act (SB 1368[1]), which requires that generation and contracts be subject to a GHG Environmental Performance Standard of 1,100 pounds (or 0.5 metric tons) of CO_2 per megawatt-hour (MWh) of electricity produced. The Emissions Performance Standard applies to base load power from new power plants, new investments in existing power plants, and new or renewed contracts with terms of five years or longer, including contracts with power plants located outside of California.[2] Implementation of the Climate Change Scoping Plan requires careful coordination on the State's energy policies, meaning that CPUC and CARB are working closely to implement the recommendations in the Scoping Plan, especially one key element of the plan: achieving a renewable energy mix of 33 percent that is reliably delivered to electricity customers.

California Renewable Energy Resources Act of 2011 (Senate Bill X1-2). In April 2011, Senate Bill (SB) 2 of the 1st Extraordinary Session (SB X1-2) was signed into law. SB X1-2 expressly applies the new 33 percent Renewable Portfolio Standard (RPS) by December 31, 2020 to all retail sellers of electricity and establishes renewable energy standards for interim years of: an average of 20 percent from 2011 through 2013; a minimum of 20 percent thereafter through 2016; and, a minimum of 25 percent by December 31, 2016. This codified the requirement to achieve 33 percent RPS statewide by the end of 2020, consistent with the AB 32 Scoping Plan and the First Update to the Climate Change Scoping Plan (CARB, 2014a).

Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100). Mandatory reporting of GHG emissions applies to electric generating facilities with a nameplate capacity equal or greater than 1 MW capacity and GHG emissions exceeding 2,500 metric tons per year. As an Electric Power Entity under this rule, SCE must report GHG emissions associated with providing electricity to end-use customers.

CARB SF_6 Regulations (17 CCR 95350). In 2010, CARB adopted a regulation for reducing SF_6 emissions from electric power system gas insulated switchgear. The regulation requires owners of such switchgear to: (1) annually report their SF_6 emissions; (2) determine the emission rate relative to the SF_6 capacity of the switchgear; (3) provide a complete inventory of all gas insulated switchgears and their SF_6 capacities;

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1 Public Utilities Code § 8340 et seq.

2 See Rule at http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/64072.htm

(4) produce a SF_6 gas container inventory; and (5) keep all information current for CARB enforcement staff inspection and verification.

Applicant Proposed Measures

There are no applicant proposed measure related to greenhouse gas emissions.

5.7.2 Environmental Impacts and Mitigation Measures

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT DURING CONSTRUCTION. Construction of the proposed substation, subtransmission line segments, and other project facilities would result in emission of GHGs from construction equipment at the various work areas and off-site motor vehicle trips carrying workers and materials. Motor vehicles, off-road equipment, and other construction equipment would directly emit CO_2, CH_4, and N_2O due to fuel use and combustion. Motor vehicle fuel combustion emissions in terms of CO2e are approximately 95 percent CO_2, and CH_4 and N_2O emissions occur at rates of less than 1 percent of the mass of combustion CO_2 emissions. Other GHGs such as SF_6, hydrofluorocarbons, and perfluorocarbons were not included in the construction emission calculations because construction activities would not emit these GHG constituents.

Emissions for each phase and for each month of proposed activity are calculated based on the proposed quantities and types of equipment and activities. The emission estimates rely on factors from the CARB OFFROAD2011 and EMFAC2011 models and U.S. EPA emission factors. Based on the construction activity forecast, approximately 1,079 MTCO2e would be emitted over the entire construction phase of the Proposed Project (SCE, 2014, Revised by Response to Question T-2 Amended). Construction-related emissions would be spread over a development schedule of one year. Construction-related GHG emissions would not recur over the life of the project, but these levels would be under the threshold level of 2,500 metric tons for annual mandatory reporting of GHG (17 CCR 95100). Emissions would also be below threshold levels of 25,000 metric tons adopted by the Eastern Kern Air Pollution Control District (EKAPCD, 2012) and 10,000 metric tons for annually recurring emissions from stationary sources used elsewhere in southern California (SCAQMD, 2011). With total project construction emissions of approximately 1,079 MTCO2e (SCE, 2014), construction-related GHG emissions would not have a significant impact on the environment, and the impact would be less than significant.

LESS THAN SIGNIFICANT DURING OPERATION. Maintenance of the proposed substation, subtransmission line segments, and other project facilities would result in low levels GHG emissions from the mobile sources used during routine operations by SCE. The proposed installation of new circuit breakers and gas switches at the Banducci Substation would also introduce new gas insulated switchgear that would be a source of GHG due to the leakage of SF_6. The quantity of potential SF_6 emissions and the mobile source emissions in terms would be 11 metric tons CO2e (SCE, 2014, PEA Table 4.7-1). The new circuit breakers would be required to comply with the CARB-adopted standards for SF_6 use in gas insulated circuit breakers. Based on SF_6 emission rates at the maximum leakage rate allowed by the manufacturer of 0.5 percent (SCE, 2014, PEA Appendix C), the CARB requirements for control of SF_6 and recordkeeping, the actual GHG emissions would be minor and well below the threshold of 2,500 metric tons for mandatory reporting. This level of GHG would not have a significant impact on the environment, and the impact associated with the GHG emissions would be less than significant.

b. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT. The Climate Change Scoping Plan, initially approved by CARB in 2008 with an update in 2014 (CARB, 2014a), provides an outline of actions to reduce California's GHG emissions. The scoping plan requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs.

The Proposed Project would improve the infrastructure used in distribution of California's energy supply, and would not affect California's ability to supply renewable energy. The Proposed Project would not affect SCE's ability to meet its RPS obligations. Similarly, the Proposed Project would not affect or conflict with any local goals or programs to achieve GHG reduction targets.

SCE would comply with CARB SF_6 regulations to inventory, report, and minimize SF_6 leaks through the use of new technology. By complying with these requirements, the Proposed Project would not conflict with any applicable GHG management plan, policy, or regulation. Therefore, this impact would be less than significant.

5.8 Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☑	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☑	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑	☐
f. 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?	☐	☐	☐	☑
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☑	☐	☐
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☑	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.8.1 Setting

This section addresses issues related to environmental hazards and hazardous materials, including accidental spills of hazardous materials, the presence of existing subsurface contamination, the risk of wildfire, and aircraft safety. Hazardous materials include fuel, oil, solvents, and lubricants. If encountered, contaminated soil or groundwater can pose a health and safety threat to workers or the public.

Land Use

Existing and past land use activities are commonly used as indicators of sites or areas where hazardous material storage and use may have occurred or where potential environmental contamination may exist. For example, many historic and current industrial sites have soil or groundwater contaminated by hazardous substances. Other hazardous materials sources include leaking underground tanks in commercial and rural areas, contaminated surface runoff from polluted sites, and contaminated groundwater plumes. Current and former agricultural properties commonly have herbicide, pesticide, and/or fumigant soil contamination.

The Proposed Project is located in the Cummings, Brite, and Tehachapi Valleys of the Tehachapi Mountains in Kern County. Components of the Proposed Project pass through the city of Tehachapi and the unincorporated communities of Cummings Valley, Brite Valley, Old Town, and Monolith. Most of the land traversed by Proposed Project components is undeveloped open grasslands with scattered trees and shrubs, agricultural land, or sparsely developed rural residential areas; a small portion of the Proposed Project traverses residential, commercial, and light industrial areas in and adjacent to the city of Tehachapi.

The proposed Banducci Substation and associated new subtransmission are located in Cummings Valley, which is primarily agricultural with scattered rural residences. Proposed Telecommunications Route 1 traverses agricultural and rural residential properties for most of its alignment, traverses across The California Correctional Institution, and traverses adjacent to a small section of residential land use as it crosses along the southern boundary of the city of Tehachapi. Proposed Telecommunications Route 2 traverses agricultural properties as it crosses north and east through Cummings Valley and then crosses adjacent to primarily rural residential properties with scattered agricultural land as it traverses along the northern edge of Brite Valley and the western end of Tehachapi Valley. This route crosses through a small area of commercial land use near Woodford-Tehachapi Road and Commercial Avenue just outside of the Tehachapi city limits. Continuing east through Tehachapi, it traverses primarily residential areas with scattered commercial and light industrial businesses. East of Dennison Road, land use along Telecommunications Route 2 transitions to primarily undeveloped grassland with scattered agricultural, rural residential, commercial, and light industrial properties.

Hazards and Hazardous Materials

During construction, hazardous materials such as cleaning solvents, paints, adhesives, vehicle fuels, oil, hydraulic fluid, and other vehicle and equipment maintenance fluids would be used and stored in construction staging yards. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. In addition, construction of the Proposed Project would be anticipated to involve the transport, use, and disposal of other hazardous materials, including hazardous liquid materials (such as mineral oil). Normal maintenance and refueling of construction equipment would be conducted at the staging yards.

The Proposed Project would replace approximately 39 existing treated wood poles. SCE states in the PEA that reuse or disposal of these poles would be required as part of the Proposed Project. SCE states that it is anticipated that these poles would either be reused, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a RWQCB-certified municipal landfill (SCE, 2014).

Operation of the Proposed Project would require the use and storage of liquids classified as hazardous materials at the Proposed Banducci Substation. Based on the anticipated volume of hazardous liquid materials (such as mineral oil) in excess of 1,320 gallons to be used at the site, a Spill Prevention, Control, and Countermeasure (SPCC) Plan would be required in accordance with 40 Code of Federal Regulations (CFR) Parts 112.1-112.7 (SCE, 2014).

There are three abandoned oil/gas wells located in Cummings Valley in the vicinity of the proposed Banducci Substation site. The closest well is a plugged, dry well located approximately 0.4 mile**s** northeast of the proposed Banducci Substation site. Due to the distance from the Proposed Project it would neither impact nor be impacted by the Proposed Project (DOGGR, 2014).

Environmental Contamination

Components of the Proposed Project where ground disturbance would occur would be susceptible to encountering environmental contamination, if located in the vicinity of commercial or industrial sites with known contamination or adjacent to sites that store and use large quantities of hazardous materials, or in agricultural areas that may have used herbicides, pesticides, or fumigants. Ground disturbing activities for the Proposed Project are as follows:

- Grading, trenching, and excavation at and adjacent to the proposed Banducci Substation for construction and installation of the new substation facilities.
- Excavation for installation of the new 66 kV subtransmission structures, which would include excavation for six new tubular steel poles (TSPs), two new TSP guy stubs, two new light-weight steel (LWS) poles, and seven new wood poles.
- Trenching for installation of new underground substructures for the new telecommunications cable, which would include the following locations and lengths:
  - Telecommunications Route 1: at and near the proposed Banducci Substation and along Pelliser and Dale Roads (3,250 feet); at Cummings Substation (510 feet); and at Monolith Substation (160 feet)
  - Telecommunications Route 2:at proposed Banducci Substation (290 feet); at W. Valley Boulevard and Woodford-Tehachapi Road (810 feet); and at Dennison Road and E. Tehachapi Boulevard (240 feet).
- Excavation for 39 replacement wood poles along proposed Telecommunication Route #2.

The proposed Banducci Substation and the nearby project components are located in an active agricultural area that is primarily used for row crops (SCE, 2014). In Kern County, records and permits for pesticides, herbicides, and fumigants used on agricultural properties and the commodities permitted for that site are maintained by the Kern County Department of Agriculture and Measurement Standards. However, while pesticides and/or herbicides and commodities permits were granted for a site, not all of the permitted pesticides and herbicides may have been used or the commodities grown at the site (SCE, 2014). The Kern County Department of Agriculture and Measurement Standards also maintains records of reported use of pesticides and herbicides for the permitted properties. SCE conducted a review of records for 2004 through 2013 of historic pesticide and herbicide use for the agricultural lots that include the proposed Banducci Substation Site (SCE, 2014).

As indicated in Table 5.8-1, no record of pesticide or herbicide use exists for 2009 through 2013 for the property containing the proposed Banducci Substation site, and a supplemental review of reported pesticide use for 2014, from January to July for this area also indicates no reported use of herbicides or pesticides (County of Kern, 2014). However, given the long history of agricultural use in the area at and near the proposed Banducci Substation site, excavation and grading for all project components in this area may encounter residual pesticides and/or herbicides in the soil.

Table 5.8-1. Historic Pesticide and Herbicide Use at and Adjacent to the Proposed Banducci Substation Site

Year	Permitted Commodity for Agricultural Site	Pesticide Use
2013	Arugula, lettuce leaf, mustard, spinach, and Swiss chard	No record of pesticide use
2012	Arugula, lettuce leaf, mustard, spinach, and Swiss chard	No record of pesticide use
2011	Fallow	No record of pesticide use

Table 5.8-1. Historic Pesticide and Herbicide Use at and Adjacent to the Proposed Banducci Substation Site

Year	Permitted Commodity for Agricultural Site	Pesticide Use
2010	Fallow	No record of pesticide use
2009	Potato	No record of pesticide use
2008	Turf/sod and onion dry etc.	Prowl H2O herbicide
2007	Turf/sod	Turflon Ester, No Foam A, and Subdue Maxx MC
2006	Turf/sod	No record of pesticide use
2005	Turf/sod	Turf Herbicide-Sun, Clean Crop Amine 4 2, 4-D Weed Killer, Loveland Industries Herbimax Oil-Surfact, Activator 90, Trimec Turf Herbicide Applicators Formula, and Nufarm Weedar 64 Broadleaf Herbicide
2004	Turf/sod	Norton SC Suspension Concentrate, Turf Herbicide-Sun, Clean Crop Amine 4 2, 4-D Weed Killer, Loveland Industries Herbimax Oil-Surfact, and Activator 90

Source: Table 4.8-1 from SCE Banducci Substation Project PEA (SCE, 2014).

SCE conducted a review of regulatory databases compiled by Environmental Data Resources, Inc. (EDR) for the area surrounding the proposed Banducci Substation which revealed no hazardous materials sites or known sites with environmental contamination within 0.5 miles of the substation site (SCE, 2014). A review of the State Water Resources Control Board's (SWRCB's) GeoTracker website was conducted by Geotechnical Consultants, Inc. in August 2014 for areas of the Proposed Project where ground disturbing activities such as excavation or trenching would occur. Six GeoTracker site listings, representing four properties, were identified within 1000 feet of ground disturbance locations along Telecommunications Route 2 in the City of Tehachapi and the unincorporated community of Old Town to the west of Tehachapi. These are listed in Table 5.8-2.

Table 5.8-2. GeoTracker Sites within 1000 feet of Proposed Project Components with Ground Disturbance

Site Name	Address	Listing Type[1]	Closest Project Component(s)	Distance (feet)
Wildrose Station	20436 Brian Way, Tehachapi	UST, Closed LUST	New underground for Route #2 at Woodford-Tehachapi Road	200 – southwest
Old Town Trading Post/ S and H Food Mart	20917 South St., Tehachapi	Closed LUST, UST	New underground for Route #2 at Woodford-Tehachapi Road	590 – west
Stop N Save	706 E Tehachapi Blvd., Tehachapi	UST	Replacement pole 1212624E for Route #2 on Tehachapi Blvd.	Adjacent to the south
Sid Garage	870 E Tehachapi Blvd., Tehachapi	Closed LUST	Replacement pole 1212624E for Route #2 on Tehachapi Blvd	610 – east

Source: (SWRCB, 2014).
1 - UST = underground storage tank; LUST = leaking underground storage tank

The closed LUST sites do not pose any potential risk for contamination to the Proposed Project due to their "case closed" status. The UST sites do not have any current known contamination issues and have a low potential to have caused contamination at the nearby Proposed Project locations with ground disturbance.

Schools

Although there are numerous public and private schools in the Tehachapi area and several in the outlying communities, only seven schools are located within 0.25-miles of the Proposed Project. The schools and their approximate distance from Project components are listed below:

- Cummings Valley Elementary School, 24220 Bear Valley Road, Tehachapi – located approximately 1290 feet northwest of proposed Telecommunications Route 2.
- Heritage Oak School, 20915 Schout Rd, Tehachapi – located approximately 500 feet south of proposed Telecommunications Route 2.
- Carden School of Tehachapi, 20419 Brian Way, Tehachapi – located approximately 700 feet northeast of a new underground section at Woodford-Tehachapi Road for proposed Telecommunications Route 2.
- Sunshine Place Preschool, 19016 Highline Road, Tehachapi – located south of and across the street from a proposed stringing site for proposed Telecommunications Route 1.
- Tompkins Elementary School, 1120 S. Curry Street, Tehachapi – located approximately 880 feet from a proposed stringing site for proposed Telecommunications Route 2 and approximately 810 feet from the proposed Telecommunications Route 2 alignment.
- Wells Elementary School, 300 S. Robinson Street, Tehachapi – located approximately 1330 feet south of proposed Telecommunications Route 2.
- Monroe High School (Continuation), 126 S. Snyder Avenue, Tehachapi – located adjacent to proposed Telecommunications Route 2 and replacement pole # 1212624E.

Airports and Airstrips

There are several airstrips/airports within the vicinity of the Proposed Project, including one private airstrip and two public airports. There is a private landing airstrip at PSK Ranch (listed as PSK Ranch Airport), which is located approximately 0.8 miles north of the proposed Banducci Substation site, approximately 0.25 miles north of proposed Telecommunication Route 1, and approximately 40 east of proposed telecommunications Route 2. Review of current and historic Google Earth photos show that the airstrip is apparently not currently used for aircraft takeoff and landing operations as it does not appear to have been maintained and is overgrown by vegetation in places. Historic Google Earth photos show the airstrip last is good condition in August 2006.

There are two public airports within 2 miles of proposed Telecommunication Routes 1 and 2, the Tehachapi Municipal Airport and Mountain Valley Airport. The Tehachapi Municipal Airport is a municipally owned public airport located in northern Tehachapi approximately 200-250 feet from proposed Telecommunication Route 2. The Tehachapi Municipal Airport runway is oriented northwest-southeast with its southwestern end about 350 feet north of Telecommunications Route #2. Mountain Valley Airport is a privately owned public airport located south of Tehachapi and is mainly used for gliders and some small aircraft. Mountain Valley Airport is located approximately 0.5 miles south of proposed Telecommunications Route 1. The Mountain Valley Airport has two parallel runways with one used exclusively for the gliders, oriented northwest-southeast with the closest end of the runway being approximately 2 miles from Telecommunications Route 1 measured along the trend of the runway.

Wildland Fires

The Proposed Project telecommunications routes pass through areas of grasslands with scattered trees and brush, agricultural areas, rural residential areas, and residential, commercial, and light industrial properties of the City of Tehachapi. Fire protection in the City of Tehachapi and the unincorporated communities near the Proposed Project area is provided by the Kern County Fire Department. According to the California Department of Forestry and Fire Prevention (CDF) Fire Hazard Severity Zone in SRA (State Responsibility Area) map for Kern County (CDF, 2007), the Proposed Project components are primarily in areas defined as High and Moderate Fire Hazard Severity Zones with a small portion of proposed

Telecommunication Route 2 crossing and adjacent to Very High Severity Zones near the north end of Brite Canyon.

Electric and Magnetic Fields

Electric voltage and electric current from transmission lines create electric and magnetic fields (EMF). Possible health effects associated with exposure to EMF have been the subject of scientific investigation since the 1970s, and there continues to be public concern about the health effects of EMF exposure. However, EMF is not addressed here as an environmental impact under CEQA. The CPUC has repeatedly recognized that EMF is not an environmental impact to be analyzed in the context of CEQA because (1) there is no agreement among scientists that EMF does create a potential health risk, and (2) there are no defined or adopted CEQA standards for defining health risks from EMF. Section 4.16 (Electric and Magnetic Fields Summary) provides information on EMF and the Proposed Project. Section 5.18 (Corona and Induced Current) discusses potential impacts associated with induced current.

Applicable Regulations

Hazardous substances are defined by federal and State regulations that aim to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14), and also in the California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

For this analysis, soil that is excavated from a site containing hazardous materials would be considered to be a hazardous waste if it exceeded specific CCR Title 22 criteria or criteria defined in CERCLA or other relevant federal regulations. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; it may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies having jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Federal

The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including the Superfund program, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endan-

ger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Federal Regulation 49 Code of Federal Regulations (CFR) Part 77 establishes standards and notification requirements for objects affecting navigable airspace. Under 49 CFR Part 77, notices to the Federal Aviation Administration (FAA) are required for the following activities:

- Any construction or alteration of more than 200 feet in height above the ground level at its site.
- Any construction or alteration of greater height than an imaginary surface extending outward and upward at one of the following slopes:
  - (i) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each with at least one runway more than 3,200 feet in actual length excluding heliports.
  - (ii) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport with its longest runway no more than 3,200 feet in actual length, excluding heliports.
  - (iii) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport.
- Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, or would exceed a standard of the thresholds outlined in specified in 49 CFR 77.
- When requested by the FAA, any construction or alteration that would be in an instrument approach area (defined in the FAA standards governing instrument approach procedures) and available information indicates it might exceed a standard specified in 49 CFR 77.
- Any construction or alteration on any of the airports (as specified in 49 CFR 77).

Due to the location of portions of SCE's existing and proposed telecommunications components, SCE would be subject to the notification requirements specified in 49 CFR 77.

State

California's cabinet-level agency, the California Environmental Protection Agency (Cal/EPA), was created in 1991. It brought the Air Resources Board (ARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), Integrated Waste Management Board (IWMB), DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one "umbrella" agency. Their coordinated missions are to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality.

The California Hazardous Waste Control Law (HWCL) is administered by Cal/EPA to regulate hazardous wastes. The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

Department of Toxic Substance Control (DTSC) is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340.2). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

In 1993 the State (Cal/EPA) was mandated by Senate Bill 1082 (Health and Safety Code Chapter 6.11) to establish a "unified hazardous waste and hazardous materials management" regulatory program (Unified Program). The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs:

- Hazardous Materials Release Response Plans and Inventories (Business Plans),
- California Accidental Release Prevention (CalARP) Program,
- Underground Storage Tank Program,
- Aboveground Petroleum Storage Act,
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs,
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

The Unified Program is implemented at the local level by various local government agencies certified by the Secretary of Cal/EPA. These agencies, known as Certified Unified Program Agencies (CUPA), implement all of the Unified Program elements and serve as a local contact for area businesses. The Kern County Environmental Health Services Department is certified by Cal/EPA as the CUPA for Kern County.

The Porter-Cologne Water Quality Act is a State law that provides a comprehensive water quality management system for the protection of California waters. The Act designates the SWRCB as the ultimate authority over state water rights and water quality policy, and also established nine Regional Water Quality Control Boards (RWQCB) to oversee water quality on a day-to-day basis at the local and regional levels. The RWQCBs have the responsibility of granting National Pollution Discharge Elimination System (NPDES) permits and waste discharge requirements (WDRs) for stormwater runoff from construction sites.

California Public Resources Codes (CPRC) Section 4292 and 4293 regulate fire protection and clearances related to electrical transmission or distribution lines. Section 4292 states that "any person that owns, controls, operates, or maintains any electrical transmission or distribution line…shall, during such times

and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a fire-break which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower. Section 4293 states that electrical transmission or distribution lines upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such area, have a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current maintained:

(a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet

(b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet

(c) For any line which is operating at 110,000 or more volts, 10 feet

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard.

Local

The County of Kern Environmental Health Services Department, Hazardous and Solid Waste Division, oversees businesses generating, storing, and transporting hazardous waste to protect the public health and the environment. The Division provides surveillance and enforcement for hazardous waste, radiological health, vector control, solid waste, and infectious waste. The program also provides emergency response to chemical events to furnish substance identification; health and environmental risk assessment; air, soil, water and waste sample collection; incident mitigation and cleanup feasibility options; and on-scene coordination for State superfund incidents. The program also provides for the oversight, investigation, and remediation of unauthorized releases from underground tanks.

Applicant Proposed Measures

SCE proposes to implement measures during the design, construction, and operation of the Proposed Project to ensure it would occur with minimal environmental impacts in a manner consistent with applicable rules and regulations. Applicant Proposed Measures (APMs) are a commitment by the Applicant (SCE) and are considered part of the proposed Project in the evaluation of environmental impacts. Therefore, the following discussions of impact analysis assume that all APMs will be implemented, including the one APM specific to hazards identified in Table 5.8-3.

Table 5.8-3. Applicant Proposed Measures – Hazardous Materials

APM Number	Description
APM HAZ-1	**Fire Management Plan.** A Fire Management Plan would be developed by SCE prior to the start of construction.

5.8.2 Environmental Impacts and Mitigation Measures

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. Construction of the Proposed Project would include the replacement of approximately 39 existing treated wood poles. SCE has indicated that they would be required to reuse or dispose of these poles as part of the Proposed Project (SCE, 2014). If disposed of, these treated wood poles would be classified as Treated Wood Waste (TWW) and would be required to be disposed of in a RWQCB approved Treated Wood Waste Landfill or a Class I hazardous waste landfill. In addition, construction activities associated with the Proposed Project, including the proposed Banducci Substation, the proposed 66 kV subtransmission line segments and new structures, the replacement of 39 subtransmission poles, and the installation of the new fiber optic telecommunication cables, would use hazardous materials such as gasoline, diesel fuel, oil, and lubricants associated with construction equipment and other vehicles and would use and store hazardous materials such as mineral oil, cleaning solvents, paints, adhesives, vehicle fuels, oil, hydraulic fluid, and other vehicle and equipment maintenance fluids in the construction staging yards. No acutely hazardous materials would be stored or used on location or at staging yards during construction. These hazardous materials would be transported, used, and disposed of in accordance with applicable laws, regulations, and SCE guidelines designed to prevent accidents, injury, or other damages to the public, workers, or the environment (SCE, 2014).

Minor spills or releases of hazardous materials could occur due to improper handling and/or storage practices during construction activities. These potential impacts would be partially avoided through implementation of the required site-specific Construction Stormwater Pollution Prevention Plan (SWPPP). The SWPPP prepared for the Proposed Project 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 (SCE, 2014). In addition, Material Safety Data Sheets would be made available at the construction site for all crew workers (SCE, 2014). Implementation of Mitigation Measure H-1 would further reduce the potential impact from transport, use, and disposal of hazardous materials to less than significant.

Mitigation Measure for Transport, Use, or Disposal of Hazardous Materials

MM H-1 **Prepare and Implement Worker Environmental Awareness Program (WEAP).** A project specific WEAP shall be prepared and submitted to the CPUC for approval prior to construction. The WEAP shall include, at a minimum, the following provisions related to hazards and hazardous materials:

- A presentation shall be prepared by SCE and used to train all site personnel prior to the commencement of work. A record of all trained personnel shall be kept.
- Instruction on compliance with Proposed Project mitigation measures.
- A list of phone numbers of SCE environmental specialist personnel associated with the Proposed Project (archaeologist, biologist, environmental coordinator, and regional spill response coordinator).
- Instruction on the individual responsibilities under the Clean Water Act, the project SWPPP, site-specific BMPs, and the location of Material Safety Data Sheets for the project.

- Worker Training on Emergency Release Response Procedures to include hazardous materials handling procedures for reducing the potential for a spill during construction, and hazardous material clean up procedures and training to ensure quick and safe cleanup of accidental spills.
- Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination. The foreman or regional spill response coordinator shall have authority to stop work at that location and to contact the Certified Unified Program Agency (CUPA) (i.e., Kern County Environmental Health Services Department) immediately if unanticipated visual evidence of potential contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the CUPA or other entities as specified by the CUPA.
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the Proposed Project.

