BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities With Voltages Between 50 kV and 200 kV: Riverway Substation Project	)))))))))	Application No. 06-06-____ (Filed June 1, 2006)

PROPONENT'S ENVIRONMENTAL ASSESSMENT
RIVERWAY SUBSTATION PROJECT

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TABLE OF CONTENTS

Section Page

Section Page

APPENDICES

TABLES

FIGURES

Figure Page

RIVERWAY PROPONENT'S ENVIRONMENTAL ASSESSMENT SUMMARY OF TERMS

Proposed Project	The construction of a new 66/12 kV low-profile substation, the installation of approximately 1,200 feet of underground 66 kV subtransmission lines, and the installation of new fiber optic cable and communication equipment to connect the substation to SCE's existing telecommunication system. For a detailed definition, see Section 3.0, Project Description.
Electrical Needs Area	The urbanized areas of the City of Visalia and Northern Tulare County. For a detailed definition, see Section 1.0, Project Purpose and Need.
Project Area	A four square mile area within the Electrical Needs Area in which the substation must be located in order to optimize load balancing and line length, and the area used to evaluate environmental impacts to the project. For a detailed definition, see Section 2.0, Project Alternatives.
Project Features	Measures that have been included as part of the project design or would be implemented per regulation and SCE standard construction and operation protocols. These Project Features are considered part of the project description, and have been specifically selected to avoid and/or minimize environmental impacts. For a detailed definition, see Section 4.0 Environmental Impact Assessment.
SCE Proposed Measures	Measures incorporated into the Proposed Project specifically to reduce environmental impacts to less than significant levels. For a detailed definition, see Section 4.0 Environmental Impact Assessment.

ABBREVIATIONS AND ACRONYMS

ACSR	Aluminum conductor steel reinforced
ADT	Average daily traffic
APEFZA	Alquist-Priolo Earthquake Fault Zoning Act
AQCR	Air Quality Control Region
ASTM	American Society of Testing and Materials
BACM	Best available control measure
BLM	Bureau of Land Management
BMPs	Best management practices
ºC	Degrees Celsius
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon monoxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	Decibels

ABBREVIATIONS AND ACRONYMS

dBA	Decibels on the A-weighted scale
EIR	Environmental Impact Report
EF	Emission factor
ESA	Endangered Species Act
°F	Degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
HMBP	Hazardous Material Business Plan
HMI	Human machine interface
Hz	Hertz
H_2S	Hydrogen sulfide
IEEE	Institute of Electrical and Electronics Engineers
kcmil	Thousand circular mils (electricity conductor)
kV	Kilovolt
lb	Pound
L_{dn}	Day-night sound level
LDS	Light duty steel
L_{eq}	Equivalent steady sound level that provides an equal amount of acoustical energy as the time-varying sound
MBTA	Migratory Bird Treaty Act
MEER	Mechanical and Electrical Equipment Room
m^3	Cubic meters
$\mu g/m^3$	Micrograms per cubic meter
mg/m^3	Milligrams per cubic meter
MW	Megawatt
MVA	Megavolt ampere
MVAR	Megavolt ampere reactive
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NERC	North American Electric Reliability Council
NOI	Notice of Intent

ABBREVIATIONS AND ACRONYMS

NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
OSHA	Occupational Safety and Health Administration
O_3	Ozone
Pb	Lead
PEA	Proponent's Environmental Assessment
PM	Particulate matter
$PM_{2.5}$	Particulate matter less than 2.5 microns
PM_{10}	Particulate matter less than 10 microns
PP	Proposed Project
ppm	Parts per million
PTC	Permit to Construct
REC	Recognized environmental conditions
RCRA	Resource Conservation Recovery Act
ROG	Reactive organic gas
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SCE	Southern California Edison Company
SCS	Soil Conservation Service
SJKF	San Joaquin kit fox
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act
SO_2	Sulfur dioxide
SPCC	Spill Prevention Control and Countermeasure
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TPQ	Total planning quantities

TQ	Threshold quantity
TSP	Tubular steel pole
USACOE	US Army Corps of Engineers
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UV	Ultraviolet
WECC	Western Energy Coordinating Council

EXECUTIVE SUMMARY

Introduction/Background

This Proponent's Environmental Assessment (PEA) evaluates the potential environmental impacts of Southern California Edison Company's (SCE) proposed Riverway Substation Project (hereafter referred to as "the Proposed Project") and its alternatives in the City of Visalia and northern Tulare County (Electrical Needs Area, as defined in Section 1.1). This portion of Tulare County is one of the fastest growing areas in the United States, and electrical demand is growing as a result of new homes and businesses built in recent years on what once was agricultural land. Therefore, the Proposed Project is required to be operational by June 1, 2008 to ensure that safe and reliable electric service is provided to meet customer electrical demand without overloading the existing electric facilities in the Electrical Needs Area. Construction is scheduled to begin in the third quarter 2007.

The Proposed Project includes the following components:

- Construction of a new 66/12 kilovolt (kV) low-profile substation. The substation would be constructed on an approximately 2 acre site in the City of Visalia, California. The substation site would contain two 66 kV subtransmission source lines, two 28 MVA 66/12 kV transformers, two 4.8 MVAR 12 kV capacitor banks and six 12 kV distribution lines. The 12 kV switch rack would be designed with an operating bus and a transfer bus. The switch rack would have a provision for a second operating bus as well as ten future 12 kV distribution lines, two 28 MVA transformers, and two 4.8 MVAR capacitors to accommodate potential growth if required.

- Installation of approximately 1,200 feet of underground 66 kV subtransmission lines starting at the intersection of Riggin Avenue and Mooney Boulevard and ending at the substation. The subtransmission lines would be located within the right-of-way (ROW) of the future Ranch Circle Drive.

- Installation of new fiber optic cable and communication equipment to connect the substation to SCE's existing telecommunication system.

SCE has defined the following objectives to meet the project purpose and need:

- Meet projected electrical load requirements in the Electrical Needs Area beginning in 2008 and extending beyond 2010 in order to meet the 10 year planning criterion;

- Provide enhanced system reliability by locating the substation within the Project Area (as defined in Section 2.3);

- Provide greater operational flexibility by providing the ability to perform load transfers between lines located nearer to their source substations;

- Meet project need with limited environmental impact;

- Meet project need in a cost effective manner.

These objectives guide SCE in developing a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives.

This PEA includes the information required by the California Public Utilities Commission's (CPUC) PEA Guidelines *(State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V)*, as well as the CPUC's requirements for a Permit to Construct (PTC) pursuant to General Order 131-D (D.94-06-014, Appendix A, as modified by D.95-08-038).

In addition to the information required by the CPUC, various regulatory agencies would issue permits for construction and operation of the Proposed Project. A list of expected permits and their requirements is provided in Appendix J.

Alternatives

The California Environmental Quality Act (CEQA) and CEQA Guidelines (Section 15126.6.a) require consideration of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project objectives while avoiding or substantially lessening the significant effects of the project. These alternatives were selected based on the following considerations:

- Minimize temporary construction-related impacts to sensitive biological resources, air quality, soil erosion and compaction;

- Use of existing ROW where possible to minimize new disturbance;

- Minimize impacts to visual resources; and

- Consideration of input received during the public involvement process.

The following alternatives are analyzed in the PEA:

- Preferred Alternative (Proposed Project);

- Overhead Subtransmission Line option to the Preferred Alternative;

- Alternative 1, northwest corner of Leila Street and future Flagstaff Avenue;
- Alternative 2, southeast corner of Demaree Street and Avenue 320; and
- No Project Alternative.

The CEQA Guidelines (Section 15126.6 [d]) require that an environmental document include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison to the Proposed Project. As discussed in Section 5, all of the alternatives evaluated in the PEA, with the exception of the No Project Alternative, satisfy the project objectives.

As evaluated in Section 4, none of the alternatives would have significant impacts, or impacts that cannot be reduced to less than significant levels with the implementation of Project Features (Section 3.6) and SCE Proposed Measures (as described in Section 4.0). SCE has selected the Proposed Project as the preferred alternative for several reasons. The Proposed Project requires 1,200 feet of new underground 66 kV subtransmission lines, while Alternative 1 requires 1,500 feet of underground subtransmission lines. The greater surface disturbance for Alternative 1 leads to greater impacts to biological resources, cultural resources, geology and soils and hydrology and water quality. Alternative 2 requires 3.5 miles (approximately 18,500 feet) of new overhead 66 kV subtransmission lines. The amount of surface disturbance is similar to the Proposed Project. However, the poles associated with Alternative 2 would have greater long-term impacts to aesthetics and biological resources than for the Proposed Project. Similarly, the poles required for the Overhead Option would have greater long-term impacts to aesthetics than for the Proposed Project.

Typically, SCE constructs transmission and subtransmission lines overhead. In this case, underground distribution lines are proposed to support future development in the area. Placing facilities overhead would be inconsistent with the planned residential development, and may pose significant visual impacts. Therefore, SCE has proposed undergrounding the 66 kV subtransmission lines associated with the Proposed Project rather than selecting the Overhead Option.

Environmental Impacts and Mitigation Measures

The environmental impacts associated with construction and operation of the Proposed Project are analyzed in this PEA using site specific information and field surveys. In the evaluation of each resource category and issue, the environmental setting is described; followed by a discussion of the regulatory framework; the identification of significance criteria or thresholds; and a description of potential environmental impacts and proposed mitigation, as needed. The impacts of each option and alternative are then described. A comparison of the impacts of each alternative is provided in Table 5-1, Comparison of Alternatives.

All potentially adverse impacts are addressed through compliance with laws, regulations, and ordinances, or with Project Features (as defined in Section 3.6) and/or SCE

Proposed Measures (as defined in Section 4.0) designed to reduce or eliminate those impacts. The Project Features and SCE Proposed Measures are incorporated into the project, and as such, no additional mitigation measures are required.

The PEA concludes that the Proposed Project would have less than significant or no impact on all resource categories and issues.

1.0 PROJECT PURPOSE AND NEED

1.1 PROJECT OVERVIEW

Southern California Edison Company (SCE) proposes to construct the Riverway Substation Project (as described in Section 2.5 and referred to as the Proposed Project) to maintain reliability and meet projected electrical load requirements in the City of Visalia and northern Tulare County (Electrical Needs Area). (See Figure 1-1, Regional Map.) The Proposed Project is required to be operational by June 1, 2008 to ensure that safe and reliable electric service is available to meet customer electrical demands without overloading the existing electric facilities in the Electrical Needs Area. Construction is scheduled to begin in the third quarter of 2007. The Proposed Project includes the following components:

- Construction of a new 66/12 kilovolt (kV) low-profile substation. The substation would be constructed on an approximately 2 acre site in the City of Visalia, California. The substation site would contain two 66 kV subtransmission source lines, two 28 megavolt-ampere (MVA) 66/12 kV transformers, two 4.8 megavolt ampere reactive (MVAR) 12 kV capacitor banks and six 12 kV distribution lines. The 12 kV switch rack would be designed with an operating bus and a transfer bus. The switch rack would have a provision for a second operating bus as well as ten future 12 kV distribution lines, two 28 MVA transformers, and two 4.8 MVAR capacitors to accommodate potential growth if required.

- Installation of approximately 1,200 feet of underground 66 kV subtransmission lines starting at the intersection of Riggin Avenue and Mooney Boulevard[1] and ending at the substation. The subtransmission lines would be located within future Ranch Circle Drive[2] right-of-way (ROW).

- Installation of new fiber optic cable and communication equipment to connect the substation to SCE's existing telecommunication system.

This PEA includes the information required by the California Public Utilities Commission's (CPUC) PEA Guidelines *(State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V)*, as well as the CPUC's requirements for a Permit to Construct (PTC) pursuant to General Order 131-D (D.94-06-014, Appendix A, as modified by D.95-08-038).

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[1] The City of Visalia has plans to further develop and extend Mooney Boulevard north of Riggin Avenue. When referencing Mooney Boulevard north of Riggin Avenue, this document is referencing the Mooney Boulevard that will, at some point, be developed and extended according to the City of Visalia.

[2] The City of Visalia and/or neighboring development plans to develop the future Ranch Circle Drive as shown on Figure 2-2, Proposed and Alternative Substation Sites and Subtransmission Routes.

1.2 PROJECT PURPOSE

The purpose of this project is to build necessary electrical facilities in order to maintain safe and reliable service to customers and to meet forecasted demand in the Electrical Needs Area beginning in 2008. Under the Federal Energy Regulatory Commission (FERC), North American Electric Reliability Council (NERC), Western Energy Coordinating Council (WECC), and CPUC rules, guidelines and regulations, electrical transmission systems must have sufficient capacity to maintain safe, reliable, and adequate service to customers. The safety and reliability of the system must be maintained under normal conditions (base case), when all facilities are in service, and also under abnormal conditions (both likely and unlikely contingencies) resulting from equipment or line failures, maintenance outages or outages that cannot be predicted or controlled due to weather, earthquakes, traffic accidents, and other unforeseeable events.

SCE utilizes a multi-step planning process to make sure that the necessary system facilities are developed in time to meet increased electrical demand. The planning process begins with the development of a peak demand forecast for each substation. Peak demand forecasts are developed using trends in population data, urbanization data, and meteorological data. Technical engineering analyses are then conducted to determine whether the forecast of peak demand can be accommodated on the existing transmission, subtransmission, and distribution systems. System facilities, such as substations or power lines, have defined operating limits. In addition to considering the operating limits of a single substation, SCE evaluates the ability to transfer the load from that single substation to adjacent substations in the system. When projections indicate that these limits would be exceeded within an appropriate planning horizon (typically 10 years), a project is proposed to keep the electrical system within specified operating limits.

1.3 PROJECT NEED

The Electrical Needs Area is currently served by a portion of SCE's Rector System. The Rector System is bounded by SCE's service territory to the south and southeast and is bounded by Pacific Gas and Electric Company's service territory to the north, west and northeast. The Rector System is comprised of 220/66 kV transformers, 66 kV subtransmission lines, 66/12 kV transformers, and 12 kV distribution facilities.

At Rector Substation, voltage is transformed from 220 kV to 66 kV and distributed to 66 kV substations in the Rector System. The five 66/12 kV substations in the Rector System that serve the Electrical Needs Area include: Chatham, Oak Grove, Visalia, Liberty, and Rector (Electrical Needs Area Substations). These five substations currently serve approximately 51,300 metered customers. The Rector System also includes nine additional 66/12 kV distribution substations, located outside the Electrical Needs Area. Figure 1-2, SCE Rector System within Electrical Needs Area, illustrates the portion of the Rector System that serves the Electrical Needs Area.

Figure 1-1 Regional Map

Figure 1-2 SCE Rector System within Electrical Needs Area

Currently, the amount of electricity that can be delivered to the Electrical Needs Area is limited by the maximum amount of electricity that these Electrical Needs Area Substations can transmit before exceeding designed operating limits. The electrical capacity for these Electrical Needs Area Substations is presently limited to 329.8 MVA under normal operating conditions. The temperature-adjusted peak demand in 2004 for these substations was 314.5 MVA. SCE projects the peak demand to increase by 64.6 MVA to approximately 379.1 MVA by 2008. The projected demand is shown on Figure 1-3, Substation Capacity and Peak Demand in Electrical Needs Area, and the data used to create the figure is included in Appendix F.

As the City of Visalia and northern Tulare County has become more densely populated, SCE has built longer distribution lines to accommodate such growth. However as distribution lines increase in length, the voltage to the end user decreases, thereby resulting in reliability problems. In addition, longer distribution lines create difficulties in shifting electrical load between lines and between substations in response to demand. The inability to shift excess load causes the distribution lines and substations to overload.

Although utilizing long distribution lines were once sufficient to serve the lower electrical requirements of the City of Visalia and northern Tulare County in its former, more rural state, SCE now must to respond to its current, more urbanized makeup. The forecasted demand for electricity in the Electrical Needs Area is expected to exceed the maximum capacity of the Electrical Needs Area Substations by 2008. Based on the forecast, demand would exceed the capacity in 2008 even with planned upgrades (discussed more fully in Section 2.0, Project Alternatives).

As a result, electric system upgrades are required to reliably serve projected electrical demand within the Electrical Needs Area. Therefore, SCE is proposing a project to ensure the electrical distribution system has sufficient capacity to maintain safe, reliable, and adequate service to customers in the Electrical Needs Area.

1.4 PROJECT OBJECTIVES

CEQA and the CEQA Guidelines (Section 15126.6.a) require the consideration of alternatives to a proposed project that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project. Therefore, SCE has defined the following objectives to meet the Proposed Project purpose and need described in this chapter:

- Meet projected electrical demand requirements in the Electrical Needs Area beginning in 2008 and extending beyond 2010 in order to meet the 10 year planning criterion;

- Provide enhanced system reliability by locating the substation within the Project Area (as defined in Section 2.3);

- Provide greater operational flexibility by providing the ability to shift load between distribution lines and substations;

- Meet project need while minimizing environmental impacts; and

- Meet project need in a cost effective manner.

SCE considers these objectives in developing a reasonable range of alternatives to a project or to the location of a project. The following chapter describes the alternatives development process, and selection of alternatives for analysis in this PEA.

Figure 1-3 Substation Capacity and Peak Demand in Electrical Needs Area

2.0 PROJECT ALTERNATIVES

2.1 ALTERNATIVES SELECTION PROCESS

CEQA and the CEQA Guidelines (Section 15126.6.a) require that an environmental impact report describe a range of alternatives to a proposed project that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project. This analysis must include evaluation of a no project alternative to compare the impacts of approving the proposed project with the impacts of not approving the proposed project (No Project Alternative). In addition, the CEQA Guidelines (Section 15126.6(d)) require the evaluation of a reasonable range of alternatives to the project or its location to provide a comparative analysis for consideration by decision-makers.

SCE first evaluates whether the existing electrical infrastructure can be modified to meet the project objectives. If not, then SCE evaluates what new infrastructure is required and where it would be located in order to meet project objectives. The following sections describe the methodology for screening system alternatives and site alternatives, if needed. Alternatives developed by these methodologies are then screened for their ability to meet the project objectives. The section concludes with a brief description of the alternatives retained for full analysis in the PEA.

2.2 SYSTEM ALTERNATIVES SCREENING METHODOLOGY

SCE first considers whether the existing electrical infrastructure that serves the Electrical Needs Area can meet the project objectives. If the project objectives cannot be met with the existing infrastructure then SCE evaluates whether the existing infrastructure can be modified or expanded to meet the project objectives. The development of these system alternatives consists of the five step process summarized below:

Step 1. Develop peak demand forecast for each substation within the Electrical Needs Area, considering population trends, area growth, and meteorological data.

Step 2. Perform technical engineering analyses to determine whether the forecasted peak electrical demand can be accommodated by modifying the existing electrical infrastructure.

Step 3. If the forecasted electrical demand cannot be accommodated by modifying the existing electrical infrastructure then develop system alternatives by considering feasible upgrades or additions to the existing electrical infrastructure.

Step 4. Evaluate each system alternative in consideration of one or more of the following criteria:

- The extent to which an alternative would substantially meet the proposed project objectives; and

- The feasibility of an alternative considering capacity limits, ability to upgrade the system on existing sites, and economic viability.

Step 5. If a system alternative is infeasible then that alternative is eliminated from consideration. If feasible, the alternative is retained for full analysis in the PEA, as required by CPUC General Order 131-D.

If it is determined that a new electrical infrastructure upgrade or addition is required, then site location alternatives are considered as described in the following section.

2.3 SUBSTATION SITE SELECTION

Constructing a new substation is one system alternative considered to meet project objectives. Once a new substation is defined as the proposed system alternative, various potential geographical substation locations are considered as project alternatives. The area in which the substation must be located in order to optimize load balancing and distribution line lengths is depicted on Figure 2-1, Project Area. The Project Area has been defined as the region approximately bounded by Demaree Street, Dinuba Boulevard, Houston Avenue, and the Saint John's River. The process used to evaluate potential substation sites within the Project Area is summarized below.

In order to identify potential substation sites available for acquisition within the Electrical Needs Area, SCE initiated a site evaluation process. SCE contacted landowners within the Electrical Needs Area and officials at the City of Visalia and Tulare County. In addition, SCE identified potential substation sites during field reconnaissance surveys. SCE then evaluated each potential site applying a series of criteria, including, but not limited to: the proximity of each site to existing SCE transmission line infrastructure; engineering constraints imposed by each site; the location of each site relative to growth within Electrical Needs Area; a minimum parcel size of approximately two acres; relative compatibility with existing nearby land uses; relative compatibility with City and County zoning; and potential environmental constraints imposed by each site.

Based on the criteria listed above, SCE identified an initial preferred substation site (Alternative 1 substation site, as described in Section 2.5) and an initial alternative substation site (Alternative 2 substation site, as described in Section 2.5). The initial preferred substation site (Alternative 1) and the initial alternative substation site (Alternative 2) both meet the project objectives. However, subsequent information and input gathered during SCE's public involvement process, together with further input from the City of Visalia, led SCE to determine that constructing a substation at the initial alternative substation site (Alternative 1) would possibly incur severe opposition from the public due to its close proximity to an existing residential development. Thereafter, the initial preferred substation site (Alternative 1) owner contacted SCE regarding two additional sites also owned, but not previously evaluated. SCE then evaluated these two sites based upon the same criteria used to evaluate other sites. SCE analyses indicated that one of these sites (the Proposed Project, as described in Section 2.5) was a superior site to the initial preferred substation site (Alternative 1) and the initial alternative substation site (Alternative 2). As a result, the Proposed Project substation site became the preferred substation site. Section 2.6 (Preferred Alternative) briefly

Figure 2-1 Project Area

describes the Proposed Project substation site in relation to the Alternative 1 and Alternative 2 substation sites.

2.4 PROJECT ALTERNATIVES ELIMINATED FROM FULL PEA EVALUATION

This section describes system alternatives that were considered in the evaluation process, but that were eliminated from full consideration in the PEA. Each alternative is described, along with a brief explanation of the reasons for eliminating the alternative.

2.4.1 System Upgrade Alternatives Considered and Eliminated

System upgrade alternatives were evaluated to determine whether the proposed project objectives could be met without the construction of a new substation. Three substations in the Electrical Needs Area (Liberty, Visalia, and Oak Grove) would be at their ultimate capacity by 2007 to 2008, and are therefore not available for upgrades. Currently, SCE plans to modify Rector Substation in 2007 to increase capacity; however these modifications do not eliminate the need for the Proposed Project. As a result, the Chatham Substation is the only substation available for system upgrades in the Electrical Needs Area (Figure 1-2, SCE Rector System in Electrical Needs Area).

Upgrade Existing Chatham Substation

Chatham Substation is currently operating at its designed capacity. Substantial upgrades to Chatham Substation would be required to increase capacity. This would include expansion of the substation, installation of two new 28 MVA transformers (to replace four existing, smaller transformers), installation of associated foundations, breakers, and switch racks. In addition to the upgrades at the substation, an upgrade of the subtransmission line grid would also be needed. The existing Chatham – Venice Hill – Visalia 66 kV subtransmission line would have to be replaced with a larger capacity conductor because it is currently inadequate for the increased electrical loading. In addition, six 12 kV distribution lines and a second 66 kV subtransmission line (approximately four miles in length) would be required for system reliability. The Chatham Substation system upgrade alternative would provide a net addition of 46 MVA of capacity.

Although the Chatham Substation system upgrades would add 46 MVA of additional capacity, that is not enough to supply the needs of the Electrical Needs Area beyond 2010. Therefore, these substation upgrades would only delay, but not eliminate, the need for a new substation in the Electrical Needs Area. If Chatham Substation were upgraded, a new substation would be required in 2010 rather than 2008. The Chatham Substation system upgrades do not satisfy the project objective of meeting projected electrical load requirements in the Electrical Needs Area beginning in 2008 and extending beyond 2010 in order to meet the 10 year planning criterion. Therefore, this alternative was eliminated from further consideration in the PEA.

2.4.2 Substation Site Alternatives Considered and Eliminated

Since the Chatham Substation system upgrade alternative does not satisfy the project objectives, a new substation in the Project Area is required to meet the proposed project objectives. As described in the Substation Site Selection (Section 2.3), SCE considered multiple potential substation sites in the Project Area and several were eliminated for failing to meet one or more of the criteria set forth in Section 2.3.

2.5 ALTERNATIVES EVALUATED IN THIS PEA

The alternatives screening methodology identified a preferred alternative, an overhead subtransmission line option to the preferred alternative, and two substation site alternatives. These alternatives were selected based on the following considerations:

- Minimize temporary construction-related impacts to sensitive biological resources, air quality, and soil erosion and compaction;
- Use of existing ROW where possible to minimize new disturbance;
- Minimize impacts to visual resources; and
- Consideration of input received during the public involvement process.

In addition to the alternatives developed in the screening process, the No Project Alternative is evaluated in this PEA. Each alternative is described briefly in the following sections, and in greater detail in Chapter 3.0, Project Description. The location of each alternative is shown on Figure 2-2, Proposed and Alternative Substation Sites and Subtransmission Routes.

Preferred Alternative (Proposed Project): 66/12 kV Substation, north of Riggin Avenue and east of Mooney Boulevard

The proposed substation site for this alternative is located north of Riggin Avenue and east of Mooney Boulevard. For discussion purposes, the substation alternatives are referred to as Riverway Substation. This alternative includes the construction of a new 66/12 kV substation with two 28 MVA transformers and six 12 kV distribution lines. The substation would be constructed to accommodate future capacity increases beyond 2010 as required.

Figure 2-2 Proposed and Alternative Substation Sites and Subtransmission Routes

There would be two 66 kV source subtransmission lines to the substation. The existing Rector-Oak Grove No. 1 66 kV subtransmission line would be reconfigured to form the Rector-Riverway and Oak Grove-Riverway 66 kV subtransmission lines at the intersection of Mooney Boulevard and Riggin Avenue. The new 66 kV subtransmission line sections would be underground and would serve as source subtransmission lines to the proposed substation. The underground sections of the future Oak Grove-Riverway 66 kV and the Rector-Riverway 66 kV subtransmission lines would travel north on the east side of Mooney Boulevard, turn east on the south side of the future Ranch Circle Drive and turn south into the proposed substation.

Option: Subtransmission Line Overhead for Preferred Alternative (Overhead Option)

This option is to install overhead subtransmission lines for the preferred alternative substation site as opposed to underground lines. The Rector-Riverway and Oak Grove-Riverway 66 kV subtransmission lines would come from the north side of Riggin Avenue, turn north on the east side of Mooney Boulevard, then turn east onto the future Ranch Circle Drive, and turn south into the substation. This option is referred to from this point forward as the Overhead Option.

Alternative 1: 66/12 kV Substation on the northwest corner of Leila Street and future Flagstaff Avenue

The substation site for this alternative is located at the northwest corner of Leila Street and future Flagstaff Avenue. This alternative includes the construction of a new 66/12 kV substation with two 28 MVA transformers and six 12 kV distribution lines. The substation would be constructed to accommodate future capacity increases beyond 2010 as required.

There would be two 66 kV subtransmission source lines to the substation. The existing Rector-Oak Grove No. 1 66 kV subtransmission line would be reconfigured to form the Rector-Riverway and Oak Grove-Riverway 66 kV subtransmission lines at the intersection of Riggin Avenue and Leila Street. The new 66 kV subtransmission line sections would be underground and would serve as subtransmission source lines to the substation. The underground sections of the future Oak Grove-Riverway 66 kV and the Rector-Riverway 66 kV subtransmission lines would travel north on the west side of Leila Street, turn west on the south side of the future Flagstaff Avenue and turn north into the substation. This alternative is referred to from this point forward as Alternative 1.

Alternative 2: 66/12 kV Substation on the southeast corner of Demaree Street and Avenue 320

The substation site for this alternative is located at the southeast corner of Demaree Street and Avenue 320. This alternative includes the construction of a new 66/12 kV substation with two 28 MVA transformers and six 12 kV distribution lines. The substation would be constructed to accommodate future capacity increases beyond 2010 as required.

There would be two separate 66 kV subtransmission source lines to the substation. These 66 kV subtransmission lines would be installed overhead for this alternative. One source line would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line at the northeast corner of Akers Street and Riggin Avenue. The overhead subtransmission line would then travel on the east side of Akers Street to Avenue 320, turn east on Avenue 320, travel on the south side of Avenue 320, turn south on Demaree Street and travel on the west side of Demaree Street and turn east into the substation site, completing the Oak Grove-Riverway 66 kV subtransmission line.

The other source line would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line at the northeast corner of Demaree Street and Riggin Avenue and then travel north on the east side of Demaree Street to the substation site, completing the Rector-Riverway 66 kV subtransmission line. This alternative is referred to from this point forward as Alternative 2.

No Project Alternative

This alternative would not alter the electrical infrastructure beyond that already planned within the Electrical Needs Area. Therefore, it does not accomplish the project objectives and would result in a reduced level of reliability, possibly leading to brownouts. This alternative is referred to from this point forward as the No Project Alternative.

2.6 PREFERRED ALTERNATIVE

As evaluated in Section 4, none of the alternatives would have significant impacts, or impacts that cannot be reduced to less than significant levels with the implementation of Project Features (Section 3.6) and SCE Proposed Measures (as described in Section 4.0). SCE has selected the Proposed Project as the preferred alternative for several reasons. The Proposed Project requires 1,200 feet of new underground 66 kV subtransmission lines, while Alternative 1 requires 1,500 feet of underground subtransmission lines. The greater surface disturbance for Alternative 1 leads to greater impacts to biological resources, cultural resources, geology and soils and hydrology and water quality. Alternative 2 requires 3.5 miles (approximately 18,500 feet) of new overhead 66 kV subtransmission lines. The amount of surface disturbance is similar to the Proposed Project. However, the poles associated with Alternative 2 would have greater long-term impacts to aesthetics and biological resources than the Proposed Project. Similarly, the poles required for the Overhead Option would have greater long-term impacts to aesthetics than for the Proposed Project.

Typically, SCE constructs transmission and subtransmission lines overhead. In this case, underground distribution lines are proposed to support future development in the area. Placing facilities overhead would be inconsistent with the planned residential development, and may pose significant visual impacts. Therefore, SCE has proposed undergrounding the 66 kV subtransmission lines associated with the Proposed Project rather than selecting the Overhead Option.

The approximate Project costs listed in the table below show the Proposed Project, Overhead Option, Alternative 1 and Alternative 2 construction costs. As shown in Table

2.6-1, Proposed Project Costs, costs of the Proposed Project and the various alternatives are similar.

Table 2.5-1 Proposed Project Costs

Project	Substation and Underground 66 kV Subtransmission Lines	Substation and Overhead 66 kV Subtransmission Lines
Proposed Project	$ 11.1 million	$ 10.4 million
Alternative 1	$ 12.0 million	N/A
Alternative 2	N/A	$ 11.0 million

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3.0 PROJECT DESCRIPTION

This section describes each of the alternatives and the Proposed Project to a level of detail suitable for environmental review. The description includes construction, operation, and maintenance of the substation, the associated subtransmission and distribution lines, and the telecommunication system. A map of the location of the substation site and subtransmission route for the Proposed Project is included as Figure 3.1, Proposed Substation Site and Subtransmission Route.

3.1 PROJECT AREA

The Project Area identified in Section 2.3 (Substation Site Selection) is the same geographical area used in Section 4.0, Environmental Impacts Analysis, to evaluate the potential environmental impacts of the Proposed Project and Alternatives. The Project Area encompasses approximately four square miles within the Electrical Needs Area.

3.2 PROPOSED RIVERWAY SUBSTATION FACILITIES

SCE is proposing the same substation facilities and work plan (operational conditions) for the Proposed Project and Alternatives 1 and 2. The following substation description applies to the Proposed Project. Although some of the sections described below are specific to the Proposed Project site, they are appropriate for the purpose of evaluating environmental impacts of the substation for Alternatives 1 and 2.

3.2.1 Substation Description

The substation would consist of electrical equipment needed to operate the substation, subtransmission lines into and out of the substation, a perimeter wall surrounding the substation equipment with a gate to provide access in and out of the substation, an access road to the substation from a public road, and landscaping outside of the perimeter wall. The substation footprint (area contained within the perimeter wall) is approximately 1.7 acres. The total area of the substation including a buffer area (area outside the perimeter wall) is approximately two acres. The substation would incorporate low-profile design features, which limit the height of the electrical equipment to approximately 15 feet. In contrast, standard substation design generally includes substation electrical equipment up to 30 feet in height.

Substation Equipment

The substation would be an unmanned, automated, 56 MVA, 66/12 kV low-profile substation. The substation would contain two 66 kV subtransmission source lines, two 28 MVA 66/12 kV transformers, two 4.8 MVAR 12 kV capacitor banks and six 12 kV distribution lines (see Figure 3-2, Proposed Substation Site Diagram).

The 66 kV switch rack would be a low-profile design with an operating and transfer bus configuration with one line breaker and three group disconnects at each bay, except for a bus-tie position with one line breaker and one set of disconnects.

The 12 kV switch rack would be a low-profile design with an operating bus and a transfer bus. The switch rack would have a provision for a second operating bus as well as ten future 12 kV distribution lines, two 28 MVA transformers, and two 4.8 MVAR capacitors to accommodate potential growth if required.

One prefabricated metal mechanical and electrical equipment room (MEER) measuring approximately 12 feet high, 36 feet long, and 20 feet wide would be erected to house control and relay racks, battery and battery chargers, AC and DC distribution switchboards, and telecommunication equipment. The substation would be equipped with a substation automation system. The system would include one human machine interface (HMI) rack and approximately twelve 19-inch racks.

All equipment and structures at the substation would be grounded in accordance with current SCE and industry standards. Ground grid calculations would be based on soil resistivity measurements.

Substations, poles and risers can be damaged by animals entering equipment or reaching the tops of the poles. Accordingly, SCE would install insulated coverings and barriers to minimize damage caused by wildlife.

Electrical equipment housed within the substation is summarized in Table 3.2-1, Substation Facility Equipment Summary.

Substation Lighting

Under normal operating conditions, the substation would not be illuminated at night. Lighting would be used only when required for maintenance outages or emergency repairs occurring at night. The lighting would consist of high-pressure sodium lights located in the switch racks, 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 lights would be directed downward, and shielded to reduce glare outside the facility.

Substation Landscaping

Once a water line is brought into the surrounding area, SCE would apply to the municipal water company for service. Thereafter, SCE would install landscaping. Landscaping around the substation would be designed to filter views from residential areas and other potential visual receptors located nearby. A plan for substation landscaping would be prepared by a licensed landscape architect and would be consistent with community and city standards to the extent feasible.

Figure 3-1 Proposed Substation Site and Subtransmission Route

Figure 3-2 Proposed Substation Site Diagram

Table 3.2-1 Substation Facility Equipment Summary

Equipment	Description
66 kV Switch Rack	The proposed 66/12 kV, low-profile steel switch rack would consist of six bays: two positions for lines, two for bank positions, one bus tie and a future vacant position for a 66 kV line. The two operating and transfer buses would each be 136 feet long and consist of 1-1590 kcmil (thousand circular mils) Aluminum Conductor Steel Reinforced (ACSR) per phase. Four switch rack positions would each be equipped with a line breaker and three group disconnect switches. One position would be equipped with a line breaker and only one group disconnect switch. A control cable trench from the switch rack to the MEER would be installed. The switch rack dimensions would be 15' H x 136' L x 64' W.
Transformers	Transformation would consist of two 28 MVA 66/12 kV transformers with isolating switch disconnects on high and low sides, surge arresters and neutral current transformers. The transformer area dimensions would be approximately 15' H x 78-1/2' L x 42' W.
12 kV Switch Rack	The 12 kV low-profile switch rack would consist of a nine position rack expandable to twenty positions with wrap around arrangement; 486 feet of three and one-half inch Iron Pipe Size, Extra Heavy Aluminum for operating and transfer buses; a power cable trench; and a control cable trench to the MEER. The dimensions would be 15' H x 81' L x 34' W.
Capacitor Banks	Two 12 kV, 4.8 MVAR capacitor banks. The dimensions would be 15' H x 15 ½' L x13' W.
Mechanical and Electrical Equipment Room	A 12' H x 36' L x 20' W MEER would be constructed and equipped with air conditioning and all standard equipment. It would contain control and relay panels, battery and battery charger, HMI rack, communication equipment, telephone and local alarm.

Substation Perimeter Features

To screen the substation from the public and to secure the facility, the substation would be enclosed on all four sides by a wall minimum of 8 feet in height and which would be consistent with community standards to the extent feasible. Access gates would also be a minimum of 8 feet high. All perimeter fences and gates would be fitted with barbed wire for increased security. The barbed wire would not be visible from outside the perimeter wall.

Site Drainage

Site drainage installations would be consistent with the National Pollutant Discharge Elimination System (NPDES) and the Storm Water Pollution Prevention Plan (SWPPP), as well as local ordinances and best engineering practices. In addition, the substation design would incorporate Spill Prevention Control and Countermeasure (SPCC) Plan design requirements such as curbs and berms.

During final engineering design, the site drainage would be developed to control surface runoff that would be in compliance with regulations regarding the alteration of existing drainage patterns. This may include, but is not limited to, concrete swales, ditches and culverts, and a retention basin.

If no local storm drain system is available at the time of construction, storm water runoff from the substation would be discharged into an on-site fenced retention basin on the east side of the property. Once the local storm system is functional, the storm water runoff from the substation may or may not be tied into the future local system. Dependent upon future storm water system availability, the retention basin may be utilized as the permanent surface runoff control measure. The environmental analysis in Section 4 assumes that a storm drain system would not be available at the time of construction, and that SCE would provide applicable control measures.

Site Access

The substation would be accessed by a 20-foot wide asphalt concrete paved driveway connecting to the future Ranch Circle Drive. The substation entrance would have a locked gate for two-way traffic access to the substation.

Substation construction may precede the completion of future Ranch Circle Drive. Under this condition, SCE would be required to construct a temporary access road into the substation from Mooney Boulevard along the future Ranch Circle Drive ROW. Construction of the access road is described in Section 3.2.2, Substation Construction, and impacts from construction of the temporary access road is included in Section 4.0, Environmental Impact Assessment.

3.2.2 Substation Construction

This section is limited to a discussion of the substation site for the Proposed Project. The alternative substation site preparations, although substantially similar, would vary depending on the specific requirements of each site. Table 3.2-2, Substation Construction Equipment Table, includes the approximate equipment, manpower, and scheduling requirements for substation construction.

Substation Site Preparations

The substation site, including buffer area, is approximately 277 feet by 300 feet comprising approximately 2 acres. The substation site is currently used as a walnut orchard and is relatively flat, but has been graded to accommodate irrigation of the existing trees. Existing water pipelines, if any, would be moved to accommodate construction.

The existing site topography would be altered slightly by grading. The site would be graded at a one percent slope toward the east.

Waste would include the walnut trees removed from the substation site to the full depth of their root system. It is estimated that 750 cubic yards of fill would be required to replace the voids caused by removal of root systems. In addition to the tree waste, the top six inches of soil (approximately 1,500 cubic yards of waste) would be removed and replaced with an appropriate fill material.

The actual quantity of fill to be imported to the site would be calculated as part of the final engineering and design. It is estimated that approximately 7,000 cubic yards of imported fill would be required if the site is graded to a one percent slope. Following final site grading, a four-inch thick layer of untreated crushed rock would be placed within the walled substation area, except in designated driveways. All grading would be conducted in compliance with the City of Visalia grading requirements.

In the event that the future Ranch Circle Drive is not constructed, a temporary access road would be graded and installed. This would require clearing additional walnut trees and other vegetation to provide a minimum 12-foot wide access road (preferably with an additional 2 feet of shoulder on each side). A new access road would be built based on the site topography, such that it would be accessible to all construction vehicles and equipment. A new road would be built such that existing roads near the substation site would be utilized. This new access road would be built with gradients and curvatures that would permit heavy equipment usage and maneuvering. Additional easements may be required within the future Ranch Circle Drive.

Substation Facilities

After site preparation and grading for the substation, a temporary chain-link fence would be erected around the site perimeter. Construction of the perimeter wall, foundations, and below-ground facilities (e.g., ground-grid, conduit, and other infrastructure) would be completed, followed by installation of the above-ground structures and the electrical equipment. Equipment laydown areas for substation construction would be within the substation footprint.

All materials for the substation would be delivered by truck. The transformers would be delivered by heavy transport vehicles and off-loaded on-site by large cranes with support trucks. If necessary, a traffic control service would be used during transformer delivery. The majority of the truck traffic would use major streets, and when possible, would be

scheduled for off-peak traffic hours. Some deliveries, such as cement truck deliveries, would occur during peak hours when footing work is being performed.

The approximate construction equipment, personnel and scheduling for the substation construction is shown in Table 3.2-2, Substation Construction Table.

Table 3.2-2 Substation Construction Table

Construction Phase	Duration	Number of Personnel	Equipment[1]	Estimated Usage/Day (Hours)
Survey and Grading (Substation, Access Road and Storm Water Basin)	24 Days	8	1 980 Loader	2
			1 Grader	2
			1 Vibrator Compactor	2
			1 Water Truck (gasoline)	3
			2 Survey Trucks (gasoline)	4
			1 Soils Test Crew Truck (gasoline)	4
Below Grade/ Perimeter Wall Construction	30 Days	12	1 Office Trailer (electric or propane)	8
			2 Crew Trucks (gasoline or diesel)	2
			2 Dump Trucks	2
			1 Cement Truck	3
			1 Cement Mixer (electric, diesel or gasoline)	3
			1 Bobcat	3
			1 Skip Loader	4
			1 Forklift	4
			1 Stake Truck (gasoline or diesel)	2

Construction Phase	Duration	Number of Personnel	Equipment[1]	Estimated Usage/Day (Hours)
MEER	10 Days	4	1 Carry-all (gasoline)	2
			1 Stake Truck (gasoline or diesel)	2
Maintenance	21 Days		2 Maintenance Trucks	3
Transformer Testing and Preparation	20 Days	15	2 Crew Trucks (gasoline or diesel)	2
			1 Diesel Generator	6
			1 Lift Truck	3
			2 Pick-up Trucks (gasoline or diesel)	2
			1 Boom Truck	3
			1 Processing Trailer (electric)	6
Electrical Construction	72 Days	10	1 Forklift	4
			1 Boom Truck	3
			1 Tool Trailer	3
			3 Crew Trucks (gasoline or diesel)	2
			1 Flat Bed	2

Construction Phase	Duration	Number of Personnel	Equipment[1]	Estimated Usage/Day (Hours)
Transformer Installation Crews	1 Day	6	1 Crane	4
			1 Forklift	6
			2 Crew Trucks (gasoline or diesel)	2
			1 Low-boy Hauler/Tractor Truck	6
Paving Crew	14 Days	6	1 Paving Roller	6
			1 Asphalt Paver	4
			1 Stake Truck (gasoline or diesel)	4
			2 Crew Trucks (gasoline or diesel)	2
			1 Tractor	3
			1 Dump Truck	3
Test Crew	30 Days	2	1 Test Truck	6

[1] Fuel for equipment is diesel except where noted

3.2.3 Substation Operation and Maintenance

The following activities would occur during routine operation and maintenance of the substation. The substation would be unmanned and the electrical equipment within the substation would be remotely monitored and controlled from Rector Substation by a power management system.

Due to the substation being remotely operated, SCE personnel would generally visit for electrical switching and routine maintenance. Routine maintenance would include equipment testing, equipment monitoring and repair, as well as emergency and routine

procedures for service continuity and preventive maintenance. SCE personnel would generally visit the substation two to three times per week.

3.3 66 KV SUBTRANSMISSION LINE DESCRIPTION

The Proposed Project and the two alternatives each have a distinct subtransmission line ROW. This section describes the subtransmission route for the Proposed Project and the two alternatives.

3.3.1 Proposed Project: Subtransmission Line Undergrounding

The existing Rector-Oak Grove No. 1 66 kV subtransmission line would be reconfigured to form the Rector-Riverway and Oak Grove-Riverway 66 kV subtransmission lines at the intersection of Mooney Boulevard and Riggin Avenue. The new section of the lines would be underground and would serve as source subtranmission lines to the substation (See Figure 3-3, Proposed Project Underground Subtransmission Route).

One Tubular Steel Pole (TSP) riser with a concrete footing would be constructed for the underground route of the new Rector-Riverway and Riverway-Oak Grove 66 kV subtransmission lines (See Figure 3-4, Pole Proposed for Underground Subtransmission Route). This TSP riser would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line at the northeast corner of Riggin Avenue and Mooney Boulevard. The underground sections of the future Oak Grove-Riverway 66 kV and the Rector-Riverway 66 kV subtransmission lines would then travel north on the east side of Mooney Boulevard, turn east on the south side of future Ranch Circle Drive and continue directly into the substation with no additional poles. Two concrete underground vaults would be installed, one north of the TSP riser at the corner of Riggin Avenue and Mooney Boulevard and the second on the south side of future Ranch Circle Drive in front of the substation. Approximately 2,400 line feet of new underground cable would be installed in a concrete encased duct bank consisting of six conduits. Total disturbed soil due to subtransmission underground construction would be approximately 3,425 cubic yards.

The proposed subtransmission line would utilize single 2000 kcmil copper cable, while approximately 2,400 line feet of new cable would be installed. It would also incorporate:

- 66 kV polymer insulator assemblies;
- Dead-end assemblies consisting of 34-inch single gray polymer insulators sustained by hardware and attached to each steel cross arm on the TSP riser in a vertical configuration; and
- Underground vaults would consist of steel reinforced, concrete “Tub Type” vaults. The internal dimensions would be 8’ wide, 20’ long, and 9.5’ deep.

Figure 3-3 Proposed Project Underground Subtransmission Route

Figure 3-4 Pole Proposed for Underground Subtransmission Route

The two new line sections connecting the substation site with the existing Rector-Oak Grove No. 1 66 kV subtransmission line would be routed along ROW acquired by SCE.

After the underground duct banks, vaults, and the TSP riser have been constructed, 2000 kcmil copper cable is pulled from the first vault up through the TSP riser. From the first vault, the cable is then pulled through the conduit to the second vault. The last length of cable would be pulled through the second vault in front of the substation to the proper position inside the substation.

Overhead Transmission Line Option

The existing Rector-Oak Grove No. 1 66 kV subtransmission line would be reconfigured to form the new Rector-Riverway and Oak Grove-Riverway 66 kV subtransmission lines at the intersection of Mooney Boulevard and Riggin Avenue and would serve as 66 kV subtransmission source lines to the substation. The Rector-Riverway and Oak Grove-Riverway 66 kV subtranmission lines would come from the north side of Riggin Avenue, turn north on the east side of Mooney Boulevard, turn east on the south side of future Ranch Circle Drive and south into the substation. In order to complete the route of the new Rector-Riverway and Riverway-Oak Grove 66 kV subtranmission lines, three TSPs with footings would be constructed and one Light Duty Steel (LDS) pole would be installed. The total amount of soil excavation required for subtransmission line construction would be approximately 105 cubic yards. The average span length between poles would be approximately 275 feet.

The three TSPs and one LDS pole would be located as follows:

- One TSP would be located on the south side of the future Ranch Circle Drive in front of the substation site to allow both new lines to go west on future Ranch Circle Drive.

- One TSP would be located on the southeast corner of the future Ranch Circle Drive and Mooney Boulevard. Both new lines would turn south at this location on the east side of Mooney Boulevard.

- One TSP would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line on the northeast corner of Riggin Avenue and Mooney Boulevard.

- One LDS pole would be set between the two TSPs on the east side of Mooney Boulevard.

The two new line sections connecting the substation site with the existing Rector-Oak Grove No. 1 66 kV subtransmission line would be routed on ROW acquired by SCE.

The equipment for pulling overhead conductor would be positioned on ROW directly adjacent to the new TSPs. No soil disturbance would occur as a result of the overhead conductor pulling activity.

Alternative 1

The substation site for Alternative 1 is located at the northwest corner of Leila Street and future Flagstaff Avenue. There would be two separate 66 kV source subtransmission lines to the substation. The existing Rector-Oak Grove No. 1 66 kV subtransmission line would be reconfigured to form the Rector-Riverway and Oak Grove-Riverway 66 kV subtransmission lines at the intersection of Riggin Avenue and Leila Street. The new 66 kV subtransmission line sections would be underground and would serve as source subtransmission lines to the substation. The underground sections of the future Oak Grove-Riverway 66 kV and the Rector-Riverway 66 kV subtransmission lines would travel north on the west side of Leila Street, turn west on the south side of the future Flagstaff Avenue and turn north into the substation. Two concrete underground vaults would be installed for this portion. Total disturbed soil due to subtransmission line and underground construction would be approximately 5,200 cubic yards.

The proposed subtransmission line would utilize single 2000 kcmil copper cable, while approximately 3,000 line feet of new cable would be installed. It would also incorporate:

- 66 kV polymer insulator assemblies;
- Dead-end assemblies consisting of 34-inch single gray polymer insulators sustained by hardware and attached to each steel cross arm on the TSP riser in a vertical configuration; and
- Underground vaults would consist of steel reinforced, concrete “Tub Type” vaults. The internal dimensions would be 8’ wide, 20’ long, and 9.5’ deep.

The two new line sections connecting the substation site with the existing Rector-Oak Grove No. 1 66 kV subtransmission line would be routed on ROW acquired by SCE.