LESS THAN SIGNIFICANT – OPERATION. Operation and maintenance of the Banducci Substation, associated new 66 kV subtransmission line segments and structures, and new fiber optic telecommunications cables would involve periodic and routine transport, use, and disposal of minor amounts of low toxicity hazardous materials consisting primarily of mineral oil and petroleum products (lubricating and insulating oils). The proposed Banducci Substation would be required to complete a SPCC Plan due to the planned operation of the oil-filled transformers, with typical SPCC features including curbs/valves, trenches, berms, or other features/structures designed and installed to contain spills, should they occur (SCE, 2014) and would also include operational methods for preventing, containing, and controlling potential releases, and provisions for quick and safe cleanup. All transport of hazardous materials would conducted in compliance with applicable laws, rules and regulations, including the acquisition of required shipping papers, package marking, labeling, transport vehicle placarding, training, and registrations (SCE, 2014). In the event of a spill, the SPCC would reduce the potential for contamination and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers.

b. 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?

LESS THAN SIGNIFICANT. Implementation of the required SPCC, SWPPP, and Mitigation Measure H-1 (Prepare and Implement Worker Environmental Awareness Program [WEAP]) for construction of the Proposed Project, as discussed above in Section 5.8.2(a), for spill prevention and hazardous substance control would reduce the potential impact from upset or accidental spills of hazardous materials to a less-than-significant level.

c. 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?

LESS THAN SIGNIFICANT. Hazardous materials to be used during the construction and operation of the Proposed Project would consist of low toxicity materials including gasoline, diesel fuel, oil, and lubricants associated with construction equipment and vehicles. These low toxicity materials would be used throughout the Proposed Project area. While there are seven schools located within 0.25 miles of the nearest

Proposed Project component, the low toxicity of the materials associated with the Proposed Project and proper handling, storage, and disposal of all hazardous materials in accordance with the project specific SWPPP, SPCC, Mitigation Measure H-1, and applicable regulations would reduce impacts to area schools to a less-than-significant level.

d. Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Most of the Proposed Project crosses through undeveloped grassland, rural residential, and medium density residential properties with no listed or known contaminated sites within 1000 feet of any of the Proposed Project components. However, portions of the Proposed Project, where ground disturbance would be required (trenching for the fiber optic telecommunications cables, excavation for several replacement poles, and excavations for the Banducci Substation and associated new 66 kV subtransmission segments and structures) cross through agricultural land with potential for residual pesticides and herbicides and through commercial and light industrial areas in Tehachapi with gas stations and other facilities that use and store hazardous materials that could have created previously unknown soil contamination. Should they be present, excavation and disposal of contaminated soils and or groundwater could potentially expose construction workers or the public to hazardous materials, a potentially significant impact. Implementation of Mitigation Measure H-2 would reduce the impact of residual pesticides and herbicides to less than significant.

Mitigation Measure for Residual Herbicides and Pesticides

MM H-2 **Identify Pesticide/Herbicide Contamination.** Prior to project construction, soil samples shall be collected in construction disturbance areas where the land has historically or is currently being farmed to identify the possibility of and to delineate the extent of pesticide and/or herbicide contamination. Materials containing elevated levels of pesticide or herbicide in areas of trenching or excavation will require special handling and disposal procedures. The local Certified Unified Program Agencies (CUPA) shall be contacted to provide oversight regarding the handling, treatment, and/or disposal options for pesticide or herbicide contaminate soil. Standard dust suppression procedures (as defined in Mitigation Measure AQ-1 [Implement EKAPCD Dust Control Measures]) shall be used in these construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public.

In the event that previously unknown contaminated soil is encountered during excavation activities in the light industrial areas of Tehachapi, implementation of Mitigation Measure H-3 would reduce the impact to less than significant.

Mitigation Measure for Discovery of Unknown Contamination

MM H-3 **Observe Exposed Soil for Evidence of Contamination.** During grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall segregate any suspect soil already excavated, stop work until sampling and testing is done to determine appropriate treatment and disposal, and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials/waste. Additionally, in the event that evidence of contamination is observed, the contractor shall document the

exact location of the contamination and shall immediately notify the local CUPA and CPUC, describing proposed actions. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CPUC.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

LESS THAN SIGNIFICANT – CONSTRUCTION. The proposed Banducci Substation site is not located within an airport land use plan or within 2 miles of a public airport. The nearest public airport, the Tehachapi Municipal Airport is located more than 9 miles northeast of the proposed Banducci Substation site and approximately 350 feet north of the nearest section of the Proposed Telecommunications Route 2. Portions of the existing telecommunications components are included in the Tehachapi Airport Master Plan Update (SCE, 2014). In SCE removed potential utility pole obstructions prior to completion of the Tehachapi Airport Master Plan Update in 2004 and a subsequent threshold siting analysis completed according to FAA methodology and California Department of Transportation guidelines concluded that removal of the poles cleared the obstructions to Runway 29, and that the airport improvements (relocating Runway 29 375 feet from the previous runway end) met the FAA threshold siting criteria (SCE, 2014).

The nearest proposed replacement pole for Telecommunications Route 2 would be approximately 500 feet away from Runway 29 and, as such, would be consistent with the existing approved siting criteria (SCE, 2014). Construction activities for proposed Telecommunication Route 2 in the vicinity of the Tehachapi Municipal Airport would occur within an area located in the Tehachapi Airport Master Plan Update, therefore SCE would be required under 49 CFR Part 77 to notify the FAA of the construction. Proposed Telecommunication Route 1 is located approximately 2 miles north of the end of the Mountain Valley Airport runways, however no replacement poles are planned in this area and stringing of the fiber optic cable should not interfere with the flight path of for these runways. Compliance with the federal aeronautics codes would ensure that construction of the Proposed Project would result in a less than significant impact in relation to safety hazards for people residing or working in the Proposed Project Study Area within two miles of a public airport.

NO IMPACT – OPERATION. The proposed Banducci Substation would not be located within an airport land use plan and would be located more than 9 miles away from the nearest public airport. The activities that would occur at the Proposed Project site would not be expected to interfere with a public airport or public use airport or create impacts that would result in a safety hazard for the people residing or working in the Proposed Project area. The addition of the fiber optic telecommunication cable to the existing and replaced subtransmission line poles would not alter the current physical alignment or height of the transmission poles and would not therefore present a safety hazard for people residing or working in the Project area near the Tehachapi Municipal Airport or the Mountain Valley Airport, resulting in no impact.

f. 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?

NO IMPACT. There is one listed private airstrip located approximately 0.8 miles northeast of the proposed Banducci Substation site and approximately 40 feet east of proposed Telecommunications Route 2; however, the airstrip does not appear to have been active since 2006 and is currently overgrown by vegetation. SCE site reconnaissance indicated that there are no people residing or working at or within the vicinity of the private airstrip (SCE, 2014). As such, construction and operation of the Proposed Project would not be expected to result in a safety hazard for people residing or working in the Proposed Project Study Area.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. The Proposed Project would be primarily located in rural area and residential areas. In the proposed Banducci Substation area there is only one main access road, Pelliser Road, to the proposed Banducci Substation site. SCE anticipates that Pelliser Road would serve as the main emergency access route to the site and that during construction, the perimeter fencing and security gates may interfere with emergency vehicle access or personnel evacuation from the site (SCE, 2014). In addition, construction-related activities and the presence of vehicles and equipment could potentially interfere with emergency access or response to the Proposed Project site or the few surrounding residences in the event of an emergency, such as a wildfire or chemical spill. Implementation of Mitigation Measures T-2 (Ensure Emergency Access and Response) and T-3 (Implement Traffic Management Plan) ensure that these potential impacts remain at a level that is less than significant and to ensure availability of emergency access to the Proposed Project site and the surrounding area during construction.

NO IMPACT – OPERATION. Operation and maintenance of the Proposed Project would not increase demands on existing emergency response services and would therefore have no impact on adopted emergency response plans or emergency evacuation plans.

h. Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Outside of the City of Tehachapi, the Proposed Project components are located in areas of grasslands, agricultural land, and low density rural residential areas. These areas are classified as Moderate to High Fire Hazard Severity Zones (FHSZs) by the CDF. The proposed substation and telecommunications routes are within Moderate to High FHSZs. In order to reduce the potential for wildland fire at Proposed Project work sites during construction and operation, SCE will implement APM HAZ-1, which would reduce wildfire risks. In order to reduce the potential impacts of risk of loss, injury or death involving wildland fires to less than significant, Mitigation Measure H-4 (Prepare a Fire Management Plan), which defines requirements and expands upon the Fire Management Plan required by APM HAZ-1, shall be implemented.

Mitigation Measure for Wildland Fires

MM H-4 **Prepare a Fire Management Plan.** SCE's Fire Management Plan shall be project-specific and shall include guidance for preventing, controlling, and extinguishing fires during construction and maintenance activities for the Proposed Project. The Fire Management Plan shall include provisions applicable to construction crews and activities and maintenance crews and activities. The Fire Management Plan shall include protocols to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. The Plan shall require construction crews to carry fire extinguishing equipment, prohibit trash burning, restrict smoking to cleared areas, and designate vehicle parking areas away from any dry vegetation to reduce potential ignition of fires at or near the project sites. Additionally the Plan shall include the following measures:

- Cease work during Red Flag Warning events in areas where grassland or other vegetation would be susceptible to accidental ignition by project activities that could ignite a fire (such as welding or use of equipment that could create a spark by striking rock). During Red Flag Warning events, as issued daily by the National Weather Service, all non-emergency construction and maintenance activities shall cease in affected areas.
- Remove hazards from work areas. SCE shall clear dead and decaying vegetation from the work area prior to starting construction and/or maintenance work. The work areas would include only those areas where personnel are active or where equipment is in use or stored, and may include: the Proposed Banducci Substation area and associated new fiber optic and subtransmission equipment; the new fiber optic telecommunications route; construction laydown areas; pull, tension, and splicing sites; access roads; parking pads; and any other sites adjacent to Proposed Project components where personnel are active or where equipment is in use or stored. Cleared dead and decaying vegetation shall either be removed or chipped and spread on site in piles no higher than six (6) inches.

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5.9 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Violate Regional Water Quality Control Board water quality standards or waste discharge requirements?	☐	☑	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater discharge such that there would be a net deficit in the aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☑	☐	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on or off site?	☐	☐	☑	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☐	☐	☑	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☑
f. Otherwise substantially degrade water quality?	☐	☐	☐	☑
g. Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other hazard delineation map?	☐	☐	☐	☑
h. Place within 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☑
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	☐	☐	☐	☑
j. Cause inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.9.1 Setting

The Proposed Project would be located largely within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB), with a portion of the easternmost project (where existing poles would be removed or replaced) located within the jurisdiction of the Lahontan RWQCB.

Surface Waters

Surface waters in the Project area are both ephemeral, containing active flow in direct response to precipitation events, and perennial, containing flow throughout the year. The nearest surface water features consist of several small, perennial ponds located east of the proposed Banducci Substation site, with the nearest feature less than one mile to the east. Brite Lake is located approximately three miles northeast of the proposed substation site. Please see Figure 5.9-1.

Portions of the inundation area associated with the Brite Valley Dam, or the area anticipated to be flooded in the event of a complete dam failure, are located approximately one mile north of the proposed substation site. In the event of failure of the Brite Valley Dam, water stored in the dam would flow through Brite Valley and Cummings Valley, eventually continuing into Stallion Springs through a golf course area. The Brite Valley Dam is 56 feet tall with a storage capacity of 1,820 acre-feet.

Groundwater

Groundwater basins in the Proposed Project area include the Brite Valley, Cummings Valley, and Tehachapi Valley Groundwater Basins. Of these, the Proposed Project traverses the Brite Valley and Cummings Valley Groundwater Basins; please see Figure 5.9-2. Any potential impacts to groundwater resulting from the Proposed Project would affect these basins, which therefore define the study area for groundwater resources and are described below.

Brite Valley Groundwater Basin. The Brite Valley Groundwater Basin has a surface area of 3,170 acres, or approximately five square miles, and is situated in a northwest to southeast trending valley bounded on the north by the Sierra Nevada and on the south by the Tehachapi Mountains. The southeast portion of the basin is drained by Brite Creek, which flows into Tehachapi Valley, and the northwest portion of the basin is drained by an unnamed ephemeral stream which flows into Cummings Valley. Recharge to this basin occurs from percolation of precipitation. Additional recharge occurs through percolation of water from a storage facility owned and operated by the Tehachapi-Cummings County Water District. (DWR, 2004a)

The Brite Valley Groundwater Basin is adjudicated, meaning that a court judgment has identified each water rights holder within the basin, and the quantity of groundwater available to each such party, as well as a Watermaster responsible for administering this judgment. The Tehachapi-Cummings County Water District (TCCWD) is the Watermaster. Based on ongoing groundwater management efforts conducted by the TCCWD, and the successful implementation of the adjudication judgment, it is understood that the Brite Valley Groundwater Basin is not currently affected by long-term overdraft conditions. As of the year 2004, the northwest portion of the basin is characterized by groundwater at the ground surface, exiting the basin by a small stream; this is considered evidence that the basin is full, and not in overdraft. There is currently no injunction against groundwater pumping by the designated water rights holders within this basin. (DWR, 2004a)

Cummings Valley Groundwater Basin. The Cummings Valley Groundwater Basin has a surface area of 10,000 acres, or approximately 16 square miles, bounded on the north by the Sierra Nevada Mountains and on the south by the Tehachapi Mountains. The basin is drained by Chanac Creek, which exits Cummings Valley to the southwest. A small ephemeral creek enters from Brite Valley to the northeast. Recharge to the Cummings Valley Groundwater Basin occurs through percolation of precipitation in the tributary watershed, as thick clay layers at the valley center inhibit the deep percolation of irrigation water, rainfall, and stream recharge; therefore, the majority of recharge occurs within the alluvial fan and foothill areas at the basin margins. Three groundwater recharge sites operated by the TCCWD are located on the higher alluvial fan areas at the east, west, and south sides of the basin, and supplied with State Water Project water through the TCCWD. (DWR, 2004b)

As with the Brite Valley basin, the Cummings Valley Groundwater Basin is adjudicated, and the TCCWD is the court-appointed Watermaster responsible for administering the court judgment as to the identified water rights holders and their respective allotments of groundwater. Water rights in this basin are overlying, not prescriptive. As with the Brite Valley Groundwater Basin, implementation of the adjudication judgment in the Cummings Valley Groundwater Basin has yielded positive results on groundwater levels

and water in storage. Since adjudication of the basin, groundwater levels have stabilized and, as of 2004, groundwater levels are comparable to those present in the 1950s, prior to development in the basin and eventual adjudication; this indicates that the basin is not affected by long-term overdraft conditions. (DWR, 2004b)

Flood Hazard Areas

The Federal Emergency Management Agency (FEMA) designates the boundaries of Flood Hazard Areas, or those areas anticipated to be inundated in the event of a 100-year storm event, on Flood Insurance Rate Maps (FIRMs). FIRMs for the Project area indicate that the proposed substation site and the telecommunications routes are located in areas designated as Zone X, or areas with a minimal flood hazard. The Zone X designation means that the area would have a moderate to low risk of inundation following a storm event, and is protected by a levee or dam from 100-year flood events as well as 500-year storm events. There also are some areas designated as Zone A in proximity to the Proposed Project; these areas are associated with perennial water features that are also designated by FEMA as Flood Hazard Areas, or those subject to inundation by a 100-year flood event.

Water Supply

The Proposed Project is located within the Tehachapi-Cummings County Water District (TCCWD) service area. The TCCWD is located in the Tehachapi Mountains, east of the Southern San Joaquin Valley and encompasses approximately 266,000 acres in the Greater Tehachapi Area (GTA). The TCCWD manages two primary sources of water for the GTA: (1) groundwater from the Brite Valley, Cummings Valley, and Tehachapi Valley Basins, and (2) surface water contracted through a State Water Project contract allocation (KCWA, 2011). TCCWD is a member unit of the Kern County Water Agency (KCWA) and, as described above, the TCCWD is the appointed Watermaster for both the Brite Valley and the Cummings Valley Groundwater Basins, which are traversed by the Proposed Project. Any use of groundwater from these basins is evaluated and approved of by the TCCWD, ensuring consistency with the court's adjudication judgment.

Regulatory Background

Federal

Clean Water Act. The Clean Water Act (CWA) (33 USC Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. 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. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine RWQCBs. The Proposed Project is located within the jurisdictions of both the Central Valley and Lahontan RWQCBs, and is therefore subject to management direction of these agencies.

Section 402 of the Clean Water Act authorizes the California State Water Resources Control Board (SWRCB) to issue NPDES General Construction Storm Water Permit (Water Quality Order 99-08-DWQ), referred to as the "General Construction Permit." Construction activities can comply with and be covered under the General Construction Permit provided that they meet the following requirements.

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

Section 401 of the CWA requires that any activity, including river or stream crossing during road, pipeline, or transmission line construction, which may result in discharges into a State waterbody, must be certified by the RWQCB. This certification ensures that the proposed activity does not violate State or federal water quality standards. The limits of non-tidal waters extend to the Ordinary High Water Mark (OHWM), defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. The U.S. Army Corps of Engineers (USACE) may issue either individual, site-specific permits or general, nationwide permits for discharge into U.S. waters. A Water Quality Certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or waiver thereof) from the Central Valley RWQCB and/or the Lahontan RWQCB.

Section 303(d) of the CWA (CWA, 33 USC 1250, et seq., at 1313(d)) requires states to identify impaired waterbodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of Total Maximum Daily Load (TMDL) requirements. A TMDL is the maximum amount of a pollutant that a particular waterbody can receive while still meeting water quality standards, or an allocation of that water pollutant deemed acceptable to receiving waters. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

National Flood Insurance Program (NFIP). The NFIP, implemented by the Congress of the United States in 1968, enables participating communities to purchase flood insurance. Flood insurance rates are set according to the flood-prone status of property as indicated by Flood Insurance Rate Maps (FIRMs) developed by FEMA. FIRMs identify the estimated limits of Flood Hazard Areas, or the 100-year floodplain for mapped watercourses, among other flood hazards. A 100-year floodplain is the area expected to be inundated as a result of the 100-year flood, or the magnitude of a flood with a one percent chance of occurring in any given year. As a condition of participation in the NFIP, communities must adopt regulations for floodplain development intended to reduce flood damage for new development through such measures as flood proofing, elevation on fill, or floodplain avoidance.

State

Porter-Cologne Water Quality Control Act. The SWRCB regulates water quality through the Porter-Cologne Water Quality Act of 1969, which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the State. On the regional level, the Proposed Project falls under the jurisdiction of the Central Valley RWQCB and the Lahontan RWQCB, which are responsible for the implementation of State and federal water quality protection statutes, regulations and guidelines. These regions have each developed a Water Quality Control Plan (Basin Plan) to show

how the quality of the surface and groundwater should be managed to provide the highest water quality reasonably possible. The Basin Plans list the various beneficial uses of water within the respective region and describe the water quality that must be maintained to allow those uses and the programs, projects, and other actions necessary to achieve the standards established in these plans. The Basin Plans also summarize plans and policies to protect water quality.

California Fish and Game Code. Section 1602 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. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State, and requires any person, State or local governmental agency, or public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake;
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Activities that result in the diversion or obstruction of the natural flow of a stream, or which substantially change its bed, channel, or bank, or which use any materials (including vegetation) from the streamed, may require that the Applicant enter into a Streambed Alteration Agreement (SAA) with the CDFW.

California Water Code Section 13260. California Water Code Section 13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCB. Any actions related to the proposed Project that would be applicable to Section 13260 would be reported to the Central Valley and/or Lahontan RWQCBs, as applicable.

Local

Kern County General Plan. The Kern County General Plan states that areas within the AP Special Study Zone[1] and other recently active faults shall be designated with Map Code 2.1 (Seismic Hazard) and areas of down-slope ground movement shall be designated with Map Code 2.2 (Landslide; Kern County, 2009). These provisions aim to reduce the potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert, including the Proposed Project area. Kern County adopted the GTA Specific and Community Plan (GTASCP) to establish land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the Kern County General Plan. A portion of the Proposed Project is located within the GTASCP.

[1] Alquist-Priolo Earthquake Fault Zones are regulatory zones that encompass surface traces of active faults that have a potential for future surface fault rupture. "Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.

Department of Building and Safety Requirements. The Proposed Project would be subject to Kern County's ministerial building and safety requirements. The Kern County Code of Building Regulations requires a grading permit from the building official for any grading activity, subject to certain specific exemptions. Under the Kern County Code, grading activities over 2,000 cubic yards must be performed in accordance with the approved grading plan prepared by a civil engineer or architect, and shall be designated as "engineered grading."

Applicant Proposed Measures

There are no Applicant Proposed Measures relevant to hydrology and water quality.

5.9.2 Environmental Impacts and Mitigation Measures

a. Would the project violate any water quality standards or waste discharge requirements?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Proposed Project is anticipated to occur in full compliance with all applicable water quality standards and waste discharge requirements. There is potential that soil erosion and sedimentation, and/or the accidental release of hazardous materials such as vehicle fuels, could occur during Project-related soil disturbing activities. Such occurrences could result in direct or indirect water quality degradation, should the materials be allowed to migrate to local surface water or groundwater resources. Given the generally flat and dry nature of the Project site and area, and with the BMPs and project design features to be implemented, it is considered unlikely that such an occurrence would result in the violation of a water quality standard or waste discharge requirement.

The Project-specific SWPPP, to be implemented for compliance with the Clean Water Act, would include a suite of BMPs designed to minimize or avoid erosion and sedimentation including stormwater runoff quality control measures such as boundary protection, dewatering procedures, and concrete waste management. Furthermore, protocols and standards included as part of the Project design would minimize the potential for accidental releases of hazardous materials to occur, thereby minimizing potential for the violation of a water quality standard or waste discharge requirement. Material Safety Data Sheets would be made available at the construction site for all crew workers. The SWPPP would also identify locations for the 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. If contaminated material is encountered during Project excavations, work would stop at that location and SCE's Spill Response Coordinator would be called to the site to make an assessment and notify the proper authorities. In addition, implementation of the Worker Environmental Awareness Program included as part of the Proposed Project, would provide site personnel with instruction on the individual responsibilities under the Clean Water Act, the project-specific SWPPP, and BMPs. Therefore, potential impacts associated with the violation of a water quality standard or waste discharge requirement would be less than significant.

Mitigation Measure HYD-1 (Stormwater Pollution Prevention Plan and Best Management Practices) is required to ensure that appropriate BMPs are implemented, and the Project occurs in compliance with water quality permits and waste discharge requirements such that potential impacts would be less than significant.

Mitigation Measure for Impacts to Water Quality

MM HYD-1 **Develop Stormwater Pollution Prevention Plan and Implement Best Management Practices.** The Applicant shall develop a Stormwater Pollution Prevention Plan (SWPPP), as outlined in General Permit 2009-0009-DWQ, which will describe best management

practices (BMPs) to prevent the acceleration of natural erosion and sedimentation rates. The SWPPP will include a written site-specific Construction Site Monitoring Program (CSMP). A monitoring program, which shall include a reporting requirement to the CPUC, will be established to ensure that the prescribed BMPs are followed during project construction. BMPs shall include but not be limited to the following:

- Use of silt fences or other sediment containment methods placed around and/or down slope of disturbed areas prior to construction;
- Protection of drain inlets from receiving polluted stormwater through the use of filters, such as fabrics, gravel bags, or straw wattles;
- Construction of a stabilized construction entrance/exit to prevent tracking onto roadways;
- Establishment of a vehicle storage, maintenance, and refueling area, if needed, to minimize the spread of oil, gas, and engine fluids. Use of oil pans under stationary vehicles is strongly recommended; and
- No overnight parking of mobile equipment within 100 feet of wetlands, culverts, or creeks. Stationary equipment (e.g., pumps, generators) used or stored within 100 feet of wetlands, culverts, or creeks will be positioned over secondary containment.

A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials management and spill response.

All BMPs shall be inspected on a weekly basis, and at least once every 24-hour period during extended storm events. BMPs shall be inspected as described in the SWPPP, maintained on a regular basis, and replaced as necessary through the course of construction. For each inspection required, an inspection checklist will be completed using a form as described in Attachment C of General Permit 2009-0009-DWQ. This checklist will remain onsite with the SWPPP.

b. 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 (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. It is anticipated that construction of the Proposed Project would require water for dust abatement, concrete manufacturing, fire suppression (as needed), and potable uses. SCE estimates the Proposed Project's water requirements for construction to be approximately 2,782,000 gallons. Potable water (bottled drinking water) would be obtained from a local vendor. Water for fire suppression would be provided by local hydrants and/or emergency response trucks, as necessary. Concrete would be obtained from a local vendor and produced using water obtained by the vendor under applicable permits. Water for dust abatement, the primary construction water demand, would be supplied through existing entitlements and resources located in and/or surrounding the Proposed Project site. Groundwater basins underlying the Proposed Project (Brite Valley Groundwater Basin and Cummings Valley Groundwater Basin) are adjudicated and are administered by the TCCWD; any use of groundwater to meet Project water requirements would occur in accordance

with the standing adjudication orders, with approval of the TCCWD. As described above, these groundwater basins are understood to have stable groundwater levels. Based on available data and information, as well as ongoing implementation of adjudication judgments designed to stabilize and maintain groundwater levels, it is understood that these groundwater basins are not currently affected by long-term overdraft conditions. To ensure that Project water supply requirements would be consistent with water conservation during the existing statewide drought and not create or exacerbate any water shortage conditions in the area, Mitigation Measure HYD-2 (Non-potable Water Use for Dust Control or Soil Compaction) would be required. As of August 2014, the Tehachapi-Cummings County Water District's recycled water is fully subscribed for us on a local golf course and a sod farm. During the winter, some excess may be available. The water district also can supply non-potable water from the State Water Project through a truck fill approximately 0.5 miles from the substation site (Martin, 2014)

During operation and maintenance of the Proposed Project, water would be required for minimal landscaping, and for restroom facilities. Landscaping water would likely be provided by the same source used for dust abatement during construction. Due to the minimal nature of landscaping water requirements, and the implementation of Mitigation Measure HYD-2 (Use Non-potable Water for Dust Control or Soil Compaction), potential impacts to groundwater supply would be less than significant. Restrooms would be stand-alone facilities maintained by a local vendor and any associated water requirements would be met by the local vendor under applicable permits, such that impacts to local groundwater resources would not occur.

In addition, the Proposed Project could affect groundwater resources if substantial new areas of impervious surfaces are introduced, such that groundwater recharge rates and patterns are adversely affected. This could particularly influence the Brite Valley Groundwater Basin, which receives a substantial portion of recharge from surface water infiltration, as opposed to the Cummings Valley Groundwater Basin, which is characterized by subsurface clay materials that inhibit infiltration. During construction of the Proposed Project, a majority of the area would use permeable applications such as gravel or crushed rock, or would remain largely in the existing condition. Therefore, the Proposed Project would not introduce substantial new areas of impermeable surfaces and would not interfere with existing groundwater recharge rates or patterns.

Also during construction of the Proposed Project, excavation activities may encounter shallow groundwater such that construction site dewatering activities would be required. As described above, the Project's SWPPP is anticipated to include BMPs for dewatering procedures. Mitigation Measure HYD-3 (Construction Site Dewatering) would be required to supplement the anticipated SWPPP BMPs and ensure that potential impacts to groundwater resulting from dewatering activities would be less than significant.

Mitigation Measures HYD-2 (Use Non-potable Water Use for Dust Control or Soil Compaction) and HYD-3 (Dewater Construction Site As Needed) are required to ensure that potential impacts to groundwater supply would be less than significant.

Mitigation Measures for Impacts to Groundwater Supply

MM HYD-2 **Use Non-potable Water for Dust Control or Soil Compaction.** Project water supply for dust control or soil compaction activities shall be obtained from non-potable sources, if available, and ensured in a water contract through a local water agency or district.