After the conduit and the TSP risers have been constructed, conductor cable is pulled from the first vault up through the TSP riser. Cable is then pulled through to the next vault, and so on, until the last length of cable has been pulled through to the proper position inside the substation.

Alternative 2

The substation site for Alternative 2 is located at the southeast corner of Demaree Street and Avenue 320. There would be two separate 66 kV subtransmission source lines to the substation. These 66 kV subtransmission lines would be installed overhead for this alternative.

One source line would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line at the northeast corner of Akers Street and Riggin Avenue. Thirty-nine LDS poles would also be set in the franchise position on the east side of Akers Street and on the south side of Avenue 320, between the TSP at the northeast corner of Akers Street and Riggin Avenue and the get-away TSP at the substation site, completing the Oak Grove-Riverway line.

The other source line would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line at the northeast corner of Demaree Street and Riggin Avenue. Nineteen LDS poles would be set in the franchise position on the east side of Demaree Street, between the TSP at the northeast corner of Demaree Street and Riggin Avenue and the TSP get-away pole at the substation site, completing the Rector-Riverway subtransmission line.

Approximately 5,240 line feet of the existing Rector-Oak Grove No. 1 66 kV subtransmission line would be removed on the north side of Riggin Avenue, between Akers Street and Demaree Street. Total disturbed soil due to subtransmission line construction would be approximately 326 cubic yards.

The new Rector-Riverway and Riverway-Oak Grove 66 kV subtransmission lines, three TSPs, with footings, would be constructed and 58 LDS poles would be installed. At the substation site, one TSP would act as a double-lines get-away pole and two TSPs would intercept the existing Rector-Oak Grove No. 1 66 kV subtransmission line. The subtransmission line would utilize single 954 kcmil stranded aluminum conductor with approximately 15,840 line feet of new conductor to be installed. The subtransmission line would also incorporate the following:

- 66 kV polymer insulator assemblies;
- Dead-end assemblies consisting of 34-inch single gray polymer insulators sustained by hardware and attached to each steel cross arm on the TSPs in a vertical configuration; and
- Tangent assemblies consisting of gray horizontal polymer post type insulators attached to the LDS poles in the triangle configuration.

The two new subtransmission line sections connecting the substation site with the existing Rector-Oak Grove No. 1 66 kV subtransmission line would be routed on ROW acquired by SCE.

The equipment for pulling overhead conductor would be positioned on ROW directly adjacent to the new TSPs. No soil disturbance would occur as a result of the overhead conductor pulling activity.

A one-acre construction lay down area located adjacent to or nearby the substation site would be cleared, fenced and watered down. This additional lay down area is required

for temporary storage of poles and related material due to greater subtransmission line length.

No Project Alternative

The No Project Alternative would maintain existing conditions. As a result, SCE would not be able to meet the Project objectives.

3.3.2 66 kV Subtransmission Line Construction

This section describes installation of underground subtransmission lines in the Project Area. The construction techniques would be the same for the Proposed Project and Alternative 1.

Digging and Trenching. A 24-inch wide by 5-foot deep trench would be required to place the conduits underground. Trenching would be performed with a backhoe and other machinery specifically designed for this purpose. Spoils would be tested for the presence of contaminants, and where appropriate, used at the substation site, transported off site for use as clean fill, or disposed of at an appropriate landfill. If the trenching requires the removal of pavement, it would be disposed of at an appropriate facility as construction debris. The trench would be backfilled with two-sack slurry. As with all SCE underground construction, Underground Service Alert would be contacted at least 48 hours prior to excavation in order to minimize impacts to other utilities.

Vault Installation. Vaults are below grade (i.e., below ground surface) concrete enclosures where the duct banks terminate. The vaults are constructed specifically for use in roadways and can accommodate vehicle loads without damage. Vaults house equipment and splices for underground lines. Because there is a practical limit to the length of cable supplied on a reel, vaults are located where necessary to allow splicing of the cable ends together.

Duct Bank Installation. Conduits are positioned in a specific configuration and encased in approximately 3 inches of concrete. This is known as a duct bank. After placement, the duct bank is then covered with 30 inches of two-sack slurry backfill. Typical duct banks used for 66 kV installation are able to accommodate six cables. The concrete encasement provides protection from accidental third party damage and improved heat conduction.

Backfill Placement. Once the concrete has cured, two-sack slurry is used to backfill the trench and return the excavation to original grade. If installation is under a paved roadway, the paved area that was cut for the cable installation is repaved to match the existing roadway.

TSP Riser Construction. A TSP riser is the structure used to transition between overhead conductors lines to underground cables. The overhead conductors terminate and connect to underground cables at the TSP riser. The aboveground conductors are

then routed down from the pole cross arms through the TSP, which transition the cables underground.

Cable Pulling. After the conduit and the TSP riser have been constructed, the cable is installed. Starting at one end, cable is pulled from the first vault up through the TSP riser. Cable is then pulled through to the next vault, and into additional vaults thereafter until the last length of cable has been pulled through the last riser inside the substation. Once installed, the cable is ready to be spliced, terminated, tested, and energized. Each line requires the installation of one cable per phase and two lines can be installed in one duct bank utilizing all six available conduits of the duct bank.

Cut-over. The final step in the process involves energizing the new cable. To accomplish this, the line would be temporarily taken out of service. This activity is unlikely to result in an extended unplanned service interruption to SCE customers. Once the subtransmission line is out of service, crews can safely connect the existing overhead lines to the new lines. When the cut-over is complete, the subtransmission line would be returned to service, and electricity would flow through the underground cable.

The approximate construction equipment, personnel and scheduling for the underground subtransmission line installation is shown in Table 3.3-1, Underground Subtransmission Line Construction Table.

Overhead Option Subtransmission Line Construction Techniques

Construction of the subtransmission lines for the Overhead Option and Alternative 2 include the following techniques:

Excavation and Footing Construction. Installation of TSPs and LDS poles would require excavation. New TSP footings typically require an excavated hole of 8 to 9 feet in diameter and 20 to 40 feet in depth. After excavation of the foundation holes, reinforcing steel would be installed and concrete poured. LDS poles are direct buried and do not require footings. Rather, crushed aggregate would be placed as backfill and for corrosion protection.

Tubular Steel Pole and Conductor Installation. The new poles are designed and sized to meet wind loading criteria. TSPs would be assembled at each site and erected and bolted to the foundations. Framing and final placement of the poles consists of attaching the polymer post type insulators, putting the LDS poles together, and setting them.

Pole installation is followed by installing the overhead conductor. This includes splicing, dead-ending, terminating, sagging and clipping in the conductor. Equipment requirements include a heavy line truck, a bucket truck, a prefabrication truck, conductor pulling machines, cable dollies, and traffic arrow boards as required for traffic management.

Table 3.3-1 Underground Subtransmission Line Construction Table

Construction Phase	Duration	Number of Personnel	Equipment[1]	Estimated Usage/Day (Hrs)
Footing for Tubular Steel Pole	2 Days	7	4 Cement Trucks	4
			1 Pick-up Truck (gasoline)	3
			1 Tractor with Trailer	3
			1 Dump Truck	5
			1 Backhoe	5
			1 Drilling Rig	6
Setting Tubular Steel Pole	1 Day	7	1 Crane, 60-Ton	7
			1 Tractor with Trailer	3
			1 Boom Truck	5
			1 Equipment Truck	3
			1 Bucket Truck	5
			1 Carry-all (gasoline)	3
			1 Pick-up Truck (gasoline)	4

Construction Phase	Duration	Number of Personnel	Equipment[1]	Estimated Usage/Day (Hrs)
Construct 66 kV duct bank	6 Days	5	1 Crane, 60 Ton	1 day
			1 Backhoe	8
Install 2 vaults	4 Days		1 Equipment Truck	4
			1 Dump Truck	8
			1 Pick-up Truck (gasoline)	3
			6 Cement Trucks	3
Cable Pulling	5 Days	7	1 Cable Puller	6
Cable Splicing/ Terminating	5 Days		1 Crane, 60 Ton	5
			1 Equipment Truck	3
			1 Bucket Truck	6
			1 Tractor with Trailer	4
			1 Pick-up Truck (gasoline)	3
			1 Carry-all (gasoline)	2

[1] Fuel for equipment is diesel except where noted

Conductor Pulling. This phase of construction consists of equipment set up for conductor pulling which includes conductor feeding out equipment, conductor pulling equipment, crane, line truck, bucket truck, prefabricated truck, and related equipment. Conductor pulling requires a 50 foot by 100 foot area at each end of the pull, one for feeding out and one for pulling. Typically, pulling sites are located every 6,500 feet in non-mountainous terrain, more frequently elsewhere.

Conductor pulling would be in accordance with SCE Specifications and similar to process methods detailed in Institute of Electrical and Electronics Engineers (IEEE) Standard 524-1992 (Guide to the Installation of Overhead Transmission Line Conductors).

Cut-over. The final step in the process involves energizing the new conductor. To accomplish this, the line would be temporarily taken out of service. This activity is unlikely to result in an extended unplanned service interruption to SCE customers. Once the subtransmission line is out of service, crews can safely connect the existing overhead lines to the new lines. When the cut-over is complete, the subtransmission line would be returned to service, and electricity would flow through the overhead conductors.

3.3.3 Subtransmission Lines Operation and Maintenance

SCE would routinely inspect the subtransmission vaults and other accessible components. The inspections may lead to routine and preventative maintenance. There may also be emergency repair and maintenance for service continuity. No additional SCE personnel, beyond normal staffing levels, would be required to operate or maintain the subtransmission lines.

3.4 TELECOMMUNICATION SYSTEM

The Proposed Project would require construction of diverse communication paths. The paths would connect the substation to the Rector, Oak Grove and Visalia Substations. The communication paths are required for communication and monitoring of the substation and subtransmission line equipment. The following sections describe the telecommunication improvements required for the Proposed Project.

3.4.1 Telecommunication Improvements

The proposed telecommunications system for the Proposed Project would consist of both existing and new facilities. New fiber optic cable would be installed between the substation and Oak Grove Substation and then continue to the Rector and Visalia Substations (See Appendix G, Telecommunication Route Map). New communication equipment for telecommunication would also need to be installed within the Rector, Oak Grove, and Visalia Substations to facilitate the new interconnections.

3.4.2 Telecommunications Construction

A 48-strand fiber optic cable would be used for the new fiber optic cable. The fiber optic installation would consist of both overhead and underground installation. The overhead cable would be installed by attaching two cross arms on existing subtransmission poles. The underground portion would be installed in both existing underground vaults and conduits and new underground vaults and conduits. The overhead portion would be installed predominately on existing poles except where the line drops down or rises up

from an underground section of the fiber optic line. The underground portion would be installed in existing underground vaults with the exception of new undergrounding which would be needed at the substation and Oak Grove Substation. At Oak Grove Substation, an underground vault and conduits would be required to bring the fiber optic cable from the substation to the subtransmission pole closest to the substation. All undergrounding would occur in areas that have previously been disturbed as part of the existing substation footprint or in areas to be disturbed by the substation. Therefore, no new impacts to environmental resources are expected. The personnel, equipment and construction schedule for the telecommunication system are listed in Table 3.4-1, Telecommunication Construction Table.

3.4.3 Telecommunication System Operation and Maintenance

The telecommunications system would require periodic routine maintenance as well as emergency procedures for service continuity. Routine maintenance would include equipment testing, equipment monitoring, and repair. No additional SCE personnel, beyond normal staffing levels, would be required to operate or maintain the telecommunication system for the substation.

Table 3.4-1 Telecommunication Construction Table

Construction Phase	Duration	Number of Personnel	Equipment[1]	Estimated Usage/Day (Hrs)
Communications Installation Crew	45 days	5	2 Vans (gasoline or diesel)	1
			1 Bucket Truck	6
			1 Reel Truck	6
			1 Crew Truck	6

[1] Fuel for equipment is diesel except where noted

3.5 PROJECT SCHEDULE AND PERSONNEL REQUIREMENTS

Construction duration for the substation, subtransmission lines, and telecommunication upgrades is estimated to be up to 12 months. The anticipated construction activities would be consistent with the City of Visalia noise ordinances.

The projected completion date for the substation and subtransmission line is April 1, 2008. Approximately two months would be required to energize and test subtransmission line components once construction has been completed. The projected operating date for the Proposed Project is June 1, 2008.

The Proposed Project construction would require up to approximately 25 crew members during peak activity. Accordingly, this number has been used to evaluate impacts to each environmental resource category throughout Section 4.0. Construction would be performed by either SCE construction crews or contractors, depending on the availability of SCE construction personnel at the time of construction. If SCE construction crews are used they would be based at SCE's Alhambra facility. Contractor construction personnel would be from within Tulare County or adjacent areas. Anticipated construction personnel, construction and scheduling construction equipment are summarized in Table 3.2-2, Substation Construction Table; Table 3.3-1, Underground Subtransmission Line Construction Table; and Table 3.4-1, Telecommunication Construction Table.

3.6 PROJECT FEATURES

The Proposed Project includes measures to avoid and/or minimize potential environmental impacts. These measures have been included as part of the project design or would be implemented per regulation and SCE standard construction and operation protocols (Project Features). These Project Features are considered part of the project description, and have been considered part of the Proposed Project in the evaluation of environmental impacts.

4.0 ENVIRONMENTAL IMPACT ASSESSMENT

This section examines the potential environmental impacts of the Proposed Project and alternatives. The analysis of each resource category begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the CEQA Guidelines) that may be affected by the Proposed Project. The effects of the Proposed Project are defined as changes to the environmental setting that are attributable to project construction and operation.

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

SCE has incorporated Project Features into the Proposed Project to avoid and/or minimize environmental impacts. These Project Features are distinguished from mitigation measures required under CEQA. CEQA Guidelines Section 15126.4 (a)(3) states that mitigation measures are not required for effects which are not found to be significant. Therefore, where an impact is less than significant, no mitigation measures have been proposed. In addition, compliance with laws, regulations, ordinances, and standards designed to reduce impacts to less than significant levels are not considered mitigation measures under CEQA. Where potentially adverse impacts may occur, SCE has proposed measures to minimize the environmental impacts to less than significant levels (SCE Proposed Measures). These SCE Proposed Measures are summarized in Appendix H, SCE Proposed Measures.

4.1 AESTHETICS

The aesthetic experience of an observer's visual understanding is discussed in this section. Visual resources of an area are comprised of certain features including landforms, vegetation, water bodies or streams, and physical changes caused by humans. These landscape features, natural appearing or otherwise, form the overall visual character of an area. The visual character of the landscape 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. Visual resources also have a social component, including public values, goals, awareness, and concern regarding visual quality. This social component is addressed as visual sensitivity, and includes the relative degree of public interest in visual resources and concern over potential adverse changes. Visual sensitivity is a consideration in assessing how important a visual impact may be and whether or not it represents a significant impact.

Accounting for visual sensitivity is achieved by selecting a sufficient number and distribution of view points for use in analysis that adequately represent the full range of conditions under which the Proposed Project would be seen by the public (Smardon, Palmer and Fellman, 1986; USDA, 1974,1995; US Department of the Interior, 1977). Existing (pre-project) visual character is determined from each selected view point. Visual impacts are subsequently evaluated in the context of these views. High visual sensitivity is assumed where landscapes, particular views, or the visual characteristics of certain features are protected through policies, goals, objectives, and design controls in public planning documents. As adopted from the US Forest Service and Bureau of Land Management (BLM), the three levels of sensitivity are high, moderate, and low as follows:

- High sensitivity suggests that at least some part of the public is likely to react strongly to a threat to visual quality. Concern is expected to be great when the affected views are rare, unique, or in other ways special to the region or locale. A highly concerned public is assumed to be more aware of any given level of adverse change and less tolerant than a public that has little concern. A small modification of the existing landscape may be visually distracting to a highly sensitive public and represent a substantial reduction in visual quality.

- Moderate sensitivity suggests that the public would probably voice some concern over substantial visual impacts. Often the affected views are secondary in importance or are similar to others commonly available to the public. Noticeably adverse changes would probably be tolerated if the essential character of the view remains dominant.

- Low sensitivity prevails where the public is expected to have little or no concern about changes in the appearance of the landscape. This may be because the affected views are not accessible to the public or because there are no indications that the public places a value on the affected views. For instance, little public concern for aesthetics is assumed to pertain to views from industrial, commercial, and common agricultural areas.

4.1.1 Environmental Setting

The substation site is approximately two acres in size and located north of Riggin Avenue and east of Mooney Boulevard. Topography of the site and the general vicinity is flat. Residential development exists south of Riggin Avenue, and orchards occupy most of the land on the north side of Riggin Avenue. The area is being developed rapidly, and a substantial amount of new construction, including residential and commercial development, is evident in many locations. Land to the west, north, and east of the substation site is presently occupied by orchards of European walnut trees. Walnut orchards of this type, once abundant near the outskirts of the City of Visalia, are being converted to residential and commercial uses.

The City of Visalia Planning Commission has approved a tentative tract map to the east of the substation site for 54 single-family lots. The parcel to the north of the substation site may also be developed into either single-family or multi-family residences, although no formal subdivision or permit requests have been submitted to the City of Visalia Planning Commission. The parcel on the southwest corner of Riggin Avenue and Mooney Boulevard is currently being developed as multi-family residential.

The proposed 66 kV underground subtransmission line would extend off of the existing Rector-Oak Grove No. 1 66 kV subtransmission line at Mooney Boulevard. It would be routed north along Mooney Boulevard, turn east at the future Ranch Circle Drive, and enter the substation site from the north side. The subtransmission line would exit the substation at this same point, return to Riggin Avenue via the same route, and rejoin the existing Rector-Oak Grove No. 1 66 kV subtransmission line.

Important to the visual analysis are views that are considered moderately to highly sensitive that would be changed by the addition of Project Features. Views from residential neighborhoods and public streets within them are considered to be moderate in sensitivity. Riggin Avenue and the existing residential area south of Riggin Avenue in the vicinity of the substation site are considered to be moderate in sensitivity. Overhead utilities and related facilities, including 66 kV subtransmission lines, are existing features of the landscape in the general vicinity of the Proposed Project and are seen along Riggin Avenue and Mooney Boulevard. A larger 220 kV transmission line runs north-south near the east side of the City of Visalia and crosses Highway 198 between South McAuliff Street and 5th Avenue. Some views from residential neighborhoods and streets near the Proposed Project currently include overhead utility lines and subtransmission lines.

The following section identifies where potentially affected sensitive views occur and provides a description of the character of the views. Based on existing land uses, these views occur primarily along Riggin Avenue in the vicinity of substation site, and to a lesser extent from an existing neighborhood south of Riggin Avenue (North Park Homes) between Dayton Street and Mooney Boulevard. Currently, there are no other developed land uses from which the public would view the Proposed Project. No scenic roadways or highways are located within the immediate Project Area. Therefore, one key observation point represents the viewshed for sensitive receptors along Riggin Avenue and the area to the south.

Key Observation Point 1: Riggin Avenue between Dayton Street and Mooney Boulevard

Riggin Avenue is an east-west arterial street. The land to the south of the substation site is enclosed by a chain-link fence and features a large barn-like structure, an equipment shelter, a large vertical tank, and open areas for moving and storing equipment and machinery. The land to the southeast contains two buildings that have been used as a farming operations office and equipment maintenance facility. The substation site is located north of these existing features and is set back approximately 250 feet from the north side of Riggin Avenue. The land immediately north, east, and west of the substation site currently contains walnut orchards. The existing Rector-Oak Grove No. 1 66 kV subtransmission line is on the north side of Riggin Avenue and is readily visible in both directions to motorists. At present, Riggin Avenue is the primary location from which the public would be able to see the substation. Therefore, Riggin Avenue is considered visually sensitive.

The immediate area of Key Observation Point 1 can be characterized as a mix of walnut orchards and farm-related facilities, an established residential neighborhood, and emerging, new neighborhoods. The established North Park Homes neighborhood is separated from Riggin Avenue by a perimeter perimeter wall approximately five and one-half feet tall that is on the south side of Riggin Avenue. A sidewalk runs along the outside of the wall (street side). The sidewalk is bordered on both sides by a lawn strip and groups of trees. Many of the trees are redwoods and are more than 40 feet tall. Each group of redwood trees acts as a partial screen for the North Park Homes neighborhood. Collectively they separate the neighborhood from the traffic and activities on Riggin Avenue. Views from within the North Park Homes neighborhood in the direction of the substation site are interrupted by houses, trees, and the perimeter wall along Riggin Avenue. The existing Rector-Oak Grove No. 1 66 kV subtransmission line along Riggin Avenue is intermittently visible from within the neighborhood. At present, there is no sidewalk along the north side of Riggin Avenue, only walnut orchards and the agricultural support facilities near Mooney Boulevard.

As the land immediately north, east, and west of the substation site is developed, additional places from which the new substation may be visible would likely occur. Although it is not possible to evaluate such potential future views since the land is currently undeveloped and development plans are conceptual, the substation setbacks, low-profile design, and screening by the perimeter wall and landscaping would minimize any potential adverse impacts.

4.1.2 Regulatory Setting

The regulatory setting relating to the protection and enhancement of visual resources adopted by jurisdictions with authority over land use within the Project Area were reviewed for this analysis and are discussed below.

Federal

There are no federal requirements regarding aesthetics in the Project Area.

State

Scenic Highways. Scenic highways exhibit unique natural beauty viewed by travelers. They are considered eligible or designated by the State of California based on criteria established in Section 260 et seq. of the Streets and Highway Code. Benefits of "scenic highway" status include protecting environmental assets that encourage tourism and inclusion on travel maps produced by the State Division of Tourism.

Local

City of Visalia General Plan. The City of Visalia General Plan contains goals and policies relating to the protection and enhancement of visual resources in the Project Area. The City of Visalia General Plan was prepared in 1991 and adopted by the Visalia City Council on September 3, 1991 under Resolution No. 91-106. An Environmental Impact Report (EIR) was prepared for the General Plan. The Land Use Element of the General Plan has been updated as recently as 2005 (City of Visalia, 2006). While they do not specifically address potential visual impacts of electrical utility facilities, both documents contain some references to scenic resource matters. Goal 1 of the Land Use Element of the City of Visalia General Plan is to "preserve and enhance the City of Visalia's unique character".

Objective A under Goal 1.1, Community Identity is to "Maintain and enhance the City of Visalia's physical diversity, visual qualities and small-town characteristics".

Goal 1 of the Land Use Element of the General Plan includes the following implementing policies (City of Visalia, 1996):

- Encourage development site design to incorporate site amenities that emulate the historical use of the property or surrounding natural features (i.e. retaining walnut groves as landscape buffers, or in parking lots) through special site design and landscaping.

- Encourage the incorporation of existing on-site trees in street and landscaping designs where appropriate to preserve the City of Visalia's diminishing agricultural/rural character.

4.1.3 Significance Criteria

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

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

4.1.4 Impact Analysis

There are no designated scenic roadways or scenic corridors or public recreation areas with views of the Proposed Project. There is one major public street from which the Proposed Project can be seen and one residential neighborhood south of the substation site that affords partial views in the direction of the Proposed Project. Visual impacts are discussed according to the sensitive viewing areas and key observation point described in Section 4.1.1.

Field studies for aesthetic impacts of the Proposed Project were conducted on January 24, 2006. To aid the visual impact assessment, a photo simulation of the Proposed Project has been prepared from a location along Riggin Avenue considered to be the only current sensitive viewing area surrounding the Proposed Project. The photo simulation was developed using the most current computer technology and applying the highest industry standards. Engineering data representing the design of Proposed Project components was used to construct detailed three-dimensional computer models of the substation and other project components. This approach depicts the way the Proposed Project features would appear once constructed. The location from which photo simulation was prepared is shown on the map in Figure 4.1-1, Visual Simulation Viewpoint Location for Proposed Substation Site. The photo simulation, paired with a photo of the existing (pre-project) view for direct comparison, is presented in Figure 4.1-2, Key Observation Point 1. A discussion of the Proposed Project's effect on sensitive views from this key observation point follows.

Key Observation Point 1: Riggin Avenue between Dayton Street and Mooney Boulevard

Proposed Project elements that would be in view from Riggin Avenue include the TSP riser at the northeast corner of Mooney Boulevard and Riggin Avenue and the substation north of Riggin Avenue and east of Mooney Boulevard.

Figure 4.1-1 Visual Simulation Viewpoint Location for Proposed Substation Site

Figure 4.1-2 Key Observation Point 1

Potentially affected viewers at this location include motorists and pedestrians on Riggin Avenue, and to a lesser extent persons living in the North Park Homes neighborhood south of Riggin Avenue between Dayton Street and Mooney Boulevard. A photo simulation was prepared to illustrate the appearance of Proposed Project elements from Riggin Avenue in this area and is shown in Figure 4.1-2, Key Observation Point 1. The substation would be located in the area behind and north of some existing agriculture-related land uses along Riggin Avenue. The substation would be approximately 250 feet from the north side of Riggin Avenue. The substation would be enclosed by a perimeter wall. Overhead utility lines are now present along Riggin Avenue and along Mooney Boulevard. As shown in the simulated view, the upper portion of the substation's internal components would be visible above the top of the wall. The substation would appear as an electrical utility feature set behind and among the existing farm-related structures. These structures would block views of the substation to varying degrees as motorists approach from either direction on Riggin Avenue. The visual character of the substation would be compatible with the existing use.

No direct, unfiltered views of the substation would occur from the North Park Homes neighborhood south of Riggin Avenue. The substation would not be seen when traveling on Dayton Street and would not be seen from Fairway Street. There may be some opportunities for filtered, mid-range views of some of the taller substation components from Lark Street when looking to the north between houses, over the existing perimeter wall, and through trees. Portions of the substation may also be partially visible from the north end of Central Court and Elm Court. In these cases, the substation would be seen when looking above the perimeter wall and through the trees on the south side of Riggin Avenue. The view of the substation would include the existing farm-related buildings on Riggin Avenue.

The low-profile design of the substation and underground subtransmission line would help reduce any visual effects on sensitive views. In addition, to further minimize the visual effects of the substation, it would be enclosed on all four sides by a wall a minimum of 8 feet in height, and would be constructed in a manner consistent with community standards to the extent feasible. Access gates would also be a minimum of 8 feet high. The area immediately outside the wall surrounding the substation would be landscaped. By enclosing the substation within the perimeter wall, most of the components of the substation would be out of view. As a result of these Project Features, the visual presence of the substation in this view would not substantially degrade the visual quality of the immediate surroundings.

The Proposed Project would not have a substantial adverse effect on scenic vistas, would not substantially damage a scenic resource, would not substantially degrade the existing visual character or quality of the site or its surroundings, and would not create a new source of substantial light or glare. Further, the Proposed Project is consistent with applicable visual resources goals and policies of local planning documents. As a result, impacts to aesthetics would be less than significant.

4.1.5 Mitigation

Because the Proposed Project would not result in significant impacts to aesthetics, no mitigation measures are required.

4.1.6 Subtransmission Line Overhead Option

For the Overhead Option, overhead 66 kV subtransmission lines and poles would be needed along Mooney Boulevard and along future Ranch Circle Drive. This would degrade the existing visual quality of the site and its surroundings along Mooney Boulevard and along future Ranch Circle Drive. Therefore, the impacts to aesthetics would be more than those for the Proposed Project. However, impacts to aesthetics would remain less than significant.

4.1.7 Alternatives

Alternative 1

Alternative 1 would contrast with the adjacent residential neighborhood to the east due to the visual character of the substation. The substation would be visible from the pedestrian walkway that surrounds the storm water retention pond north of the substation site. Therefore, the impacts to aesthetics would be more than those for the Proposed Project. However, impacts to aesthetics would remain less than significant.

Alternative 2

Alternative 2 requires the installation of three TSPs and 58 LDS poles. The longer overhead 66 kV subtransmission lines and additional poles required for Alternative 2 would result in greater aesthetics impacts than for the Proposed Project. Therefore, the impacts to aesthetics would be more than those for the Proposed Project. However, impacts to aesthetics would remain less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to aesthetics.

4.1.8 References and Communications

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City of Visalia. 2005. Tentative Subdivision Map No. 5510 located on the north side of Riggin Avenue. and 550 feet east of Mooney Boulevard. Visalia Public Works. (APN:078-120-017)Community Development Publications. From: http://www.ci.visalia.ca.us/Community-Development/cd-new.htm.

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4.2 AGRICULTURAL RESOURCES

This section describes the agricultural resources in the Project Area and discusses the affected environment and regulatory setting for agriculture. Potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.2.1 Environmental Setting

Regional Setting

The California Department of Conservation (CDC) 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. Every even numbered year, FMMP issues a Farmland Conversion Report. FMMP data are used in elements of some county and city general plans and associated environmental documents as a way of assessing project impacts on Prime Farmland and in regional studies for assessing impacts due to agricultural land conversion.

The U.S. Department of Agriculture (USDA), Soil Conservation Service, classifies notable agricultural lands as follows:

- Prime Farmland: Land that has the best combination of physical and chemical properties for the production of crops;

- Farmland of Statewide Importance: Similar to Prime Farmland, but with minor shortcomings (e.g. steeper slopes, inability to hold water); and

- Unique Farmland: Land of lesser quality soils, but recently used for the production of specific high economic value crops.

Collectively, these valuable agriculture lands are referred to as Farmland. The USDA, Natural Resources Conservation Service (NRCS) and other State and local agencies have mapped soils within Tulare County (soil types are discussed in Section 4.6 Geology and Soils) (NRCS, 1993). In general, the Visalia area is comprised of Nord, Tagus and Grangeville soils, all considered ideal soils for irrigated crops. More specifically, the Project Area is located on Grangeville soil. The Grangeville series is characterized by very deep, somewhat poorly drained alluvial soils originating from granitic rock sources. Slopes range from 0 to 2 percent. Grangeville soils are considered prime farmland if irrigated and protected from flooding.

Historically, the City of Visalia's economy has been based upon agriculture and related industries and is the principal trading center for the County of Tulare, which consistently ranks as one of the three most productive counties in the United States in terms of agricultural output. However, agriculture lands are being lost to make way for new developments in the area.

Project Area

The substation site is not located on land zoned for agriculture use but is located on soil considered prime farmland or farmland of state importance. Approximately two acres of land would be cleared for the substation.

4.2.2 Regulatory Setting

Federal

Pursuant to the Farmland Protection Policy Act (FPPA) of 1981 (Sections 1539-1549 P.L. 97-98, Dec 22, 1981), the Secretary of Agriculture is directed to establish and carry out a program to "minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to the extent practicable, would be compatible with state, unit of local government, and private programs and policies to protect farmland" (7 USC 4201-4209 & 7 USC 658).

State

Statewide programs applicable to agricultural resources include the California Land Conservation Act (Williamson Act) and the California Department of Conservation Farmland Mapping and Monitoring Program. The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses (California Legislative Official Information, 2005). A landowner enters into a contract, agreeing to protect the land's open space or agricultural uses in order to receive reduced property taxes. The CDC FMMP identifies and designates lands that are prime farmland or farmland of statewide importance. Nearly 17 million of the State's 28 million acres of farm and ranch land are currently protected under the Williamson Act (CDC, 2006). The vehicle for these agreements is a rolling term 10 year contract (i.e., there is an initial minimum 10 year contract, and unless either party files a "notice of nonrenewal" the contract is automatically renewed annually for an additional year).

The City of Visalia General Plan (City of Visalia, 1996) encourages urban development adjacent to agricultural lands and established a City agricultural preserve program. The Plan objectives include providing orderly and efficient transition from rural to urban land uses while protecting agriculture land from premature urban development. In order to achieve this objective, the City of Visalia has created Urban Area Boundaries that represent the area necessary for growth over the next 30 years plus additional area to provide an open space buffer around the community. Further changes include designating residential densities and "up-zoning" agricultural, residential and low intensity use areas to commercial and office uses, and introducing land use designations to reflect new land use policies.

Local

Section 6 of the Tulare County General Plan (Tulare County, 2001) describes plans and policies that aim at maintaining open-space and protecting agriculture lands. As part of the plan, it maintains that county and city policies should aim at:

- Attempting to maintain agriculture as a primary, extensive land use, not only in recognition of the economic importance of agriculture, but also in terms of agriculture's real contribution to the economic conservation of open space and natural resources (Tulare County, 2001).

- Recognize the need to utilize the Williamson Act on all agricultural lands throughout the county and not just within three miles of the city limits. It should support the concept that agriculture is a total, functioning system, which would suffer when any part of it is subjected to conflicts of land use, urban-based speculative tax procedures, or excessive fragmentation. It should be aggressive in its support, at the State level, of the use of the Williamson Act to protect viable agricultural and other open space lands throughout the county, without limitation by the rationale that only land within three miles of the city limits is threatened by urban uses. The County Board of Supervisors should pass a resolution stating that all lands in the county otherwise eligible for this program are subject to such pressure and should be included in the Williamson Land Conservation Act agricultural preserves. The Local Agency Formation Commission should concur in this action (Tulare County, 2001).

4.2.3 Significance Criteria

The significance criteria for assessing the impacts to agricultural resources come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Convert prime farmland, unique farmland, or farmland of statewide importance, to nonagricultural use;

- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or

- Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to nonagricultural use.

4.2.4 Impact Analysis

The substation site is zoned CSO (Shopping Office/Commercial) which includes retail level commercial and office uses. The construction of the Proposed Project would not conflict with this existing zoning. The substation site is not subject to a Williamson Act contract. See Figure 4.2-1, Lands Under Williamson Act Contract, for a map with Williamson Act and Prime Farmlands identified. The substation site would be located on

Figure 4.2-1 Lands Under Williamson Act Contract

land that has been designated soils considered to be prime farmland. The City of Visalia 1991 General Plan Land Use Update (City of Visalia, 1991) rezoned this area to provide service and commercial uses to support planned residential development. The Environmental Impact Report supporting the General Plan included a Statement of Overriding Considerations for the resulting conversion of prime farmland to shopping, office and commercial uses. The Proposed Project is consistent with the conditions of the General Plan, and therefore would not convert additional prime farmland to nonagricultural use. Therefore, the Proposed Project would have less than significant impacts to agricultural resources.

4.2.5 Mitigation

Because the Proposed Project would not result in significant impacts to agricultural resources, no mitigation measures are required.

4.2.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. Therefore, the impacts to agricultural resources would be the same as those for the Proposed Project. Impacts to agricultural resources would be less than significant.

4.2.7 Alternatives

Alternative 1

The Alternative 1 substation site is zoned (R-M-2) multi-family residential and is currently used for walnut orchards. According to the City of Visalia Municipal Code 17.16.040 (City of Visalia, 2005a) this zoning provides for the conditional use of electrical distribution substations. Therefore, the construction of Alternative 1 would not conflict with existing zoning. In addition, the Alternative 1 substation site is not subject to a Williamson Act Contract, and is not designated as prime farmland, unique farmland, or farmland of statewide importance. Therefore, the impacts to agricultural resources would be less than for the Proposed Project, and impacts to agricultural resources would remain less than significant.

Alternative 2

The Alternative 2 substation site is zoned AE-40 (Exclusive Agriculture - 40 acre minimum) and is currently used for walnut orchards. According to Tulare County, this zoning provides for the conditional use of electrical distribution substations. Therefore, the construction of Alternative 2 would not conflict with existing zoning. In addition, the Alternative 2 substation site is not subject to a Williamson Act contract, and is not designated as prime farmland, unique farmland, or farmland of statewide importance. Therefore, the impacts to agricultural resources would be less than for the Proposed Project. However, impacts to agricultural resources would remain less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to agriculture.

4.2.8 References and Communications

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4.3 AIR QUALITY

This section describes the air quality resources in the Project Area and discusses the affected environment and regulatory setting for air quality. Potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.3.1 Environmental Setting

The Proposed Project lies entirely within the San Joaquin Valley Air Basin (SJVAB), which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and western Kern counties. The SJVAB incorporates the same area as the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD), encompassing approximately 25,000 square miles. The Proposed Project is located within the San Joaquin Valley Intrastate Air Quality Control Region. The Air Quality Control Regions (AQCRs) were established by the Clean Air Act (CAA) as a method of dividing the country into regional air basins based on air pollution being a regional problem and not limited to an area by a state or other political boundary.

Areas of the country that are currently in violation of NAAQS are classified as nonattainment areas, and new sources to be located in or near these areas are typically subject to more stringent air permitting requirements than similar sources in attainment areas.

Currently, the ambient air in Tulare County is classified as nonattainment for ozone (O_3) and suspended particulate matter measuring less than 10 microns (PM_{10}). The ambient air in Tulare County is either unclassified or classified as Attainment for all other federal and State regulated air pollutants (SJVAPCD, 2006). The attainment-status of each CAAQS and NAAQS pollutants is shown in Table 4.3-1, Federal and California Ambient Air Quality Standards and San Joaquin Valley Attainment Status.

4.3.2 Regulatory Setting

The Proposed Project would comply with all applicable laws, ordinances, regulations, and standards related to air quality during and following construction.

Federal

The Clean Air Act of 1970, 42 USC 7401 et seq. as amended in 1977 and 1990, is the basic federal statute governing air quality. The provisions of the CAA that are potentially relevant to this Proposed Project are the administration of the AQCRs and the development of NAAQS.

Air Quality Control Regions. Because air pollution is a regional problem and not limited to political or state boundaries, the CAA established AQCRs as a method of dividing the country into regional air basins. The Proposed Project is located within the San Joaquin Valley Intrastate Air Quality Control Region.

Table 4.3-1 Federal and California Ambient Air Quality Standards and San Joaquin Valley Attainment Status

Air Pollutant	State Standard Averaging Time and Concentration	San Joaquin Valley Air Basin Attainment Status State	Federal Primary Standard Averaging Time and Concentration/	San Joaquin Valley Air Basin Attainment Status Federal
Ozone (O_3)	8-hr avg. 0.070 ppm (137 µg/m^3)	No data.	8-hr avg. 0.08 ppm (157 µg/m^3)	Nonattainment/ Serious
	1-hr. avg. 0.09 ppm (180 µg/m^3)	Nonattainment/ Severe	None	Not applicable
Carbon Monoxide (CO) [portion including Tulare County]	8-hr avg. 9.0 ppm (10 mg/m^3)	Attainment	8-hr avg. 9 ppm (10 mg/m^3)	Unclassified/ Attainment
	1-hr avg. 20 ppm (23 mg/m^3)	Attainment	1-hr avg. 35 ppm (40 mg/m^3)	Unclassified/ Attainment
Nitrogen Dioxide (NO_2)	1-hr avg. 0.25 ppm (470 µg/m^3)	Attainment	annual arithmetic mean 0.053 ppm (100 µg/m^3)	Unclassified/ Attainment
Sulfur Dioxide (SO_2)	24-hr avg. 0.04 ppm (105 µg/m^3)	Attainment	annual arithmetic mean 0.030 ppm (80 µg/m^3)	Unclassified
	1-hr. avg. 0.25 ppm (655 µg/m^3)	Attainment	24-hr avg. 0.14 ppm (365 µg/m^3)	Unclassified

Air Pollutant	State Standard Averaging Time and Concentration	San Joaquin Valley Air Basin Attainment Status State	Federal Primary Standard Averaging Time and Concentration/	San Joaquin Valley Air Basin Attainment Status Federal
Suspended Particulate Matter (PM_{10})	annual arithimetic mean 20 µg/m^3	Nonattainment	annual arithmetic mean 50 µg/m^3	Nonattainment/ Serious
	24-hr avg. 50 µg/m^3	Nonattainment	24-hr avg. 150 µg/m^3	Nonattainment/ Serious
Particulate Matter ($PM_{2.5}$)	annual arithmetic mean 12 µg/m^3	No data	annual arithmetic mean 15 µg/m^3	Nonattainment
			24-hr avg. 65 µg/m^3	Nonattainment
Sulfates	24-hr avg. 25 µg/m^3	Attainment	None	N/A
Lead	30-day avg. 1.5 µg/m^3	Attainment	calendar quarter 1.5 µg/m^3	No designation
Hydrogen Sulfide (H_2S)	1-hr. avg. 0.03 ppm (42 µg/m^3)	Unclassified	None	N/A
Visibility-Reducing Particles	See (1) below	Unclassified	None	N/A

Source: SJVAPCD, 2006

Note: Attainment status is reported as unclassified when the data do not indicate attainment or nonattainment.

(1) State criterion for nonattainment of visibility-reducing particles is the amount of particles present to produce an extinction coefficient of 0.23 per kilometer when relative humidity is less than 70 percent.

µg/m^3 = microgram per cubic meter
mg/m^3 = milligram per cubic meter
ppm = parts per million

National Ambient Air Quality Standards. Under requirements of the CAA, the United States Environmental Protection Agency (USEPA) has developed primary and secondary NAAQS. The NAAQS are codified in 40 CFR Part 50.

State

The California Air Resources Board (CARB) was created by the Mulford-Carrell Air Resources Act in 1968. The CARB's primary responsibilities include to (1) develop, adopt, implement and enforce the State's motor vehicle pollution control program; (2) administer and coordinate the State's air pollution research program; (3) adopt and update the State's ambient air quality standards; (4) review the operations of the local air pollution control districts; and (5) review and coordinate the State Implementation Plans for achieving federal ambient air quality standards.

California Clean Air Act. In 1989, California established State ambient air quality standards, including stringent enforcement of the NAAQS and additional standards for visibility reducing particles, sulfates, and hydrogen sulfide.

Local

State law establishes local air pollution control districts and air quality management districts with the responsibility for regulating emissions from stationary sources and preparing air quality plans for the attainment of basin ambient air quality standards. The SJVAPCD has developed emission standards for construction projects and the thresholds of significance for construction emissions are listed in Table 4.3-2, Construction Emission Thresholds of Significance.

For the attainment of particulate air quality standards, the SJVAPCD emphasizes the implementation of effective and comprehensive control measures rather than detailed estimates of construction emissions (SJVAPCD, 2002).

Federal and State Monitored Air Pollutants

Ozone (O_3). Ground-level ozone is an oxidant and the major component of smog. Ozone is generated by a complex series of chemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of ultraviolet radiation. The presence of both ROG and NO_x in the lower atmosphere is typically the result of incomplete combustion. The rate of ground-level ozone formation is dependent on the concentrations of ROG and NO_x, daytime wind flow patterns, mountain barriers, persistence of temperature inversions, and the intensity of sunlight. For this reason, ROG and NO_x are considered precursors to ozone and emissions of ROG and NO_x are regulated in place of ozone.

Nitrogen Dioxide (NO_2). Nitrogen oxides emissions are primarily generated from the combustion of fuels. NO_x includes nitric oxide (NO) and nitrogen dioxide (NO_2). Because NO converts to NO_2 in the atmosphere over time and NO_2 is more toxic than NO, NO_2 is the listed criteria pollutant.

Carbon Monoxide (CO). CO is a product of incomplete combustion, principally from automobiles and other mobile sources of pollution. CO emissions from wood-burning stoves and fireplaces can also be measurable contributors. Typically, peak CO levels occur during winter months, due to a combination of higher emission rates and stagnant weather conditions, such as ground-level radiation inversions.

Sulfur Dioxide (SO_2). SO_2 is produced when any sulfur-containing fuel is burned. Processed natural gas contains trace amounts of sulfur, while fuel oils contain much larger amounts. SO_2 reacts in the atmosphere to form acid rain, which is destructive to lakes and streams, crops and vegetation, as well as to buildings, materials, and works of art.

Particulate Matter (PM). Particulates in the air are caused by a combination of wind-blown fugitive or road dust, particles emitted from combustion sources (usually carbon particles), and organic sulfate and nitrate aerosols formed in the air from emitted hydrocarbons, sulfur oxides, and NO_x. Respirable particulate matter is referred to as PM_{10}, because it has a diameter size of equal to or less than 10 microns. Concentrations of fine particulates ($PM_{2.5}$) are also measured and reported as part of the AAQS program.

Lead. Lead gasoline additives, non-ferrous smelters, and battery plants were historically a significant contributor to atmospheric lead emissions. Legislation in the early 1970s required gradual reduction of the lead content added to gasoline over a period of time, which has dramatically reduced lead emissions from mobile and other combustion sources. In addition, unleaded gasoline was introduced in 1975, and together these controls have essentially eliminated violations of the lead standard for ambient air in most urban areas.

California-Only Designated Criteria Pollutants. Particulate sulfates, hydrogen sulfide and visibility-reducing particles are CAAQS criteria pollutants.

The attainment-status of each CAAQS and NAAQS pollutants are shown in Table 4.3-1, Federal and California Ambient Air Quality Standards and San Joaquin Valley Attainment Status.

4.3.3 Significance Criteria

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

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

- Result in a cumulatively considerable net increase of any criteria 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);

- Expose sensitive receptors to substantial pollutant concentrations;

- Expose sensitive receptors to substantial pollutant concentrations; or

- Create objectionable odors affecting a substantial number of people.

Table 4.3-2 SJVAPCD Construction Emission Thresholds of Significance

Pollutant		Threshold
CO		257 tons per year (or 9 ppm) averaged over 8 hours and 20 ppm for 1 hour (20 ppm is equivalent to 150 lbs/hr, 1,650 lbs/day or 9,900 lbs/wk, and 257 tons/year)
O_3 Precursors	ROG	10 tons per year
	NO_x	10 tons per year
PM_{10}		No quantified threshold, requires control measures (see Table 4.3-3)

Source: SJVAPCD, 2002.

CO = Carbon Monoxide ROG = Reactive Organic Gas NO_x = Nitrogen Dioxide
PM_{10} = Particulate Matter less than 10 microns

4.3.4 Impact Analysis

Construction-Related Impacts

During the construction phase of the Proposed Project emissions from operation of heavy equipment and support vehicles would be generated. In addition, fugitive dust would also be generated during clearing, grading or scraping activities associated with site preparation, temporary access road construction, pole installation, and duct bank construction and vault installation.

Disturbed soil would be subject to wind entrainment; and therefore, dust control measures would be implemented at the construction sites to minimize off-site deposition

of fugitive dust as emphasized by the SJVAPCD. These fugitive dust control measures are listed in Table 4.3-3, SJVAPCD Control Measures for Construction Emissions of PM_{10}. These measures would be included as SCE Proposed Measures.

Although the combustion emissions would vary according to the construction phase, the combustion emissions calculated here are worst-case maximum annual emissions (tons/year). The combustion emissions listed in Tables 4.3-4 and 4.3-5, and 4.3-6 are based on the specific information provided for substation, undergrounding subtransmission lines, the development of an access road within the future Ranch Circle Drive easement, retention basin construction, and telecommunication construction. Emissions were based on electrical construction taking place 6 days per week for 12 weeks. The data in Table 4.3-4, Estimated Daily Exhaust Emissions for substation, and Electrical Construction, Table 4.3-5, Estimated Daily Exhaust Emissions for Underground Construction, and Table 4.3-6, Estimated Daily Exhaust Emissions for Telecommunications Construction, takes into account the worst-case impacts for all construction phases, with the exception of the No Project Alternative. Combustion emissions associated with construction-related vehicles and equipment are estimated based on the specific equipment listed in Section 3.0, Project Description, which includes the construction equipment for substation, subtransmission line, and telecommunication improvements. These are Tables 3.2-2, Substation Construction Table, 3.3-1, Underground Subtransmission Line Construction Table, and 3.3-2, Telecommunication Construction Table, respectively. Daily emissions rates for this equipment are estimated using tables published in the URBEMIS7G user's guide, as suggested by SJVAPCD. Emissions of all criteria pollutants are below the relevant significance thresholds as shown in Table 4.3-7, Construction Emissions Compared to Threshold Levels for the Proposed Project.

Table 4.3-3 SJVAPCD Control Measures for Construction Emissions of PM_{10}

Regulation VIII Control Measures for Construction Emissions of PM_{10} (required for all construction projects)
All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. *(The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)*
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

Table 4.3-4 Estimated Daily Exhaust Emissions for Substation Construction

	Emissions in Tons Per Year			
Construction Phase	**CO**	**ROG**	**NO_x**	**PM_{10}**
Survey and Grading	0.47	0.07	0.46	0.01
Civil and Perimeter Wall Construction	0.58	0.08	0.58	0.02
MEER Relay House	0.04	0.005	0.04	0.002
Maintenance	0.12	0.02	0.12	0.006
Electrical and Shop Services and Instrument Division Construction	0.38	0.05	0.40	0.02
Transformer Installation Crew	0.01	0.001	0.01	0.0004
Paving Crew	0.24	0.03	0.22	0.009
Test Crew	0.17	0.02	0.18	0.008
Electrical Construction*	3.56	0.48	3.60	0.16
TOTAL Tons Per Year**	**5.57**	**0.76**	**5.61**	**0.24**

Includes construction days for construction of substation access road and retention basin
* Total number of days not provided, assumed construction six days per week, 8 hours per day
**Based on specific days of construction per Table 3.2-2
CO = Carbon Monoxide ROG = Reactive Organic Gas NO_x = Nitrogen Dioxide
PM_{10} = Particulate Matter less than 10 microns
Total construction equipment emissions are considered unmitigated.