MM HYD-3 **Dewater Construction Site As Needed.** If groundwater is unexpectedly encountered during construction, operation, or decommissioning of the Project, dewatering activities shall be performed in compliance with the California Stormwater Quality Association

(CASQA) Handbook for Construction or other similar guidelines, as approved by the Central Valley and/or Lahontan RWQCB, as applicable based on jurisdiction. The Applicant shall submit a written description of all executed dewatering activities, including steps taken to return encountered groundwater to the subsurface and/or to dispose of the dewatered groundwater upon the completion of dewatering activities at the affected site(s).

c. 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?

LESS THAN SIGNIFICANT. The Project would not alter the course of any stream or river. Implementation of the proposed Project would include localized drainage pattern alterations associated with the installation of permanent features, but sites would be graded such that water would run toward the direction of the natural drainage, and drainage patterns would be designed to prevent ponding and erosive water flows that could damage structure footings. In total, construction of the Proposed Project, including construction yards, would temporarily disturb approximately 34.61 acres and permanently disturb approximately 6.44 acres. As described above, erosion and sedimentation control measures would be implemented via BMPs as part of the required SWPPP. Therefore, although the Project would result in localized drainage pattern alterations, impacts associated with erosion and siltation on- or off-site would be less than significant.

d. 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 substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?

LESS THAN SIGNIFICANT. The proposed Project would not substantially alter existing drainage patterns of the site or area, and would not alter the course of any stream or river. In addition, as described in the analysis of potential groundwater impacts (item b above), disturbed areas associated with the Proposed Project would be surfaced with permeable materials, and the Project would not substantially alter recharge or runoff patterns in the area. Therefore, although the Project would result in localized drainage pattern alterations, impacts associated with flooding on- or off-site would be less than significant.

e. Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems to provide substantial additional sources of polluted runoff?

NO IMPACT. There are no existing stormwater drainage systems on or adjacent to the Project site. As described above, the Proposed Project would be designed to maintain existing drainage patterns as much as possible, and potential impacts associated with increased runoff and flooding would be less than significant. Also, potential impacts associated with water quality degradation would be less than significant. The impact discussions provided above fully characterize potential impacts of the Project associated with increased runoff water and water quality degradation. No additional impact would occur.

f. Would the project otherwise substantially degrade water quality?

NO IMPACT. All potential water quality impacts of the Proposed Project are characterized under the discussions above in items a through e. No additional impact to water quality would occur as a result of the Proposed Project, and no additional mitigation is required.

g. Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

NO IMPACT. The Proposed Project does not include the construction of any housing, and would not alter existing drainage patterns and flood areas in such a way that existing housing would be mapping as being in a new Flood Hazard Area. No impact would occur.

h. Would the project place within a 100-year floodplain structures that would impede or redirect flood flows?

NO IMPACT. The Proposed Project is not located within a 100-year floodplain or a FEMA-designated Flood Hazard Area and would not place structures within a floodplain such that flood flows would be impeded or redirected. Consistent with standard engineering design practices, all structures and facilities associated with the Proposed Project would be designed to withstand surface runoff and sheetflow that may occur in response to storms typical of the Project area. No impact would occur.

i. 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?

NO IMPACT. The proposed Banducci Substation site is located within approximately one mile of the inundation area defined for Brite Lake, or the area that would experience flooding in the event the Brite Valley Dam should fail. The proposed Project would have no influence on the boundaries of this inundation area, and would not include any activities that could contribute to the dam's potential for failure. The Project would involve no activities which could result in the failure of a levee or dam. No impact would occur.

j. Would the project cause inundation by seiche, tsunami, or mudflow?

NO IMPACT. The Project site is not located near any body of water that could be subject to seiche or tsunami, and would not include any activities that may result in seiche or tsunami events on regional waterbodies. Additionally, the Project site is relatively level and is not situated near steep slopes that could be subject to mudflow events. The Project would not include any activities that could facilitate mudflow events on regional slopes. Potential impacts associated with inundation such as flooding are characterized in the discussions presented above. No impact would occur.

5.10 Land Use and Planning

LAND USE AND PLANNING Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project physically divide an established community?	☐	☐	☐	☑
b. 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?	☐	☐	☐	☑
c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.10.1 Setting

The proposed substation and the surrounding area are largely rural and agricultural. Most of the project corridor for the telecommunication routes is in unincorporated Kern County, but a small portion is in the City of Tehachapi (see Figure 4-5, Proposed Telecommunications Routes). The proposed telecommunications routes are near several residences. The telecommunications routes also include two road crossings that are within the jurisdiction of Caltrans (State Route 202 and State Route 58) and three crossings of the Union Pacific Railroad right-of-way.

The proposed substation site would be approximately 1.6 miles from the nearest location of sensitive receptors, the California Correctional Institution; the nearest residential development would be in the community of Stallion Springs, approximately 2 miles from the site. Three residences are within 0.5 miles of the substation site, with the nearest being 0.25 miles to the south on Pelliser Road.

The community of Bear Valley Springs is approximately 3 miles northwest of the proposed Banducci Substation site, and the California Correctional Institution is approximately 1.6 miles northeast and east of the site within the City of Tehachapi.

General Plan designations for the substation and surrounding area are shown in Figure 5.10-1 (General Plan Land Uses); zoning is shown in Figure 5.10-2 (Kern County Zoning). The proposed Banducci Substation site is designated as Intensive Agriculture, and the proposed telecommunications routes are largely designated as Residential, Incorporated Cities, Resource Reserve, and Intensive Agriculture. The proposed substation site is zoned for Exclusive Agriculture. Zoning designations along the proposed telecommunication routes include Agriculture (both Exclusive and Limited), Residential, Resource Reserve, Commercial, Industrial, and Manufacturing.

Construction of the Proposed Project would require several temporary staging areas. The land use designations and zoning classifications for each of these staging yards are described below.

- **Banducci Substation:** One acre within the boundaries of the proposed Banducci Substation site. The land use designation is Intensive Agriculture, and the zoning designation is Exclusive Agriculture.
- **Tehachapi Service Center:** 0.5 acres within the boundaries of the SCE Tehachapi Service Center in the City of Tehachapi. This area includes light industrial, residential, and manufacturing uses. The current use of this site is commercial and utility-related.

- **North of Highline Road:** Approximately 1 acre northwest of the proposed Banducci Substation site at the northwest corner of the intersection of Pelliser Road and Highline Road. The current land use designation is Intensive Agriculture, and the zoning designation is Exclusive Agriculture.
- **Highwind Substation:** One-acre site within the boundaries of SCE's existing Highwind Substation. This area is located at the southwest corner of Steuber Road and Highline Road. The current land use designation is Intensive Agriculture, and the zoning designation is Exclusive Agriculture.

Regulatory Background

Kern County General Plan. The following goals and policies of the Kern County General Plan (Kern County, 2009) are relevant to the Proposed Project.

- Goal: To encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects (Energy Element).
- Goal 2: Protect areas of important mineral, petroleum, and agricultural resource potential for future use (Goals: Resource; Land Use, Open Space, and Conservation Element).
- Goal 5: Conserve prime agriculture lands from premature conversion (Goals: Resource; Land Use, Open Space, and Conservation Element).
- Goal 7: Facilitate the provision of reliable and cost effective utility services to residents of Kern County (Goals: Public Facilities and Services; Land Use, Open Space, and Conservation Element).
- Policy 1: The County should encourage the development and upgrading of transmission lines and associated facilities (e.g., substations) as needed to serve Kern County's residents and access the County's generating resources, insofar as transmission lines do not create significant environmental or public health and safety hazards (Energy Element).
- Policy 2: The County shall review all proposed transmission lines and their alignments for conformity with the Land Use, Conservation, and Open Space Element of this General Plan (Energy Element).
- Policy 3: In reviewing proposals for new transmission lines and/or capacity, the County should assert a preference for upgrade of existing lines and use of existing corridors where feasible (Energy Element).

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along State Route 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs, but does not include the incorporated City of Tehachapi. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that includes a land use plan, goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan, while recognizing the unique features of the region. The proposed Banducci Substation would be located within the GTASCP.

The Land Use chapter of the GTASCP describes the Intensive Agriculture designation as follows: Areas devoted to the production of irrigated crops or having a potential for such use. Other agricultural uses, while not directly dependent on irrigation for production, may also be consistent with the intensive agriculture designation. Minimum parcel size is 40 acres gross. Uses shall include, but are not limited to, the following: irrigated cropland; orchards; vineyards; horse ranches; raising of nursery stock ornamental flowers and Christmas trees; fish farms; bee keeping; ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage;

ground water recharge acres; mineral; aggregate; and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries pursuant to provisions of the Kern County Zoning Ordinance, and land within development areas subject to significant physical constraints.

5.10.2 Environmental Impacts and Mitigation Measures

a. Would the project physically divide an established community?

NO IMPACT. The proposed Banducci Substation would be located in a sparsely populated rural area. The main roadways in the vicinity include Pelliser Road and Banducci Road. Construction of the proposed Banducci Substation would not block Pelliser Road or Banducci Road or any other established roadway within an established community. The proposed substation would be surrounded by walls and security gates, but it would not create any substantial barriers for the existing community or physically divide an established community. The telecommunications lines would be located within the existing SCE right-of-way on existing or replaced poles or in underground conduits. Installation of telecommunications infrastructure would temporarily disrupt some local traffic during safety-related lane closures, but these disruptions would be short-term and would not divide any community. Therefore, there would be no impact.

b. 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?

NO IMPACT. The Banducci Substation would be built on land designated as Intensive Agriculture and zoned as Exclusive Agriculture. However, both the Intensive Agriculture designation and the Exclusive Agriculture zone allow public utility infrastructure, including substations. The proposed telecommunications routes pass through areas designated as Intensive Agriculture, Resource Reserve, and Residential and zoned as Exclusive Agriculture, Limited Agriculture, and Estate. A portion of the telecommunications routes would pass through the City of Tehachapi. Telecommunications routes would be within existing SCE rights-of-way in areas where utility-related uses are allowed.

Routes for the Proposed Project's telecommunications components include two crossings of roadways that are within Caltrans jurisdiction and three railroad crossings within Union Pacific Railroad jurisdiction. Easements and exclusionary permits would be required for these crossings. However, the telecommunications components would not conflict with the use of the railroad, highways, or any existing or proposed plans or uses. See Section 5.16 (Transportation and Traffic) for more detail.

By improving the electrical infrastructure within Kern County, the Proposed Project would be consistent with most of the goals and policies listed in the Regulatory Background section above. Although the project would convert Prime Farmland to non-agricultural use, construction of utility infrastructure on the substation site would not conflict with local land use policies (see Section 5.2 [Agricultural Resources] for more detail regarding potential conflicts with agriculture). Therefore, there would be no conflict with local land use plans or policies.

c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

NO IMPACT. As discussed in Section 5.4.2 (Biological Resources, Environmental Impacts and Mitigation Measures), the Proposed Project is not within the boundaries of any adopted habitat conservation plans or natural community conservation plans. Therefore, there would be no impact.

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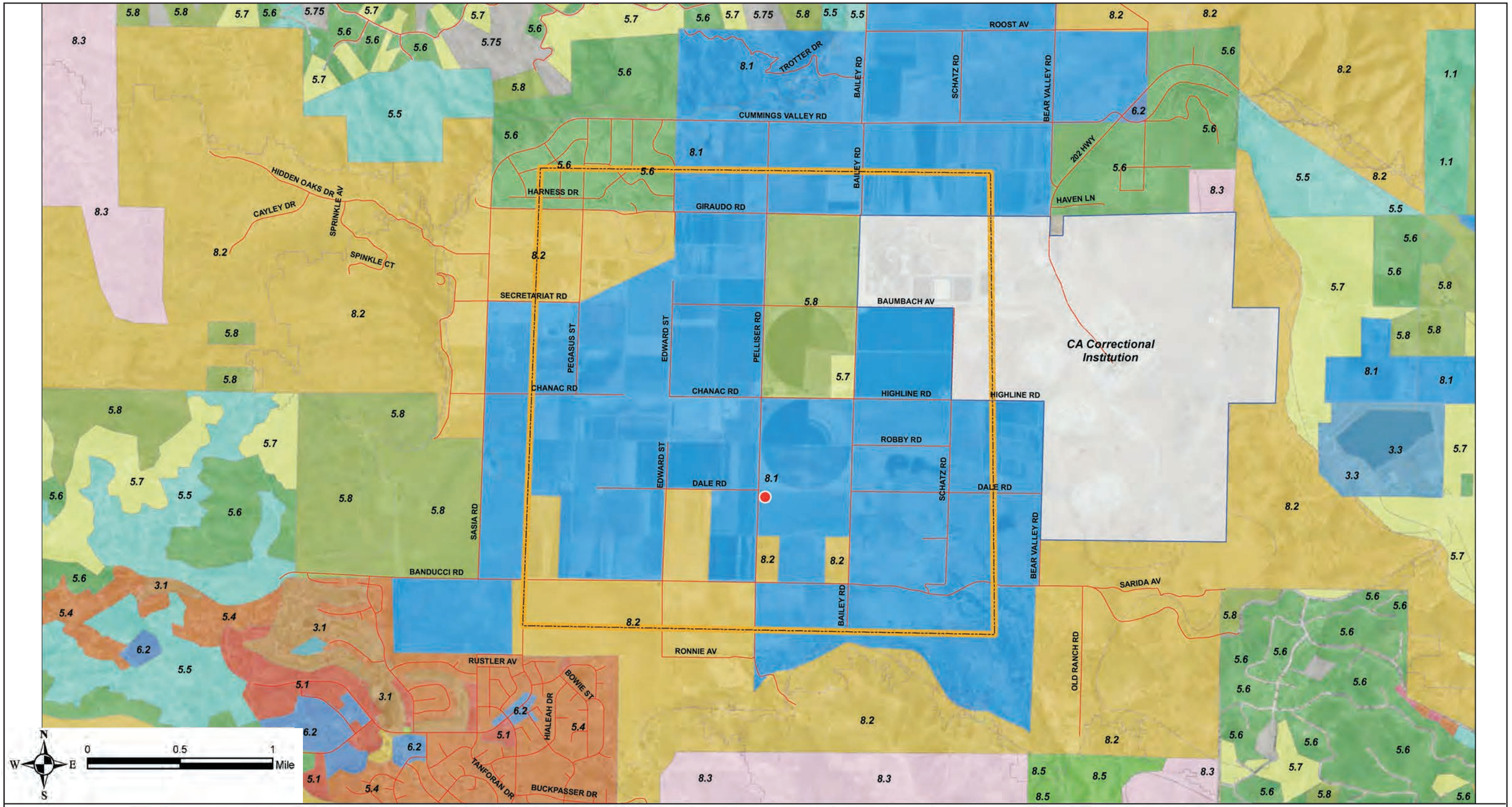

Source: SCE, 2014.

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Road

- 1.1 State or Federal Land
- 1.2 Incorporated Cities
- 3.1 Public or Private Recreation Areas
- 3.3 Other Facilities
- 5.1 Maximum 29 Units/Net Acre
- 5.2 Maximum 16 Units/Net Acre
- 5.4 Maximum 4 Units/Net Acre
- 5.45 Maximum 2 Units/Net Acre
- 5.5 Maximum 1 Unit/Net Acre
- 5.6 Minimum 2.5 Gross Acres/Unit
- 5.7 Minimum 5 Gross Acres/Unit
- 5.75 Minimum 10 Gross Acres/Unit
- 5.8 Minimum 20 Gross Acres/Unit
- 6.1 Major Commercial
- 6.2 General Commercial
- 8.1 Intensive Agriculture (Min. 20 Acre Parcel Size)
- 8.2 Resource Reserve (Min. 20 Acre Parcel Size)
- 8.3 Extensive Agriculture (Min. 20 Acre Parcel Size)
- 8.5 Resource Management (Min. 20 Acre Parcel Size)

Figure 5.10-1
General Plan Land Uses

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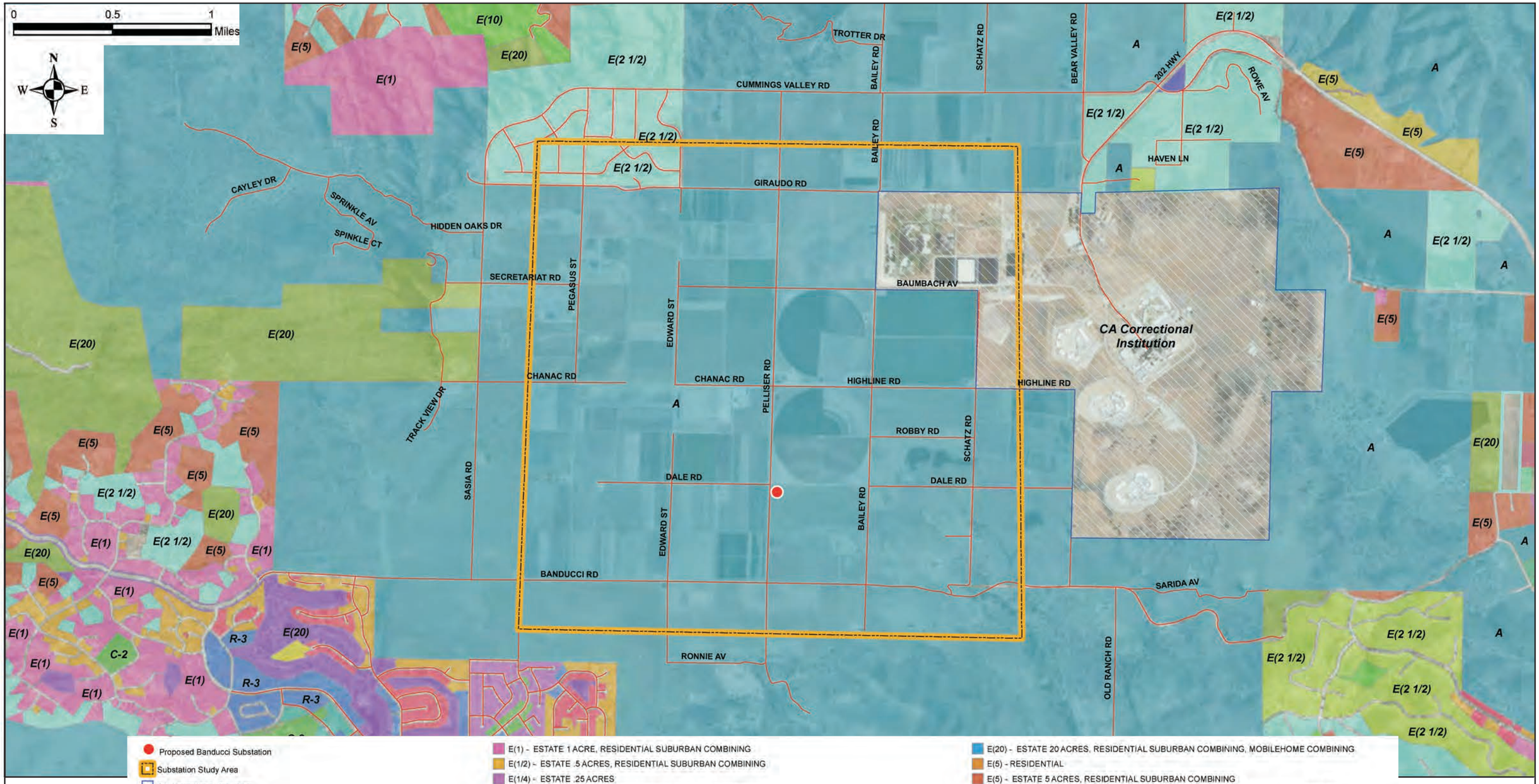

Aspen Environmental Group

Source: SCE, 2014.

Figure 5.10-2
Kern County Zoning

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5.11 Mineral Resources

MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☑
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.11.1 Setting

Mineral resources in Kern County include petroleum, natural gas, borax, cement production, and construction aggregates (Kern County, 2009; USGS, 2014). Petroleum is the primary mineral resource in Kern County. Land uses surrounding the Proposed Project Study Area are largely designated as agricultural, residential, industrial, or commercial. Kern County has not designated any land surrounding the Project Study Area as critical to mineral or petroleum resources (Kern County, 2009). Field observations and site exploration data confirm that the Substation Study Area is underlain by deposits consisting mainly of silty sand (SCE, 2014). A review of U.S. Geological Survey (USGS) data indicate that the majority of the remaining portions of the Proposed Project along the telecommunications components are also underlain by Quaternary alluvium, which consists of sand and silt. In addition, short portions of the telecommunications routes are underlain by Mesozoic granite rocks and pre-Cenozoic metasedimentary and metavolcanic rocks undivided (SCE, 2014).

Mines. A review of the USGS Mineral Resources Data System indicated that one mine, Barrett Pit Mine, is located within the Substation Study Area. However, Barrett Pit Mine is located approximately 0.7 miles northwest of the proposed Banducci Substation site and would not be impacted by the Proposed Project. Barrett Pit Mine is designated by USGS Mineral Resources Data System as a past producer of construction material (specifically, sand and gravel). Site observations indicated that the mine is not currently active. The Lehigh Southwest Cement Company operates the nearest active mine (and cement plant) to the proposed telecommunication routes. The Lehigh mine and plant are located approximately 0.4 miles slightly north and east of the intersection of the proposed Telecommunications Routes 1 and 2. In addition the Lee Deposit prospect mine is located approximately 0.25 miles south of the Proposed Telecommunications Route 1.

Oil and Gas. A review of the California Department of Conservation (DOC) Division of Oil, Gas, and Geothermal Resources (DOGGR) online mapping system indicated that four oil/gas wells are located in the Substation Study Area; however, none of the oil/gas wells are within the Proposed Project site. In addition, the DOGGR data indicate that all four wells within the Project Study Area are dry wells. The nearest oil/gas well is located approximately 0.3 miles north of the proposed Banducci Substation site. The remaining oil/gas wells are located more than 0.5 miles from the proposed Banducci Substation site. None of the oil/gas wells would be affected by the Proposed Project (DOGGR, 2014).

There are no oil/gas wells directly within the proposed telecommunications routes. The nearest well is a dry well located approximately 350 feet east of the Proposed Telecommunications Route 1.

Regulatory Background

State

California Surface Mining and Reclamation Act (SMARA) of 1975. The California SMARA requires that the State Geologist classify land into mineral resource zones (MRZ) according to the known or inferred mineral potential of the land. Project components are not in a classified MRZ, and there are no known important mineral resources or active mining operations in the immediate vicinity of the substation site that would be affected.

SMARA also requires city and county regulatory agencies to adopt ordinances for land use permitting and reclamation procedures. These provide the regulatory framework under which local mining and reclamation activities are conducted. The State Mining and Geology Board (SMGB) reviews these ordinances to determine whether an ordinance meets or exceeds the California surface mining and reclamation procedures established pursuant to SMARA. The SMGB has the authority to further regulate the authority of the local agencies if it finds that the agencies are not in compliance with the provisions of SMARA.

Local

Kern County General Plan. The Kern County General Plan (Kern County, 2009) has developed policies to protect the current and future extraction of mineral resources that are important to Kern County's economy, while minimizing impact of this use to the public and the environment. Kern County emphasizes that lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses. Kern County also emphasizes conservation and development of identified mineral deposits and discourages incompatible land use adjacent to map code 8.4 (Mineral and Petroleum) areas.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert. Consistent with State and County requirements, the GTA Specific and Community Plan (GTASCP) sets forth a land use plan, as well as goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region.

Applicant Proposed Measures

There are no applicant proposed measures related to mineral resources.

5.11.2 Environmental Impacts and Mitigation Measures

a. 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?

NO IMPACT. There are no known important mineral resources that would be impacted by the project. There are no designated Mineral Resource Zones in the project vicinity.

Mining has and does occur in the general area. The Barrett Pit Mine is located approximately 1 mile northwest of the Banducci Substation Site and would not be affected by the Proposed Project. Furthermore, site observations suggest that this mine is not currently active. The Lehigh mine is located slightly north and east of the intersection of the Proposed Telecommunications Routes 1 and 2 on Williamson Road at the existing Monolith Substation and would not be affected by the Proposed Project. In addi-

tion, the Lee Deposit prospect mine is located approximately 0.25 miles south of the proposed Telecommunications Route 1, near Highline Road and Water Canyon Road. At these distances from the proposed telecommunications routes, the active mines would not be expected to be impacted by the Proposed Project.

Four dry oil/gas wells are located in the Project Study Area. None of these wells is within the proposed Banducci Substation site; all are located 0.5 miles or more from the proposed Banducci Substation site. No oil/gas wells are located directly within the proposed telecommunication routes (DOGGR, 2014). None of these oil/gas wells would be affected by the Proposed Project.

Therefore, the project would have no impact on either rock or oil/gas mineral resources.

b. 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?

NO IMPACT. There are no known important mineral resources that would be impacted by the project. There are no designated Mineral Resource Zones in the project vicinity. Therefore, the project would have no impact on any locally important mineral resource recovery sites.

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5.12 Noise

NOISE Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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?	☐	☑	☐	☐
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☑	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f. 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?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.12.1 Setting

Existing Conditions

Community Noise. To describe environmental noise and to assess project impacts on areas that are sensitive to community noise, a measurement scale that simulates human perception is used. The A-weighted scale of frequency sensitivity accounts for the sensitivity of the human ear, which is less sensitive to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. Decibels are logarithmic units that can be used to conveniently compare wide ranges of sound intensities.

Community noise levels can be highly variable from day to day as well as between day and night. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour day-night period (Ldn). The Leq, or equivalent sound level, is a single value (in dBA) for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually one hour. The L50, is the median noise level that is exceeded 50 percent of the time during any measuring interval. The Ldn, or day-night average sound level, is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to nighttime sounds occurring between 10:00 p.m. and 7:00 a.m. Community Noise Equivalent Level (CNEL) is another metric that is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. To easily estimate the day-night level caused by any noise source emitting steadily and continuously over 24-hours, the Ldn is 6.4 dBA higher than the source's Leq. For example, if the expected continuous noise level from equipment is 50.0 dBA Leq for every hour, the day-night noise level would be 56.4 dBA Ldn.

Community noise levels usually are closely related to the intensity of human activity. Noise levels generally are considered low when below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, the Ldn noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas, and levels up to 85 dBA occur near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse to public health.

Surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than what would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments are about seven decibels lower than the corresponding daytime levels. In rural areas away from roads and other human activity, the day-to-night difference can be considerably less. Areas with full-time human occupation and residency are often considered incompatible with substantial nighttime noise because of the likelihood of disrupting sleep. Noise levels above 45 dBA at night can result in the onset of sleep interference. At 70 dBA, sleep interference effects become considerable (U.S. EPA, 1974).

Noise Environment in the Project Area. Land uses in the vicinity of the proposed substation site and along the alignments of the proposed linear facilities are primarily agricultural with intermittent rural residences. The proposed telecommunication routes would also pass through areas with commercial, light industrial, and manufacturing uses, including the Tehachapi Municipal Airport.

Baseline noise levels are typically around 30 dBA for quiet rural lands during the nighttime, when located away from traffic, whereas commercial and urban areas typically have noise levels between 60 and 70 dBA or higher (Caltrans, 2009). SCE conducted ambient noise measurements in 2011 prior to filing the application for the Proposed Project. These field tests found noise levels along Pelliser Road, at 50 feet from the centerline, to range up to 62 dBA in the daytime and between 40 dBA and 56 dBA at night (SCE, 2014). Table 5.12-1 shows typical sound levels of various environmental noise sources.