Table 4.3-5 Estimated Daily Exhaust Emissions for Underground Construction

Construction Phase	Emissions in Tons Per Year			
	CO	ROG	NO_x	PM_{10}
TSP Riser Footing	0.07	0.01	0.06	0.002
TSP Riser Setting	0.02	0.002	0.02	0.009
Duct Bank Construction/Vault Installation	0.13	0.02	0.14	0.01
Cable Pulling/Cable Splicing/Terminating	0.11	0.01	0.10	0.004
TOTAL Tons Per Year*	**0.33**	**0.06**	**0.32**	**0.02**

**Based on specific days of construction per Table 3.3-1
CO = Carbon Monoxide ROG = Reactive Organic Gas NO_x = Nitrogen Dioxide
PM_{10} = Particulate Matter less than 10 microns
Total construction equipment emissions are considered unmitigated.

Table 4.3-6 Estimated Daily Exhaust Emissions for Telecommunications Construction

Construction Phase	Emissions in Tons Per Year			
	CO	ROG	NO_x	PM_{10}
Communications Installation Crew	0.86	0.12	0.89	0.04
TOTAL Tons Per Year*	0.86	0.12	0.89	0.04

**Based on specific days of construction per Table 3.4-1
CO = Carbon Monoxide ROG = Reactive Organic Gas NO_x = Nitrogen Dioxide
PM_{10} = Particulate Matter less than 10 microns
Total construction equipment emissions are considered unmitigated.

Table 4.3-7 Construction Emissions Compared to Threshold Levels for the Proposed Project

	Pollutant			
	CO	**ROG**	**NO_x**	**PM_{10}**
TOTAL Tons Per Year	**6.76**	**0.94**	**6.82**	**0.3**
Threshold Tons Per Year	**257**	**10**	**10**	**NA**
Are Project Emissions Below SJVAPCD Construction Emission Thresholds of Significance?	YES	YES	YES	Protective measures included in Project Description

CO = Carbon Monoxide ROG = Reactive Organic Gas NO_x = Nitrogen Dioxide
PM_{10} = Particulate Matter less than 10 microns

Operational-Related Impacts

There would be no emissions to air during operation of the substation and underground subtransmission lines, and subsequently no impacts to air quality.

All emissions are below thresholds of significance established by the SJVAPCD. As a result, impacts to air quality would be less than significant.

SCE Proposed Measures

Proposed Project construction activities would include implementation of emission control measures as listed in Table 4.3-3, SJVAPCD Control Measures for Construction Emissions of PM_{10}, in order to minimize construction impacts from PM_{10} and fugitive dust emissions.

4.3.5 Mitigation

Because the Proposed Project would not result in significant impacts to air quality, no mitigation measures are required.

4.3.6 Subtransmission Line Overhead Option

The Overhead Option would result in similar emissions for construction equipment and construction duration as for the Proposed Project. Therefore, the impacts to air quality

would be similar to those for Proposed Project. Impacts to air quality would be less than significant.

4.3.7 Alternatives

Alternative 1

Alternative 1 would result in greater emissions for the longer construction duration (due to longer underground 66 kV subtransmission lines) than for the Proposed Project. Therefore, the impacts to air quality would be more than those for the Proposed Project. However, impacts to air quality would remain less than significant.

Alternative 2

Alternative 2 would result in similar emissions for the construction equipment and construction duration as for the Proposed Project. Therefore, the impacts to air quality would be similar to those for the Proposed Project. Impacts to air quality would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to air quality.

4.3.8 References and Communications

Midwest research Institute. 1996. Improvement of Specific Emission Factors (BACM Project No. 1), Final Report.

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URBEMIS, 2002 for Windows with Enhanced Construction Module Version 8.7 Emissions Estimation for Land Use Development Projects. Software User's Guide: Appendix H Construction Equipment Emission Factors. http://www.urbemis.com/software/URBEMIS2002%20User's%20Manual.pdf

4.4 BIOLOGICAL RESOURCES

This section describes the biological resources in the Project Area and discusses the affected environment and regulatory setting. Potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.4.1 Environmental Setting

Regional Setting

The City of Visalia is located in the delta of the Kaweah River in the San Joaquin Valley. The Saint John's River is a distributary of the Kaweah River, located one mile north of the Project. The region hosts natural streams as well as man-made channels used for irrigation and flood protection. Average annual precipitation is 7 to 13 inches. Topography of the site and the general vicinity is flat.

Historical land use in the region was agricultural, with present land uses moving toward residential and urban development. The area is being developed rapidly, and a substantial amount of new construction, including residential and commercial development, is evident in many locations. Land to the west, north, and east of the substation site is presently occupied by orchards of European walnut trees. Walnut orchards of this type, once abundant near the outskirts of the City of Visalia, are being converted to residential and commercial uses. Residential development exists south of Riggin Avenue while orchards occupy most of the land on the north side of Riggin Avenue between State Route 63 and Mooney Boulevard.

Literature Search

Prior to field surveys, records from the California Natural Diversity Database (CNDDB, 2005) were reviewed regarding the potential occurrence of any sensitive species or habitat within the Project Area. Visalia, Woodlake, and Exeter 7-1/2 minute United States Geological Survey quadrangles were used to search CNDDB occurrence records for "sensitive" species and habitats. Other references used include the California State University, Fresno herbarium and zoology collections, the California Native Plant Society's Inventory of Rare and Endangered Plants of California (Tibor, 2001), The Jepson Manual (Hickman, 1993), Recovery Plan for Upland Species (Williams et al, 1998).

Survey Methodology

Biological surveys in the Project Area were conducted during the summer-fall of 2005 and the winter-spring of 2006. Initial surveys were focused on identifying habitats for special-status plants and animals that could potentially occur at the substation sites and along the subtransmission line route for the Proposed Project and Alternatives 1 and 2. Survey efforts concentrated on the existing habitat within the footprint of the substation site and up to 1,000 feet beyond, and for 100 feet on each side of the subtransmission

line routes. When potential habitat was observed, the locations were noted so more focused surveys could be conducted prior to construction.

Periodic on-site field surveys were also conducted in the Project Area which included wildlife and botanical observations. The wildlife surveys consisted of field observations of birds and other wildlife; an examination of any elderberry shrubs (if present) for emergence holes of valley elderberry longhorn beetles (*Desmocerus californicus dimorphus*); and specific searches for vernal pools which could support sensitive plants, fairy shrimp, or amphibians. During the field surveys a list of vascular plant species and animals in the Project Area was compiled, and habitat types were classified with special emphasis placed on identifying "indicator species" of any sensitive habitats.

General Vegetation Habitat Types

The Project Area is comprised of four dominant habitat types: Non-native Annual Grassland, Agricultural, Ruderal, and Urban/Suburban.

Non-native Annual Grassland. The annual grassland habitat is dominated by non-native annual grasses and forbs, intermixed with a variety of native forbs and grasses. The dominant grasses present include: soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), red brome (*B. madritensis rubens),* slender wild oats (*Avena barbata*), foxtail barley (*Hordeum jubatum*), rattail fescue (*Vulpia megalura*) and annual rye (*Lolium multiflorum*). The dominant forbs are filaree (*Erodium cicutarium*), fiddleneck (*Amsinckia intermedia*), pepperweed (*Lepidium nitidum*), blow wives (*Achyrachaena mollis*), bicolor lupine (*Lupinus bicolor*), popcorn flower (*Plagiobothrys nothofulvus*), lotus (*Lotus micranthus*), and gilia (*Gilia tricolor*).

Agricultural. A significant portion of the Project Area is located on land that is currently intensively cultivated and does not support natural vegetation or sensitive species habitat. English walnuts (*Juglans regia*) and stone fruits (plums and apricots) dominate these agricultural areas. Some of the nonnative agricultural habitat intergrades with the most heavily disturbed nearby "ruderal" areas.

Ruderal. Ruderal areas are dominated by weedy species such as prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), horseweed (*Conyza canadensis*), and Bermuda grass (*Cynodon dactylon*). Examples of these areas include roadsides, ditch banks, vacant lots near urban or agricultural buildings, and other similar settings.

Urban/Suburban. Urban, suburban, and other developed "habitats" are dispersed throughout the Project Area near the ranches, houses, and commercial buildings near the Proposed Project and Alternatives 1 and 2.

Special-Status Species

Based on review of the CNDDB and other available sources, including a list prepared by the California Department of Fish and Game (CDFG) (CDFG, 2005) and the United States Fish and Wildlife Service (USFWS) and Lists 1 and 2 of the California Native

Plant Society (CNPS) (Skinner and Pavick, 1994), several special-status species may potentially occur in the Project Area. A list of these species is provided in Table 4.4-1, Sensitive Plant Species Potentially Occurring in the Survey Area and Table 4.4-2 Sensitive Animal Species Potentially Occurring in the Survey Area. The following tables were developed from surveys performed at the Proposed Project and Alternative 1 and 2. The presence of species and habitat ratings (i.e. low, moderate, high) are based upon spring and early summer field surveys, 2005.

Table 4.4-1 Sensitive Plant Species Potentially Occurring in the Survey Area

Scientific Name	Common Name	Listing Status	Habitat in Survey Area	Occurrence Discussion	Observed in Field
Atriplex subtili	Subtle oracle	CNPS 1B	No	Low	No
Brodiaea insignis	Kaweah brodiaea	SE, CNPS 1B	Marginal	Low	No
Chamaesyce hooveri	Hoover's spurge	FT, CNPS 1B	No	Low	No
Clarkia springvillensis	Springville clarkia	FT, SE, CNPS 1B	No	Low	No
Delphinium recurvatum	Recurved larkspur	CNPS 1B	No	Low	No
Eryngium spinosepalum	Spiny-sepaled button-celery	CNPS 1B	No	Low	No
Fritillaria striata	Striped adobe lily	ST, CNPS 1B	No	Low	No
Mimulus pictus	Calico monkey flower	CNPS 1B	Marginal	Low	No
Orcuttia inaequalis	San Joaquin orcutt grass	FE, SE, CNPS 1B	No	Low	No

Scientific Name	Common Name	Listing Status	Habitat in Survey Area	Occurrence Discussion	Observed in Field
Pseudobahia peirsonii	San Joaquin adobe sunburst	FE, SE, CNPS 1B	No	Low	No
Sidalceaa keckiii	Keck's checker mallow	FE, CNPS 1B	No	Low	No
Tuctoria greenei	Greene's tuctoria	FE, SR, CNPS 1B	No	Low	No

Codes
FE = federally listed as Endangered
FT = federally listed as Threatened
SE = listed by the State of California as Endangered
ST = listed by the State of California as Threatened
SR = listed by the State of California as Rare
CNPS 1A = California Native Plant Society: plants believed to be extinct in California
CNPS 1B = California Native Plant Society: plants rare or endangered in California and elsewhere
CNPS 2 = California Native Plant Society: rare in California but more common elsewhere

Table 4.4-2 Sensitive Animal Species Potentially Occurring in the Survey Area for the Proposed Project

Scientific Name	Common Name	Listing Status	Habitat in Survey Area	Occurrence Potential	Observed in Field
Invertebrates					
Branchinecta lynchii	Vernal pool fairy shrimp	FT	No	Low	No
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT, ST	No	Low	No
Lytta moesta	Moesta blister beetle	-	No	Low	No
Lytta molesta	Molestan blister beetle	-	No	Low	No
Lytta hoppingi	Hopping's blister beetle	-	No	Low	No
Amphibians and Reptiles					
Ambystoma tigrinum californiense	California tiger salamander	FC, SC	No	Low	No
Clemmys marmorata marmorata	Northwestern pond turtle	FC, SC	No	Low	No
Gambelia sila	Blunt-nosed leopard lizard	FE, SE	No	Low	No
Scaphiopus hamondii	Western spade-foot toad	SC	No	Low	No

Scientific Name	Common Name	Listing Status	Habitat in Survey Area	Occurrence Potential	Observed in Field
Birds					
Agelaius tricolor	Tri-colored blackbird	SC	No	Low	No
Aquila chrysaetos	Golden eagle	SC	Marginal	Low	No
Athene cunicularia	Burrowing owl	SC	No (Yes for Alternative 2 only)	Low (Moderate for Alternative 2 only)	No
Buteo swainsoni	Swainson's hawk	ST	No	Low	No
Charadrius montanus	Mountain plover	FPT, SC	No	Low	No
Cypseloides niger	Black swift	SC	No	Low	No
Gymnogyps californianus	California condor	FE, SE	No	Low	No
Mammals					
Dipodomys nitratoides nitratoides	Tipton kangaroo rat	FE, SE	No	Low	No
Taxidea taxus	American badger	SC	No	Low	No
Vulpes macrotis mutica	SanJoaquin kit fox	FE, ST	No (Marginal for Alternatives 1 and 2)	Low (Also low for Alternatives 1 and 2)	No

FE = federally listed as Endangered
FT = federally listed as Threatened
FC = federally listed as a Candidate species
FPT = proposed for listing as Federally Threatened
SE = listed by the State of California as Endangered
ST = listed by the State of California as Threatened
SR = listed by the State of California as Rare
SC = listed by the State of California as a Species of Concern

4.4.2 Regulatory Setting

Federal

Endangered Species Act of 1973, 16 USC §1531 et seq.; 50 CFR Parts 17 and 222. The federal Endangered Species Act (ESA) protects species designated as threatened or endangered by prohibiting actions that may jeopardize the continued existence of such species. The ESA includes provisions for the protection and management of plants and animals and delineates areas of critical habitat for such species. The administering agency for terrestrial and avian species, as well as for non-anadromous freshwater fish, is the USFWS. Section 7 and 10 of the Act may require consultation with the USFWS for the protection of such species prior to proposed Project implementation.

Clean Water Act, Section 404; 33 USC §1251-1376; 30 CFR §330.5(1)(26). This law regulates restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. These waters include the “Waters of the United States”, which means all navigable waters and tributaries thereto and adjacent wetlands. Any activity that results in the deposit of dredge or fill material within the “Ordinary High Water Mark” of "Waters of the US" usually requires a permit, even if the area is dry at the time the activity takes place. Permits issued by the United States Army Corps of Engineers (USACOE) would require the State to issue a certificate pursuant to Clean Water Act Section 401 that the proposed Project complies with State water quality standards.

Migratory Bird Treaty Act; 16 USC §703-711; 50 CFR Subchapter B. The Migratory Bird Treaty Act (MBTA) includes provisions for protection of migratory birds. This protection includes prohibitions against any taking of any migratory bird, unless authorized by federal regulation or permit. The current list of species protected by MBTA can be found in 50 CFR §10.13. Loss of non-native species, such as house sparrows, European starlings, and rock doves, is not covered by this statute. The administering agency for the MBTA is the USFWS.

State

California Endangered Species Act of 1984 (CESA); California Fish and Game Code §2050-2098. The CESA provides for the protection of rare, threatened and endangered plants and animals, as recognized by the CDFG, and prohibits the taking of such species without its authorization. The take of State-listed species through incidental or otherwise lawful activities requires a permit pursuant to §2081(b) of the CESA. The CESA also provides protection for those species that are designated as candidates for threatened or endangered listings. With regard to plants, the CESA greatly expanded upon the protection afforded to rare, threatened, and endangered plants under the earlier California Native Plant Protection Act of 1977. Consultation with the CDFG is required for projects authorized by a State lead agency that could affect a State-listed threatened or endangered species. The State has the authority to issue an incidental take permit under Section 2081 of the Fish and Game Code, or to coordinate with USFWS during the Section 10(a) process to make the federal permit also apply to State-listed species. Threatened and endangered species are listed in Title 14, CCR §670.2 and 670.5. The administering agency for the CESA is the CDFG. The CNDDB was

reviewed to identify State-listed endangered and threatened species potentially present in the Project Area.

California Native Plant Protection Act of 1977; California Fish and Game Code §1900 et seq. This law includes provisions that prohibit the taking of listed rare or endangered plants from the wild. The law also includes a salvage requirement for landowners. Furthermore, it provides the CDFG the authority to designate native plants as endangered or rare and provides specific protection measures for identified populations.

California Fish and Game Code, Section 1600-1603. This statute regulates activities that would "substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of a natural watercourse" that supports fish or wildlife resources. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. A Streambed Alteration Agreement must be obtained for any proposed Project that would result in an adverse impact to a river, stream, or lake. If fish or wildlife would be substantially adversely affected, an agreement to implement mitigation measures identified by the CDFG would be required.

California Species Preservation Act. This Act provides for the protection and enhancement of the amphibians, birds, fish, mammals, and reptiles of California. The administering agency is the CDFG.

California Fish and Game Code §3503. This section prohibits the taking and possession of any bird egg or nest, except as otherwise provided by this code or subsequent regulations. The administering agency is CDFG.

California Fish and Game Code §3503.5. This section prohibits the taking, possession, or destruction of any birds-of-prey in the orders *Falconiformes* or *Strigiformes* and their eggs and nests, except as otherwise provided by this code or subsequent regulations. This statute does not provide for the issuance of any type of incidental take permit. The administering agency is the CDFG.

California Fish and Game Code §3511 and 5050. This section prohibits the taking and possession of birds and reptiles listed as "fully protected". The administering agency is the CDFG. The CNDDB was reviewed to identify special-status species potentially present in the Project Area.

California Fish and Game Code §3513 – Adoption of the Migratory Bird Treaty Act. This section provides for the adoption of the MBTA's provisions. As with the MBTA, this State code offers no statutory or regulatory mechanism for obtaining an incidental take permit for the loss of non-game, migratory birds. The administering agency is the CDFG.

Local

Oak Tree Preservation Ordinance. As a response to the loss of oak trees from growth and development, in 1971 the Visalia City Council worked to pass an ordinance that required a permit to remove an oak tree. This ordinance (Ord. 9907) was amended in 1974 to set guidelines for oak maintenance and preservation. Its goal was to enhance the beauty of Visalia and to complement and strengthen zoning, subdivision and land use standards and regulations, while also improving the quality of air, water and soil resources (Section 12.24.010).

4.4.3 Significance Criteria

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

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service;

- 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;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.4.4 Impact Analysis

During a biological survey conducted for the Proposed Project March 6, 2006 no special-status plant species were observed and there is low potential for most listed or special-status species to occur in the areas where ground-disturbing activities are proposed.

The described sensitive plant species that have the potential to occur in this area are closely associated with specific habitats such as vernal pools and swales, alkaline playas, salt bush scrub, ungrazed grasslands, and heavy adobe clay soils. These habitats were not observed within the Project Area. Furthermore, although the substation site is located on land currently planted with walnut trees there are no oak trees on the substation site. Therefore, no oak trees would be removed or disturbed during construction or operation activities.

The biological survey to assess occurrence of federally or State-listed or other special-status wildlife species or suitable habitats capable of supporting them determined that appropriate habitat was not present. In addition, no federally or State-listed or other special-status wildlife species were observed during field surveys, although suitable habitat does exist for some of these species.

The San Joaquin kit fox (SJKF) is known to occasionally use agricultural and semi-urban areas on the east side of the San Joaquin Valley for hunting and foraging, but no field signs (dens, scat, tracks, prey remains, etc.) were observed in or near the Project Area. No dens have been recorded to date in the immediate vicinity of the substation site. Since no potential den entrances were observed during the daytime surveys and the site has been significantly disturbed by farming, and development, it is interpolated that the substation site has not recently functioned as denning habitat. However, the possibility that the substation site could function as a wildlife corridor could not be eliminated. Therefore, preconstruction surveys would be conducted. If evidence of the SJKF is found the SCE Proposed Measures below would be implemented.

SCE Proposed Measures to protect the San Joaquin Kit Fox

If evidence of SJKF is found, the following SCE Proposed Measures would be implemented:

- To prevent inadvertent entrapment of kit foxes or other animals during the construction-phase of the project, all excavated, steep-walled holes or trenches more than 2 feet deep would be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures are listed below.

- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4 inches or greater that are stored at a construction site for one or more overnight periods would be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe would not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.

- All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a week from the Project site.

- To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets would be permitted on the Project site.

- Use of rodenticides and herbicides in Project Areas would be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds would observe label and other restrictions mandated by the US Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide would be used because of proven lower risk to kit fox.

- A representative shall be appointed by the Project proponent who would be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped individual. The representative would be identified during the employee education program. The representative's name and telephone number shall be provided to the USFWS.

- An employee education program would be conducted for any project that has expected impacts to kit foxes. The program would consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and agency personnel involved in the Project. The program would include the following: a description of the San Joaquin kit fox and its habitat need; a report of the occurrence of kit fox in the Project Area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information would be prepared for distribution to the above-mentioned people and anyone else who may enter the Project site.

- Upon completion of the Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. would be re-contoured if necessary, and revegetated to promote restoration of the area to pre-Project conditions. An area subject to "temporary" disturbance means any area that is potential to be revegetated. Appropriate methods and plant species used to revegetate such areas would be determined on a site-specific basis in consultation with the USFWS, California Department of Fish and Game, and revegetation experts.

- In case of trapped animals, escape ramps or structures would be installed immediately to allow the animal(s) to escape, or the USFWS would be contacted for advice.

- Any contractor, employee, or military or agency personnel who inadvertently kills or injures an SJKF shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045. They would contact the local warden or biologist.

- The Sacramento Fish and Wildlife Office and CDFG would be notified in writing within three working days of the accidental death or injury to a SJKF during Project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. The CDFG contact is Mr. Ron Schorloff at 1416 9th Street, Sacramento, CA 95814, (916) 654-4262.

Additional SCE Proposed Measures to avoid and/or minimize biological resource impacts have been included as part of the Proposed Project are discussed below.

SCE Proposed Measures to Protect Migratory Birds

Tree removal for substation construction activities would not take place during nesting season (March – May) unless pre-construction surveys are conducted, and a qualified biologist verifies that no nests are present. If nests are located, the nest area will be avoided if feasible (with an appropriate buffer as determined by a qualified biologist. If avoidance is not feasible, the qualified biologist will confer with USFWS and CDFG on nest/chick relocation measures.

General SCE Proposed Measures

Minimization of Ground Disturbance. Clearing of vegetation would be confined to the minimal area needed to conduct the construction activities.

Spill Containment/Management. Construction personnel would ensure that contamination of habitat does not occur and would have a plan to promptly address any accidental spills. The contractor would have an emergency spill containment kit to contain and remove spilled fuels, hydraulic fluids, etc. Likewise, equipment refueling or storage of these materials would not occur within 100 feet of streams, lakes or other waterways. If a 100-foot buffer is not feasible for a given refueling activity, secondary containment would be employed during the fuel transfer and the transfer would be continuously monitored to prevent accidental spills. All contaminated soils and materials would be excavated and removed from the site and disposed of appropriately to prevent sensitive animal species from becoming exposed or killed by the effects of crude oil or other chemicals used during construction.

Trash Removal. To reduce the potential for attracting wildlife species to the area, all trash would be properly contained and removed from the work site and disposed of regularly.

Raptor-Safe Design. All subtransmission poles would be designed raptor-safe in accordance with the Suggested Practices for Raptor Protection on Power Lines. (Avian Power Line Interaction Committee, 1996).

With the implementation of the SCE Proposed Measures, impacts to sensitive biological resources would be less than significant.

4.4.5 Mitigation

Because the Proposed Project would not result in significant impacts to biological resources, no mitigation measures are required.

4.4.6 Subtransmission Line Overhead Option

The Overhead Option does not require trenching for the overhead 66 kV subtransmission lines but there is more surface infrastructure associated with the above-ground poles. Because there is less ground disturbance but more above ground infrastructure, there is similar potential for adverse impacts to biological resources as for the Proposed Project. Therefore, the impacts to biological resources would be similar to those for the Proposed Project. Impacts to biological resources would be less than significant.

4.4.7 Alternatives

Alternative 1

Alternative 1 requires more trenching than the Proposed Project due to the greater length of the underground 66 kV subtransmission lines. Because there is more ground disturbance, there is more potential for adverse impacts to biological resources. Therefore, the impacts to biological resources would be more than those for the Proposed Project. However, impacts to biological resources would remain less than significant.

Alternative 2

A biological survey conducted for the Alternative 2 substation site did not identify sensitive or threatened species. However, there is the potential for San Joaquin kit foxes to use this site as habitat. Additionally, there is more surface infrastructure associated with the above ground poles. Because there is more potential for sensitive or threatened species habitat and more above ground infrastructure, there is more potential for adverse impacts to biological resources as for the Proposed Project. Therefore, the potential impacts to biological resources would be more than those for the Proposed Project. However, impacts to biological resources would remain less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to biological resources.

4.4.8 References and Communications

Avian Power Line Interaction Committee. 1996. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996.

California Department of Fish and Game (CDFG). 2005. Special Vascular Plants, Bryophytes, and Lichens List. California Department of Fish and Game, Sacramento, California.

California Natural Diversity Data Base (CNDDB). 2005. Commercial search program. California Dept. of Fish and Game, Natural Heritage Program, Sacramento, Calif.

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Williams, D.F. et al, 1998. Recovery Plan for Upland Species of the San Joaquin Valley, California. US Fish and Wildlife Service, Portland, Oregon.