Table 5.12-1. Typical Sound Levels Measured in the Environment and Industry

Noise Source and Distance	A-Weighted Sound Level (dBA)	Subjective Impression
Civil defense siren (100 ft)	130	Pain threshold
Jet takeoff (200 ft)	120	
Rock music concert (50 ft)	110	
Pile driver (50 ft)	100	Very loud
Ambulance siren (100 ft)	90	
Diesel locomotive (25 ft)	85	Loud
Pneumatic drill (50 ft)	80	
Freeway (100 ft)	70	Moderately loud
Vacuum cleaner (10 ft)	60	
Light traffic (100 ft)	50	
Large transformer (200 ft)	40	Quiet
Soft whisper (5 ft)	30	Threshold of hearing

Noise Sensitive Areas. The Noise Element of the Kern County General Plan identifies the following land uses as noise-sensitive: residential areas, schools, convalescent and acute care hospitals; parks and recreational areas; and churches.

Regulatory Background

Regulating environmental noise generally is the responsibility of local governments. The U.S. EPA once published guidelines on recommended maximum noise levels to protect public health and welfare (U.S. EPA, 1974), and the State of California maintains recommendations for local jurisdictions in the General Plan Guidelines published by the Governor's Office of Planning and Research (OPR, 2003). The following summarizes the local requirements.

Kern County General Plan. The Noise Element (Chapter 3 of the Kern County General Plan) identifies the following policies to protect residents from excessive noise in Kern County:

- Policy 1. Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.
- Policy 2. Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health (DOSH).
- Policy 3. Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.
- Policy 4. Utilize good land use planning principles to reduce conflicts related to noise emissions.
- Policy 5. Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into the project design. Such mitigation shall be designed to reduce noise to the following levels: a) 65 dB Ldn or less in outdoor activity areas; b) 45 dB Ldn or less within interior living spaces or other noise sensitive interior spaces.
- Policy 6. Ensure that new development in the vicinity of airports will be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan.
- Policy 7. Employ the best available methods of noise control.
- Policy 8. Enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code concerning the construction of new multiple-occupancy dwellings such as hotels, apartments, and condominiums.

The Kern County General Plan, Noise Element also includes an implementation strategy that would be relevant to the proposed substation: "Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB Ldn and interior noise levels in excess of 45 dB Ldn."

Kern County Municipal Code. The Kern County Municipal Code, Noise Control (Chapter 8.36.020) prohibits noise from construction between the hours of 9:00 p.m. and 6:00 a.m. on weekdays, and between the hours of 9:00 p.m. and 8:00 a.m. on weekends if the construction site is within 1,000 feet from an occupied residential dwelling, and if the construction is audible to a person with average hearing faculties or capacity at a distance of 150 feet from the construction site.

City of Tehachapi. The City of Tehachapi Municipal Code does not include any prohibition on noise levels or time-of-day limitations on construction activity that could apply to the portions of the Proposed Project that would be inside city limits.

Applicant Proposed Measures

There are no applicant proposed measures related to noise.

5.12.2 Environmental Impacts and Mitigation Measures

a. Would the project result in 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?

DURING CONSTRUCTION, *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. Construction of the Proposed Project would involve use of heavy-duty equipment at the proposed substation site and along the routes of linear facilities. Equipment needed would include dozers, loaders, graders, backhoes, augers (drill rigs), lifts, a crane, and haul trucks for lifting, delivery, concrete, water, and work crews. All construction activities would create both intermittent and continuous noises, generally in the daytime. Intermittent noise would result from periodic, short-term equipment operation, such as cranes for positioning equipment or drilling rig use during foundation work for poles. Continuous noise would result from steady equipment operation over longer periods, such as a mixer for pouring concrete. The maximum intermittent construction noise levels would range from 80 to 90 dBA at 50 feet from an active construction area. Sound from stationary sources naturally attenuates over distance by decreasing six dBA with every doubling of distance from the source.

The nearest existing noise-sensitive receptor to proposed substation site would be an occupied residential dwelling located on Pelliser Road approximately 0.25 miles south of the proposed Banducci Substation (SCE, 2014). The proposed subtransmission and telecommunication facilities would be placed on poles near residences; the nearest occupied residential dwellings are located along South Curry Street, some of which are as close as approximately 25 feet from a proposed pole site along both proposed telecommunications routes (SCE, 2014). The proposed substation site would be approximately 1.6 miles from the California Correctional Institution; the nearest residential development would be in the community of Stallion Springs, approximately 2 miles from the site. Three additional residences are within 0.5 miles of the substation site.

Construction noise at the substation site would be attenuated to approximately 55 to 65 dBA before reaching the nearest residence approximately 0.25 mile away. Obstacles such as trees, existing buildings, and construction equipment in the path of the sound waves would attenuate noise to lower levels.

Construction would also cause noise off site, primarily from commuting workers and from trucks bring materials to the substation site and work sites along the subtransmission and telecommunications routes. The peak noise levels associated with passing trucks and commuting worker vehicles would be approximately 70 to 75 dBA at 50 feet, and would be concentrated along the roads and arterial streets that access the substation site and linear facilities.

Although noise from construction would attenuate with distance, activities for substation construction, heavy truck traffic, and construction of the linear facilities could result in intermittent peak noise levels of approximately 65 dBA for the nearest sensitive receptor from the substation site and levels of 75 to 80 dBA near pole sites for subtransmission and telecommunication facilities. Existing ambient noise levels range up to 62 dBA during the daytime. Therefore, noticeable noise increases would occur temporarily during construction.

Noise from construction activities would be short-term and intermittent in nature and would vary from day to day depending on specific construction activities. In order to ensure that all construction activities, especially equipment and vehicle noise, comply with local ordinances and standards, Mitigation

Measures N-1 and N-2 should be implemented to reduce noise from construction activities and to avoid unnecessary noise from equipment, vehicles, and construction traffic. Considering the short-term and temporary nature of the construction activities and the recommended mitigation measures, noise impacts during construction would be less than significant.

Mitigation Measure for Construction Noise

MM N-1 **Limit Construction Noise to Daytime Hours.** SCE shall limit grading, scraping, hole augering and pole installation to daylight hours, between 6:00 a.m. and 9:00 p.m. Exceptions for work outside of these hours shall be allowed for project safety or to take advantage of the limited times when power lines can be taken out of service or as determined to be warranted by the CPUC. If nighttime work is needed because of clearance restrictions on power lines, SCE shall take appropriate measures to minimize disturbance to local residents by informing them in advance of the work schedule and probable inconveniences.

MM N-2 **Minimize Construction Vehicle and Traffic Noise.** SCE shall maintain construction equipment and vehicle mufflers in accordance with equipment vendor specifications on all engines used in construction. Where feasible, construction traffic shall be routed to avoid noise-sensitive areas, such as residences, schools, religious facilities, hospitals, and parks.

DURING OPERATION, LESS THAN SIGNIFICANT. For long-term noise impacts associated with operations of the Proposed Project, refer to Section 5.12.2(c), below.

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

LESS THAN SIGNIFICANT. Vibration from construction equipment and activities might be perceptible to people in the immediate vicinity of construction activities. Tamping of ground surfaces, the passing of heavy trucks on uneven surfaces, and drilling would each create perceptible vibration in the immediate vicinity of installing poles or conduit for the proposed linear facilities. The level of groundborne vibration that could reach sensitive receptors depends on the distance to the receptor, what equipment is creating vibration, and the soil conditions surrounding the construction site. Construction of utilities on poles may occur within 25 feet of the nearest residences, and construction of the substation site would be about 0.25 mile from the nearest residence.

Installing poles or conduit could cause vibration levels that could cause some persons to become annoyed, and this would temporarily impact persons in buildings within about 50 feet of construction equipment. Persons in buildings further than 50 feet away from construction activity would not be impacted by construction vibrations. Project-related vibrations would not cause any structural damage. Impacts from vibrations would be temporary (e.g., no more than two or three days at each site) and localized and, therefore, would not be excessive, resulting in a less than significant impact.

c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

LESS THAN SIGNIFICANT. The permanent noise sources that would occur with the project are limited to transformer operation at the substation and noise from crews conducting routine inspection and maintenance of the substation and linear facilities.

Substations usually generate steady noise from the process of power conversion, including the operation of transformers and auxiliary equipment needed to cool the transformer. Transformer noise con-

tains pure-tone or "hum" components. This tonal quality is typically the most offensive characteristic of transformer noise. Auxiliary equipment includes cooling fans and pumps that operate depending on the internal temperature of the transformer oil. With all auxiliary cooling fans operating, the worst-case noise level from each of the two proposed transformers at full load would be no more than 74 dBA on a design basis and no more than 68 dBA under contract specifications set by SCE (SCE, 2014).

Simultaneous operation of the two transformers would create a continuous noise level of approximately 71 dBA Leq for every hour, or an equivalent day-night noise level of approximately 77.4 dBA Ldn at the project site. This noise level would exceed the Kern County exterior criteria noise level of 65 dBA Ldn for locations immediately adjacent to the proposed Banducci Substation site, but the proposed low-profile substation design and 8-foot high pre-cast or concrete masonry material perimeter wall enclosing the substation would minimize the potential increase in noise levels experienced off-site. The resulting noise level at the nearest existing residences (0.25 mile away) would be attenuated over distance to a level that would not be audible over the existing background conditions. As such, a substantial increase in ambient noise levels would not occur due to substation operation.

Electric transmission or subtransmission lines emit an audible noise during routing as a result of the electric field that is generated in the air surrounding the conductors forming a "corona." The corona discharge occurs at the conductor surface and results in an audible noise that is characterized as a hissing or crackling sound that may be accompanied by a 120-hertz hum. For the proposed subtransmission lines, the predicted levels due to corona noise would be less than 33.5 dBA (SCE, 2014). The resulting noise levels directly below the proposed 66 kV subtransmission lines would be comparable with the ambient noise levels for locations away from traffic, and would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Routine inspection and maintenance of the Proposed Project would be accomplished through periodic visits to the facilities. Visits to substations do not normally involve a large crew. Additional noise produced at the substation may occur during activation of circuit breakers. Because each of these noise sources would be infrequent and isolated, no substantial noise increase would occur.

d. 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?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Noise impacts associated with construction would mainly affect those receptors closest to the substation site and near construction of subtransmission and telecommunications routes. Existing homes near the substation site and linear facilities would experience a temporary increase in noise above levels now existing without the project. The increase would not be substantial because of the distance involved, and because the short-term and intermittent nature of construction noise would limit the impacts. Compliance with Mitigation Measures N-1 and N-2 would reduce the effects of noise caused by construction vehicles and traffic to levels that would not be substantially over levels existing without the project. With the mitigation, this impact would be less than significant.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

NO IMPACT. The proposed substation site would be located approximately 9 miles south and west of the Tehachapi Municipal Airport, and the nearest proposed telecommunication line would be roughly 300 feet south of the airport. The substation site would be unstaffed, and the project would not expose

people to noise from the airport. Similarly, no excessive noise would result from project operations that could impact people residing or working near the airport. As such, there would be no impact.

f. For a project within the vicinity of a private air strip, would the project expose people residing or working in the project area to excessive noise levels?

NO IMPACT. The Proposed Project is located near a private airstrip at PSK Ranch (FAA Identifier: 9CA0), approximately 0.8 miles from the proposed substation site, and limited operations occur at this airstrip as it does not appear to be currently used (SCE, 2014). Because the Proposed Project would not expose people to noise from the airstrip, no impact would occur.

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5.13 Population and Housing

POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c. Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.13.1 Setting

The population and housing study area for the Proposed Project includes two residential communities located near the proposed Banducci Substation site, Bear Valley Springs and Stallion Springs, the city of Tehachapi, and Kern County. U.S. Census Bureau 2008–2012 5-Year Estimate data for population, housing, and employment for Bear Valley Springs, Stallion Springs, the City of Tehachapi, and Kern County are presented in Table 5.13-1.

Table 5.13-1. Year 2014 Existing Conditions – Population, Housing, and Employment: Bear Valley Springs, Stallion Springs, the City of Tehachapi, and Kern County

		Housing Units		Employment	
Location	Population	Total Units	Vacancy Rate	Total Employed[1]	In Construction Trades
Bear Valley Springs	5,462	2,655	22.2%	1,942	101
Stallion Springs	3,377	1,546	14.9%	1,295	142
City of Tehachapi	14,168	3,708	8.5%	3,824	296
Kern County	839,153	283,810	10.8%	314,751	19,346

1 – Accounts for population greater than 16 years of age and in Labor Force.
Source: SCE, 2014; 2008-2012 American Community Survey (5-Year Estimates)

Regulatory Background

Federal

There are no Federal regulations, plans, and standards for population and housing that apply to the Proposed Project.

State

There are no State regulations, plans, and standards for population and housing that apply to the Proposed Project.

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan. Recognizing the importance of accommodating future growth and development, Kern County has developed goals to ensure that it can accommodate such growth while maintaining a safe, healthful environment and a prosperous economy. As part of its accommodation efforts, Kern County uses its General Plan as a means for preserving valuable natural resources, guiding development away from hazardous areas, and ensuring the provision of adequate public services (Kern County, 2009).

The Housing Element of the Kern County General Plan provides background information regarding housing and general policy guidance. The Kern County Housing Element includes goals, policies, and programs that Kern County intends to implement to address the community's identified housing needs and issues. As the Proposed Project would not include new housing, the goals and policies of the housing element do not apply to the Proposed Project.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan, goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. (Kern County, 2010) The proposed Banducci Substation component of the Proposed Project and portions of the telecommunications routes would be located within the GTASCP.

Applicant Proposed Measures

No applicant proposed measures are proposed for population and housing.

5.13.2 Environmental Impacts and Mitigation Measures

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

NO IMPACT. Construction activities resulting from project implementation would be short-term and temporary. The Proposed Project would be constructed by local SCE crew members, who would commute to the project area from the surrounding area. The Proposed Project would require up to 50 workers during a 12-month period. These individuals would work at various locations across the Proposed Project area. The Proposed Project would generate neither a permanent increase in population levels, nor a decrease in available housing. No impacts to existing or future population growth levels would occur as a result of construction of the Proposed Project.

Operation of the proposed substation would be automated, requiring no additional employees; however, routine inspections by SCE crew members would be required. No direct population growth would be induced because the Proposed Project would not involve the construction of housing and no new

jobs would be created. Implementation of the project would not generate a direct increase in the permanent population of the area.

The purpose of the Proposed Project is to address the electric system deficiency projected to occur in Cummings Valley and to ensure safe and reliable electric service (SCE, 2014). Development and growth depend on reliable electrical infrastructure, but electric service would not cause population growth either directly or indirectly. The Proposed Project would not induce population growth directly or indirectly, and associated impacts would not occur.

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

NO IMPACT. No housing currently exists within the proposed substation site, existing rights-of-way for the distribution line work, or work areas, although several residences are located near the proposed telecommunication routes. Implementation of the Proposed Project would not result in the displacement of any housing, including affordable housing, or necessitate the construction of replacement housing. Therefore, no impacts would occur.

c. Would the project displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

NO IMPACT. As stated in Section 5.13.2(b) above, there is no existing housing within the proposed substation site or distribution line areas. Therefore, the project would not result in the displacement of people or necessitate the construction of replacement housing elsewhere, and no impacts would occur.

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5.14 Public Services

PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Fire protection?	☐	☐	☑	☐
b) Police protection?	☐	☐	☑	☐
c) Schools?	☐	☐	☐	☑
d) Parks?	☐	☐	☐	☑
e) Other public facilities?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.14.1 Setting

Fire and police departments as well as school districts, parks and recreation services, and other public services are provided by Kern County, the Bureau of Land Management, special districts, and State agencies. See Figure 5.14-1 for public services in the Proposed Project vicinity.

Fire Protection and Emergency Services

The Proposed Project is located in an area of Kern County that has been designated as having a moderate to high fire potential (SCE, 2014). There are three fire stations in the area comprising the Greater Tehachapi Area (GTA) and the City of Tehachapi.

Kern County Fire Department

The Kern County Fire Department provides primary fire protection to unincorporated areas of the county and on regional transportation corridors, in addition to providing fire protection services to the City of Tehachapi. Kern County Fire Department has 46 fire stations throughout the county and is divided into seven battalions for operational management. Each battalion covers a large geographical area and includes between seven and nine fire stations. The county has a total of 546 uniformed firefighter personnel (Kern County, 2010). Stations #12, #16, and #18 are closest to the Proposed Project.

- Station #12: Tehachapi Station is located at 800 South Curry Street in Tehachapi, approximately 11.7 miles from the proposed substation site.
- Station #16: Bear Valley Station is located at 28946 Bear Valley Road, approximately 9.4 miles from the proposed substation site.
- Station #18: Stallion Springs Station is located at 28381 Braeburn Place, approximately 3.2 miles from the proposed substation site.

Sheriff and Police Protection

There are three law enforcement agencies serving different parts of the project area. These include the Kern County Sheriff's Office, the California Highway Patrol, and the Tehachapi Police Department. Two

police other police departments are in the general area: the Stallion Springs Police Department and the Bear Valley Police Department. The Banducci Substation site is under the jurisdiction of the County Sheriff's Office.

Kern County Sheriff's Office

The Kern County Sheriff's Office is the primary provider of police services throughout the GTA, with the exception of the Bear Valley Springs and Stallion Springs areas, which have their own police departments. The Sheriff's Office operates one substation in the Tehachapi area, located at 22209 Old Town Road approximately 10 miles from the proposed substation site.

California Highway Patrol

The California Highway Patrol (CHP) is a statewide law enforcement organization that provides traffic enforcement along state highways, including State Route (SR) 58 and SR-202 both in the vicinity of the Proposed Project. The nearest office is in Mojave, approximately 22 miles east of Tehachapi.

Tehachapi Police Department

The City of Tehachapi Police Department, located at 129 East F Street, provides police services within the incorporated city.

Schools

The Proposed Project is located in the Tehachapi Unified School District, which encompasses 522 square miles and operates three elementary schools, one middle school, one alternative education school, and one comprehensive high school. These include:

- **Cummings Valley Elementary School:** Located at 24220 Bear Valley Road, approximately 4 miles from the proposed substation site, this school serves approximately 690 students.
- **Golden Hills Elementary School:** Located at 20215 Park Road, approximately 10 miles from the proposed substation site, this school serves approximately 700 students.
- **Tompkins Elementary School:** Located at 1120 South Curry Street, in the City of Tehachapi, approximately 11 miles from the proposed substation site, this school serves approximately 690 students.
- **Jacobsen Middle School:** Located at 711 Anita Drive, in the City of Tehachapi, this school is approximately 13 miles from the proposed substation site and serves approximately 1,135 students.
- **Tehachapi High School:** Located at 801 South Dennison Road, in the City of Tehachapi, this school is approximately 12 miles from the proposed substation site and serves approximately 1,478 students.
- **Monroe Continuation High School:** Located at 20569 Eumatilla Street, this school is approximately 16 miles from the proposed substation site and serves approximately 175 students.

Private and charter schools in Tehachapi include: Heritage Oak School (K-12) at 20915 Schout Road; Valley Oaks Charter School (K-12) at 20705 South Street; Carden School of Tehachapi (PK-8) at 20419 Brian Way, New Life Christian School (PK-K) at 920 W Valley Blvd; Sunshine Place Preschool at 19016 Highline Road; Good Shepard Preschool at 329 S Mill Street; and Covenant Christian (1-12) at 21800 Oak Summit Court.

Parks

The nearest park to the proposed substation site is the Brite Valley Aquatic Recreation Area, located 3 miles northeast of the site. There are three public parks located within 1 mile of the proposed telecommunications routes. These recreational facilities include the Brite Lake Aquatic Recreation Area, Meadowbrook Park, and Philip Marx Central Park, which are described in Section 5.15 Recreation (SCE, 2014). In addition to these, there are a number of public parks, open spaces, and recreational areas located in the City of Tehachapi (including West Park, Tehachapi City Park, Dye Natatorium, Tehachapi Mountain Park) and the region (including Kern River State Park, Sequoia National Forest, Fort Tejon State Historical Park, and Red Rock Canyon Recreation Area).

Institutions

Correctional institutes exist in several locations under various jurisdictions in Kern County. The California Correction Institution is operated by the California Department of Corrections and Rehabilitation and is located approximately 1.5 miles from the proposed substation site.

Hospitals

The Tehachapi Valley Healthcare District is approximately 12 miles from the proposed substation site and provides a 24-bed critical access facility with over 70 physicians. The Tehachapi Valley Healthcare District Hospital is located at 115 West E Street in the City of Tehachapi.

Regulatory Background

Federal

There are no federal laws or regulations related to public services that are applicable to the Proposed Project.

State

Fire Protection. The California Code of Regulations (CCR), Title 24, Part 9 is known as the California Fire Code. This code provides for planning, precautions, and preparations for fire safety and fire protection during various activities, including, but not limited to, construction and demolition, as well as requirements for buildings and guidelines for working with flammable chemicals and materials. The Proposed Project would be located in an area that has a moderate to high fire hazard potential.

California Public Resources Code (CPRC) Section 4292 states:

> *[A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line…shall, during such times and in such areas as are determined to be necessary by the director or the agency, has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrestor, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower.*

CPRC Section 4293 states:

> *[A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the*

director or the agency which has primary responsibility for the fire protection of such area, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:

(a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet

(b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet

(c) For any line which is operating at 110,000 or more volts, 10 feet

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard.

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan. The goals of the General Plan's Safety Element include assisting in the allocation of public resources in Kern County to develop a systematic approach toward the protection of public health, safety and welfare within the county and assure the continuity of vital public services and functions (Kern County, 2009). These goals and policies include the following:

- Safety Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.
- Safety Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- Safety Policy 6: All discretionary projects shall comply with the adopted Fire Code and requirements of the Fire Department.

In addition, the goals of the General Plan's Land Use, Open Space, and Conservation Element include ensuring the provision of adequate public services, including fire and police protection. These goals and policies include the following:

- Public Facilities and Services Policy 6: The County will ensure adequate fire protection to all Kern County residents.
- Public Facilities and Services Policy 7: The County will ensure adequate police protection to all Kern County residents.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along SR-58

between the San Joaquin Valley and the Mojave Desert (Kern County, 2010). The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation would be located within the GTASCP, as would portions of the telecommunications routes.

Applicant Proposed Measures

There are no Applicant Proposed Measures for public services.

5.14.2 Environmental Impacts and Mitigation Measures

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

a) Fire protection?

LESS THAN SIGNIFICANT. The Proposed Project would be located in an area that is designated as having a moderate to high fire potential. Construction activity would be temporary and occur over the course of approximately one year. Construction activity would not be anticipated to require new or physically altered fire protection emergency services. The Proposed Project area would continue to be adequately supported by the existing fire protection services. Once constructed, the substation would be unmanned and operated remotely. It would not pose any unusual fire risks that would result in the need to construct new fire facilities. Therefore, construction of the Proposed Project would be expected to result in less than significant impacts related to fire protection services.

b) Police Protection?

LESS THAN SIGNIFICANT. Construction of the Proposed Project would not require police protection beyond routine patrols and response. The Proposed Project site and the staging and equipment yards, would be enclosed and locked when crews are not at work. The majority of construction-related activities would be located away from major emergency access routes and not be expected to significantly interfere with emergency police. Therefore, construction of the Proposed Project would result in less than significant impacts related to police protection.

c) Schools?

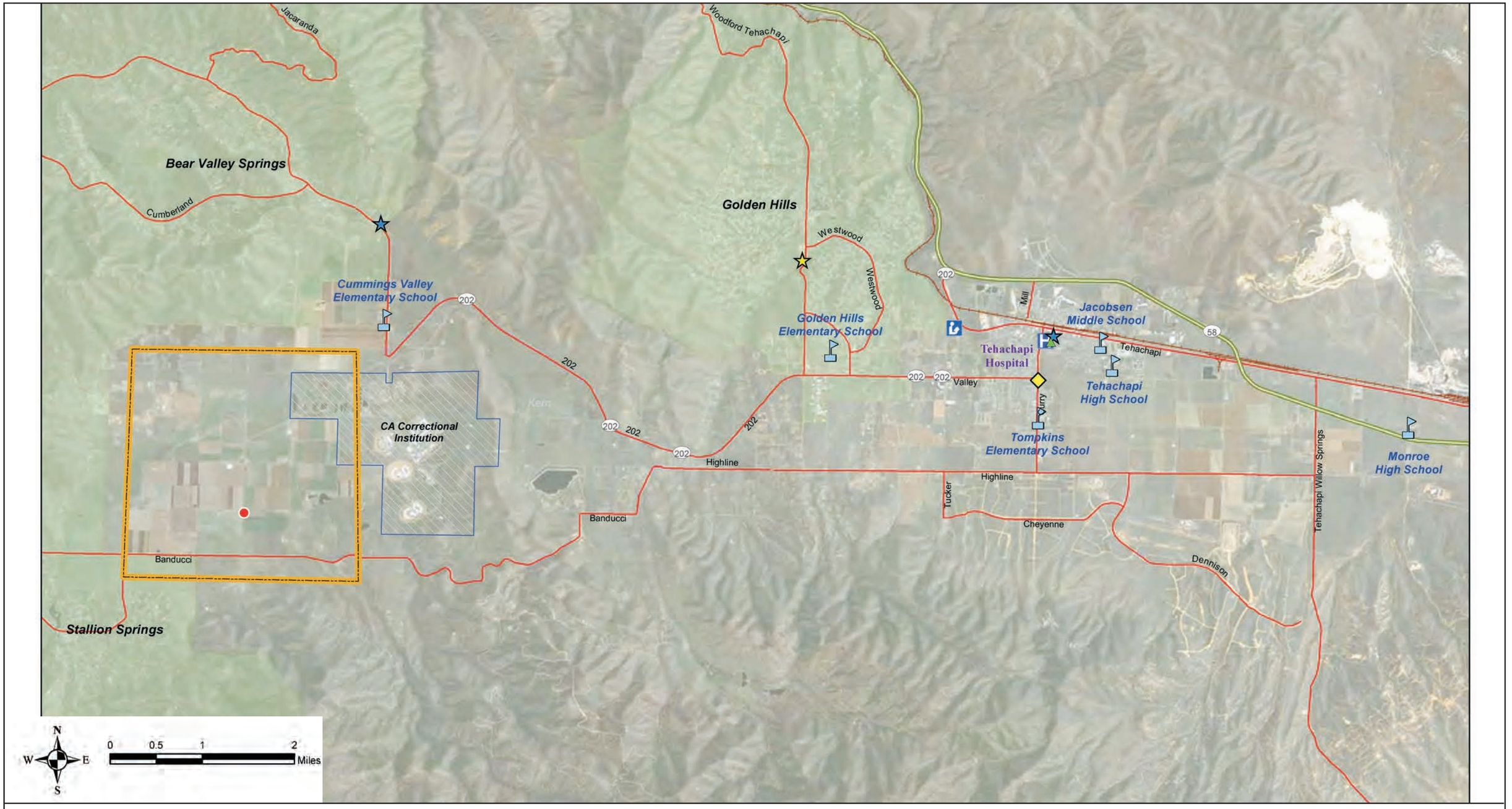
NO IMPACT. The Proposed Project would not be expected to result in an increase in population within the area. Construction of the proposed substation and other ancillary facilities would occur over approximately 12 months and would not require the relocation of workers to the Proposed Project area. There would not be an expected increase in families or in school-age children as a result of the temporary construction activities and workers relocating temporarily to the area. The substation would be remotely operated and would be serviced by existing SCE crews. Therefore, the Propose Project would result in no impact related to requiring expanded schools.

d) Parks?

NO IMPACT. The Proposed Project would not increase the region's population. Construction of project infrastructure would take place over 12 months, requiring up to 50 construction personnel working on any given day. Although some workers may use local and regional park facilities during project construction, increased use would be minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities. Consequently, the project would not increase any long-term demands on existing parks in the project area, and no new or expanded park facilities would be required because the of Proposed Project.

e) Other Public Facilities?

NO IMPACT. The Proposed Project would not increase population and would not affect other governmental services or public facilities so as to require new or expanded facilities to be developed. Therefore, no impact on other public facilities is expected.