4.5 CULTURAL RESOURCES

This section describes cultural resources and paleontological resources in the Project Area and describes the affected environment and regulatory setting. Potential impacts, proposed mitigation measures, and alternatives are also described.

Cultural resources consist of tangible or observable evidence of past human activity, found in direct association with a geographic location, including tangible properties possessing intangible, traditional cultural values. Historical resources may include buildings, structures, objects, sites, areas, and places which are historically or archaeologically significant.

Paleontological resources are any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth, with the exception of materials associated with an archaeological resource.

4.5.1 Environmental Setting

Native Americans have occupied the San Joaquin Valley and foothills for at least 10,000 years. The Proposed Project is located in an area inhabited historically by Talumne Yokuts (also known as Telamne Yokuts, Telamni Yokuts) (Gayton 1948; Kroeber 1925; Latta 1999; Wallace 1978). There are no ethnographically documented Talumne villages in the Project Area.

The townsite of Visalia was surveyed in November 1852 and became the county seat. The name was changed to Buena Vista in 1853, and changed back to Visalia in 1854 (Gudde 1967; Hoover et al. 1966). The Project Area is situated northeast of the town in an area that has been used for agriculture until recent suburban development. There are no known historically significant buildings, structures, events or persons associated with the Project Area.

Existing Cultural Resource Landscape

Record Searches

Prior to fieldwork, a record and information search was conducted on June 3, 2005 at the Southern San Joaquin Valley Information Center of the California Historical Resources Inventory System at California State University, Bakersfield (Record Search #05-361) for known cultural resources within one-half mile radius of the Project Area. Sources consulted include:

- Southern San Joaquin Valley Information Center site and study base maps;

- National Register of Historic Places (*Directory of Determinations of Eligibility*, California Office of Historic Preservation, Volumes I and II, 1990);

- Office of Historic Preservation Computer Listing 1990 and updates;

- *California Historic Resources Inventory* (State of California 1976);

- California Historical Landmarks (State of California 1990); and

- *California Points of Historical Interest* listing (May 1992).

In addition, a request was submitted on February 28, 2006 to the California Native American Heritage Commission to consult their Sacred Lands Files in order to identify other culturally significant properties. In a letter dated March 20, 2006 the Commission reported that no sacred lands were known to the Commission within the Project Area.

No prehistoric or historic archaeological sites or Native American cultural resources have been previously recorded within the Project Area.

Pedestrian Surveys

Archaeological field studies were conducted on March 2, 2006. A pedestrian archaeological survey was completed over the entire area (approximately two acres) of the substation site, and along the length of the proposed 66 kV subtransmission line, covering a corridor 100 feet wide. No surface evidence of cultural resources was found either within the substation site proper or along the transmission line corridor. Cultural resource specialists visited the immediate vicinity of the substation sites for Alternative 1 and 2 and observed no conspicuous cultural resources around the perimeter of either site, nor any conspicuous potentially historic buildings or structures on those parcels.

Paleontology

Paleontology is the study of pre-Holocene (greater than 10,000 years before present) remains of plants and animals typically preserved as fossils.

The Project Area is located within the historic Kaweah River delta of the Kaweah River between the river source in the Sierra Nevada Mountains to the east and Tulare Lake to the west. Geologically this area is characterized by deep *Great Valley* sedimentary deposits of Quaternary age (Matthews and Burnett, 1965). Two types of sedimentary formations are interspersed in this area: fan deposits and basin deposits. Fan deposits are recent alluvium originating from streams emerging from highlands surrounding the *Great Valley*. In the Project Area these fan deposits are known as the Modesto Formation, and are comprised of sand and silt from granitic sources. Fan deposits are not conducive to the formation and preservation of fossils. Basin deposits are sediments deposited between natural stream channels during flood stages of major streams in the

area (the Kaweah River delta). Fan deposits are not considered conducive to the formation or preservation of fossils, while basin deposits may preserve fossils.

4.5.2 Regulatory Setting

Federal

There are no federal requirements.

State

The CPUC is tasked with compliance of all provisions in CEQA that concern cultural resources (CEQA Sections 21083.2, 21084.1, and 15064.5). Cultural resources as defined in CEQA include prehistoric and historic era archaeological sites, districts, and objects; historic buildings, structures, objects and districts; and traditional/cultural sites or the locations of important historic events. CEQA Guidelines (Section 15064.5) state that a Project may have a significant environmental effect if it causes a substantial adverse change in the significance of an historic resource. Additionally, the CPUC must consider properties eligible for listing on the California Register of Historical Resources (CRHR) or that are defined as a unique archaeological resource in CEQA Section 21083.2.

Local

Tulare County General Plan, Natural Resources Element includes objectives and goals that endeavor to preserve known and newly discovered cultural resources.

4.5.3 Significance Criteria

The significance criteria for assessing the impacts to cultural and paleontological resources come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significant of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

4.5.4 Impact Analysis

Cultural Resources

No surface evidence of cultural resources was found either within the substation site or along the subtransmission line route during the pedestrian surveys. Additionally, there have been no reports of resources made to the Southern San Joaquin Information Center. If archeological resources or human remains are encountered during construction, SCE would implement the following measures.

SCE Proposed Measures:

- If previously unidentified archaeological resources are unearthed during construction activities, construction would be halted in that area and directed away from the discovery until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve or recover the resources.

- If human remains are encountered during construction or any other phase of development, work in the area of the discovery must be halted in that area and directed away from the discovery. No further disturbance would occur until the county coroner makes the necessary findings as to origin pursuant to Public Resources Code 5097.98-99, Health and Safety Code 7050.5. If the remains are determined to be Native American, then the Native American Heritage Commission (NAHC) would be notified within 24 hours as required by Public Resources Code 5097. The NAHC would notify the designated Most Likely Descendants who would provide recommendations for the treatment of the remains within 24 hours. The NAHC mediates any disputes regarding treatment of remains.

The SCE Proposed Measures to avoid and/or minimize impacts to cultural resources have been included as part of the Proposed Project design and are included in SCE standard construction and operation protocols. With the implementation of these SCE Proposed Measures, impacts to cultural resources would be less than significant.

Paleontology

Geologically the Project Area is underlain by Quaternary age *Great Valley* fan and basin sedimentary deposits (Matthews and Burnett, 1965). Fan deposits are not conducive to fossil formation or preservation, and are therefore rated low or negligible sensitivity. Basin deposits may preserve fossils, and are rated moderate sensitivity. As a result, it is very unlikely that paleontological specimens would be encountered anywhere in the Project Area. Therefore, impacts to paleontological resources would be less than significant.

4.5.5 Mitigation

Because the Proposed Project would not result in significant impacts to cultural or paleontological resources, no mitigation measures are required.

4.5.6 Subtransmission Line Overhead Option

The Overhead Option does not require trenching for the overhead 66 kV subtransmission lines. Because there is less ground disturbance, there is less potential for adverse impacts to cultural or paleontological resources. Therefore, the impacts to cultural or paleontological resources would be less than those for the Proposed Project. Impacts to cultural or paleontological resources would be less than significant.

4.5.7 Alternatives

Alternative 1

Alternative 1 requires more trenching than the Proposed Project due to the greater length of the underground 66 kV subtransmission lines. Because there is more ground disturbance, there is more potential for adverse impacts to cultural or paleontological resources. Therefore, the impacts to cultural or paleontological resources would be more than those for the Proposed Project. However, impacts to cultural or paleontological resources would remain less than significant.

Alternative 2

Alternative 2 requires the installation of three TSPs with footings and 58 LDS poles. Alternative 2 does not require trenching for the overhead 66 kV subtransmission lines but does require excavation for pole installation. However, the potential for adverse impacts resulting from the ground disturbance would be comparable to the Proposed Project. Therefore, the impacts to cultural or paleontological resources would be similar to those for the Proposed Project. Impacts to cultural or paleontological resources would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to cultural or paleontological resources.

4.5.8 References and Communications

Gayton, A. H. 1948. Yokuts and Western Mono Ethnography. *University of California Anthropological Records* 10(1, 2).

Gudde, E.G. 1967. *California Place Names*. University of California Press, Berkeley.

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Jackson, T. L. 2006. Cultural Resources Inventory Report.

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4.6 GEOLOGY AND SOILS

This section describes the geologic resources, geologic hazards, and soils in the Project Area and discusses the affected environment and regulatory setting for geology and soils. Potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.6.1 Environmental Setting

The Project Area is located in the City of Visalia, northern Tulare County, California. Elevations in Tulare County range from approximately 190 feet along the edge of Tulare Lake to approximately 870 feet on the summit of Venice Hill. Tulare County is located entirely within the San Joaquin Valley, which in turn comprises the southern portion of California's Great Valley.

The Sierra Nevada Mountains at the eastern boundary of the San Joaquin Valley have many deep-cut river canyons that deposit alluvial materials into the San Joaquin Valley. The rivers originating in the Sierra Nevada include the Kings, Kaweah, Tule and White Rivers, and Cross and Deer Creeks. The soils associated with the deposition of alluvial materials from these drainages are predominantly granitic in origin and cover more than half of the Project Area.

The surface topography in Western Tulare County generally slopes westward and can be subdivided into three basic geomorphic units. These include (1) more recent alluvial fans and flood plains associated with major drainages; (2) older fan remnants that occur between the major drainages; and (3) basin rims and flood plains along the eastern edge of Tulare Lake.

Soils in the Project Area are almost entirely Grangeville sandy loam and similar soils formed on alluvial fans and flood plains. These soils occur between 190 and 410 feet in elevation at a 0 to 2 percent slope. The substation site is located on irrigated cropland that has been leveled, drained, and reclaimed. The soil profile is brown sandy loam from 0 to 16 inches, light brownish gray loam from 16 to 27 inches, and light brownish gray fine sandy loam and sandy loam from 27 to 67 inches. Soils in the Project Area are shown in Figure 4.6-1, Soils Map, and the soil properties summarized in Table 4.6-1, Properties of Soils in the Project Area.

The Project Area is located in a tectonically inactive portion of the San Joaquin Valley. The closest major active fault to the Project Area is the San Andreas Fault, located approximately 70 miles to the southwest (Jennings, 1994). The location of this fault relative to the Project Area is shown on Figure 4.6-2, Fault Map. There are no known potentially active faults in the Project Area. The nearest active or potentially active faults are the Pond Poso Faults, located approximately 40 miles south of the Project Area. A small segment of this fault exhibits "creep", and therefore, is considered active. A northern extension of the potentially active Premier Fault is about 30 miles southeast of the Project Area.

Table 4.6-1 Properties of Soils in the Project Area

Soil Property	Quality
Depth Class	Very Deep
Drainage Class	Somewhat Poor
Permeability	Moderately Rapid
Available Water Capacity	Moderate
Shrink-Swell Potential	Low
Corrosivity to Steel	High
Corrosivity to Concrete	Low

Source: USDA, 1999

4.6.2 Regulatory Setting

Federal

The Federal Water Pollution Control Act of 1972 and Clean Water Act of 1977 require that discharge requirements be met, including the discharge of sediment to surface water as a result of erosion. The Soil Conservation Service National Engineering Handbook presents standards for planning, design, and construction of soil conservation practices to be implemented during construction projects.

State

The Alquist-Priolo Special Studies Zones Act was enacted in 1972. In 1994, it was renamed the Alquist-Priolo Earthquake Fault Zoning Act (APEFZA). The primary purpose of the APEFZA is to mitigate structural damage caused by surface rupture by prohibiting construction of new buildings for human occupancy across the trace of an active fault (Hart and Bryant, 1997). The APEFZA requires that “earthquake fault zones” be delineated by the State of California (that is, by the State Geologist) along faults that are “sufficiently active” and “well defined.” These faults show evidence of Holocene surface displacement along one or more of their segments (sufficiently active) and are clearly detectable by a trained geologist as a physical feature at or just below the ground surface (well defined). The APEFZA dictates that cities and counties withhold development permits for sites within a designated APEFZA earthquake fault zone under their jurisdiction until geologic investigations demonstrate that the sites are not threatened by surface displacements from future faulting (Hart and Bryant, 1997).

The Seismic Hazards Mapping Act of 1990 (PRC Section 2690 and following as Division 2, Chapter 7.8), as supported by the Seismic Hazards Mapping Regulations (CCR Title 14, Division 2, Chapter 8, Article 10), was promulgated for the purpose of protecting

Figure 4.6-1 Soils Map

Figure 4.6-2 Regional Fault Map

public safety from the effects of strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CDC, 1997), constitutes the guidelines for evaluating seismic hazards other than surface fault rupture, and for recommending mitigation measures as required by PRC Section 2695(a).

The California Building Code is another name for the body of regulations known as the CCR, Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Published by the International Conference of Building Officials, the Uniform Building Code is a widely adopted model building code in the United States. The California Building Code incorporates by reference the Uniform Building Code with necessary California amendments. About one-third of the text within the California Building Code has been tailored for California earthquake conditions.

Local

City of Visalia Municipal Code, Chapter 15.08 Section 15.08.10 (City of Visalia, 2005), Adoption of the California Building Code.

4.6.3 Significance Criteria

The significance criteria for assessing the impacts to geology and soils come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a know 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 know fault (Hart and Bryant, 1997); strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides;

- Result in substantial soil erosion or the loss of topsoil;

- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or

- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

4.6.4 Impact Analysis

The substation site is located on a relatively flat area. Given the site topography, there is negligible potential for landslides or other slope stability concerns from Proposed Project construction. Furthermore, substation and subtransmission line construction would not involve extensive excavation, grade or elevation changes. Therefore, no impacts associated with slope stability or topographic changes are anticipated.

Soil expansion is a phenomenon by which clay-rich soils expand when they are wet and shrink upon drying. In the vicinity of the substation site clay content is low, and soils have a low shrink-swell potential. Therefore, potential hazards associated with expansive soils are less than significant.

The project is not situated in an area prone to subsidence, and does not include activities that could induce subsidence. Therefore, potential hazards associated with subsidence are less than significant.

No known geologic resources of recreational, commercial, or scientific value (including mineral resources) are present within the Project Area. The alluvial and wash deposits such as those found in the vicinity of the substation site are not quarried and are unlikely to be quarried. Once in operation, the substation would have no impact on geologic or soil resources on site or within the surrounding area.

During construction, erosion control measures would be implemented to avoid or minimize soil erosion and off-site deposition. It is estimated that approximately 1,500 cubic yards of soil would be removed from the site and 7,000 cubic yards of new clean fill material would be imported. Because Proposed Project disturbance would be greater than one acre, specific erosion control measures would be identified as part of the National Pollution Discharge Elimination System (NPDES) permit and Storm Water Pollution Prevention Plan (SWPPP) required for the Proposed Project (See Water Quality and Hydrology for regulatory framework).

The nearest active or potentially active fault is approximately 40 miles south of the Project Area. There are no designated APEFZA faults in the Project Area, and as such, the Proposed Project is not subject to the Alquist-Priolo Earthquake Fault Zoning Act.

Due to its distance from major active faults, the Project Area would experience relatively low levels of earthquake-induced ground shaking generated by large earthquakes occurring at one of these faults. Additionally, due to the unlikelihood of an extended period of strong ground shaking during an earthquake, in combination with the deep depth to groundwater beneath the site (see Section 4.8, Hydrology and Water Quality) this region would not likely experience liquefaction. Therefore, potential impacts associated with fault rupture, strong ground motion, and liquefaction are less than significant.

4.6.5 Mitigation

Because the Proposed Project would not result in significant impacts to geology and soils, no mitigation measures are required.

4.6.6 Subtransmission Line Overhead Option

The Overhead Option does not require trenching for the overhead 66 kV subtransmission lines. Because there is less ground disturbance, there is less potential for adverse impacts to geology and soils. Therefore, the impacts to geology and soils would be less than those for the Proposed Project. Impacts to geology and soils would be less than significant.

4.6.7 Alternatives

Alternative 1

Alternative 1 requires more trenching than the Proposed Project due to the greater length of the underground 66 kV subtransmission lines. Because there is more ground disturbance, there is more potential for adverse impacts to geology and soils. Therefore, the impacts to geology and soils would be more than those for the Proposed Project. However, impacts to geology and soils would be less than significant.

Alternative 2

Alternative 2 requires the installation of three TSPs with footings and 58 LDS poles. Alternative 2 does not require trenching for the overhead 66 kV subtransmission lines but does require excavation for pole installation. Therefore, the impacts to geology and soils would be similar to those for the Proposed Project. Impacts to geology and soils would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to geology and or soils.

4.6.8 References and Communications

California Geological Survey. 2005. Alquist-Priolo Earthquake Fault Zones. Accessed online October 2005. From: http://www.consrv.ca.gov/cgs/rghm/ap/index.htm.

City of Visalia. 2005. California Municipal Code. Retrieved October 2005 From: http://www.amlegal.com/library/ca/visalia/shtml.

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Soil Survey of Tulare County, California, Western Part. 1999. United States Department of Agriculture.

United States Geological Survey. 2005. Earthquake Hazards Program. Accessed online October 2005. From: http://www.usgs.gov.

4.7 HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential hazards associated with construction and operation of the Proposed Project, excluding the geological hazards discussed in Section 4.6, Geology and Soils, but including use of hazardous materials during construction, the likelihood of encountering historical contamination sites during grading, and fire hazards.

4.7.1 Environmental Setting

The substation site has been utilized for walnut production purposes since 1939. Based on prior known land use, there is no indication of hazardous material or waste along the subtransmission line route and substation site.

A Phase I Environmental Site Assessment was conducted on March 10, 2006 to identify recognized environmental conditions (RECs) at the substation site. A REC is defined by the American Society of Testing and Materials (ASTM) Standard E 1527-97 as: "The presence or likely presence of hazardous substances or petroleum products that indicate an existing release, past release or material threat of a release into the ground, groundwater, or surface water of the property."

No RECs or historical RECs were identified at the subject site. However, since the substation site and the immediately surrounding areas are currently and have historically been utilized for agricultural purposes, there is a potential for pesticides or metals to be present in soil and underlying groundwater.

4.7.2 Regulatory Setting

The Proposed Project would comply with all applicable laws, ordinances, regulations, and standards related to hazards and hazardous materials during and following construction. The current regulatory setting that applies to the Proposed Project is outlined below.

Federal

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III and Clean Air Act of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. The Act (codified in 40 CFR, § 68.110 et seq.) requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. Additionally, SARA identifies requirements for planning, reporting, and notification concerning hazardous materials.

Clean Water Act (CWA) - The Spill Prevention and Countermeasure Control (SPCC) plan was developed as one of the many requirements of the CWA. Requirements of

SPCCs are provided in Title 40, CFR, Part 112. SPCCs are intended to reduce the threat of spills of hydrocarbons to navigable waters of the United States.

State

Health and Safety Code Section 25500 (Waters Bill) - The California Health and Safety Code, Section 25500, et seq., and the regulations to the law found in Title 19 of the CCR, Section 2620, et seq., requires that local governments be responsible for regulating local facilities that store, handle, or use hazardous materials above specified quantities. Additionally, the law mandates that facilities that store these hazardous materials must prepare a Hazardous Materials Business Plan (HMBP). The HMBP is required to identify the facility's internal response requirements to accidental response and training. The law also required that the HMBP be submitted to the local administering agency. All spills from a facility must be reported to both the local administering agency and the Governor's Office of Emergency Services. The threshold quantities (TQ) for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure.

Health and Safety Code Section 25531 (La Follette Bill) - The La Follette Bill required the registration of, and regulates the handling of, acutely hazardous materials. This bill is found in the California Health and Safety Code, Section 25531, et seq. With some exceptions, California identified acutely hazardous materials are listed by the USEPA as extremely hazardous substances. A listing of the federal extremely hazardous substances are provided in Title III of SARA. Therefore, this State law overlaps or duplicates some of the requirements of SARA and the CWA. The California law requires that facilities, which handle, store, or use acutely hazardous materials above total planning quantities (TPQs) register the material with their local administrating agency.

Safe Drinking Water and Toxics Enforcement Act (Proposition 65) - Proposition 65 or the Safe Drinking Water and Toxics Enforcement Act regulates chemicals that cause cancer and/or affect reproduction. Users of regulated chemicals identified under this law are responsible for informing the public that could be exposed to releases of these materials from their facility. Additionally, the law is intended to prevent discharges of specified hazardous materials into drinking water sources. The law provides a listing of chemicals of concern, which is updated periodically. Proposition 65 is administered through California's Office of Environmental Health Hazard Assessment.

Local

The Uniform Fire Code (UFC), Article 80 - This article deals with hazardous materials issues of the UFC. The article provides local fire departments with the responsibility of enforcement requirements of the development of HMBP and submittal of a Hazardous Material Inventory Statement. The City of Visalia has adopted the UFC Article 80, which is incorporated into the City of Visalia Municipal Code Title 8 Chapter 8.32.

City of Visalia Municipal Code Title 8 Chapter 8.32. Hazardous Materials. This section of the code addresses scene management, notification requirements, and mitigation requirements for a hazardous materials release (City of Visalia, 2005).

4.7.3 Significance Criteria

The significance criteria for assessing the impacts to hazards and hazardous materials come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- 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;
- 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;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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.

4.7.4 Impact Analysis

Construction. Hazardous materials to be used during the construction of the Proposed Project include gasoline, diesel fuel, oil, and lubricants. There are no feasible alternatives to these materials for operation of construction vehicles and equipment and best management practices would be implemented during construction to reduce the potential for or exposure to accidental spills or fires involving the use of hazardous

materials. No acutely hazardous materials would be used or stored on-site during construction.

Due to the low volume and low toxicity of the hazardous materials that would be used during construction, the potential for environmental impacts from hazardous material incidents during construction is less than significant. The most likely incidents involving these hazardous materials are associated with minor spills or drips. Impacts from such incidents would be avoided by thoroughly cleaning up minor spills as soon as they occur. A site specific Construction SWPPP would be developed (see Section 4.8, Hydrology and Water Quality for more detail) and implemented to ensure quick response to minor spills and minimal impacts to the environment.

As required by Occupational Safety and Health Administration, construction personnel handling hazardous materials would be trained to understand the hazards associated with these materials and would be instructed in the proper methods for storing, handling, and using these hazardous materials. The onsite construction foreman would ensure that all on-site health and safety guidelines and regulations involving hazardous materials handling are followed during the construction phase of the Proposed Project.

In the event that contaminated soil is encountered during excavation activities at the substation site or along the subtransmission line route, the soil would be segregated, sampled, and tested to determine appropriate treatment options and disposal. If the soil is classified as hazardous (according to RCRA criteria) the soil would be properly profiled, manifested and transported to a Class I Landfill or other appropriate soil treatment or recycling facility.

Operation. Operation of the Proposed Project would not require the routine transport, use, or disposal of hazardous materials. The substation site is not included on a list of hazardous materials sites nor would operation of the substation impact operation of an airport or private airstrip. The substation would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan nor would it expose people or structures to wildland fires.

The proposed transformer banks contain mineral oil (a non-hazardous material) that could leak or spill if the transformers were damaged from a seismic event, fire or other unforeseen incident. To minimize potential impacts from spills, the design of the substation would provide containment and/or diversionary structures or equipment to prevent discharge of an oil spill as described in the SPCC requirements (40 CFR Part 112.1 through Part 112.7). An SPCC Plan would be prepared by SCE before any oil containing equipment is brought to the substation site. As a result, impacts to hazards and hazardous materials is less than significant.

4.7.5 Mitigation

Because the Proposed Project would not result in significant impacts to hazards or hazardous material, no mitigation measures are required.

4.7.6 Subtransmission Line Overhead Option

The Overhead Option uses similar hazardous materials as those used during construction of the Proposed Project. Operation of the overhead 66 kV subtransmission lines would not create additional hazards. Therefore, the impacts to hazards and hazardous materials would be similar to those for the Proposed Project. Impacts to hazards and hazardous materials would be less than significant.

4.7.7 Alternatives

Alternative 1

Alternative 1 uses similar hazardous materials as those used during construction and operation of the Proposed Project. Additionally, construction and operation of Alternative 1 would not create additional hazards. Therefore, the impacts to hazards and hazardous materials would be similar to those for the Proposed Project. Impacts to hazards and hazardous materials would be less than significant.

Alternative 2

Alternative 2 uses similar hazardous materials as those used during construction and operation of the Proposed Project. Additionally, construction and operation of Alternative 2 would not create additional hazards. Therefore, the impacts to hazards and hazardous materials would be similar to those for the Proposed Project. Impacts to hazards and hazardous materials would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to hazard or hazardous materials.

4.7.8 References and Communications

City of Visalia. 2005. California Municipal Code. Retrieved October 2005 From: http://www.amlegal.com/library/ca/visalia/shtml.

4.8 HYDROLOGY AND WATER QUALITY

This section describes the groundwater and surface water resources in the Project Area and describes the affected environment and regulatory setting. Potential impacts, proposed mitigation measures, and alternatives are also described in this section.

4.8.1 Environmental Setting

The Project Area is located in the Kaweah subbasin, part of the Tulare Lake Basin, in the San Joaquin Valley and under the jurisdiction of the Central Valley Regional Water Quality Control Board (CRWQCB). The Kaweah subbasin lies between the Kings groundwater subbasin to the north, the Tule groundwater subbasin to the south, crystalline bedrock of the Sierra Nevada foothills to the east, and the Kings River Conservation District to the west. The Kaweah subbasin generally comprises lands in the Kaweah Delta Water Conservation District. Major rivers and streams in the subbasin include the Kaweah and Saint John's Rivers. The Kaweah River is the primary source of recharge to the area. The Saint John's River is a distributary of the Kaweah River, located one mile north of the Project Area and runs in a northwest to southeast orientation (see Figure 4.8-1, Hydrology and FEMA Boundaries in the Project Area). Average annual precipitation ranges from approximately 7 to 13 inches, increasing eastward.

Groundwater

The City of Visalia is located on alluvial fan deposits of sand, silt, gravel and clay. These materials form groundwater aquifers as surface water seeps into the sand and gravel layers and flows along gradients created by layers of silt and clay. The aquifer beneath the City of Visalia serves as a municipal water source (City of Visalia, 1991).

According to the Department of Water Resources Groudwater Level Database, the depth to groundwater in State Well #18S25E18A001M, located approximately 1.25 miles northeast of the subject site was measured at the approximately 72 feet below ground surface on January 24, 2003. The depth to groundwater beneath the subject site is unknown (GeoTrans, Inc., 2006).

Surface Water

The City of Visalia's community waterway network includes natural and manmade channels. Natural streams include the Saint John's River, Mill Creek, Packwood Creek and Cameron Creek. Significant man-made channels include Wutchumna Ditch, Modoc Ditch, Evans Ditch and Persian Ditch. These waterways are intermittent and supplied by water released from Lake Kaweah. Historically, these waterways have been used for irrigation and flood protection including storm water runoff. In 1962, the threat of major flooding was significantly reduced by the completion of Terminus Dam and the formation of Lake Kaweah (City of Visalia, 1991).

The substation site is located approximately a mile south of Saint John's River and is buffered by the Modoc Flood Ditch, preventing flooding to the site. The Modoc Ditch drains from the Saint John's River to the west, crossing under Mooney Boulevard, north of the Proposed Project, and empties into an 80-acre basin northwest of the substation site and owned by Modoc Water. To the south, the Wutchumna Ditch lies approximately 0.22 miles away and serves the same purpose.

The Federal Emergency Management Agency (FEMA) maintains and updates insurance flood hazard maps for both public and private use (FEMA, 2005). The Flood Hazard Map for the Project Area was last updated in 1994. The Proposed Project would not be located in a special flood zone hazard area, indicating that it is unlikely that the Proposed Project would be impacted in the event of a 100 or 500 year flood (see Figure 4.8-1, Hydrology and FEMA Boundaries in the Project Area). The Project Area is located within the inundatation zone for Terminus Dam.

4.8.2 Regulatory Setting

Several federal, State and local laws regulate groundwater and surface water quality. This section describes the relevance of these statutes to the Proposed Project.

Federal

Clean Water Act, Section 404; 33 USC §1251-1376; 30 CFR §330.5(1)(26). This law regulates restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. These waters include the "Waters of the United States", which means all navigable waters and tributaries thereto and adjacent wetlands. Any activity that results in the deposit of dredge or fill material within the "Ordinary High Water Mark" of "Waters of the US" usually requires a permit, even if the area is dry at the time the activity takes place. Permits issued by the USACOE would require the State to issue a certificate pursuant to Clean Water Act Section 401 that the proposed Project complies with State water quality standards.

Additionally, the CWA established national water-quality goals. The objective of the CWA is to eliminate pollution in the nation's waters by imposing uniform standards on all municipal and industrial wastewater sources based on the best available technology. The CWA created a system with regard to permits that specified minimum standards for the quality of discharged waters. It requires states to establish standards specific to water bodies and designate the types of pollutants to be regulated, including total suspended solids and oils. California has been authorized to implement this portion of the CWA, which created programs for storm water and construction discharge permits that may be applicable to the Proposed Project.

State

Porter-Cologne Water Quality Act – Water Code Section 13000-13002. The Porter-Cologne Water Quality Control Act (Porter-Cologne) provides a comprehensive water quality management system for the protection of California waters. Porter-Cologne

designates the State Water Resources Control Board (SWRCB) as the ultimate authority over State water rights and water quality policy, and also establishes nine Regional Water Quality Control Boards (RWQCB) to oversee water quality on a day-to-day basis at the local/regional level. The SWRCB and RWQCBs have the responsibility of granting permits for certain point-source discharges, and for construction and storm water runoff, and either waste discharge requirements or conditioned water quality certification for other discharges.

The SWRCB and RWQCBs are responsible for developing and implementing regional basin plans to regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Basin Plans are prepared by the RWQCBs to establish water quality standards for both surface and groundwater bodies within their respective jurisdictions. Specifically, Basin Plans designate beneficial uses for surface and groundwater, set narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses, and describe implementation programs to protect all waters in the region.

The RWQCBs regulate discharges in waters within their respective jurisdictions through the administration of National Pollutant Discharge Elimination Systems (NPDES) permits, waste discharge requirements, and water quality certification. Water quality certification is administered by the RWQCBs to ensure that projects with federal permits do not violate State water quality standards.

State General Storm Water Permit. In response to CWA requirements, the State of California has adopted a general storm water permit covering nonpoint source discharges from certain industrial facilities and from construction sites involving more than one acre. The General Permit requires preparation of a storm water pollution prevention plan and implementation of best management practices to reduce the potential for non-storm water pollutants (chemicals and sediment) to be discharged from the construction site to waters of the State.

California Fish and Game Code, Sections 1600-1603. This statute regulates activities that would "substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of a natural watercourse" that supports fish and wildlife resources. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. The CDFG's jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. A Streambed Alteration Agreement must be obtained for any Project that would result in adverse impacts to a river, stream, or lake.

Figure 4.8-1 Hydrology and FEMA Boundaries in the Project Area

Local

Water Quality Control Plan: Tulare Lake Basin Plan. The Tulare Lake Basin Plan (State of California, 2004) incorporates by reference all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Specifically, the Plan designates beneficial uses for surface and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses, and describes implementation programs to protect all waters in the region.

City of Visalia Storm Drainage Master Plan. The 1989 Storm Drainage Master Plan cited the facilities necessary to accommodate 'build-out' inside the boundaries of the 1976 Land Use and Circulation Element's Urban Improvement Boundary. The master plan recommends the use of detention and retention basins and creeks and ditches for storm water runoff.

4.8.3 Significance Criteria

The significance criteria for assessing the impacts to hydrology and water quality come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute to runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;

- Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- 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; or

- Inundation by seiche, tsunami, or mudflow.

4.8.4 Impact Analysis

Construction. The agency for water quality issues in the region of the Proposed Project is the CRWQCB. For administering the NPDES, the CRWQCB requires a General Construction Activity Storm Water Permit for storm water discharges associated with any construction activity including clearing, grading, excavation reconstruction and dredge and fill activities that results in the disturbance of at least one acre of total land area. As the Proposed Project would disturb more than one acre, a Storm Water Pollution Prevention Plan would be required for compliance.

Construction of the Proposed Project would not impact groundwater resources. There are no streams or rivers that cross, or come into contact with the substation site, thus no stream or river would be altered in a manner that results in substantial erosion or siltation, on or off site, nor would storm water be directed into such resources. A retention basin would be constructed on the site in order to impound runoff and reduce erosion.

Construction impacts for the subtransmission lines would generally be the same as described above for the substation site. Storm water erosion control measures would be implemented for all areas cleared for construction of the Proposed Project. In addition, a notice of intent to comply with the Storm Water General Permit requirements for Construction activities would be submitted to the Central Valley Regional Water Quality Control Board and a SWPPP prepared and implemented to ensure consistency standards and discharge requirements. All activities would be subject to storm water control requirements defined in the NPDES permit and SWPPP.

No project components would be placed within the 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation maps. The City of Visalia, General Plan, Land Use Element Update (City of Visalia, 1994) uses FEMA Flood Hazard Boundaries to evaluate flood potential in the City of Visalia.

Operation. Once in operation, the substation would comply with all of the CRWQCB water quality standards and/or drainage discharge requirements. Runoff volumes are not forecasted to be substantial; and therefore, would not exceed the capacity of existing

or planned storm water drainage systems. An on-site retention basin would be constructed to minimize runoff from the Proposed Project. Water from the City of Visalia water system would be used for landscape irrigation. This water usage would be minimal and therefore, is not considered a significant impact. No groundwater or surface water resources would be impacted nor would any subsequent structures be placed on site or result in activities that could adversely impact or be impacted by site or neighboring hydrology.

The entire City of Visalia, including the Project Area, is located within the inundation zone for Terminus Dam. Visalia is located approximately downstream (west) of this dam on a broad alluvial plain. The Proposed Project site is on the western side of the city, about 17 miles from the dam. The probability of dam failure resulting from a large local earthquake is relatively low. Historically, the Project Area has not experienced major seismic activity generated locally. The nearest major active faults are discussed in Section 4.6, Geology and Soils. In the unlikely event of a dam breach or failure, floodwater from an uncontrolled release would spread laterally across the Central Valley, and losing energy as it travels westward over the broad alluvial plain toward dry Tulare Lake. Buildings, walls, major roads and drainage structures within Visalia would also intercept and divert potential floodwaters. Also, the site elevation and perimeter wall would provide some additional flood protection. As such, any flooding at the Proposed Project site would be minimal and unlikely to cause major damage.

Since the probability of a dam breach or failure is relatively low, and potential for major damage to the substation is unlikely even if an uncontrolled release occurred, impacts associated with inundation from Terminus Dam are less than significant.

Once operational, the substation would be periodically maintained. However, these activities would not impact hydrologic resources within or adjacent to the 66 kV corridor.

As a result, impacts to hydrology and water quality would be less than significant.

4.8.5 Mitigation

Because the Proposed Project would not result in significant impacts to hydrology and water quality, no mitigation measures are required.

4.8.6 Subtransmission Line Overhead Option

The Overhead Option does not require trenching for the overhead 66 kV subtransmission lines. Because there is less ground disturbance, there is less potential for adverse impacts to water quality, drainage patterns or storm water runoff. Therefore, the impacts to hydrology and water quality would be less than those for the Proposed Project. Impacts to hydrology and water quality would remain less than significant.

4.8.7 Alternatives

Alternative 1

Alternative 1 requires more trenching than the Proposed Project due to the greater length of the underground 66 kV subtransmission lines. Because there is more ground disturbance, there is more potential for adverse impacts to water quality, drainage patterns or storm water runoff. Therefore, the impacts to hydrology and water quality would be more than those for the Proposed Project. However, impacts to hydrology and water quality would remain less than significant.

Alternative 2

Alternative 2 requires the installation of three TSPs with footings and 58 LDS poles. Alternative 2 does not require trenching for the overhead 66 kV subtransmission lines but does require excavation for pole installation. However, the potential for adverse impacts to water quality, drainage patterns or storm water runoff resulting from the ground disturbance would be comparable to the Proposed Project. Therefore, the impacts to hydrology and water quality would be similar to those for the Proposed Project. Impacts to hydrology and water quality would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to hydrology or water quality.

4.8.8 References and Communications

California Department of Water Resources (CDWR). 1980. Bulletin 118. California's Groundwater: Tulare Lake Hydrologic Region and San Joaquin Valley Groundwater Basin. http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-22.11.pdf

City of Visalia. 2005. Bob Buss, GIS Department. Personal Communication Sept. 27, 2005 via e-mail regarding 100 and 500 year flood zones.

Federal Emergency Management Agency (FEMA). 2005. Flood Hazard Maps. From: website. http://store.msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1

City of Visalia 1994. General Plan, Land Use Element.

GeoTrans, Inc. 2006. Phase I Environmental Site Assessment Southern California Edison Visalia Walnut Groves, Visalia, CA. Report prepared March 10, 2006.

State of California. 2004. Water Quality Control Plan for the Tulare Lake Basin Second Edition, Central Valley Regional Water Quality Control Board, Central Valley Region.

4.9 LAND USE AND PLANNING

This section discusses the existing land use within the vicinity of the Proposed Project, the Proposed Project's consistency with associated land use policies and regulations, and the potential impacts to existing land use from the Proposed Project. Although projects to maintain electrical facilities are generally exempt from local land use and zoning regulations, CPUC General Order No. 131-D, Section III. C requires "the utility to communicate with, and obtain the input of, local authorities regarding land use matters and obtain any non-discretionary local permits". Even though the Proposed Project is exempt from local land use requirements, SCE has considered local and State land-use plans as part of the current environmental review and Proposed Project design process.

4.9.1 Environmental Setting

The City of Visalia incorporates two levels of planning into their long-term development strategy. These include the Tulare County General Plan (Tulare County, 2001) and City of Visalia General Plan (City of Visalia, 1996). The Tulare County General Plan provides broad policies and objectives to guide development within the cities, and Specific Plans that provide detailed policies and site development standards for planning areas. Those general and specific plan elements pertaining to the Project Area are defined below. In addition, agency jurisdictional boundaries, local and regional plan boundaries, and zoning designations described in this section are shown on Figure 4.9-1, City of Visalia General Plan Land Use Designations for the Project Area and Figure 4.9-2, City of Visalia Zoning Designations in the Project Area. The City of Visalia General Plan is a long-range guide for attaining the City's goals within its ultimate service area and accommodating its population to the year 2020. It too has specific plans which regulate development in specific geographic areas of the community.

The City of Visalia is located in the delta of the Kaweah River. This location, at the base of the Sierra Nevada, created good water and soil conditions, optimal for agricultural use. The City of Visalia has been shaped by both rural and urban development. Agriculture, since the late 1800s, has been the predominant land use around City of Visalia, while urban development has been characterized by gradual and steady growth around the City of Visalia's downtown area.

The substation site is located north of Riggin Avenue and east of Mooney Boulevard. The future Ranch Circle Drive off of Mooney Boulevard would serve as the access road in and out of the substation. European walnut trees are currently growing on the substation site and the current land use is agriculture. Several areas of residential housing and businesses are located in the area, primarily south of Riggin Avenue. Existing land uses for the Project Area are shown on Figure 4.9-3, Existing Land Uses for the Project Area.

The substation site is zoned CSO (Shopping/Office Commercial). The zoning designation to the immediate west and south of the Proposed Project is CSO. The immediate north and east of the Proposed Project is designated low density residential.

Figure 4.9-1 City of Visalia General Plan Land Use Designations for the Project Area

Figure 4.9-2 City of Visalia Zoning Designations in the Project Area

Figure 4.9-3 Existing Land Uses in the Project Area

The City of Visalia Planning Commission has approved a tentative tract map to the east of the substation site for 54 single-family lots. The parcel on the southwest corner of Riggin Avenue and Mooney Boulevard is currently being developed as multi-family residential (City of Visalia, 2006).

4.9.2 Regulatory Setting

Federal

There are no applicable federal regulations regarding land use for the Proposed Project.

State

CPUC General Order No. 131-D applies to this Project.

Local

Although this Proposed Project is exempt from local land use and zoning regulations because SCE is complying with CPUC regulations governing transmission lines, CPUC General Order No. 131-D, Section III. C requires "the utility to communicate with, and obtain the input of, local authorities regarding land use matters and obtain any non-discretionary local permits". SCE has considered local and State land use plans as part of the current environmental review process.

Tulare County General Plan. The planning area of the Tulare County General Plan encompasses the entire county. Decision makers in the County would use the General Plan to provide direction when making future land use and public service decisions. All community plans, specific plans, subdivisions, public works projects, and zoning decisions must be consistent with the County's General Plan (Tulare County, 2005).

The General Plan was adopted by Tulare County in 1991 and is currently being revised. A number of Specific Plans and Community Plans have also been adopted and are not under the current revision process but would be reviewed for consistency with the newly adopted General Plan.

City of Visalia General Plan. The City of Visalia General Plan includes goals and objectives that aim to preserve and enhance the City of Visalia's unique character (City of Visalia, 1996).

City of Visalia Municipal Code. According to Ordinance 9717 § 2 (part) Ch. 17.18 of the City of Visalia Municipal Codes, restrictions are placed on the types of development permitted within a planned commercial zone in order to allow for growth while still preserving a desirable characteristic and atmosphere (City of Visalia, 2005a).

4.9.3 Significance Criteria

The significance criteria for assessing the impacts to land use and planning come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Physically divide an established community;
- Conflict with an applicable environmental plan, policy, or regulation of an agency with jurisdiction over the project (including, 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; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.9.4 Impact Analysis

Construction. Construction of the substation would not cause the physical division of an established community or conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project.

Operation. The substation would be located on a site zoned CSO. This zoning designation includes electric distribution substations and communication equipment buildings as a conditional use, and is consistent with the operational activities of the substation (Ord. 9717 § 2 (part) Ch. 17.18 City of Visalia Municipal Codes) (City of Visalia, 2005a).

The zoning designation to the immediate west and south of the Proposed Project is CSO. The immediate north and east of the Proposed Project is designated low density residential, but there is currently no residential development in this area. As a result, the Proposed Project substation use would not conflict with adjacent existing land uses, and operation of the Proposed Project would not divide an existing community. Therefore, impacts to land use and planning would be less than significant.

4.9.5 Mitigation

Because the Proposed Project would not result in significant impacts to land use and planning, no mitigation measures are required.

4.9.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. Therefore, impacts to land use and planning would be the same as those for the Proposed Project. Impacts to land use and planning would be less than significant.

4.9.7 Alternatives

Alternative 1

The Alternative 1 substation site is zoned (R-M-2) multi-family residential and is currently used for walnut orchards. According to the City of Visalia Municipal Code 17.16.040 this zoning provides for the conditional use of electrical distribution substations. Lands to the west and south are currently used for walnut orchards and the land immediately to the north is a storm water retention pond. Residential uses are located immediately east of the substation site (across Leila Street). Because there are existing residential uses near the substation site, there is more potential for adverse impacts to land use and planning. Therefore, the impacts to land use and planning would be more than those for the Proposed Project. However, impacts to land use and planning would remain less than significant.

Alternative 2

The Alternative 2 substation site is zoned AE-40 (Exclusive Agriculture - 40 acre minimum) and is currently used for walnut orchards. According to Tulare County, this zoning provides for the conditional use of electrical distribution substations, the same as for the Proposed Project substation site. (Tulare County, 2006) In addition, all surrounding lands are currently used for agriculture. Hence, Alternative 2 would not physically divide an established community. Therefore, the impacts to land use and planning would be similar to those for the Proposed Project. Impacts to land use and planning would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to land use or planning.

4.9.8 References and Communications

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City Of Visalia. 2005b Brian Cline, Tulare County Assessor. Zoning and Land Use. Personal Communication Oct. 17, 2005 2:00 p.m.

City Of Visalia.2005c Derrick Lord, City of Visalia GIS Department. Zoning and Land Use. Personal Communication Oct 17, 2005 via e-mail.

City Of Visalia. 1996. City of Visalia General Plan, Land Use Element Retrieved from: http://www.ci.visalia.ca.us/community_development/cd-new.htm

Tulare County. 2001. Tulare County General Plan update, General Plan Policy Summary. Prepared by Quad Knopf, December 2001. From: http://www.westplanning.com/docs/tulare/gp_issue_summary.htm.

Tulare County. 2006. Resource Management Department. Personal communication with Andrew Pacheco on May 2, 2006 regarding AE-40 zoning.

City of Visalia 2006. Planning Commission Meeting February 27 – Approval of Tentative Subdivision Map No. 5510 located on the north side of Riggin Avenue and 550 feet east of Mooney Blvd. (APN:078-120-017)

4.10 MINERAL RESOURCES

This section describes the mineral resources in the Project Area and describes the affected environment and regulatory setting. Potential impacts, proposed mitigation measures, and alternatives are also described.

4.10.1 Environmental Setting

Aggregate (sand, gravel, and crushed stone) comprises the most economically significant mineral resources in Tulare County. Aggregate is primarily used as construction material in buildings and roads. Two main sources of aggregate in Tulare County are alluvial deposits (river beds and floodplains) and hard rock quarries. There are currently twenty-eight active aggregate mines in Tulare County, most of which are located along rivers at the base of the Sierra foothills. There are no active aggregate mines in the Project Area (Tulare County, 2006).

Other minerals with possible commercial value in Tulare County include tungsten (which has been mined to some extent), chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present, but not in commercial quantities, include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur. There are no commercial mineral deposits in the Project Area (Tulare County, 2006).

In Tulare County, there are two oil fields (Deer Creek and North Deer Creek), and one gas field (Trico). The existing oil and gas production fields in Tulare County are located outside of the Project Area (Tulare County, 2004).

4.10.2 Regulatory Setting

Federal

Surface Mining Control and Reclamation Act of 1977. This Act establishes a program for regulating surface coal mining and reclamation activities. It establishes mandatory uniform standards for these activities on state and federal lands, including a requirement that adverse impacts on fish, wildlife and related environmental values be minimized. The Act creates an Abandoned Mine Reclamation Fund for use in reclaiming and restoring land and water resources adversely affected by coal mining practices.

State

The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. SMARA is administered jointly at the State level by the Department of Conservation's Office of Mine Reclamation and the State Mining and Geology Board. The Tulare County Resource

Management Agency has jurisdiction for processing surface mine reclamation plan applications in the county.

California Code of Regulations Title 14, Division 2, Chapter 2 (Implementation of the California Environmental Quality Act of 1970) and Chapter 4 (Development, Regulation, and Conservation of Oil and Gas Resources).

California Laws for Conservation of Petroleum and Gas Division 3 and several chapters of the Public Resources Code govern the regulation of oil and gas operations.

Local

Tulare County Zoning Ordinance, Surface Mining and Reclamation, Ordinance Code Part VII, Chapter 25 (Tulare County, 2006).

Tulare County General Plan (Tulare County, 2004), Environmental Resources Management Element includes the managed production of resources including mineral and energy resources.

4.10.3 Significance Criteria

The significance criteria for assessing the impacts to mineral resources come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

- Result in loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.10.4 Impact Analysis

The Proposed Project is not located on land delineated as a locally important mineral resource recovery site in the General Plan for Tulare County. The Proposed Project is also not located on or near known oil and gas resources. Therefore, no impact to mineral resources would occur.

4.10.5 Mitigation

No impact to mineral resources would occur; therefore, no mitigation measures are necessary.

4.10.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. Therefore, the impacts to mineral resources would be the same as those for the Proposed Project. No impact to mineral resources would occur.

4.10.7 Alternatives

Alternative 1

Alternative 1 is not located on land delineated as a locally important mineral resource recovery site in either the General Plan for the City of Visalia or the General Plan for Tulare County. Therefore, the impacts to mineral resources would be the same as those for the Proposed Project. No impact to mineral resources would occur.

Alternative 2

Alternative 2 is not located on land delineated as a locally important mineral resource recovery site in the General Plan for Tulare County. Therefore, the impacts to mineral resources would be the same as those for the Proposed Project. No impact to mineral resources would occur.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impact to mineral resources.

4.10.8 References and Communications

Tulare County. 2004. General Plan Update Natural Resources Element (October 2004 Draft)

Resource Management Agency County Wide Planning Branch. 2006. Tulare County Zoning Ordinance Retrieved from: http://www.co.tulare.ca.us/government/rma/countywide/mineral.asp

4.11 NOISE

This section describes the noise resources in the Project Area and discusses the affected environment and regulatory setting for noise. Potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.11.1 Environmental Setting

General Noise Information

Noise is defined as unwanted or objectionable sound. Noise is characterized using three variables: magnitude, frequency, and duration.

The magnitude of variations in air pressure associated with sound wave results in the quality commonly referred to as loudness. Customarily, sound magnitude is expressed in decibels (dB) which are logarithmic (power of 10) ratios comparing measured sound pressures to a reference pressure. An increase of 10 dB equals a 10-fold increase in the air pressure differential between the two sounds; however, the human ear senses a doubling of the noise level. Thus, a noise of 70 dB is approximately twice as loud as 60 dB and four times as loud as 50 dB.

The frequency of a sound refers to the number of times per second the object producing the sound vibrates. The unit of measurement of frequency is Hertz (Hz) (defined as one vibration per second). People hear most readily at frequencies between 1,000 - 6,000 Hz. Sounds above 10,000 Hz are much more difficult to hear as is sounds with frequencies below 100 Hz (USEPA, 1974). People generally find higher pitched sounds to be more annoying than lower pitched sounds. Most of the sounds we hear in the environment do not consist of a single frequency but rather a broad band of frequencies with each differing in sound level.