Source: SCE, 2014.

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- School
- Hospital
- Post Office
- Police
- Sheriff
- Fire Department
- Library
- Freeway / Major Highway
- Major Road / Minor Highway

Figure 5.14-1

Public Services in the Proposed Project Vicinity

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5.15 Recreation

RECREATION	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.15.1 Setting

Kern County contains numerous county, state, and federal parks and recreation areas and public open space areas. The Kern County Parks and Recreation Department maintains neighborhood and community parks throughout the County as well as several regional recreation areas. These facilities include scenic and view areas, playgrounds, competitive sports fields, multi-use trails, picnic grounds, campgrounds, water sports parts, and winter snow sports parks. There are approximately 400 acres of park and recreation facilities in the County (Kern County, 2004).

See Figure 5.15-1 for recreation resources in the Proposed Project vicinity. The nearest park to the proposed substation site is the Brite Valley Aquatic Recreation Area, located 3 miles northeast of the site. There are three public parks located within 1 mile of proposed telecommunications components. These recreational facilities include the Brite Lake Aquatic Recreation Area, Meadowbrook Park, and Philip Marx Central Park, which are described below (SCE, 2014):

- **Brite Lake Aquatic Recreation Area:** Located 3 miles northeast of the substation site and 200 feet south of proposed Telecommunications Route 1, is a 90-acre man-made lake with picnic and camping sites.
- **Meadowbrook Park:** Located approximately 7.3 miles northeast of the proposed substation site and 1-mile north of proposed Telecommunications Route 2, Meadowbrook Park is an 8-acre park with 3 baseball fields, a playground, restrooms, a snack bar, and a picnic pavilion. There is also a Frisbee Golf Course and a dog park.
- **Philip Marx Central Park:** Located approximately 9 miles northeast of the proposed substation site and 0.25 miles south of proposed Telecommunications Route 2, Philip Marx Central Park is a 5-acre park with a central gazebo, picnic tables, a playground, and a hall used for youth groups and special indoor events.

In addition to these, there are a number of public parks, open spaces, and recreational areas located in the City of Tehachapi (including West Park, Tehachapi City Park, Dye Natatorium, Tehachapi Mountain Park) and the region (including Kern River State Park, Sequoia National Forest, Fort Tejon State Historical Park, and Red Rock Canyon Recreation Area).

Regulatory Background

Federal

There are no Federal regulations, plans, and standards for population and housing that would apply to the Proposed Project.

State

There are no State regulations, plans, and standards for population and housing that would apply to the Proposed Project.

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan. The goals and policies of the General Plan's Land Use, Open Space, and Conservation Element include preserving valuable natural resources and ensuring the provision of adequate public services, including parks and recreation (Kern County, 2009). These goals and policies include the following:

- Public Facilities and Services Goal 8: Provide recreation opportunities for all citizens of Kern County while avoiding duplication between jurisdictions.
- Public Facilities and Services Goal 13: Provide a variety of park and recreation programs that offer safe, equitable, and balanced recreation opportunities for all residents and visitors.
- Public Facilities and Services Policy 5: Seek to provide recreational facilities where deficiencies have been identified.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert (Kern County, 2010). The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan, goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

Applicant Proposed Measures

There are no Applicant Proposed Measures for recreation.

5.15.2 Environmental Impacts and Mitigation Measures

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

NO IMPACT. The Proposed Project would not result in any residential or commercial development that would lead to increased use of existing parks or other recreational facilities. Construction of project infrastructure would take place over the course of 12 months, requiring up to 50 construction personnel working on any given day. Although some workers may use nearby park facilities during project construction, increased use would be minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities. Therefore, there would be no impact.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

NO IMPACT. The Proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact.

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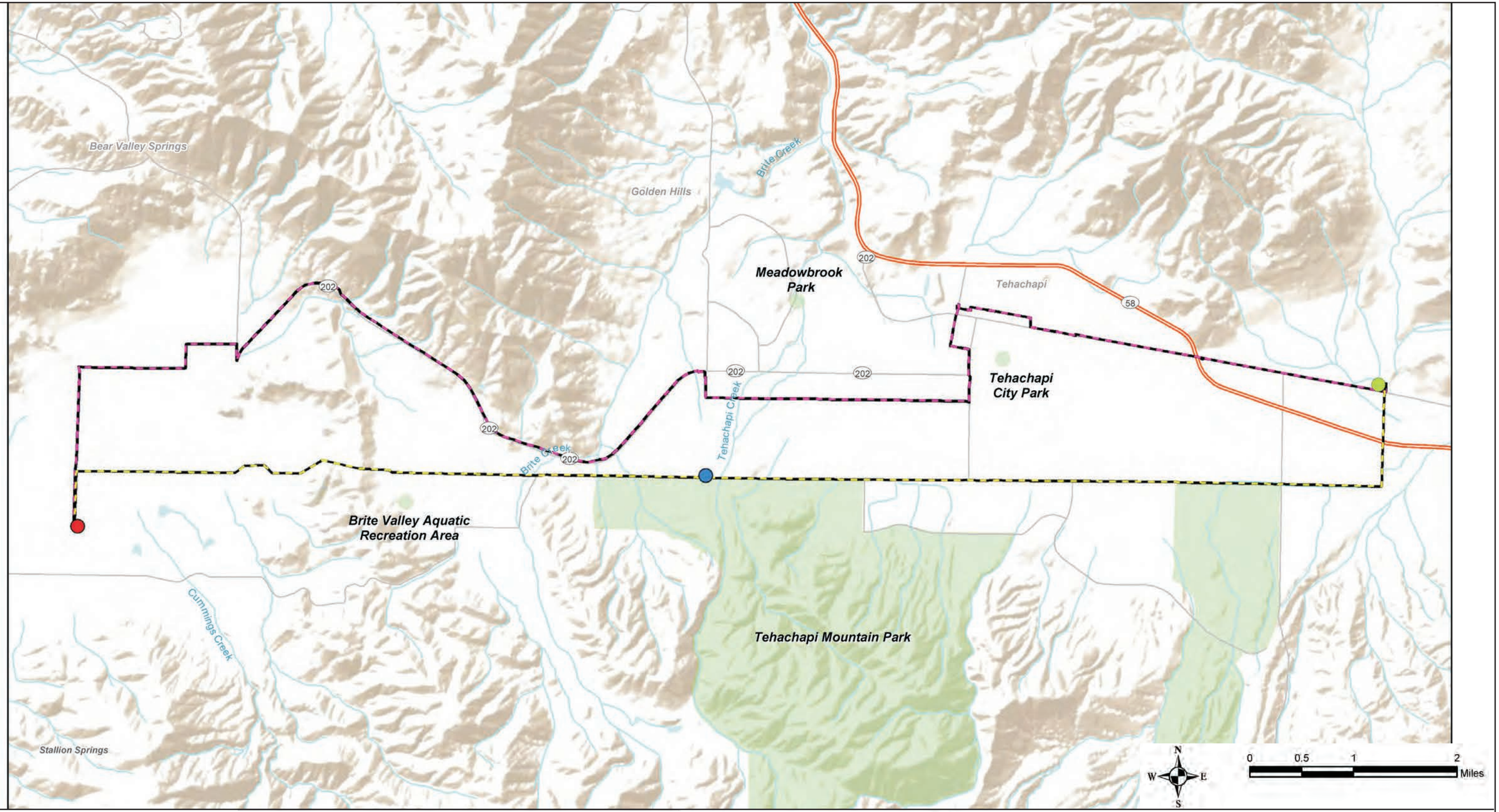

Aspen Environmental Group

Source: SCE, 2014.

- Proposed Banducci Substation
- Cummings Substation
- Monolith Substation
- Proposed Telecommunications Route 2
- Proposed Telecommunications Route 1
- Parks and Open Spaces
- Freeway / Major Highway
- Minor Highway / Major Roac

Figure 5.15-1

Recreation Resources in the Proposed Project Vicinity

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5.16 Transportation/Traffic

TRANSPORTATION AND TRAFFIC Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☑	☐	☐
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☑	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☑	☐	☐
e. Result in inadequate emergency access?	☐	☐	☑	☐
f. Result in inadequate parking capacity?	☐	☐	☐	☑
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.16.1 Setting

During construction, the substation site and the subtransmission lines in the vicinity of the proposed Banducci Substation site would be accessed via Pelliser Road. The Banducci Substation Staging Yard would be accessed via Pelliser Road. The North of Highline Road and Highwind Substation Staging Yards would be accessed via Highline Road. The Tehachapi Service Center Staging Yard would be accessed via North Mill Street. SCE would install two new TSP guy stubs along Pelliser Road, replace three wood poles on the south side of Highline Road east of Pelliser Road, install two new wood poles, remove four wood poles, and replace two wood poles on Pelliser Road, and install two new TSP poles and one LWS pole along unimproved Dale Road. Proposed telecommunication routes include underground conduit and overhead lines along portions of Highline Road, Jameson Street, Pelliser Road, Giraudo Road, West Valley Boulevard, Woodford Tehachapi Road, Cherry Lane, South Curry Street, West C Street, West H Street, Dennison Road, and Tehachapi Boulevard.

Existing Traffic Volumes and Levels of Service

Roadways and intersections are rated at varying levels of service (LOS). LOS is a measure of roadway operating conditions, ranging from LOS A, which represents the best range of operating conditions, to LOS F, which represents the worst. Basic definitions are presented in Table 5.16-1. LOS can be estimated based the on the road's traffic volume-to-road capacity (v/c) ratio or the average delay experienced by vehicles on the roadway.

Table 5.16-1. Level of Service Criteria for Roadways.

LOS	V/C	Traffic Flow Characteristics
A	0.00 – 0.60	Free flow; insignificant delays
B	0.61 – 0.70	Stable operation; minimal delays
C	0.71 – 0.80	Stable operation; acceptable delays
D	0.81 – 0.90	Approaching unstable flow; queues develop rapidly but no excessive delays
E	0.91 – 1.00	Unstable operation; significant delays
F	> 1.00	Forced flow; jammed conditions

LOS = level of service; V/C = volume/capacity ratio
Source: SCE, 2014 from Transportation Research Board, 2000.

Regional Transportation

The regional transportation system in the vicinity of the Proposed Project is largely composed of state highways and local roads within Kern County. The proposed Banducci Substation site is located at the intersection of Pelliser Road and Dale Road. Access to Pelliser Road is provided by Banducci Road to the south and Cummings Valley Road to the north. Regional access to the Proposed Project area is provided by California State Route (SR) 202, which heads west from SR-58. Both SR-202 and SR-58 are within the jurisdiction of the California Department of Transportation (Caltrans).

Highways

A summary of the highway characteristics for the roads in the vicinity of the project area is provided in Table 5.16-2.

Table 5.16-2. Roadway Characteristics for Local Access Roads in the Project Area.

Roadway	Location	Classification	Lanes	Average Daily Traffic	Level of Service	Physical Relationship to Project Components
SR-58	East of Mill Street Interchange	Freeway	4	21,000	A	Telecommunications infrastructure overhead and underground crossing
SR-202	North of California Correctional Institute	Enhanced Collector	2	2,500	A	Overhead telecommunication route
	North of Cummings Valley Road	Enhanced Collector	2	9,300	A	Overhead telecommunication route
	East of Old Town Road	Enhanced Collector	2	9,500	A	Overhead telecommunication route
	West of Tucker Road	Enhanced Collector	2	15,000	A	Overhead telecommunication route
Banducci Road	East of Pelliser Road	Collector	2	3,400	A	Access road
Cherry Lane	West of Tucker Road	Collector	2	600	A	Overhead telecommunication route
Dennison Road	North of Highline Road	Collector	2	1,000	A	Underground and overhead telecommunication route
Giraudo Road	West of Pelliser Road	Collector	2	500	A	Overhead telecommunication route

Table 5.16-2. Roadway Characteristics for Local Access Roads in the Project Area.

Roadway	Location	Classification	Lanes	Average Daily Traffic	Level of Service	Physical Relationship to Project Components
Highline Road	West of Water Canyon Road	Collector	2	5,000	A	Access road and overhead telecommunication route
	West of Tehachapi Willow Springs Road	Collector	2	3,000	A	Access road and overhead telecommunication route
	East of Banducci Road	Collector	2	4,800	A	Access road and overhead telecommunication route
Pelliser Road	South of Giraudo Street.	Collector	2	1,700	A	Access road
Tehachapi Boulevard	West of Tehachapi Willow Springs Road	Collector	2	4,100	A	Underground telecommunication route
Woodford Tehachapi Road	South of SR-202	Collector	2	4,000	A	Overhead telecommunication route

Source: SCE 2014, Kern County 2010

SR-202: SR-202 is a two-lane highway that travels in an east-west direction northeast and east of the proposed Banducci Substation site. Proposed telecommunications route 2 runs along SR-202 just north of Administration Dr. near the proposed substation site.

SR-58: SR-58 is a two and four-lane highway that travels in a general east-west direction and is located north, northeast, and east of the Proposed Project site. At its nearest, it is approximately eight miles from the substation site. However, SR-58 is crossed by both telecommunications routes as they approach Monolith Substation, which is north of the highway.

Arterial Roads

Cummings Valley Road, Banducci Road, and Giraudo Road: These two-lane roads serve local residents in the vicinity of the substation site. All three are truck routes. The substation site is on Pelliser Road, which can be approach from the south via Banducci Road and from the north via Giraudo Road. Telecommunication Route 2 makes an overhead crossing across Cummings Valley Road and runs along a portion of Giraudo Road.

Highline Road: This roadway is a two-lane east-west roadway parallel to SR-202, on the south side of Tehachapi. Telecommunication route 1 will travel along this roadway.

Tucker Road: This roadway is a key four-lane arterial that extends north from Highline Road Avenue to Tehachapi Boulevard. Both telecommunication routes cross Tucker Road.

South Curry Street: This roadway is a two-lane north-south street in the downtown central core of the City of Tehachapi. Telecommunication route 2 runs along a portion of South Curry Street.

Dennison Road: This roadway is a two-lane north-south roadway located in eastern Tehachapi. Both telecommunication routes cross Dennison Road.

Mass Transit

Kern Transit provides through service to and from Tehachapi on the 100 Bakersfield/Lancaster route. Service is provided 10 times a day during the week and three times a day on weekends. Amtrak Thruway bus service occurs twice daily both east and west bound.

Rail

The Union Pacific Railroad (UPRR) crosses through the middle and downtown areas of the City of Tehachapi at Green Street, Hayes Street, and Dennison Road. Proposed Telecommunication Route 1 crosses the UPRR right-of-way at Grand Avenue, as the line enters Monolith Substation immediately north of the railroad. Proposed Telecommunication Route 2 crosses the UPRR right-of-way three times, twice in the city and once at Grand Avenue to reach Monolith Substation.

Bicycle

There are no existing bikeways located within the vicinity of the proposed Banducci Substation site. The Tehachapi Bicycle Master Plan identifies numerous existing and proposed bikeways that occur on or near to the proposed telecommunication routes (Tehachapi, 2012).

Truck Routes

The northern and eastern segments of SR-202, Cummings Valley Road, Pelliser Road, and Banducci Road could be used as truck routes to access the proposed Banducci Substation site on Pelliser Road. Truck routes providing access to the telecommunication components of the Propose Project include SR-58, Highline Road, and West Valley Boulevard. See Figure 5.16-1 at the end of this section for truck routes and arterial roads within the Proposed Project vicinity.

Air Transportation

There is a private landing airstrip at PSK Ranch, approximately 0.75 miles northeast of the proposed Banducci Substation site. The Tehachapi Municipal Airport is located more than 9 miles northeast of the proposed Banducci Substation site and just north of the nearest section of the proposed Telecommunications Route 2. The Proposed Project would be located approximately 5 miles north of Black Mountain Supersonic Corridor which is a military Supersonic Corridor. Edwards Air Force base is located more 40 miles southeast of the proposed Banducci Substation site and is approximately 30 miles southeast of the nearest proposed telecommunication routes. The Proposed Project would not be located within an area that would be subject to military review (SCE, 2014).

Regulatory Background

Federal

Hazardous Materials Transportation Act of 1974. The Hazardous Materials Transportation Act of 1974 directs the United States Department of Transportation (USDOT) to establish criteria and regulations regarding safe storage and transportation of hazardous materials. The USDOT would primarily deal with the transportation of hazardous materials on roadways in the Proposed Project area

State

California Streets and Highways Code. This Code requires project proponents to obtain permits from Caltrans for any roadway encroachment and includes regulations for the care and protection of highways (both State and County) and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Sections 700 through 711 are specific to utility providers and address utility infrastructure. The Code also outlines directions for cooperation with local agencies, guidelines for permits, and general provisions relating to state highways and Caltrans' jurisdiction.

California Joint Utility Traffic Control Manual. The California Joint Utility Traffic Control Manual (CJUTCM) provides guidelines for ensuring that the needs of all road users (motorists, bicyclists, and pedestrians within the highway including persons with disabilities) are met through a temporary traffic control (TTC) zone during highway construction, utility work, maintenance operations and the management of traffic incidents.

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan. One of the goals of the General Plan's Circulation Element includes maintaining a minimum LOS "D" for all roads throughout the County. These goals include:

- Circulation Goal 2: Upgrade road circulation in and around Tehachapi.
- Circulation Policy 5: The County should monitor development applications as they relate to traffic generation developed for this plan. If traffic resulting from projects would exceed current volume to capacity projections, mitigation is required if development causes roadways to fall below LOS D and LOS C for Caltrans roadways.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route SR-58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

The Proposed Project would be located within an area that is classified by the GTASCP as a Tehachapi Regional Transportation Impact Fee Area. Development within a Transportation Impact Fee Area is subject to a transportation impact fees if the project would result in substantial transportation-related impacts. Maintaining a LOS of C or better on roadways within the designated Transportation Impact Fee Areas remains one of the goals of the GTASCP.

The GTASCP also provides the following right-of-way allowances for relevant streets near the proposed Banducci Substation location.

- **Banducci Road:** Collector Road – Minimum 90-foot right-of-way (typically provides two to four lanes)
- **Pelliser Road:** Collector Road – Minimum 60-foot right-of -way (typically provides two lanes)
- **Highline Road:** Collector Road – Minimum 90-foot right-of-way (typically provides two to four lanes)
- **Dale Road:** Collector Road – Minimum 90-foot right-of-way (typically provides two to four lanes)

Applicant Proposed Measures

There are no applicant proposed measures for transportation and traffic.

5.16.2 Environmental Impacts and Mitigation Measures

a. Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Proposed Project would contribute to traffic congestion by adding truck trips and worker commute trips during construction. The major construction would occur at the proposed substation site. Construction along the telecommunications routes would be period, involving the replacement of some poles and the stringing of fiber optic cable, as well as some trenching for conduit installation underground.

The peak level of estimated truck trips would occur during the import of 10,000 cubic yards of soil of fill material to the substation site. Another 10,000 cubic yards of excavated soil would also be used as fill material. Import of fill (and removal of organic waste in the same trucks) would result in between 550 and 560 round trips (1,100 to 1,120 total trips) using heavy duty trucks (18 cubic yards). Approximately 26 to 28 truck trips per day would be needed to import soil and dispose of organic material over a 30-day period. In addition, SCE estimates that there would be approximately 700 water truck trips over the course of project construction (12 months). Additional trucks would be needed to bring equipment, hardware, and building materials (such as concrete) to the work site. Transformers would be brought to the site on a low-bed truck.

During construction of the Proposed Project, it is anticipated that on any given day up to 50 workers could be at various locations on the Proposed Project. While a number of the workers likely would carpool, in the event that each worker traveled to the site alone, a worst case scenario would include the addition of 50 vehicles to traffic in the vicinity of the Proposed Project (100 one-way trips per day).

Construction of the substation and telecommunication components of the Proposed Project would require crews of between two and 20 workers each working in the project work area. A worst case scenario would include the addition of 20 vehicles to traffic in the vicinity of where the proposed Banducci Substation and transmission components would be constructed. Throughout the day, a majority of these vehicles would be parked at the proposed substation site or construction yards and would not contribute to traffic in the area.

Installation of the proposed fiber optic telecommunications cables would involve crews of approximately three to six workers at a site. A worst case scenario would add up to six vehicles to traffic in the vicinity of where the telecommunications work is taking place. This would be a negligible addition to traffic.

If all 50 worker vehicle trips were to occur at one location, this would represent an approximately ten percent increase on the road segment with the lowest ADT (Giraudo Road west of Pelliser Road) and a less than one percent increase on the road with the highest ADT (Cummings Valley Road without SR-202).[1] Each of these roadways currently is at LOS C or better and the increased use would not be expected to

[1] The assumption of up to 50 trips per day assumes that up to 20 workers would travel to and from the Substation Study Area daily in separate vehicles. This estimate further assumes that up to 10 additional daily trips (i.e., for lunch, supplies, etc.) would be associated with the Proposed Project during construction. For the entire Proposed Project, the worst case scenario would be an additional 50 workers and 100 average daily trips. (SCE, 2014)

impact the current service levels within the vicinity of the substation site or the larger project area (Table 5.16-2: Roadway Characteristics for Local Access Roads in the Project Area).

Temporary traffic slowdowns may occur while large slow-moving equipment is travelling on public roadways to the substation site. SCE anticipates that the majority of such traffic be outside of peak hours. Heavy transport vehicles (60-ton capacity) would be used to deliver transformers to the substation site, and a traffic control service would be required (SEC, 2014). By law, the heavy loads would require SCE to obtain transportation permits from local jurisdictions and Caltrans. Each transportation permit would designate the haul routes to be taken and require SCE to repair any damage caused to any restricted load limit streets. With these procedures in place, congestion and potential roadway damage caused by project-related truck traffic would cause adverse, but less than significant impacts.

Construction activities undertaken within public streets would require the use of traffic control, and any lane closures would be conducted in accordance with applicable requirements of the agency having jurisdiction over the road. These traffic control measures would be consistent with those published in the *California Joint Utility Traffic Control Manual* (SCE, 2014). If lane closures are required, SCE would notify emergency services regarding the project and lane closures/detours.

The increase in traffic that would occur due to construction activities and worker vehicles accessing the work site would be minimized through implementation of Mitigation Measures T-1, T-2, and T-3 would not be substantial in relation to the existing traffic volume and the capacity of the street system, and construction effects would be limited to a short-term duration. During operation of the proposed substation, work crews would visit the substation only two to three times per week for routine maintenance. As such, the permanent increase in traffic would not be substantial, and this impact would be less than significant.

Mitigation Measures for Construction Traffic and Interference with Emergency Access during Construction

MM T-1 **Restrict Lane Closures.** SCE shall restrict all necessary lane closures or obstructions on major roadways associated with overhead or underground construction activities to off-peak periods in congested areas to reduce traffic delays. Lane closures must not occur between 6:00 and 9:30 a.m. or between 3:30 and 6:30 p.m., unless otherwise authorized in writing by the responsible public agency issuing an encroachment permit.

MM T-2 **Ensure Emergency Access and Response.** Prior to construction, SCE shall coordinate with Kern County and emergency service providers regarding emergency access and/or response to the Proposed Project area during construction activities to avoid restricting movements of emergency vehicles. SCE shall ensure that the Proposed Project has considered the relevant Kern County ordinances and building codes so as not to hinder or interfere with emergency access or response (such as, but not limited to, the Kern County Code of Building Regulations: Chapter 17.32, Fire Code and Chapter 17.34, Wildland-Urban Interface Code).

Police departments, fire departments, ambulance services, and paramedic services serving the project area shall be notified 30 days in advance by SCE of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where roads will be temporarily blocked, work crews shall be ready at all times to accommodate emergency vehicles through immediately stopping work for emergency vehicle passage and/or facilitating the use of short detours and alternate routes in conjunction with local agencies.

MM T-3 **Implement Traffic Management Plan.** SCE shall follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. SCE is a member of the California Joint Utility Traffic Control Committee, which published the California Joint Utility Traffic Control Manual (2010). SCE will follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the CVC. These recommendations include provisions for safe access of police, fire, and other rescue vehicles.

b. Would the project cause, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways to be exceeded?

LESS THAN SIGNIFICANT. Construction of the Proposed Project would cause a minor short-term increase in the local traffic throughout the project study area. Project-related traffic would result in a relatively small increase when added to the existing daily traffic on highways and arterial roadways. The Proposed Project would not increase traffic substantially as compared to the existing traffic volume and the capacity of the street system in the area. Therefore, it is not anticipated that the temporary construction traffic generated by the Proposed Project would alter the existing level of service designations on area roadways, and level of service standards would not be exceeded. Operation of the Proposed Project would require routine inspection and periodic maintenance visits, which would not cause level of service standards to be exceeded. The result would be less than significant impacts on level of service.

c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

NO IMPACT. The nearest airport facility would be 9 miles from the project site. No change in air traffic patterns would occur as a result of the project.

d. Would the project substantially increase hazards because of a design feature or incompatible uses?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED - CONSTRUCTION. Heavy equipment operating adjacent to or within a road right-of-way could increase the risk of accidents. Construction of the Proposed Project may require the development of access roads and use of existing access roads for trucks, large vehicles, and other equipment to access the substation site and some telecommunication poles; however, these access roads would reduce potential hazardous conditions by ensuring the availability of safe access points to and from various components of the Proposed Project. Additionally, through implementation of Mitigation Measures T-1, T-2, and T-3, SCE would incorporate traffic control measures that are designed to ensure the safety of all road users and to further ensure that hazards along roadways or at intersections are not increased during construction. Therefore, with implementation of mitigation, the Proposed Project would not increase hazards on area roadways due to a design feature or incompatible uses.

NO IMPACT – OPERATIONS AND MAINTENANCE. An entrance to the new Banducci Substation would be constructed off Pelliser Road This entrance would be constructed on a straight street with low traffic. Because it would be used infrequently and not cause substantial disruption to existing traffic, it would not create a hazard, and there would be no impact.

e. Would the project result in inadequate emergency access?

LESS THAN SIGNIFICANT IMPACT – CONSTRUCTION. Routes for emergency vehicles would be maintained throughout project construction. Project activities could have the potential, in rare circumstances, to slow emergency response vehicles (for example, a slow-moving pole delivery truck occurring simultaneously with the need for emergency vehicle access). Given the frequency with which such occurrences would take place and the brevity of such a delay, this potential impact would be less than significant. This less-than-significant impact would be further minimized with implementation of Mitigation Measure T-2 (Ensure Emergency Access and Response), which requires early coordination with officials providing emergency services.

NO IMPACT – OPERATIONS AND MAINTENANCE. The proposed Banducci Substation would be unstaffed, and electrical equipment within the substation would be remotely monitored and controlled by an automated system from SCE's Vincent Substation. Therefore, no additional operating and maintenance staff would be required after construction is completed. SCE personnel typically would visit for electrical switching and routine maintenance. Existing O&M crews would operate and maintain the new equipment as part of their current O&M activities. Consequently, operation of the project would not result in inadequate emergency access.

f. Would the project result in inadequate parking capacity?

NO IMPACT. Construction workers would park all personal and project vehicles in the four temporary staging yards set up by SCE (SCE, 2014); therefore, there would be no impacts to parking capacity.

g. Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

NO IMPACT. The Proposed Project would not conflict with plans, policies, or programs supporting development of alternative transportation. The Proposed Project would not permanently remove bicycle lanes or conflict with alternative transportation routes. Impacts would not result from project activities.

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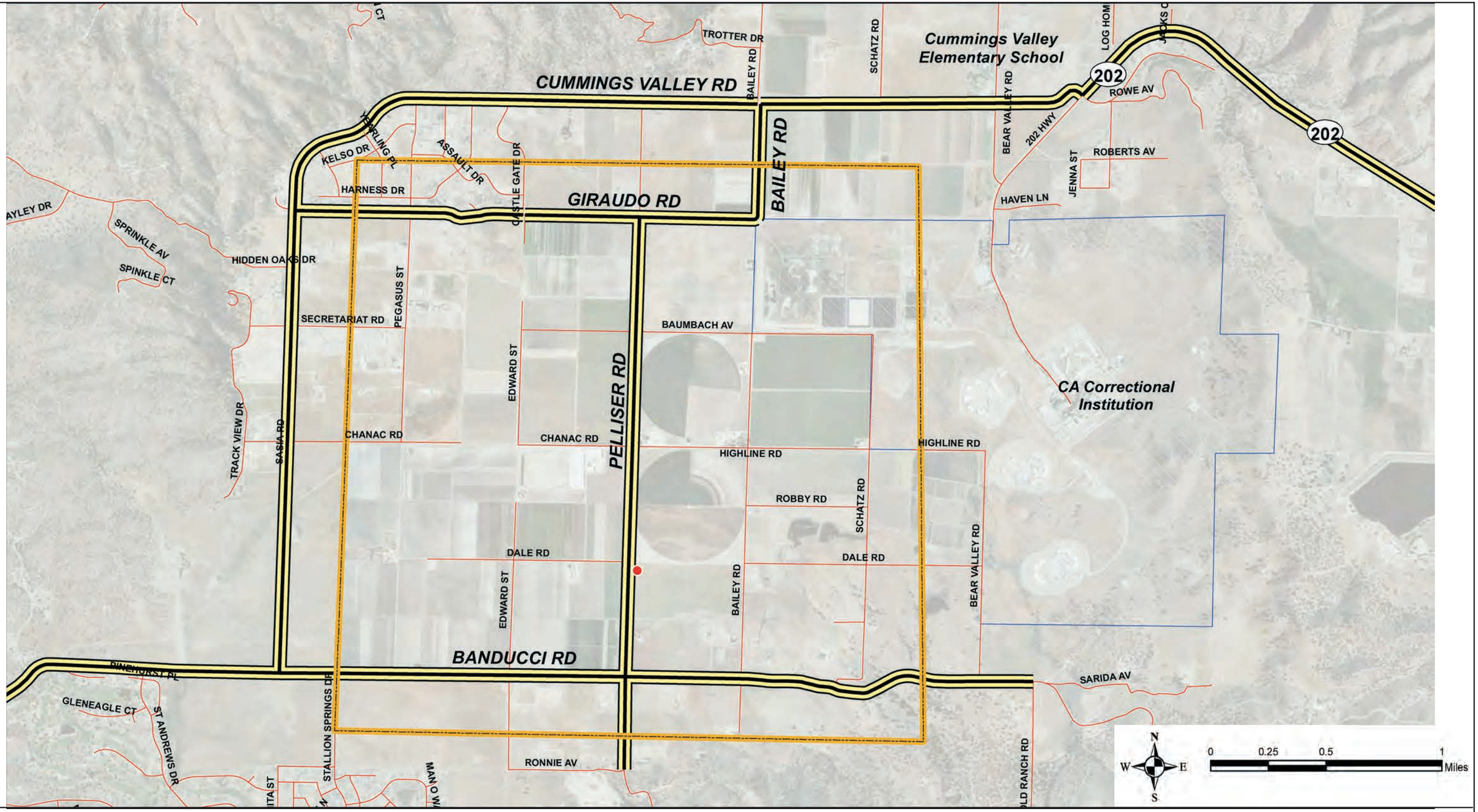

Aspen Environmental Group

Source: SCE, 2014.

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Truck Route
- Secondary Road

Figure 5.16-1

Truck Routes and Arterial Roads in the Proposed Project Vicinity

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5.17 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☑	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☑	☐	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☑	☐	☐
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

Significance criteria established by CEQA Guidelines, Appendix G.

5.17.1 Setting

Utility and services system facilities associated with electricity, domestic (potable) water, stormwater, solid waste, communications, and natural gas are provided and maintained by a variety of local purveyors, including cities, counties, special districts, water agencies, and private companies. Table 5.17-1 lists utility providers in the area.

Table 5.17-1. Utility Providers

Natural gas – SCE, PG&E

Electricity – SCE

Water – Tehachapi – Cummings County Water District

Wastewater – City of Tehachapi Wastewater Treatment Facility, Bear Valley Community Services District, Stallion Springs Community Services District, and Golden Hills Sanitation Company

Telephone – AT&T

Solid Waste – Kern County Waste Management Department, Stallion Springs Community Services District, and Bear Valley Community Services District, Benz Sanitation

Sources: Kern County, 2010; SCE, 2014.

Utilities

Water Supply

Water supply sources in the Greater Tehachapi Area (GTA) and the City of Tehachapi include groundwater basin sources, imported water supply (State Water Project), stored water sources, recycled/ reclaimed water sources, and conjunctive use recharge sources.

The Proposed Project is located within the Tehachapi-Cummings County Water District. Groundwater is the primary source of water supply. Four groundwater basins in the GTA (Bear Valley, Brite Valley, Cummings Valley, and Tehachapi Valley Basins) provide water supplies to current users. In total, the four basins provide approximately 10,714 acre-feet of water. Of this total, 9,948 acre-feet of groundwater is being used for consumptive uses, leaving approximately 766 acre-feet of unused or unexercised water (Kern County, 2010).

The allocation of State Water Project water is through the Kern County Water Agency and State Department of Water Resources (SEC, 2014).

Electricity and Natural Gas

Electricity and natural gas within the vicinity of the Proposed Project are provided by SCE. The proposed Banducci Substation site is located within an Electrical Needs Area bounded by Woodford-Tehachapi Road to the east, El Camino Drive to the north, the Pacific Gas & Electric service territory to the west, and High Gun Drive to the south. In the Bear Valley area, Pacific Gas & Electric provides natural gas.

Service System

Sewerage/Wastewater

Sanitary sewer collection and treatment services are available in select areas in the area and, depending on location, are operated by the Bear Valley Community Services District, the Stallion Springs Community Services District, and the Golden Hills Sanitation Company (Kern County, 2010).

Approximately 90% of the existing lots within the Proposed Project area are on septic systems (SCE, 2014). Sewer service is not currently available at the proposed Banducci Substation site. A stand-alone, permanent restroom would be installed within the substation perimeter wall, which would be equipped with self-contained water and waste holding tanks. The restroom would be maintained by an outside service company.

Solid Waste Disposal

The Kern County Waste Management Department operates seven landfills, five transfer stations, four transfer bins, and two special waste facilities sites in the County. The Tehachapi landfill is located at 12001 Tehachapi Boulevard, approximately 18 miles from the proposed Banducci Substation site. The Mojave-Rosamond landfill is approximately 60 miles distant (Kern County Waste Management Department, 2014).

Table 5.17-2. Landfill Capacities

Landfill Name	Total Capacity (cu.yd.)	Remaining Capacity (cu.yd.)	Remaining Capacity (percent)	Maximum Throughput (tons/day)
Tehachapi Sanitary Landfill (Cease operation estimated 2016)	3,388,723	874,874	25.8	1,000
Mojave-Rosamond Sanitary Landfill (Cease operation estimated 2123)	78,000,000	76,310,297	97.8	3,000

Source: CalRecycle 2014

Regulatory Background

Federal

Clean Water Act Section 402: National Pollutant Discharge Elimination System. Section 202 of the Clean Water Act (CWA) establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point source discharges of pollutants of Waters of the United States. Discharges or construction activities that disturb 1 or more acres, which includes the Proposed Project, are regulated under the NPDES stormwater program and are required to obtain coverage permit under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements such as the implementation of the Stormwater Pollution Prevention Plan, which would further specify best management practices to avoid or eliminate pollution discharge into the nation's waters. The State Water Resources Control Board (SWRCB) issues both general and individual permits under this program. The SWRCB delegates much of its NPDES authority to nine regional water quality control boards. The Proposed Project's NPDES permits are under jurisdiction of Region 5, the Central Valley Regional Water Quality Control Board, and Region 6, the Lahontan Regional Water Quality Control Board.

State

General Order No. 131-D. The California Public Utilities Commission (CPUC) is the regulatory agency for General Order 131-D. This General Order provides guidelines and measures for public utility providers to plan and construct substations, electric generation, and transmission, power, and distribution line facilities in California. This General Order identifies the process, documentation, and measures required to ensure compliance. The Proposed Project would be subject to comply with this order.

Integrated Waste Management Act of 1989. The Integrated Waste Management Act of 1989 created the authority and responsibilities of the California Integrated Waste Management Board (CIWMB). The Act, which is administered by the CIWMB, requires all local and county governments to adopt a waste reduction measure designed to manage and reduce the amount of solid waste sent to landfills. This Act established reduction goals of 25 percent by the year 1995 and 50 percent by the year 2000. The CIWMB has continued to encourage reduction measures through the continued implementation of reduction measures, legislation, infrastructure and supporting local requirements for new developments to include areas for waste disposal and recycling on-site.

California Department of Toxic Substances Control. The California Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and identifies ways to reduce the hazardous waste produced in California. The DTSC operates programs that respond to incidents and prevent releases; performs research such as evaluations; and enforces the appropriate handling, transport, storage, treatment, disposal, and cleanup of hazardous wastes.

California Code of Regulations (Title 27). Title 27 (Environmental Protection) of the California Code of Regulations defines regulations for the treatment, storage, processing, and disposal of solid waste. The State Water Resources Control Board maintains and regulates compliance with Title 27 (Environmental Protection) of the California Code of Regulations. The compliance of the Proposed Project would be enforced by the Central Valley and Lahontan RWQCB.

Senate Bill (SB) 610. SB 610 requires preparation of a Water Supply Assessment for any development which meets the definition of "project" under the Water Code section 10912. The Proposed Project does not meet the definition of "project", which applies to large residential, commercial, and industrial project that require a substantial ongoing water supply.

Local

The California Public Utilities Commission (CPUC) General Order No. 131-D, Section XIV B states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan. The goals of the General Plan's Land Use, Open Space, and Conservation Element include assisting in the allocation of public resources in Kern County and assure the continuity of vital public services and functions. These goals and policies include the following:

- Public Facilities and Services Goal 9 Serve the needs of industries and Kern County residents in a manner that does not degrade the water supply and the environment and protect the public health and safety by avoiding surface and subsurface nuisances resulting from the disposal of hazardous wastes irrespective of the geographic origin of the waste.
- Public Facilities and Services Goal 11: Reduce residential contamination of groundwater by encouraging sanitary sewer systems.
- Public Facilities and Services Policy 12: All methods of sewage disposal and water supply shall meet the requirements of Kern County Environmental Health Services Department and the California Regional Water Quality Control Board. The Environmental Health Department shall periodically review and modify, as necessary, its requirements for sewage disposal and water supply, and shall comply with any new standards adopted by the State of implementation of Government Code Division 7 of the Water Code.
- Public Facilities and Services Policy 13: The County shall ensure landfill capacity for the residents and industry of Kern County.
- Public Facilities and Services Policy 15: Prior to the approval of any discretionary permit, the County shall make the finding, based on information provided by CEQA documents, staff analysis, and the applicant, that adequate public and private services and resources are available to serve the proposed development.
- Industrial Policy 1: Locations for new industrial activities shall be provided with adequate infrastructure (water, sewage, disposal systems, roads, etc.) to minimize effects on County services.
- Resource Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through the utilization of grading and flood protection ordinances.

Greater Tehachapi Area Specific and Community Plan. The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

Applicant Proposed Measures

There are no Applicant Proposed measures for utilities and service systems.

5.17.2 Environmental Impacts and Mitigation Measures

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

LESS THAN SIGNIFICANT DURING CONSTRUCTION. Minimal amounts of wastewater would be generated during construction. Sanitary facilities would be provided and serviced by a private company (SCE, 2014). This would generate a nominal amount of wastewater to be treated. There would be no sewer connection to the Proposed Project. Therefore, the Proposed Project would have less than significant impact related to wastewater treatment requirements.

LESS THAN SIGNIFICANT DURING OPERATION. Operation of the facility would be automated, with periodic maintenance and servicing by SCE personnel. Sanitary facilities at the substation would be self-contained and would be managed by a private company. Minimal amounts of wastewater would be generated. Therefore, during operation, the Proposed Project would have a less than significant impact on wastewater treatment requirements.

b. Would the project require, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

NO IMPACT. The Proposed Project would generate minimal demand for water or wastewater treatment. Construction work crews would bring their own drinking water to the site and portable toilets would be provided. During construction, temporary sanitary facilities would be provided. During operation, the substation would be unmanned and a self-contained sanitary facility at the substation would be maintained by a vendor. Existing wastewater and water treatment facilities are adequate to accommodate the demand generated by the Proposed Project. Thus, the project would have no impact requiring the construction or expansion of water or wastewater treatment facilities.

c. Would the project require, or result in the construction of, new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Construction of the Proposed Project would include grading and removal of existing vegetation from the proposed Banducci Substation site. These site preparation measures would have the potential to reduce water infiltration into the soil, as the existing site is unoccupied and has no paved or impermeable surfaces. The implementation of a Stormwater Pollution Prevention Plan (SWPPP), required by the Regional Water Quality Control Board and described in Mitigation Measure HYD-1 (Develop Stormwater Pollution Prevention Plan and Implement Best Management Practices) (see Section 5.9 [Hydrology and Water Quality]), as well as stormwater retention facilities (if needed), would contain stormwater discharges during storm events at the site. The Proposed Project would not require the construction of new stormwater drainage facilities or expansion of such facilities, this impact would be less than significant.

d. Would the project have sufficient water supplies available to serve the Proposed Project from existing entitlements and resources, or would new or expanded entitlements be needed?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Construction work crews would bring their own drinking water to the site or be provided drinking water by SCE or the contractor. During construction, water would be required for dust suppression and cleaning of construction equipment. SCE estimates the Proposed Project's water requirements for construction would be approximately 2,782,000 gallons. Water for dust control would be provided by the construction contractors and would come from an offsite source in 4,000-gallon water trucks. Mitigation Measure HYD-2 (Use Non-potable Water for Dust Control or Soil Compaction) in Section 5.9 (Hydrology and Water Quality) requires use of non-potable water for dust control, if available. Recycled water may be available from the Tehachapi-Cummings County Water District, which operates a tertiary wastewater treatment plant in the area. If non-potable water is unavailable, water for dust control would be obtained from the local water purveyor. The volume of water required for dust control is not known. However, the amount of water for dust suppression during construction is considered to be nominal in comparison to available municipal water supplies, and water use for construction would be periodic and temporary, as required during the construction period. Upon completion, the Proposed Project would generate minimal daily water demand; water would be required only from landscaping irrigation needs at the proposed substation. Therefore, the Proposed Project would not be expected to exceed the existing water supplies available to serve the Proposed Project, and this impact would be less than significant.

e. Would the project result in a determination by the wastewater treatment provider that serves or may serve the Proposed Project that it has adequate capacity to serve the Proposed Project's projected demand in addition to the provider's existing commitments?

LESS THAN SIGNIFICANT. The Proposed Project would generate minimal wastewater during construction. Existing wastewater facilities would adequately accommodate the minor demand caused by project construction while serving existing commitments. Therefore, this impact would be less than significant.

f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs?

LESS THAN SIGNIFICANT. A private contractor would collect and transport any construction-related solid waste to a landfill authorized to accept the material. Small amounts of construction debris would be related to use of building materials (such as concrete and metal). Although it is anticipated that Tehachapi Landfill would be closed in 2016, the waste generated during construction would be reused or disposed of one of the other Kern County operated landfills The Mojave-Rosamond Landfill is 60 miles to the east and is not expected to close for over 100 years. Total solid waste generated by construction of the Proposed Project is anticipated to be minor compared to the capacity of existing landfills. Therefore, the impact of solid waste disposal on landfill capacity would be less than significant.

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

NO IMPACT. The California Integrated Waste Management Act of 1989, which emphasizes resource conservation through reduction, recycling, and reuse of solid waste guide solid waste management, requires that localities conduct a Solid Waste Generation Study (SWGS) and develop a Source Reduction Recycling Element (SRRE). The Proposed Project would operate in accordance with these applicable Solid Waste Management Policy Plans by including recycling activities where feasible. Construction of the Proposed Project would include replacement of approximately 39 existing treated wood poles. These poles would be reused, disposed of in a Class 1 hazardous waste landfill, or disposed of in the lined portion of

a RWQCB-certified municipal landfill. Hazardous liquid materials, such as mineral oil, would be subject to the Spill Prevention, Control, and Countermeasure developed for the Proposed Project. Other solid waste generated during construction of the Proposed Project would be temporarily stored in a designated area of laydown yards and would be reused or disposed in a manner consistent with applicable federal, State, and local statutes and regulations related to solid waste. Therefore, the Proposed Project would comply with federal, State, and local statutes and regulations related to solid waste disposal limits and landfill capacities. No impact would occur.

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5.18 Corona and Induced Current Effects

5.18.1 Environmental Setting

Corona

One of the phenomena associated with all energized electrical devices, including high-voltage transmission lines, is corona. The localized electric field near a conductor can be sufficiently concentrated to ionize air close to the conductors. This can result in a partial discharge of electrical energy called a corona discharge, or corona. The corona effect is the physical manifestation of discharged electrical energy into very small amounts of sound, radio noise, heat, and chemical reactions with air components. It is a phenomenon associated with all energized electrical devices but is especially common with high-voltage power lines.

The amount of corona produced by a power line is a function of line voltage, conductor diameter, conductor locations in relation to each other, power line elevation above sea level, condition of conductors and hardware, and local weather conditions. Corona typically becomes a design concern for power lines 230 kV and higher (i.e., transmission lines). It is less noticeable for lines that are operated at lower voltages (i.e., subtransmission and distribution-sized lines). The electric field gradient is greatest at the conductor surface. Larger-diameter conductors have lower electric field gradients at the conductor surface and, therefore, lower corona noise than smaller-diameter conductors.

Induced Currents

Electric currents can be induced in metallic objects located within the electric fields created by power lines. An electric current can flow when an object has an induced charge and a path to ground is present. The amount of induced current that can flow is important to evaluate from a safety perspective because of the potential for electrical shocks to people and the possibility of electric arcs that could form across small gaps between conductive surfaces and ignite flammable materials in the vicinity of the arc.

From a safety perspective, the National Electrical Safety Code (NESC) specifies that transmission lines be designed to limit short circuit current from vehicles or large objects near the line to no more than 5 milliampere (mA). The California Public Utilities Commission (CPUC) General Order 95, Rules for Overhead Electric Line Construction Section 35, covers all aspects of design, construction, operation, and maintenance of electrical power lines and fire safety hazards. The Public Utilities Code, CPUC General Order 95, and the NESC also address shock hazards to the public by providing guidelines on minimum clearances to be maintained for practical safeguarding of persons during the installation, operation, or maintenance of overhead transmission lines and their associated equipment.

5.18.2 Environmental Impacts and Assessment

The CEQA Guidelines do not provide significance criteria for evaluating impacts from corona or induced current effects. Corona and induced current from high-voltage power lines can cause environmental impacts through:

- Audible noise
- Radio and television interference
- Computer interference
- Disturbance of cardiac pacemakers
- Ignition of flammable materials

The Proposed Project involves construction of the new Banducci Substation, construction of two new 66 kV subtransmission line segments that would loop the existing Correction-Cummings-Kern River 66 kV line, construction of three new underground 12 KV distribution getaways, and installation of telecommunications facilities to connect the proposed new substation to SCE's existing telecommunications system. The audible corona noise level caused by the 66 kV power line was not quantified. However, circuits operating at 66 kV typically cause noise at levels comparable to the ambient baseline noise levels for agricultural and rural-residential land use, which as noted in Section 5.12 (Noise), would be approximately 30 dBA. At this level, the impact of audible noise from the corona effect would be less than significant.

Although corona can generate high frequency energy that may interfere with broadcast signals or electronic equipment, this is generally not a problem for transmission lines. The Institute of Electrical and Electronic Engineers (IEEE) has published a design guide (IEEE, 1971) that is used to limit conductor surface gradients so as to avoid corona levels that would cause electronic interference. Corona or gap discharges related to high frequency radio and television interference impacts are dependent upon several factors, including the strength of broadcast signals, and are anticipated to be very localized if they occur. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines. Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding or changes at the monitor location. As a result, impacts from corona, radio/television interference, and magnetic field interference would be less than significant.

Induced currents and voltages on conducting objects near the proposed power lines would not pose a threat in the environment if the conducting objects are properly grounded. Project construction and operation would meet or exceed General Order 95 standards and work would be done in accordance with SCE's safety practices. Likewise, induced currents would not significantly increase the risk of fuel ignition in the area.

The electric fields associated with the Proposed Project's subtransmission lines may be of sufficient magnitude to impact operation of a few older model pacemakers resulting in them reverting to an asynchronous pacing (IEEE, 1979). Substantial adverse effects would not occur with prolonged asynchronous pacing; periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Therefore, while the transmission line's electric field may impact operation of some older model pacemakers, the result of the interference would be of short duration and is not considered significant or harmful. No mitigation measures would be required or recommended.

5.19 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? (*Cumulatively considerable* means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☑	☐	☐
c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. As described in Section 5.4, Biological Resources, the project could result in impacts to habitats that support sensitive species. However, implementation of the Applicant Proposed Measures BIO-1, BIO-2, BIO-3, BIO-4 and BIO-5 and Mitigation Measures B-1, B-2, B-3, AQ-1, H-1, H-2, and HYD-1 described in Section 5.4.2 would reduce these potential impacts to less than significant levels. Similarly, Section 5.5, Cultural Resources, shows that the project would have a less than significant impact to important examples of the major periods of California history or prehistory.

As described in Section 5.5, Cultural Resources, the Proposed Project could have an adverse effect on cultural resources, either by itself or cumulatively with other projects. With implementation of Applicant Proposed Measures PA-1 and Mitigation Measures C-1 through C-7, the project would not eliminate important examples of major periods of California history or prehistory.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. CEQA defines a cumulative impact as an effect that is created as a result of the combination of the Proposed Project together with other projects (past, present, or future) causing related impacts. Cumulative impacts of a project need to be evaluated when the project's incremental effect is cumulatively considerable and, therefore, potentially significant.

A list of cumulative projects used for this analysis is provided in Table 5.19-1. The list includes projects in the vicinity of the project area in unincorporated Kern County and the City of Tehachapi. The projects were reviewed to identify whether the Proposed Project could contribute to cumulatively significant impacts when evaluated in combination with other projects. All of the projects are located more than a mile from the proposed substation site.

Table 5.19-1. Planned and Current Projects in the Vicinity of the Proposed Project

Project Name	Address	Proximity to Substation Site (approx. miles)	Type of Development	Status	Size (approx. acres unless noted)
Renia Boudaghian/ AT&T	Cummings Valley Road Near Renta St.	3.2	80 ft monopole	Construction 2014 or 2015	
Sturn, Pete & Terri	Highline Rd & Easy St	4	Equestrian facility	In suspense, per County	2.6
Mitchell, B.J.	Red Apple and Reeves St	7.5	Performing Arts Center	Going to EIR review, in suspense per County	7
Wal-Mart Super Center	Tucker Rd/Hwy 202, south of Tehachapi Boulevard	7.6	Shopping center	In litigation	23
O'Reilly Auto Parts	700 Tucker Road	7.8	Commercial	Under construction	7,453 sq.ft.
Red Apple Pavilion	Southwest corner of Tucker Road and Red Apple Drive	8	Commercial Center	Application submitted, CEQA review underway	13.9
Two professional office buildings	707 Valley Boulevard west of Mountain View Avenue	8.2	Office	Phase 1 completed and occupied; Phase II under construction	12,107 sq.ft.
Professional Building	West '"J" Street near North Mill Street	8.6	Professional building	No current activity	8,211 sq.ft.
Tehachapi Hospital Complex	Voyager Drive and Challenger Drive	9	Hospital	Under construction	77,889 sq.ft.
Medical Office Buildings	North and adjacent to Athens Street, east of Voyager, west of Challenger Drive	9.1	Office buildings	No current activity	66,000 sq.ft.
Motel	Capital Hills Business Park: Capital Hills Parkway, east of Magellan Drive, west of Challenger Drive	9.1	72 room motel	Approved January 2013, no current activity	26,061 sq.ft.
Film studio/ office/ warehouse	West of Arabian Drive on the north side of Burnett Road	10.4	Warehouse with caretaker quarters	No activity, approval extended	3,108 sq.ft.
Rock Creek Ranch/Quad-Knopf	Steuber & Abajo	10.7	Sewage Plant	Unknown, per County	2

As discussed in Sections 5.1 through 5.17, many of the potential impacts of the Proposed Project would occur during construction, with few lasting operational effects. Because the construction-related impacts of the project would be temporary and localized, they would only have the potential to combine with similar impacts of other projects if they occur at the same time and in close proximity. No current and/or

probable projects in the vicinity of the substation have anticipated construction schedules that would occur at the same time as the Proposed Project and thus create a potential cumulative impact. The nearest known project that may overlap with the substation construction schedule would be installation of an 80-foot monopole by AT&T on Cummings Valley Road, approximately 4 miles from the substation site. Erecting a monopole is not expected to require extensive site preparation or large construction crews. It is not anticipated that the impacts from the AT&T project, should they occur coincident with the Banducci Substation project, would create cumulative significant impacts. Post-construction, long-term impacts from the Proposed Project, however, have the potential to combine with impacts from the projects listed in Table 5.18-1. These impacts are considered by issue area.

Aesthetics. With incorporation of mitigation measures, construction and operation of the Proposed Project would not result in significant impacts to visual resources. The proposed substation would be largely screened from public views by project landscaping and a wall. Installation of tubular steel poles adjacent to the substation would introduce a visible but relatively minor element into the landscape. The replacement of existing wood poles and the installation of telecommunications cables are incremental changes that would not substantially alter the existing visual character found in the area. The incremental change in visual conditions associated with the Proposed Project would contribute to a cumulative change in visual conditions, but represents only a relatively minor incremental change in cumulative conditions. Therefore, the project's visual effects are adverse, but not considerable enough to represent a significant cumulative impact.

Air Quality. Air emissions would result from both construction and operation of the substation. Implementation of Mitigation Measure AQ-1 discussed in Section 5.3, Air Quality, would reduce air emissions of particulate matter from the project to a less than significant level. Other pollutants resulting from construction activities are accounted for in emissions inventories for regional air quality maintenance plans and would not impede attainment or maintenance of ozone or carbon monoxide (CO) standards. Any potential adverse cumulative air quality impacts would be short-term (lasting for the duration of construction) and would not be cumulatively considerable; therefore, the cumulative impact would be less than significant. Since the substation would be unmanned, there would be no vehicular emissions associated with regular commuting to and from the substation. As a result, there will be no significant cumulative impacts to Air Quality.

Biological Resources. Potential impacts to biological resources could occur from construction impacts on special-status species (particularly listed plants). The proposed substation site is bordered by agricultural lands, making it less desirable for wildlife species. Biological resources could be affected by noise, dust, ground disturbance, sedimentation, and potential spills of hazardous materials. Potential impacts from the Proposed Project would be less than significant with the implementation of APMs and mitigation measures discussed in Section 5.4. The project would not represent a significant contribution to cumulative impacts. Impacts to biological resources during operation and maintenance would be the same as those during current operation and maintenance practices; therefore, no contribution to cumulative impacts would occur.

Cultural Resources. Neither short-term construction activities nor operation and maintenance activities would affect any known cultural resources with the implementation of APMs and mitigation measures discussed in Section 5.5. These measures would require marking the limits of the project area to exclude the known resources. Workers would also be trained to identify potential cultural resources and to halt and redirect construction activities in the event that unanticipated cultural resources are discovered. No cultural resources would be affected during project construction or during operation of the project, and no contribution to cumulative impacts would occur.

Geology and Soils. The project would not increase potential risks associated with seismic events or other geologic hazards. Short-term construction impacts to soils, including unstable soils, have the potential to occur; however, implementation of the mitigation measures described in Section 5.6 would reduce the impacts to a less than significant level.

Greenhouse Gas Emissions. Greenhouse gas (GHG) emissions would result from the burning of fuel required to operate construction equipment and vehicle use during construction activities. The most common GHGs associated with fuel combustion are CO2, CH4, and N2O. Greenhouse gas reduction measures would be implemented to reduce already less than significant GHG emissions. Any potential adverse cumulative GHG impacts would be short-term and not cumulatively considerable; therefore, GHG emissions would have a less than significant cumulative impact. GHG emissions from operation and maintenance would be minimal, as the substation and power lines would be unmanned and would require only infrequent maintenance. The use of sulfur hexafluoride (SF_6) in transformers would comply with CARB requirements on use and reporting. SCE would install new SF_6 breaker designs that are guaranteed to have an annual leak rate of one-half of one percent or less. The small amount of emissions created during operation and maintenance would not significantly contribute to cumulative impacts.

Hazards and Hazardous Materials. The use of hazardous materials for the project would be minimal during construction and operation. Hazardous materials would be stored and used in compliance with applicable regulations. The project would not result in an increase in usage of hazardous materials. Impacts from routine use, transportation, disposal, and accidental spillage of hazardous materials would be reduced to a less than significant level with implementation of the APM and mitigation measures discussed in Section 5.8.

Hydrology and Water Quality. The project would not substantially change drainage patterns at the site. It would require minimal water for dust control during construction and minimal use of water for irrigation of landscape vegetation during operation. With the implementation of the measures discussed in Section 5.9, the construction and operation of the substation would not adversely impact hydrology or water quality in the project area or contribute to a significant cumulative impact.

Land Use. The project would not conflict with applicable land use policies and regulations; therefore, the project would not contribute to cumulative impacts to land use.

Mineral Resources. No commercial mineral resources are known to exist within the project area and the Proposed Project would not result in the loss of availability of a known mineral resource; therefore, the project would not contribute to potential cumulative impacts that may result in the loss of mineral resources.

Noise. The Proposed Project is not expected to contribute to a long-term cumulative impact on ambient noise levels in the project area. Noise from construction activities would be audible, but most construction would be limited to daytime hours and would be short-term. Any required nighttime work would be of extremely short duration. Impacts from noise to nearby sensitive receptors would be less than significant with the implementation of APMs and Mitigation Measure N-1. No other projects in the area are expected to be under construction at the same time as the proposed project (see Table 5.19-1). As such, the project would result in a less than significant noise impact during construction and operations, and will not contribute to a significant cumulative impact.

Population and Housing. The Proposed Project would not result in impacts to population and housing. Construction workers would be existing local SCE staff or contracted workers from the region. The project would not displace any existing housing or people. The Proposed Project would have no impacts on population and housing.

Public Services. The Proposed Project would not result in significant impacts to public services. The Proposed Project would not require the cessation or interruption of fire or police protection services, schools, or other public facilities. Impacts would be less than significant and would not contribute to a cumulatively significant impact on the public services or parks in the project area.

Recreation. The Proposed Project would not cause a substantial increase in the use of or physical deterioration of parks or recreational facilities. The project would have no effects on recreation and would not contribute to cumulative effects associated with other projects.

Transportation and Traffic. Construction of the Proposed Project would have the potential for temporary impacts to traffic volumes, LOS standards, road hazards, and emergency access. Use of local roads for transport of construction equipment and construction personnel would be temporary and short-term. Power line and telecommunication cable installation would require temporary lane closures; however, these slight increases in traffic would be temporary and short-term. Given the location of the project area in relation to other development projects in the region, the transportation network is sufficient to accommodate construction traffic to avoid significant impacts to any one area. Transportation and Traffic impacts would be temporary and less than significant, and would not contribute to cumulatively considerable impacts.

Utilities and Service Systems. Implementation of other development projects could result in potential cumulative impacts to utilities, particularly local water supplies and wastewater facilities. In contrast, construction of the Proposed Project would temporarily require a minimal water supply and generate minimal amounts of wastewater. Construction would require the disposal of a less than significant amount of all types of waste. No expanded facilities or services would be needed for the project, and use and disposal of all water and waste products would comply with all applicable laws and regulations. Impacts to utilities and service systems during operation and maintenance would be the same as those during current operation and maintenance practices; therefore, no contribution to cumulative impacts would occur.

c. Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The project would not substantially adversely affect human beings directly or indirectly. The Initial Study identified no environmental effects that would cause substantial adverse effects on human beings. Adverse effects would be mitigated by implementation of APMs and mitigation measures and in most instances would be related to short-term construction impacts. Nearby residents could be affected during construction by impacts related to air quality, hazardous materials, and noise. However, few residences are located near the substation site, which would be the focus of most construction activity. Installation of telecommunications cable on existing poles or in conduit would be a transitory work activity near residences. These potential impacts would be reduced to a less than significant level with the implementation of the APMs and mitigation measures included in this Initial Study.

6. Mitigation Monitoring Plan

SCE proposes to construct and operate the Banducci Substation Project ("Proposed Project"). An Initial Study was prepared to assess the Proposed Project's potential environmental effects. The Initial Study was prepared based on information in the Proponent's Environmental Assessment (PEA), project site visits, and supplemental research. The majority of the Proposed Project's impacts would occur during project construction. Within SCE's application, Applicant Proposed Measures (APMs) were proposed to reduce potentially significant adverse impacts related to project construction and operation.

The purpose of this Mitigation Monitoring Plan is to ensure effective implementation of each APM, as well as the mitigation measures identified by the Initial Study and imposed by the CPUC as part of project approval.

This Mitigation Monitoring Plan includes:

- The Applicant Proposed Measures and mitigation measures that SCE must implement as part of the Proposed Project;
- The actions required to implement these measures;
- The monitoring requirements; and
- The timing of implementation for each measure.

A CPUC-designated environmental monitor will carry out all construction field monitoring to ensure full implementation of all measures. In all instances where non-compliance occurs, the CPUC's designated environmental monitor will issue a warning to the construction foreman and SCE's project manager. Continued non-compliance shall be reported to the CPUC's designated project manager. Any decisions to halt work due to non-compliance will be made by the CPUC. The CPUC's designated environmental monitor will keep a record of any incidents of non-compliance with mitigation measures, APM, or other conditions of project approval. Copies of these documents shall be supplied to SCE and the CPUC.

6.1 Minor Project Changes or Variances

The CPUC Project Manager along with the CPUC Monitoring Team will ensure that any process to consider minor project changes that may be necessary due to final engineering or variances or deviations from the procedures identified under the monitoring program are consistent with CEQA requirements. No minor project changes or variances will be approved by the CPUC if they are located outside of the geographic boundary of the project study area or if they create new or substantially more severe significant impacts. Variances are strictly limited to minor project changes that will not trigger other permit requirements unless the appropriate agency has approved the change, and that clearly and strictly comply with the intent of the mitigation measure or applicable law or policy. This determination is ministerial, and shall be made by the CPUC Project Manager. SCE shall seek any other project refinements by a petition to modify. Should a project change or refinement require a Petition for Modification, supplemental environmental review under CEQA will be required.

Any proposed deviation from the approved project, adopted mitigation measures, APMs, and correction of such deviation, will be reported immediately to the CPUC Project Manager for his or her review. The CPUC Monitoring Team will review the variance request to ensure that all of the information required to process the minor project change is included, and then forward the request to the CPUC Project Manager for review and approval. The CPUC Project Manager may request a site visit from the CPUC EM, or may need additional information to process the variance. In some cases, project refinements may also

require approval by jurisdictional agencies. In general, a minor project change request must include the information listed below.

- Detailed description of the location, including maps, photos, and/or other supporting documents;
- How the variance request deviates from a project requirement;
- Biological resource surveys or verification that no biological resources would be significantly impacted;
- Cultural resource surveys or verification that no cultural resources would be significantly impacted; and
- Agency approval (if necessary).

6.2 Dispute Resolution

It is expected that the Mitigation Monitoring Plan will reduce or eliminate many potential disputes. However, even with the best preparation, disputes may occur. In such event, the following procedure will be observed:

- **Step 1.** Disputes and complaints (including those of the public) should be directed first to the CPUC-designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- **Step 2.** Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the Proposed Project or adopted Mitigation Monitoring Plan.
- **Step 3.** If a dispute or complaint regarding the implementation or evaluation of the Mitigation Monitoring Plan cannot be resolved informally or through enforcement or compliance action by the CPUC, any affected participant in the dispute or complaint may file a written "notice of dispute" with the CPUC Executive Director. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) shall meet or confer with the filer and other affected participants for purposes of resolving the dispute. The Executive Director shall issue an Executive Resolution describing his/her decision, and serve it on the filer and other affected participants.
- **Step 4.** If one or more of the affected parties is not satisfied with the decision as described in the Resolution, such party(ies) may appeal it to the Commission via a procedure to be specified by the Commission.

Parties may also seek review by the Commission through existing procedures specified in the CPUC Rules of Practice and Procedure for formal and expedited dispute resolution, although a good faith effort should first be made to use the foregoing procedure.

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
AGRICULTURAL RESOURCES			
Conversion of Important Farmland	**MM AG-1: Minimize Impacts to Agricultural Resources.** For project components sited on or adjacent to Important Farmland, SCE shall: ▪ Minimize paving and ground-disturbing activities to the maximum extent practical within agricultural fields to retain agricultural soil characteristics. ▪ Notify adjacent agricultural operations of construction schedules at least 30 days in advance of the start of construction-related activities. The announcement shall: (1) describe where and when construction is planned; and (2) provide contact information for a point of contact for complaints about impacts to adjacent agricultural resources related to construction activities. Prior to commencing ground disturbing activities, the Applicant shall submit a copy of the template used for the notification letter and a list of the landowners notified to the CPUC. The Applicant shall document all complaints and strategies for resolving complaints in regular reporting to the CPUC.	Review notices, list of landowners, and complaints report(s) to minimize impacts to Important Farmland	Prior to and during construction
Conversion of Important Farmland	**MM AG-2: Compensate for Loss of Prime Farmland.** If Prime Farmland (as designated by the California Department of Conservation's Farmland Mapping and Monitoring Program) is converted to non-agricultural use, SCE shall mitigate for the loss of farmland through permanent preservation of off-site farmlands of equal or greater quality at a 1:1 ratio. Prior to the start of ground disturbance, SCE shall provide evidence to the CPUC that an Agricultural Conservation Easement has been granted in perpetuity to the local jurisdiction or an Agricultural Land Trust. The Agricultural Land Trust must either: (A) demonstrate that it: (1) has adopted the Land Trust Alliance's Standards and Practices; (2) has substantial experience creating and stewarding Agricultural Conservation Easements; and (3) has a stewardship endowment to help pay for its perpetual stewardship obligations; or (B) be approved by the CPUC. Prior to the commencement of ground disturbing activities, the applicant shall also provide appropriate funds (as determined by the CPUC) to compensate for reasonable administrative costs incurred by the easement holder, including an endowment to cover the cost of monitoring and enforcing the easement in perpetuity.	Review proof of compensation for loss of Prime Farmland	Prior to construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
AIR QUALITY			
Construction-Phase Air Quality	**MM AQ-1: Implement EKAPCD Dust Control Measures.** SCE shall implement the following measures during site preparation and construction: ▪ All soil excavated or graded should be sufficiently watered or treated with non-toxic soil stabilizers to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations. ▪ All clearing, grading, earth moving and excavation activities should cease: during periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown; or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property. ▪ All fine material transported offsite should be sufficiently watered, treated with non-toxic soil stabilizers, or securely covered to prevent excessive dust. ▪ If more than 5,000 cubic yards of fill material will be imported to or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed. ▪ Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times. ▪ Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust. ▪ Where acceptable to the fire department, weed control should be accomplished by mowing instead of discing, thereby, leaving the ground undisturbed and with a mulch covering. ▪ Once initial leveling has ceased all inactive soil areas within the construction site should either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission. ▪ All active disturbed soil areas should be sufficiently watered or treated with non-toxic soil stabilizers to prevent excessive dust, but no less than twice per day. ▪ Onsite vehicle speed should be limited to 15 mph. ▪ All areas with vehicle traffic should be paved, treated with dust palliatives, or watered a minimum of twice daily. ▪ Streets adjacent to the project site should be kept clean and accumulated silt removed. Access to the site4 should be by means of an apron into the project from adjoining surfaced roadways. The apron should be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of the vehicles, a grizzly or other such device should be used on the road exiting the project, immediately prior to the pavement, in order to remove most of the soil material from the vehicle's tires.	Ensure SCE implements measures and particulate matter emissions are minimized during construction	During construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
BIOLOGICAL RESOURCES			
Special-Status Plants [MM B-1 supersedes APM Bio-1 and APM Bio-5]	**MM B-1: Perform Biological Resource Surveys and Construction Monitoring.** After project approval, but within 30 days prior to the start of construction, updated biological resource surveys shall be conducted confirming special-status or listed biological resources, if any, in the vicinity of the Proposed Project, including the 66 kV subtransmission line route, telecommunication line route, wire stringing locations, access roads, and staging yards. Updated survey results, including a map of biological resources identified, shall be provided to the CPUC for review and verification prior to construction. Prior to submitting the first survey report, SCE shall consult with the CPUC regarding the preferred format. During construction, any special-status or listed species identified shall be reported to the CPUC within 24 hours. SCE shall provide a report documenting biological surveys conducted, construction activities observed, biological resources identified, and compliance with APMs and MMs to the CPUC on a weekly basis. Maps of special-status or listed biological resources identified during project surveys and monitoring activities shall be provided to the CPUC on a weekly basis. ▪ Sensitive plant surveys shall be conducted by a qualified botanist, approved by the CPUC, familiar with plants in the Cummings Valley. Field surveys will be conducted at the appropriate time of year to locate and identify the target species. Surveys will focus on identifying whether state and federally listed species as well as California Native Plant Society special-status plants are present. In addition, potential habitat to support special-status plant species and sensitive vegetation communities will be identified. ▪ Clearance surveys shall be conducted no more than 7 days prior to the start of construction in a particular area to identify potential plant and animal species that may be affected by construction activities. Clearance surveys will include a field survey by a qualified botanist and wildlife biologist and will include 500-feet beyond the border of any proposed project disturbance areas (where these areas are legally accessible). Clearance surveys will be submitted to the CPUC for review and verification prior to construction. Biological monitors shall monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique biological resources to ensure such resources are avoided to the extent feasible.	Review survey results and reports to identify and minimize impacts to sensitive biological resources	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Special-Status Plants	**MM B-2: Establish Special-status Plants Buffers.** If special-status plants are found during field surveys, a buffer shall be established around the plants or plant populations within which no construction work is permitted unless the CPUC determines that such work may proceed without significantly impacting the special-status and listed species. The size of the buffer shall be adequate to ensure that plants are not significantly disturbed and shall be determined by a qualified biologist. Construction monitors shall ensure that work crews are aware of the buffer and related work restrictions. If special-status plants cannot be avoided, SCE shall coordinate with the CPUC, CDFW, and USFWS to determine whether construction and operation impacts of the Proposed Project would be significant. Impacts to special-status plants will be considered significant if listed threatened or endangered species would be directly or indirectly affected; or plants presumed extinct in California (California Rare Plant Rank [CRPR] 1A) would be directly or indirectly affected; or ten (10) percent or more of a local occurrence of CRPR 1B or CRPR 2 species would be directly or indirectly affected. In the event any of the above are triggered, SCE shall coordinate with the CPUC, CDFW, and USFWS to design and implement appropriate mitigation measures. These measures may include, but would not be limited to: ▪ **Avoidance**. Project construction would be adjusted as necessary to avoid or minimize impacts to special-status plants and provide a minimum 25 foot buffer area surrounding each avoided occurrence, where no project activities will take place. ▪ **Off-site Compensation**. SCE would provide compensation lands to protect off-site special-status plant occurrence(s). Compensation lands would protect acreage, habitat suitability, and overall numbers of each special-status plant at no less than a 1:1 ratio or levels comparable to the project's impacts. In addition, the applicant will provide funding for long-term conservation management of the compensation land. The applicant will prepare a Compensation Plan, identifying the proposed compensation lands, proposed habitat improvements and long-term management, and specific legal mechanism for long-term preservation (e.g., holder of conservation easement or fee title). The Conservation Plan will be subject to review and approval by the CPUC in consultation with the CDFW and, upon approval, will be implemented in full. In cases where a federally or state-listed threatened or endangered species may be affected, the Conservation Plan will conform to applicable conditions under any CESA or federal ESA Incidental Take Permit, Biological Opinion, or other consultation documents. Where a Habitat Conservation Plan or similar conservation instrument is applicable, then participation in that plan may constitute compliance with this habitat compensation requirement. ▪ **Salvage**. In instances where salvage and relocation for special status or listed species is feasible, SCE will consult with a qualified conservation and horticulture institute (such as Rancho Santa Ana Botanic Garden in Claremont, California) to design a Salvage and Relocation Plan, to be reviewed and approved by the CPUC in consultation with CDFW prior to disturbance of any occupied special-status plant habitat. The Plan will include at minimum: (a) collection/salvage measures for plants or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plants or seed banks; (c) location of the proposed recipient site, and detailed site preparation and plant introduction technique; (d) details for topsoil storage, as applicable; (e) time of year that the salvage and replanting or seeding will occur and the methodology of the replanting; (f) a description of the irrigation method(s), if used; (g) success criteria; and (h) a detailed monitoring program, commensurate with the Plan's goals. ▪ **Horticultural propagation and off-site introduction**. If salvage and relocation is not believed to be feasible for special-status plants, then the applicant will develop and implement an appropriate propagation and relocation strategy, based on the life history of the species affected. The strategy will include at minimum: (a) collection/salvage measures for plant materials or seed banks, to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the strategy's goals.	Review buffer areas, proof of compensation, Salvage and Relocation Plan and propagation/relocation strategy, if needed	Prior to and during construction
Special-Status Plants	**MM B-3: Minimize Noxious Weeds.** Precautions shall be taken to minimize the introduction of any invasive weeds. Construction vehicles and equipment shall be clean before they arrive at work areas in the project corridor. Any landscaping involving vegetation other than trees and shrubs shall consist of native seed mix or other ecologically appropriate, non-invasive plants. Only weed-free straw or mulch shall be used.	Ensure noxious weeds are not introduced	During construction and prior to landscaping

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Special-Status Wildlife	**MM B-4: Manage Trash and Microtrash.** Trash and microtrash shall be removed from work areas daily. Construction monitors shall conduct daily sweeps of work areas to ensure all trash and microtrash has been collected and removed. Microtrash in the form of construction materials such as nuts and bolts or other small materials must be secured at the end of each work day in secured, closed containers.	Ensure trash and microtrash are secured and/or removed daily	During construction
Special-Status Wildlife	**MM B-5: Prevent Wildlife Entrapment.** SCE shall ensure that all potential wildlife pitfalls (trenches, bores, portable water tanks, and other excavations) have been backfilled or securely covered at the end of each workday. If backfilling or covering is not feasible, these potential pitfalls will be sloped at a 3:1 ratio at the ends as wildlife escape ramps. The biological monitor shall inspect all potential pitfalls no fewer than three times daily throughout and at the end of each workday. All pipes or other construction materials or supplies shall be covered or capped in storage or laydown areas. No pipes or tubing is to be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials shall be inspected for wildlife before it is moved, buried, or capped. Should native wildlife become trapped in excavations, materials, or other project-related situation, the biological monitor shall remove it (if feasible and safe) or immediately contact CDFW and the CPUC. Any native wildlife encountered shall be allowed to leave the area unharmed. If injured native wildlife is found on or near Project access roads, work areas, or the ROW, whether or not the injuries are obviously project-related, SCE shall contact and work with a local wildlife rehabilitator, animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. SCE shall bear the costs of veterinary treatment and rehabilitation for any native injured wildlife found on or near Project access roads, work areas, or the ROW and any native wildlife injured by Project-related activities. Dead animals of non-special-status species found on Project access roads, work areas, or the ROW shall be reported to the appropriate local animal control agency within 24 hours or a biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found on Project roads, work areas, or the ROW shall be reported to the appropriate agency within 24 hours, and if required, the carcass handled according to agency guidelines.	Ensure wildlife pitfalls are backfilled or covered at the end of each workday and are inspected by a biological monitor and the appropriate authorities are contacted regarding trapped, injured or dead animals.	During construction
Burrowing Owl [MM B-6 supersedes APM Bio-3]	**MM B-6: Survey for and Avoid Burrowing Owl.** This mitigation measures supersedes APM BIO-3 (Burrowing Owl). Preconstruction surveys for burrowing owl shall be conducted in project areas within 30 days of construction. If any ground disturbing activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), avoidance measures shall include a no construction buffer zone of a minimum distance of 250 feet, consistent with the Staff Report on Burrowing Owl Mitigation (CDFG, 1995). SCE shall comply with CDFW burrowing owl mitigation guidelines as detailed in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012) or more recent updates, if available. Construction activities shall be scheduled and planned to avoid burrowing owls and their burrows. If occupied burrows cannot be avoided, an appropriate relocation strategy shall be developed in conjunction with CDFW. Biological monitors shall monitor all construction activities that have the potential to impact active burrows.	Review survey results and ensure buffer zone (if needed) and compliance with CDFW mitigation guidelines	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Tehachapi Slender Salamander [MM B-7 supersedes APM Bio-4]	**MM B-7: Survey Requirements and Avoidance Relocation Measures for Tehachapi Slender Salamander.** This mitigation measure supersedes APM BIO-4 (Tehachapi Slender Salamander). Pre-construction surveys and avoidance measures shall be implemented for Tehachapi slender salamander subject to applicable permit requirements. For construction activities involving ground disturbance in or directly adjacent to occupied or suitable habitat for the Tehachapi slender salamander, preconstruction surveys shall be conducted by a qualified biologist, approved by the CPUC, prior to disturbance to determine if Tehachapi slender salamander individuals are present in the disturbance zone. If visual searches are used for pre-construction surveys, they shall be conducted no earlier than 72 hours prior to disturbance, and if pitfall trapping is used, it shall be conducted no earlier than 5 days prior to disturbance. If Tehachapi slender salamanders are located, individuals within the disturbance zone shall be captured and relocated to the closest suitable habitat area containing talus, as and to the extent required by USFWS and/or CDFW in applicable permits or habitat conservation plans. If project activities are located within oak woodlands and ravines, construction activities shall avoid displacement of rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. Biological monitors shall monitor all construction activities in occupied or suitable Tehachapi slender salamander habitat to ensure that construction activities do not impact this species. When occupied habitat for Tehachapi slender salamander is directly impacted by construction activities involving ground disturbance, a habitat restoration plan shall be developed for the Tehachapi slender salamander that specifies, at a minimum, the following: (1) the location of creation, enhancement, or restoration planting sites; (2) a complete description of the hardscape (e.g., talus, rocks, and logs) to be installed and where hardscape materials will be deposited, along with desired leaf and litter cover; (3) a description of how the existing typical hydrologic regime will support Tehachapi slender salamander habitat; (4) the quantity and species of plants to be planted; (5) planting procedures, including the use of soil preparation and irrigation; (6) methods for the removal of non-native plants; (7) a schedule and action plan to maintain and monitor the creation/enhancement/ restoration area; (8) a list of criteria (e.g., growth, percent plant cover, plant diversity, debris, and hardscape) and performance standards by which to measure success of the creation/enhancement/restoration; and (9) contingency measures in the event that creation/enhancement/restoration efforts are not successful. Performance standards shall be defined by a site-specific pre-construction study of known locations occupied by Tehachapi slender salamander, including evaluation of specific cover; distance to water; water inundation levels; percent canopy cover; percent shrub and grass cover; presence of talus, boulder, log, or other refugia; and other factors. The restoration plan performance standard under this mitigation measure is to create, restore, or enhance areas so that Tehachapi slender salamanders can naturally colonize these areas or Tehachapi slender salamanders within the disturbance zone can be successfully relocated to these areas. The plan shall be prepared by SCE and submitted to the CPUC and the resource agencies for approval prior to ground disturbance activities that would have an impact on occupied habitat for the Tehachapi slender salamander. Pre-construction survey methods, avoidance measures, and final mitigation requirements for this species shall be established by USFWS and CDFW. Permit applications submitted to CDFW shall include, at a minimum, the applicable mitigation measures from this document.	Review CDFW authorization, survey results, and habitat restoration plan.	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
California Condor	**MM B-8: Halt Construction when California Condor Present.** SCE shall retain a qualified biologist with demonstrated knowledge of California condor identification to monitor all construction activities within the project area. If a California condor is present in any project work area (except flying over), construction activities shall be halted in that area (and within 500 feet of the condor) and the animal shall be allowed to leave the area on its own. All condor sightings in the project area will be immediately reported to the USFWS, CDFW, and the CPUC. Construction may resume upon the departure of the California condor and verification by a qualified biologist.	Ensure biological monitor present, construction activities are halted if a condor is present, and all sightings are reported	During construction
Nesting Birds [MM B-9 supersedes APM Bio-2]	**MM B-9: Prepare Nesting Birds Management Plan and Conduct Surveys.** This mitigation measure supersedes APM BIO-2 (Pre-construction Surveys for Nesting Birds/Raptors). Clearing of any vegetation (including agricultural fields and grasslands), site preparation in open or barren areas, or other project-related activities that may adversely affect breeding birds shall be scheduled outside the nesting season as feasible. Nesting season is generally February 1 to August 31, but varies with region, environmental factors, and species. Within one week (7 days) prior to the start of construction in a particular area during nesting season, a nesting survey shall be conducted within project disturbance areas and a 500 foot buffer surrounding all project disturbance areas (wherever legal access is available). At a minimum, nesting surveys shall be conducted from February 1 to August 31. A qualified biologist will determine if nesting activity is occurring either prior to or after this February-August period and nesting surveys will be performed accordingly. If an active nest is found, a buffer shall be established around the nest in which no construction work is permitted. The size of the buffer will be adequate to ensure that the nest, nesting birds, and chicks (including fledglings and precocial chicks) are not disturbed. For nests of raptors and special-status bird species, the size of the buffer will be determined based on a project-specific nesting bird management plan approved by the appropriate resource agencies or consultation with the appropriate resource agencies. For all other nests, the size of the buffer will be determined by a qualified biologist. Construction monitors will ensure that work crews are aware of the buffer and related work restrictions. The buffer zone will remain in place until the young have fledged and are no longer dependent on the nest or the nest is no longer active, as determined by a qualified biologist. An active nest is defined as a nest with eggs or chicks, or as otherwise defined by CDFW If an active nest must be moved during the nesting season, SCE shall coordinate with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to obtain approval prior to moving the nest. Prior to the start of construction, SCE shall prepare a draft Nesting Bird Management Plan, in consultation with the CPUC, describing measures to detect birds that may nest on and adjacent to the project site or facilities and to avoid impacts to or take of those birds or their nests during project construction. The draft Nesting Bird Management Plan shall be submitted to the CPUC for review and approval in consultation with USFWS and CDFW. The Nesting Bird Management Plan will be finalized by SCE prior to issuance of CPUC's Notification to Proceed. The Nesting Bird Management Plan will describe avoidance measures, such as buffer distances from active nests, based on the specific nature of project activities, noise, or other disturbance of those activities, the bird species and conservation status, and other pertinent factors. The Plan will specify species' (or groups of species) appropriate buffer distances based on tolerance of human activities. Standard nest buffers shall be 300 feet, and 500 feet for raptor species, or as specified in the CPUC-approved Nesting Bird Management Plan.	Review survey results and Nesting Bird Management Plan. Ensure buffers established and coordination with CDFW/USFWS	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Other Protected Species	**MM B-10: Follow APLIC Guidelines.** Design, install, and maintain distribution lines and all electrical components in accordance with the Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 to reduce the likelihood of electrocutions of large birds. Specifically, the phase conductors should be separated by a minimum of 60 inches. Where adequate separation is not feasible, avian protection materials should be used to cover electrical equipment (APLIC, 2006). Before construction begins, SCE shall submit a plan to the CPUC documenting that project design is consistent with APLIC guidelines.	Review plan and ensure design is consistent with APLIC guidelines	Prior to construction and during operation
Loss of Sensitive Habitat [MM B-11 supersedes APM Bio-5]	**MM B-11: Replace or Offset Sensitive Habitat Loss.** This mitigation measures augments APM BIO-5 (Avoidance of Sensitive Habitats). In the case of any conflict between Mitigation Measure B-11 and APM BIO-5, Mitigation Measure B-11 supersedes the APM. Native vegetation in Big Sagebrush Scrub, Blue Oak Woodland, and Foothill Pine-Oak Woodland vegetation communities and aquatic features in construction sites shall be flagged for avoidance prior to construction activities. If avoidance is not feasible, SCE shall implement one or both of the following measures to offset or compensate for those impacts. ▪ **On-site Restoration.** If sensitive vegetation communities or habitat that may support special-status plants or animals are removed or degraded due to temporary project impacts, the applicant shall prepare and implement an Ecological Restoration Plan, to restore any temporary habitat loss within five (5) years of initial disturbance. The Plan will be subject to review and approval by the CPUC, in coordination with CDFW. The Ecological Restoration Plan's goal will be to replace habitat values that are damaged or degraded by the project. The plan will include: (a) soil or substrate preparation measures, such as recontouring, decompacting, or imprinting; (b) provisions for soil or substrate salvage and storage; (c) plant material collection and acquisition guidelines, including guidelines for salvaging, storing, and handling seed, cuttings, or rooted plants from the project site, as well as obtaining materials from commercial nurseries or collecting from outside the project area; (d) time of year that the planting or seeding will occur and the methodology of the planting; (e) an irrigation plan or alternate measures to ensure adequate water; (f) quantitative success criteria, to reflect yearly progress and final completion; (g) a detailed monitoring program to evaluate conformance with the success criteria; and (h) contingency measures to remediate the restoration site if success criteria are not met. ▪ **Compensation**. If sensitive vegetation communities or habitat that may support special-status species are removed or degraded, resulting in long-term or permanent project impacts (i.e., impacts lasting more than five [5] years), the applicant will provide for long-term habitat replacement by acquiring and protecting compensation land that will provide habitat value equivalent or greater than habitat removed for the project. Compensation may include off-site habitat restoration or other habitat improvements as needed, to replace habitat components affected by the project. In addition, the applicant will provide funding for long-term conservation management of the compensation land. The applicant will prepare a Compensation Plan, identifying the proposed compensation lands, proposed habitat improvements and long-term management, and specific legal mechanism for long-term preservation (e.g., holder of conservation easement or fee title). The Conservation Plan will be subject to review and approval by the CPUC in consultation with the CDFW. After approval, the Conservation Plan must be implemented in full. In cases where a federally or state-listed threatened or endangered species may be affected, the Conservation Plan will conform to applicable conditions under any CESA or federal ESA Incidental Take Permit, Biological Opinion, or other consultation documents. Where a Habitat Conservation Plan or similar conservation instrument is applicable, then participation in that plan may constitute compliance with this habitat compensation requirement.	Review plan and ensure flagging and proof of compensation.	Prior to construction and during operation

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Wetlands	**MM B-12: Delineate Jurisdictional Wetlands and Waters.** Prior to the start of construction, a jurisdictional delineation shall be conducted to describe the type and extent of waters of the United States, including wetlands, and/or waters of the State within the proposed impact area. The presence or absence of wetlands shall be verified through an analysis of any hydrological conditions, hydrophytic vegetation, and hydric soils pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008). SCE shall provide copies of delineation reports to the CPUC. Prior to any impacts to jurisdictional areas, permits/agreements from the USACE, the CDFW, and the RWQCB shall be obtained for direct and indirect impacts to areas within these agencies' jurisdictions. SCE would implement all measures required by the permits/agreements as issued by the resource agencies, potentially including constraints on proposed activities and restoration of disturbed jurisdictional areas and/or replacement as determined by the resource agencies. Copies of permits issued shall be provided to the CPUC.	Review reports and ensure permit measure implemented	Prior to construction
Conflicts with Local Policies or Ordinances Protecting Trees	**MM B-13: Identify Trees Affected by Project.** Prior to construction, SCE shall identify any trees covered by tree protection local policies or ordinances that may be affected by construction of the Proposed Project and consult with applicable jurisdictional agencies prior to any tree alteration, removal, or other impacts. Impacts include trimming or removal of the tree; any construction activities within the dripline of the tree; any trenching or excavation that may damage tree roots, and any other project-related activities that may cause damage to the tree or as specified by local policies or ordinances protecting trees. If operation of the Proposed Project requires tree trimming to the extent that would require a tree alteration or removal permit as a requirement of a local policy or ordinance protecting trees, SCE shall consult with the local agency and a local agency certified arborist consistent with CPUC General Order No. 131-D.	Review identification of affected trees and consultation with applicable jurisdictions	Prior to construction and during operation
CULTURAL RESOURCES			
Known Cultural Resources	**MM C-1: Avoid Known Cultural Resources.** Where feasible, all impacts to sites identified in the preliminary cultural resource inventories shall be avoided and protected. Wherever a pole, access road, equipment, etc., must be placed or accessed within 100 feet of a recorded, reported, or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an Environmentally Sensitive Area (ESA) (without disclosure of the exact nature of the environmental sensitivity [i.e., the ESA is not identified as an archaeological site]). Construction equipment shall then be directed away from the ESA, and construction personnel shall be directed not to enter the ESA. Archaeological monitoring of Project construction shall occur in all areas of ground disturbing activity that occur within 100 feet of a cultural resource ESA.	Flag and avoid ESAs and ensure monitor present, where necessary	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Unknown Archaeological Resources	**MM C-2: Conduct Cultural Resources Surveys.** Prior to construction, and based on final engineering, cultural resource surveys would be conducted in areas of the Area of Direct Impact (ADI) that have not been previously surveyed for the Proposed Project. No work shall be conducted in the previously un-surveyed areas until approval has been received by the CPUC. Supplemental cultural resource surveys of all new areas that would be affected shall be conducted by a qualified professional archaeologist. Any identified cultural resource would be documented and evaluated for its eligibility for listing in the CRHR. A supplemental technical report shall be provided to the CPUC discussing the supplemental surveys, documented and evaluated cultural resources, potential impacts, and avoidance and minimization measures. Ideally, cultural resources found to meet any of the CRHR eligibility criteria would be avoided and preserved in place. If avoidance is not feasible, then SCE and CPUC shall develop and implement appropriate mitigation measures to reduce any impacts to a less-than-significant level and all ground disturbing activities would be monitored by a qualified archaeologist.	Review surveys of any areas that have not previously been surveyed for the project and ensure monitor present, where necessary	Prior to and during construction
Unknown Archaeological Resources	**MM C-3: Treat Previously Unidentified Cultural Resources Appropriately**. If previously unidentified cultural resources are unearthed during construction of the Proposed Project, construction work in the immediate area of the find shall be halted and directed away from the discovery until a qualified professional archaeologist assesses the significance of the resource. The archaeologist, in consultation with SCE and the CPUC, shall make the necessary plans for evaluation of the CRHR-eligibility of find(s) and for the assessment and mitigation of impacts if the finds are found to be historically significant according to CEQA (CEQA Guidelines Section 15064.5(a)). SCE shall develop a Cultural Resources Treatment Plan (CRTP) for all known and newly discovered cultural resources within the Project ADI, including procedures for protection and avoidance of ESAs, evaluation and treatment of the unexpected discovery of cultural resources including Native American burials; provisions and procedures for Native American consultation; detailed reporting requirements by the Project Archaeologist; curation of any cultural materials collected during the Project; and requirements to specify that archaeologists and other discipline specialists meet the Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP). Implementation of the CRTP shall ensure that known and recorded cultural resources will be avoided during construction. Specific protective measures shall be defined in the CRTP to reduce the potential adverse impacts on any presently undetected cultural resources to less-than-significant levels. The CRTP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction.	Review CRTP and ensure cultural resources are avoided	Prior to and during construction
Unknown Archaeological Resources	**MM C-4: Train Construction Personnel Regarding Cultural and Paleontological Resources.** Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained, by a qualified archaeologist, regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and paleontological resources, and protection of all archaeological and paleontological resources during construction. SCE shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of cultural or paleontological materials. All personnel shall be instructed that unauthorized removal or collection of artifacts is a violation of State law and unauthorized collection or disturbance of fossils is prohibited. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits or fossils. SCE shall provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA and anticipated procedures to treat unexpected discoveries. A record of all trained personnel shall be kept and provided to the CPUC as requested.	Review training materials and ensure construction personnel sign an environmental training attendance sheet	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Paleontological Resources [MM C-5 supersedes APM PA-1]	**MM C-5: Develop a Paleontological Resources Management Plan.** Prior to construction, SCE shall retain a qualified paleontologist to prepare a Paleontological Resources Management Plan (PRMP). The PRMP shall identify construction impact areas where significant paleontological resources may be encountered and the depths at which those resources are likely to be discovered. The Plan shall outline a coordination strategy to ensure that all construction disturbance in high sensitivity sediments or exceeding 10 feet in depth would be monitored full-time by qualified professionals. The Plan shall also detail methods of recovery; post-excavation preparation and analysis of specimens; final curation of specimens at a recognized, accredited facility; data analysis; and reporting, in the event that paleontological resources are encountered during construction.	Review PRMP and ensure monitoring and implementation of PRMP	Prior to and during construction
Paleontological Resources	**MM C-6: Monitor Construction for Paleontology.** Based on the paleontological sensitivity assessment and Paleontological Resource Management Plan consistent with Mitigation Measure C-5 (Develop a Paleontological Resource Management Plan), SCE shall ensure that full-time construction monitoring is conducted by the Paleontological Resource Monitor in areas determined to have high sensitivity. Sediments of moderate or undetermined sensitivity shall be monitored by a Paleontological Resource Monitor on a part-time basis (as determined by the Qualified Paleontologist). Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. The monitor may also screen sediments to check for the presence of microvertebrates if they are believed to be present. In the event that a paleontological resource is discovered, the monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance, and collected. Mitigation Measure C-6 does not apply to any drilling construction activities.	Ensure monitor present in areas determined to have high sensitivity	During construction
Paleontological Resources	**MM C-7: Conduct Curation and Final Reporting**. All significant fossils collected will be prepared in a properly equipped paleontology laboratory to a point ready for curation no more than 45 days after all fieldwork is completed. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to an accredited museum repository for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of SCE. At the conclusion of laboratory work and museum curation of any discovered paleontological resources, a final report will be prepared and submitted to the CPUC describing the results of the paleontological resource monitoring efforts associated with the project. The report will include a summary of the field and laboratory methods, an overview of the project area geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. A copy of the report will also be submitted to the designated museum repository.	Review report	During operation (within 45 days after fieldwork completed)

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Disturbance of Human Remains	**MM C-8: Treat Human Remains Appropriately.** If human remains are unearthed during construction activities, construction work within 100 feet of the discovery shall be halted and directed away from the discovery until the county coroner can determine whether the remains are those of a Native American. If they are those of a Native American, the following would apply: ▪ The coroner shall contact the Native American Heritage Commission. ▪ If discovered human remains are determined to be Native American remains, and are released by the coroner, these remains shall be left in situ and covered by fabric or other temporary barriers. ▪ The human remains shall be protected until SCE, the landowner, and the Native American Heritage Commission come to a decision on the final disposition of the remains. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).	Ensure work within 100 feet of the find stops and the find is treated in compliance with State and federal regulations	During construction
GEOLOGY AND SOILS			
Seismic-related Ground Failure and Liquefaction	**MM G-1: Conduct Geotechnical Investigations for Liquefaction**. Because seismically induced liquefaction-related ground failure has the potential to damage or destroy Project components, the design-level geotechnical investigations to be performed by the SCE shall include investigations designed to assess the potential for liquefaction to affect the new Project structures and replacement poles within Cummings and Tehachapi Valleys in areas with potential liquefaction-related impacts. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the Project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables to allow ground deformations without damage to structures. Study results and proposed solutions to mitigate liquefaction shall be provided to the CPUC for review and approval at least 60 days before final Project design.	Review study and design measures	Prior to construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
HAZARDS AND HAZARDOUS MATERIALS			
Transport, Use, or Disposal of Hazardous Materials	**MM H-1: Prepare and Implement Worker Environmental Awareness Program (WEAP).** SCE shall develop and implement a project-specific WEAP, which shall be submitted to the CPUC for review and approval prior to construction. The WEAP shall include, at a minimum, the following provisions: ▪ A presentation shall be prepared by SCE and used to train all site personnel prior to the commencement of work. A record of all trained personnel shall be kept and provided to the CPUC as requested. Crewmembers who have attended the WEAP training presentation shall be provided with a card or a hard hat sticker indicating that they have completed the WEAP training. ▪ Instruction on compliance with Proposed Project mitigation measures, including site-specific biological resources protective measures. ▪ A list of phone numbers of SCE environmental specialist personnel associated with the Proposed Project (archaeologist, biologist, environmental coordinator, and regional spill response coordinator). ▪ Instruction on the individual responsibilities under the Clean Water Act, the project SWPPP, site-specific BMPs, and the location of Material Safety Data Sheets for the project. ▪ Worker Training on Emergency Release Response Procedures to include hazardous materials handling procedures for reducing the potential for a spill during construction, and hazardous material clean up procedures and training to ensure quick and safe cleanup of accidental spills. ▪ Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination. The foreman or regional spill response coordinator shall have authority to stop work at that location and to contact the Certified Unified Program Agency (CUPA) (i.e., Kern County Environmental Health Services Department) immediately if unanticipated visual evidence of potential contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the CUPA or other entities as specified by the CUPA. ▪ Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the Proposed Project.	Review training materials and ensure construction personnel sign an WEAP attendance sheet	Prior to and during construction
Residual Herbicides and Pesticides	**MM H-2: Identify Pesticide/Herbicide Contamination.** Prior to project construction, soil samples shall be collected in construction disturbance areas where the land has historically or is currently being farmed to identify the possibility of and to delineate the extent of pesticide and/or herbicide contamination. Materials containing elevated levels of pesticide or herbicide in areas of trenching or excavation will require special handling and disposal procedures. The local Certified Unified Program Agencies (CUPA) shall be contacted to provide oversight regarding the handling, treatment, and/or disposal options for pesticide or herbicide contaminate soil. Standard dust suppression procedures (as defined in Mitigation Measure AQ-1 [Implement EKAPCD Dust Control Measures]) shall be used in these construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public.	Review soil sample results and ensure compliance with any special handling/ disposal procedures	Prior to construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Discovery of Unknown Contamination	**MM H-3: Observe Exposed Soil for Evidence of Contamination.** During grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall segregate any suspect soil already excavated, stop work until sampling and testing is done to determine appropriate treatment and disposal, and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials/waste. Additionally, in the event that evidence of contamination is observed, the contractor shall document the exact location of the contamination and shall immediately notify the local CUPA and CPUC, describing proposed actions. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CPUC.	Observe soil and ensure potentially contaminated soil is segregated and work is stopped until sampling and testing is completed	During construction
Wildland Fires [MM H-4 supersedes APM-HAZ-1]	**MM H-4: Prepare a Fire Management Plan.** SCE's Fire Management Plan shall be project-specific and shall include guidance for preventing, controlling, and extinguishing fires during construction and maintenance activities for the Proposed Project. The Fire Management Plan shall include provisions applicable to construction crews and activities and maintenance crews and activities. The Fire Management Plan shall include protocols to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. The Plan shall require construction crews to carry fire extinguishing equipment, prohibit trash burning, restrict smoking to cleared areas, and designate vehicle parking areas away from any dry vegetation to reduce potential ignition of fires at or near the project sites. Additionally the Plan shall include the following measures: ▪ Cease work during Red Flag Warning events in areas where grassland or other vegetation would be susceptible to accidental ignition by project activities that could ignite a fire (such as welding or use of equipment that could create a spark by striking rock). During Red Flag Warning events, as issued daily by the National Weather Service, all non-emergency construction and maintenance activities shall cease in affected areas. ▪ Remove hazards from work areas. SCE shall clear dead and decaying vegetation from the work area prior to starting construction and/or maintenance work. The work areas would include only those areas where personnel are active or where equipment is in use or stored, and may include: the Proposed Banducci Substation area and associated new fiber optic and subtransmission equipment; the new fiber optic telecommunications route; construction laydown areas; pull, tension, and splicing sites; access roads; parking pads; and any other sites adjacent to Proposed Project components where personnel are active or where equipment is in use or stored. Cleared dead and decaying vegetation shall either be removed or chipped and spread on site in piles no higher than six (6) inches.	Review plan and implementation of measures	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
HYDROLOGY AND WATER QUALITY			
Water Quality and Prevention of Soil Erosion	**MM HYD-1: Develop Stormwater Pollution Prevention Plan and Implement Best Management Practices.** The Applicant shall develop a Stormwater Pollution Prevention Plan (SWPPP), as required by the RWQCB and outlined in General Permit 2009-0009 DWQ, which will describe best management practices (BMPs) to prevent the acceleration of natural erosion and sedimentation rates. The SWPPP will include a written site-specific Construction Site Monitoring Program (CSMP). A monitoring program, which shall include a reporting requirement to the CPUC, will be established to ensure that the prescribed BMPs are followed during project construction. BMPs shall include but not be limited to the following: ▪ Use of silt fences or other sediment containment methods placed around and/or downslope of disturbed areas prior to construction; ▪ Protection of drain inlets from receiving polluted stormwater through the use of filters, such as fabrics, gravel bags, or straw wattles; ▪ Construction of a stabilized construction entrance/exit to prevent tracking onto roadways; ▪ Establishment of a vehicle storage, maintenance, and refueling area, if needed, to minimize the spread of oil, gas, and engine fluids. Use of oil pans under stationary vehicles is strongly recommended; and ▪ Prohibition on overnight parking of mobile equipment within 100 feet of wetlands, culverts, or creeks. Stationary equipment (e.g., pumps, generators) used or stored within 100 feet of wetlands, culverts, or creeks will be positioned over secondary containment. A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials management and spill response. All BMPs shall be inspected on a weekly basis, and at least once every 24 hour period during extended storm events. BMPs shall be inspected as described in the SWPPP, maintained on a regular basis, and replaced as necessary through the course of construction. For each inspection required, an inspection checklist will be completed using a form as described in Attachment C of General Permit 2009-0009 DWQ. This checklist will remain onsite with the SWPPP.	Ensure a SWPPP is prepared and implemented to minimize construction impacts on surface water and groundwater quality	Prior to and during construction
Groundwater Supply	**MM HYD-2: Use Non-potable Water for Dust Control or Soil Compaction.** Project water supply for dust control or soil compaction activities shall be obtained from non-potable sources, if reasonably available from local water purveyors, and ensured in a water contract through a local water agency or district.	Ensure non-potable water is used for dust control and soil compaction	During construction
Groundwater Supply	**MM HYD-3: Dewater Construction Site As Needed.** If groundwater is unexpectedly encountered during construction, operation, or decommissioning of the Project, dewatering activities shall be performed in compliance with the California Stormwater Quality Association (CASQA) Handbook for Construction or other similar guidelines, as approved by the Central Valley and/or Lahontan RWQCB, as applicable based on jurisdiction. The Applicant shall submit a written description of all executed dewatering activities, including steps taken to return encountered groundwater to the subsurface and/or to dispose of the dewatered groundwater upon the completion of dewatering activities at the affected site(s).	Review dewatering activities reports	During construction and during operation

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
NOISE			
Construction Noise	**MM N-1: Limit Construction Noise to Daytime Hours.** SCE shall limit grading, scraping, hole augering and pole installation to daylight hours, between 6:00 a.m. and 9:00 p.m. Exceptions for work outside of these hours shall be allowed for project safety or to take advantage of the limited times when power lines can be taken out of service or as determined to be warranted by the CPUC. If nighttime work is needed because of clearance restrictions on power lines, SCE shall take appropriate measures to minimize disturbance to local residents by informing them in advance of the work schedule and probable inconveniences.	Ensure specified activities limited to daylight hours. Review notification (if nighttime work is necessary)	During construction
Construction Noise	**MM N-2: Minimize Construction Vehicle and Traffic Noise.** SCE shall maintain construction equipment and vehicle mufflers in accordance with equipment vendor specifications on all engines used in construction. Where feasible, construction traffic shall be routed to avoid noise-sensitive areas, such as residences, schools, religious facilities, hospitals, and parks.	Ensure implementation during construction such that construction noise is minimized and noise-related complaints from nearby residents are minimized	During construction
TRAFFIC/TRANSPORTATION			
Construction Traffic and Interference with Emergency Access during Construction	**MM T-1: Restrict Lane Closures.** SCE shall restrict all necessary lane closures or obstructions on major roadways associated with overhead or underground construction activities to off-peak periods in congested areas to reduce traffic delays. Lane closures must not occur between 6:00 and 9:30 a.m. or between 3:30 and 6:30 p.m., unless otherwise authorized in writing by the responsible public agency issuing an encroachment permit	Ensure lane closures during off-peak hours and traffic delays minimized	During construction
Construction Traffic and Interference with Emergency Access during Construction	**MM T-2: Ensure Emergency Access and Response**. Prior to construction, SCE shall coordinate with Kern County and emergency service providers regarding emergency access and/or response to the Proposed Project area during construction activities to avoid restricting movements of emergency vehicles. SCE shall ensure that the Proposed Project has considered the relevant Kern County ordinances and building codes so as not to hinder or interfere with emergency access or response (such as, but not limited to, the Kern County Code of Building Regulations: Chapter 17.32, Fire Code and Chapter 17.34, Wildland-Urban Interface Code). Police departments, fire departments, ambulance services, and paramedic services serving the project area shall be notified 30 days in advance by SCE of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where roads will be temporarily blocked, work crews shall be ready at all times to accommodate emergency vehicles through immediately stopping work for emergency vehicle passage and/or facilitating the use of short detours and alternate routes in conjunction with local agencies.	Review notification and ensure coordination	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Construction Traffic and Interference with Emergency Access during Construction	**MM T-3: Implement Traffic Management Plan.** SCE shall follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. SCE is a member of the California Joint Utility Traffic Control Committee, which published the California Joint Utility Traffic Control Manual (2010). SCE will follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the CVC. These recommendations include provisions for safe access of police, fire, and other rescue vehicles.	Ensure traffic safety practices are implemented	During construction

Note: Applicant Proposed Measures (APMs) appear in the Proponent's Environmental Assessment (A.12-11-011).
Source: SCE, 2014.

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Appendix A. List of Preparers

A consultant team headed by Aspen Environmental Group prepared this document under the direction of the California Public Utilities Commission. The preparers and technical reviewers of this document are presented below.

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California Public Utilities Commission, Energy Division

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Joan George, Archaeologist	Cultural Resources
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Appendix B.
Estimated Temporary and Permanent Land Disturbance

Table B-1. Estimated Temporary and Permanent Land Disturbance

Project Element	Site Quantity	Disturbed Area Calculation (LxW in Feet)	Acres Temporarily Disturbed During Construction	Acres to Be Restored	Acres Permanently Disturbed
Substation					
Internal grading of substation site	1	440 x 326	3.30	0	3.30
External grading of the substation site (excluding access road)	1	Irregular shape	2.94	0	2.94
Access road to substation	1	115 x 24	0.06	0	0.06
Total Estimated for Substation			*6.30*	*0*	*6.30*
Distribution Getaways					
Vault and vents	5	22 x 10	0.005	0.002	0.003
Duct and trench	4,550'	4,550 x 30	3.09	3.09	0.0
Total Estimated for Distribution			*3.10*	*3.10*	*0.003*
Subtransmission Project Feature					
Remove existing wood pole (1)	4	150 x 75	1.03	1.03	0.00
Remove existing wood pole and install new wood pole (2)	5	150 x 75	1.29	1.24	0.00
Construct new wood pole (3)	2	150 x 75	0.52	0.50	0.02
Construct new tubular steel guy pole (3)	2	200 x 150	1.38	1.26	0.12
Construct new tubular steel pole (3 and 4)	6	200 x 150	0.00	0.00	0.00
Construct new light weight steel pole (4)	2	200 x 100	0.00	0.00	0.00
Conductor stringing setup area (5)	8	600 x 100	11.02	11.02	0.00
Material and equipment staging area (6)	1	1 acre	1.00	1.00	0.00
Total Estimated (7)			*16.24*	*16.05*	*0.14*
Telecommunications Project Location					
Banducci Substation	2	300 x 20	0.14	0.14	0.0
Cummings Substation	1	500 x 20	0.27	0.27	0.0
Pelliser Road, 1400 feet s/o Highline Road	1	100 x 20	0.05	0.05	0.0
Highway 202 at Woodford-Tehachapi Road	1	850 x 20	0.39	0.39	0.0
Fiber optic cable stringing sites	36	100 x 30	2.52	2.52	0.0
Distribution class poles to be removed/replaced	39	125 x 50 per pole	5.60	5.60	0.0
Total Estimated for Telecommunications			**8.97**	**8.97**	**0.0**
Total Estimated for Proposed Project			**34.61**	**28.12**	**6.44**

Source: Table 3.4 in SCE, 2014a.

Notes:

1 - Includes the removal of existing conductor and teardown of existing structure for wood poles north and west of Proposed Banducci Substation.
2 - Includes the transfer of existing conductor and teardown of existing structure for wood poles south of Proposed Banducci Substation and near Highline Road. Includes structure erection and conductor installation. Portion of ROW within 10' of Wood Poles to remain cleared of vegetation. The permanent disturbance is zero because the area of the new poles is within the previously disturbed area (0.05 acres) of the existing poles being removed.
3 - Includes structure assembly, erection, guy wire and/or conductor installation. The permanent area of disturbance includes that portion within 25' of a Tubular Steel Pole or 10' of a LWS or Wood Pole and would remain cleared of vegetation; permanently disturbed area is approximately 0.06 ac/TSP, 0.01 ac/LWS and Wood Pole.
4 - The temporary and permanent disturbance area calculations for these structures are zero because they are located within the substation property area and are accounted for in the substation area calculations.
5 - Based on number of circuits and route design.
6 - The disturbed acreage for the material storage area would be restored upon the completion of the Proposed Project.
7 - The disturbed acreage calculations are estimates based upon SCE's preferred area of use for the described project feature, they do not include any new access/spur road information; they are subject to revision based upon final engineering and review of the project by SCE's Construction Manager and/or Contractor awarded project.

Assumptions for Footing / Base Volume and Area Calculations:

- Average TSP depth 30 feet deep, 7 feet diameter, quantity 1 per TSP: earth removed for footing = 42.8 cu.yd.; surface area = 38.5 sq.ft.
- Average LWS depth 12 feet deep, 2.5 feet diameter, quantity 1 per LWS: earth removed for pole base = 2.2 cu.yd.; surface area = 4.9 sq.ft.
- Average Wood Pole depth 12 feet deep, 2.5 feet diameter, quantity 2 per Pole: earth removed for pole base = 4.4 cu.yd.; surface area = 9.8 sq.ft.