Noise is also characterized by the duration of the sound. Noise induced hearing loss, for example is directly related to magnitude, frequency content, and duration of noise exposure. Annoyance due to environmental noise is also associated with how often noise is present and how long noise persists.

The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies that comprise a sound in accordance with a weighting that reflects the fact that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called A-weighting and the decibel level reported as such is called A-weighted sound level (dBA).

Project Area

The substation site is located north of Riggin Avenue and east of Mooney Boulevard. The future Ranch Circle Drive off of Mooney Boulevard would serve as the access road in and out of the substation. The City of Visalia Planning Commission has approved a

tentative tract map for 54 single-family lots on the parcel to the east of the substation site. The parcel on the southwest corner of Riggin Avenue and Mooney Boulevard is currently being developed as multi-family residences.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Residences, hospitals, schools, guest lodging, and libraries are most sensitive to noise intrusion, and therefore have more stringent noise exposure targets. The residences along Riggin Avenue are the closest existing receptors to the Proposed Project.

Results of Background Noise Survey

An initial noise survey was conducted on October 12 and 13, 2005, and a second noise survey was conducted on the substation site on March 20 and 21, 2006 (Veneklasen Associates, Inc., 2006). The surveys were completed to determine both daytime and nighttime existing (pre-construction) noise levels in the vicinity of the substation site. Data was collected at seven points along the property boundary of the substation site. Sources of noise contributing to daytime sound levels include traffic on both Riggin Road and Mooney Boulevard, development construction activities, and community activities, and animals. During the noise survey, a 24-hour drilling operation was taking place approximately one-quarter mile from the location of the noise measurements. Table 4.11-1, Existing Noise Levels at the Substation Site, illustrates the noise measurements recorded at each location to demonstrate existing noise conditions.

4.11.2 Regulatory Setting

The Proposed Project would comply with all applicable laws, ordinances, regulations, and standards related to noise quality during and following construction. Applicable laws, ordinances, regulations, and standards, which are summarized below, are not expected to change prior to the completion of this Proposed Project.

Federal

In 1974, USEPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. This document provides information for state and local governments to use in developing their own ambient noise standards. USEPA determined that a day-night sound level of 55 dBA protects the public from indoor and outdoor activity interference.

The USEPA, the Federal Aviation Administration, the Federal Highway Administration and the USDOT have developed guidelines for noise. Under the authority of the Noise Control Act of 1972, the USEPA established noise emission criteria and testing methods, published at 40 CFR Part 204, which apply to interstate rail carriers, and some construction and transportation equipment (portable air compressors, and medium- and heavy-duty trucks).

Table 4.11-1 Existing Noise Levels at the Substation Site

Measurement Location	Daytime Noise Level (dBA)	Nighttime Noise Level (dBA)
1 – Centered at the midpoint of the northern boundary of the substation site directly north of the proposed transformer locations.	54.4	47.2
2 – Centered at the midpoint of the western boundary of the substation site directly west of the proposed transformer locations.	54.4	47.2
3 – Centered at the midpoint of the southern boundary of the substation site directly south of the proposed transformer locations.	54.4	47.2
4 – Centered at the midpoint of the eastern boundary of the substation site directly east of the proposed transformer locations.	54.4	47.2
R-1 – Residential area immediately southeast of Measurement Location 4.	54.4	47.2
R-2 – Residential area at the northwest corner of the substation footprint west of Measurement Location 1 and north of Measurement Location 2.	54.4	47.2
R/A – Residential area southeast of the site along Dayton Street south of Riggin Avenue.	51.7	38.8

Source: Veneklasen Associates, 2006

State

No State noise codes apply to the Proposed Project.

Local

The Ordinance Code of Tulare County does not regulate noise from construction or operation of a substation (Tulare County, 2005a).

The Tulare County General Plan is currently in the process of being updated. The updated General Plan will include a Noise Element (Tulare County, 2005b). The noise exposure information developed for the Noise Element will be used to establish baseline

levels for use in the development and enforcement of a County noise control ordinance if deemed appropriate. The County noise control ordinance will be used to address noise levels generated by local industrial, commercial, agricultural and residential uses that are not currently regulated by federal or State noise level standards.

The updated Tulare County General Plan Noise Element includes two goal statements as listed below (Tulare County, 2005b):

(1) Protect the citizens of Tulare County from the harmful effects of exposure to excessive noise; and

(2) Protect the economic base of Tulare County by preventing the encroachment of incompatible land uses near known noise-producing industries, railroads, airports and other sources.

The City of Visalia Municipal Code includes provisions for regulating noise for both the construction and operation of the Proposed Project. Title 8 Health and Safety, Chapter 8.36.070 Noise, Section (I) addresses noise limits from the operation of substations by stating, "Notwithstanding the provisions of Sections 8.36.040 and 8.36.050, noise sources associated with the operation of electrical substations shall not exceed fifty (50) dBA when measured as provided in Section 8.36.030. (Prior code § 5090.6)" (City of Visalia, 2005).

Title 8 Health and Safety, Chapter 8.36.050 Exterior Noise Standards-Mobile Noise Sources Prohibition Against Use states, "It is unlawful to operate any of the below-listed devices, appliances, equipment or vehicles on public or private property abutting noise sensitive land uses between the weekday hours of seven pm and six am, and between the weekend hours of seven pm and nine am. Construction equipment including jackhammers, portable generators, pneumatic equipment, trenchers, or other such equipment, except for emergency repair purposes as provided in Section 8.36.070."

The City of Visalia General Plan, Noise Element (City of Visalia, 1995a) includes three goal statements as listed below:

(1) Protect citizens from the harmful effects of exposure to excessive noise;

(2) Protect the City's economic base by preventing the encroachment of incompatible land uses near known noise producing industries, railroads, airports, and other sources; and

(3) Protect existing and future noise-sensitive land uses from encroachment of and exposure to excessive levels of noise.

The Land Use Element of the City of Visalia General Plan (City of Visalia, 1995b) also contains policies or objectives that address noise issues within the city. The goals of the Land Use Element most pertinent to the Project are listed below:

- Identify residential areas adjacent to roadways and other noise sources which require setbacks and/or special sound-proofing to reduce negative noise-related impacts;

- Develop design measures to buffer residential development from non-residential land uses; and

- Require special site development standards for proposed non-residential or more intensive land uses adjacent to established residential areas to minimize negative impacts on abutting properties.

Appendix C of the City of Visalia General Plan Noise Element (City of Visalia, 1995a), Chapter 5.0, Standard Noise Reduction Methods, requires implementation noise-reducing measures such as setbacks, walls and barriers, landscaping, building materials, and site and building design in order to reduce noise levels in noise sensitive land use areas.

The City of Visalia General Plan Noise Element does not specify mitigation requirements specifically for noise reduction during construction activities.

4.11.3 Significance Criteria

The significance criteria for assessing the impacts to noise levels come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- 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;

- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- 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; or

- For a project within the vicinity of a private airstrip, where the project would expose people residing or working in the project area to excessive noise levels.

4.11.4 Impact Analysis

Construction-Related Impacts

Equipment operation is the primary noise source associated with construction activities for the substation, underground subtransmission line, and telecommunication installation. Noise levels are dependent on several factors including the number of machines operating within an area at a given time and the distance between the source(s) and receptors. Noise generated from construction activities ranges between 80 and 90 dBA at a reference distance of 50 feet from an active construction area, as illustrated by Table 4.11-2, Typical Noise Levels at Construction Sites (Bolt, 1971). The sound levels would be attenuated with distance from the source by a variety of mechanisms, but the most significant of these mechanisms is the dispersion of acoustical energy with distance from the source (attenuation by divergence). In general, this mechanism results in a 6 dBA decrease in the sound level with every doubling of distance from the source.

The nearest residential properties are located approximately 300 feet from the substation site to the south across Riggin Avenue. At this distance, noise levels from the Proposed Project construction activities would be attenuated to approximately 65 to 75 dBA. However, obstacles such as trees, existing buildings, and construction equipment in the path of the sound waves would attenuate the levels to an even lower dBA. Other activities that create sound levels similar to the noise level expected from construction include conversation speech (60 to 75 dBA), passenger car at 50 feet (69 dBA), and vacuum cleaner in a private home at 10 feet (69 dBA) (Industrial Acoustics Company, 1989). Existing ambient noise levels in this area are 54 dBA during the daytime. Therefore, noise levels in nearby residential areas would increase temporarily during construction, but not significantly. The increased noise is also not considered significant due to the short-term and temporary nature of the construction activities.

Construction of the substation would adhere to the noise ordinance provisions set by the City of Visalia. The City of Visalia noise regulations permit construction activity abutting sensitive noise receptors between the weekday hours of 6:00 am and 7:00 pm, and between the weekend hours of 9:00 am and 7:00 pm. There are currently no sensitive noise receptors abutting the substation site. It may be necessary, particularly during cut over activities, to work during nighttime hours when loads on the lines are reduced. Should the need arise to work outside the time permitted in the aforementioned local ordinance, SCE would comply with variance procedures required by the County of Tulare and/or the City of Visalia.

Construction to support residential development is currently being conducted in the Project Area, and the construction of the substation site and the required subtransmission line is not expected to result in a perceived increase in noise levels over the current residential construction noise levels.

Table 4.11-2 Typical Noise Levels at Construction Sites

Construction Phase	Average Noise Level at 50 Feet	
	Minimum Required Off-road Equipment	All Pertinent Equipment On-site
Clearing	84 dBA	84 dBA
Excavation	78 dBA	88 dBA
Paving	78 dBA	79 dBA

Source: Bolt, Beranek and Newman, 1971

Operational-Related Impacts

The substation includes the operation of two 28 MVA 66/12 kV transformers. The substation site would be contained within a perimeter wall and a landscaped buffer to the property line. The most conservative estimate for the noise level generated by the transformers with the fans operating is 66 dBA at three feet away from the equipment. Noise levels are estimated to be 3 dBA approximately 30 feet from the nearest property boundary that surrounds a residential structure (Veneklasen Associates, 2006). The estimated operating equipment noise levels indicate that the operation of the substation would result in noise levels below those listed in the City of Visalia Municipal Code. The substation site is approximately 300 feet from the nearest residence, and as such, noise levels are expected to be even less.

Appendix C of the City of Visalia General Plan Noise Element (City of Visalia, 1995a), Chapter 5.0, Standard Noise Reduction Methods, requires implementation noise-reducing measures such as setbacks, walls and barriers, landscaping, building materials, and site and building design in order to reduce noise levels in noise sensitive land use areas. The Project is not located within a noise sensitive land use area; however, as mentioned above, the substation would be setback from the property boundary and the equipment would be surrounded by a perimeter wall, minus the entrance gate. Table 4.11-3, Wall Height and Noise Reduction, present the estimated noise reduction from the use of setbacks and walls based on information in the City of Visalia General Plan Noise Element.

There are no sources of noise associated with the operation of underground subtransmission lines, and therefore no noise impacts are anticipated to occur. As a result, impacts to noise would be less than significant.

Table 4.11-3 Wall Height and Noise Reduction

Wall Height (feet)	Noise Attenuation (dBA) Percent of Wall Open	
	5%	**10%**
5	5	3
6	7	4
7	10	8
8	**12**	**10**
9	14	12
10	15	13

Source: City of Visalia, 1995a

Note: (1) These attenuation values assume a setback between 15 and 50 feet.
(2) The noise reduction achieved by a sound wall is directly proportional to the height of the perimeter wall and the amount of surface area enclosed.

4.11.5 Mitigation

Because the Proposed Project would result in less than significant impacts to noise levels, no mitigation measures are required.

4.11.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. As such, the Overhead Option would result in similar impacts to existing noise levels for construction and operation as for the Proposed Project. Therefore, the impacts to the noise levels would be similar to those for the Proposed Project. Impacts to noise levels would be less than significant.

4.11.7 Alternatives

Alternative 1

The residences east of the Alternative 1 substation site are the closest noise receptors to construction and operation of Alternative 1. However, Alternative 1 would be subject to the same local noise ordinances during construction as the Proposed Project. Similarly, noise from the operation of the substation is estimated to be less than 50 dBA

at a distance of 20 feet from the equipment solely from the use of a setback. The perimeter wall surrounding the substation equipment would attenuate the operational noise to an even lower level. As a result, Alternative 1 would result in similar impacts to existing noise levels for construction and operation as for the Proposed Project. Therefore, the impacts to the noise levels would be similar to those for the Proposed Project. Impacts to noise levels would be less than significant.

Alternative 2

There are no sensitive noise receptors in the vicinity of Alternative 2. As a result, Alternative 2 would result in similar impacts to existing noise levels for construction equipment and construction duration as for the Proposed Project. Therefore, the impacts to the noise levels would be similar to those for the Proposed Project. Impacts to noise levels would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impact to noise levels.

4.11.8 References and Communications

Bolt, Beranek and Newman. 1971. "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the U.S. Environmental Protection Agency. 1971.

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City of Visalia. 1995a. Noise Element to the General Plan, November 1995. Retrieved from: http://www.ci.visalia.ca.us/

City of Visalia. 1995b. Land Use Element to the General Plan, November 1995. Retrieved from: http://www.ci.visalia.ca.us/

Tulare County. 2005a. Ordinance Code Retrieved from. http://www.co.tulare.ca.us/government/board/ordinance_code.asp

Tulare County. 2005b. General Plan Noise Element Update. Retrieved from http://www.westplanning.com/docs/tulare/index.htm

United States Environmental Protection Agency (USEPA). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Office of Noise Abatement and Control, Pub. 550/9-74-004

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Industrial Acoustics Company. 1989. *Noise Control Reference Handbook.*

4.12 POPULATION AND HOUSING

This section describes the population and housing in the Project Area and discusses the affected environment and regulatory setting for population and housing. Potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.12.1 Environmental Setting

The City of Visalia has added residents to its population at a rapid rate since its founding in 1852. The population of the City of Visalia grew slowly but steadily throughout the early half of the 20th Century with more rapid growth starting in the 1960s. Table 4.12-1, Comparison of Compound Annual Growth Rate lists Visalia's growth trend since 1970. Much of Visalia's urban development has revolved around what is now the City's downtown area. The Central Business District, in the heart of downtown, is the traditional retail, medical and professional center.

Table 4.12-1 Comparison of Compound Annual Growth Rate

Rate of Growth			
Year	**City of Visalia**	**Tulare County**	**California**
1970 – 1990	5.12%	2.55%	2.01%
1990 – 1995	3.34%	2.30%	1.23%
1995 – 2000	0.88%	1.05%	1.46%
2000 – 2005	3.38%	2.45%	1.65%

Source: CDF, 2006

The California Department of Finance issued its 2005-2006 California Annual Growth Report, reporting that Tulare County was one of the Top 10 Fastest Growing Counties in the State with a growth rate of 2.2 percent. Visalia's annual growth rate was 2.9 percent and the population increased from 108,042 in 2005 to 111,168 in 2006.

4.12.2 Regulatory Setting

Federal

There are no federal policies regarding population and housing.

State

There are no State goals, objectives, or policies regarding population and housing.

Local

There are no local policies or regulations regarding population and housing.

4.12.3 Significance Criteria

The significance criteria for assessing the impacts to population and housing come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Induce substantial population growth in the area, either directly (by proposing new homes and businesses) or indirectly (through the extension of new roads or other infrastructure);

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.12.4 Impact Analysis

Construction. Construction of the substation site, associated transmission lines and telecommunication improvements is considered short-term and temporary. Workers would come from either Tulare County or surrounding communities and it is unlikely that they would require housing. If SCE construction crews are used they would be based at SCE's Alhambra facility, and they would require temporary, short-term housing.

During the construction phase of the Proposed Project the peak number of construction workers is expected to be 25. Therefore, the Proposed Project would not require a large temporary workforce that may displace existing housing or people, or necessitate relocation or construction of replacement housing elsewhere. Construction of the Proposed Project would have no impacts to population and housing.

Operation. The substation would be unmanned and the electrical equipment within the substation would be remotely monitored and controlled by a power management system from Rector Substation. Due to the substation being operated remotely, SCE personnel would generally visit for electrical switching and routine maintenance. Routine maintenance would include equipment testing, equipment monitoring and repair, as well as emergency and routine procedures for service continuity and preventive maintenance. SCE personnel would generally visit the substation two to three times per week. Therefore, operation of the Proposed Project would not generate a large operation-related workforce from out of the area that would require permanent housing.

In addition, extending electrical infrastructure to meet the demand for electricity is a result of, not a precursor to, development in the region. Therefore, the Proposed Project would not induce substantial population growth in the area. Operation of the Proposed Project would have no impacts to population and housing.

4.12.5 Mitigation

No impact to population and housing would occur; therefore, no mitigation measures are necessary.

4.12.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. Therefore, the impacts to population and housing would be the same as those for the Proposed Project. No impact to population and housing would occur.

4.12.7 Alternatives

Alternative 1

Alternative 1 would not require a large temporary workforce that may displace existing housing or people, or necessitate relocation or construction of replacement housing elsewhere. Therefore, the impacts to population and housing would be the same as those for the Proposed Project. No impact to population and housing would occur.

Alternative 2

Alternative 2 would not require a large temporary workforce that may displace existing housing or people, or necessitate relocation or construction of replacement housing elsewhere. Therefore, the impacts to population and housing would be the same as those for the Proposed Project. No impact to population and housing would occur.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to population and housing.

4.12.8 References and Communications

California Department of Finance (CDF). 2006. [online] Demographic Research Unit. http://www.dof.ca.gov/HTML/DEMOGRAP/repndat.asp. [cited May 12, 2006].

US Census Bureau. 2004. State and County Quickfacts. Retrieved from website: http://www.census.gov/popest/cities/tables/sub-est2004-02.xls).

4.13 PUBLIC SERVICES

This section discusses the existing public services within the vicinity of the Proposed Project. Where specific information pertaining to public services in the City of Visalia area could be obtained, it has been included in this section. When such information was not available for the City of Visalia area, more general information for Tulare County is provided.

4.13.1 Environmental Setting

Public Services

The City of Visalia has traditionally aimed to provide a high level of public facilities and services that encourage tourism and conference activities, commerce, education, and sustain growth (City of Visalia, 1991).

Schools

Several schools in the City of Visalia are located within a 2-mile radius of the Project Area (Table 4.13-1, Schools in the Project Area). Figure 4.13-1, Schools within the Project Area, is a map showing the location of the schools in the Project Area (Tulare County, 2006).

Health Facilities

The City of Visalia, with two general hospitals, is the health care and medical center for Tulare County. The largest medical care center is Kaweah Delta District Hospital, a 248-bed facility.

Local Government Services

The City provides a variety of public services including police and fire protection, solid waste and recycling collection, recreational and cultural resources.

The City of Visalia fire, police, and emergency medical service facilities are available to serve the Project Area. The nearest fire station is located on Johnson Street, two miles or approximately seven minutes, from the substation site. Two more fire stations, including the Tulare County Fire Department Headquarters, are within five miles of the Project Area. The City of Visalia Police Department is located on Johnson Street, two miles from the substation site. The Farmersville Police Department is also nearby at seven miles away. Several hospitals and medical centers are located near the Proposed Project. The two closest are Visalia Health Care Center located on North Dinuba Boulevard (one mile away) and the Sierra Ambulatory Surgery Center located on West Main Street (two miles away).

Table 4.13-1 Schools in the Project Area

School	Street Address	Distance (mi.)
Fairview Elementary School	1051 W. Robin Dr.	0.65
Green Acres Middle School	1147 Mooney Blvd.	1.16
Houston Elementary School	1200 N. Giddings St.	1.20
Sequoia High School	901 Mooney Blvd.	1.29
Crowley Elementary School	214 Ferguson Ave.	1.41
Oak Grove Elementary School	4445 W. Ferguson Ave.	1.45
Highland Elementary School	701 N. Stevenson St.	1.66
Restoration Academy	118 NE 3rd Ave.	1.66
Four Creeks Elementary School	1844 N. Burke St.	1.89
George Mc Cann Memorial School	200 E. Race Ave.	1.95
Redwood High School	1001 W. Main St.	1.95
Special Education School	2637 W. Burrel Ave.	1.98

Source: Tulare County, 2006

4.13.2 Regulatory Setting

Federal

There are no applicable federal regulations pertaining to public services.

State

California Fire Code, Section 902.2.2.1. Requires fire apparatus access roads to have a minimum unobstructed width of 20 feet. Other local regulations are related to health, fire, and building safety. These include the California Health Code, the California Fire Code, and the Uniform Building Code.

Local

The Proposed Project lies within the City of Visalia. Both city and county jurisdictions manage public services in these areas. The City has laid the foundation for future facilities and services through the Wastewater Treatment Plant Master Plan (1987), Storm Drainage Master Plan (1988), and Circulation Element update (1989).

4.13.3 Significance Criteria

The significance criteria for assessing the impacts to public services come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- 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: fire protection, police protection, schools parks, or other public facilities.

4.13.4 Impact Analysis

Construction. Construction related activities would not require expansion of fire and police protection, schools, parks or other public facilities. Construction of the Proposed Project would not significantly affect police and fire protection response times or create higher demand for these public services.

Figure 4.13-1 Schools within the Project Area

Operation. Operation related activities would not require expansion of fire and police protection, schools, parks or other public facilities. Operation of the Proposed Project would not significantly affect police and fire protection response times or create higher demand for these public services.

Construction and operation of the Proposed Project would have less than significant impacts to public services.

4.13.5 Mitigation

Because the Proposed Project would not result in significant impacts to public services, no mitigation measures are required.

4.13.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. Therefore, the impacts to public services would be the same as those for the Proposed Project. Impacts to public services would be less than significant.

4.13.7 Alternatives

Alternative 1

Alternative 1 construction and operation would not have a significant effect on the ability to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools parks, or other public facilities. Therefore, the impacts to public services would be the same as those for the Proposed Project. Impacts to public services would be less than significant.

Alternative 2

Alternative 2 construction and operation would not have a significant effect on the ability to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools parks, or other public facilities. Therefore, the impacts to public services would be the same as those for the Proposed Project. Impacts to public services would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts on public services.

4.13.8 References and Communications

City of Visalia, 1991. General Plan, Land Use Element Update.

Tulare County. 2006. Tulare County Office of Education, Tulare County School Districts. [online] http://www.tcoe.org/Districts/index.shtm [cited May 12, 2006].

4.14 RECREATION

This section identifies the existing recreational opportunities adjacent to and near the Proposed Project and its alternatives, and addresses the potential impacts caused by the Proposed Project. The section identifies those areas known as sensitive receptors, which include recreational facilities that could be adversely affected by the Proposed Project.

4.14.1 Environmental Setting

The City of Visalia has 34 parks and six community centers, as well as facilities for skating, biking, disc golf, nature preservation, swimming, senior citizens, dogs, various sports and a YMCA. In addition, the City of Visalia is planning construction of a sports park located at Riverway and Dinuba Highways, approximately 1.4 miles from the substation site, 2.3 miles from Alternative Site 1 and 2.1 miles from Alternative Site 2. The City is also developing a Waterway Master Plan that includes the construction of green belts and multipurpose trails along the Saint John's River (City of Visalia, 2005b). A map with the locations of the parks and recreational areas within the Project Area is included as Figure 4.14-1, Recreational Areas within the Project Area.

4.14.2 Regulatory Setting

Federal

There are no applicable federal regulations for recreation.

State

There are no applicable State regulations for recreation.

Local

The City of Visalia General Plan, Land Use Element (City of Visalia, 2005c) and Tulare County General Plan, Land Use and Urban Boundaries Element (Tulare County, 2005).

4.14.3 Significance Criteria

The significance criteria for assessing the impacts to recreational resources come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- 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; or

- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

4.14.4 Impact Analysis

The Proposed Project would not result in the increased use of city parks or other recreational facilities, or cause the deterioration of these facilities. Furthermore, the Proposed Project would not include or require the construction or expansion of recreational facilities. The Proposed Project would not have a significant impact on the recreational character of the City of Visalia. Therefore, no impact to recreational resources would occur.

4.14.5 Mitigation

No impact to recreational resources would occur; therefore, no mitigation measures are necessary.

4.14.6 Subtransmission Line Overhead Option

The Overhead Option is located at the site as the Proposed Project. Therefore, the impacts to recreational resources would be the same as those for the Proposed Project. No impact to recreational resources would occur.

4.14.7 Alternatives

Alternative 1

Alternative 1 would not result in the increased use of city parks or other recreational facilities, or cause the deterioration of these facilities. Furthermore, Alternative 1 would not include or require the construction or expansion of recreational facilities. Therefore, the impacts to recreational resources would be the same as those for the Proposed Project. No impact to recreational resources would occur.

Alternative 2

Alternative 2 would not result in the increased use of city parks or other recreational facilities, or cause the deterioration of these facilities. Furthermore, Alternative 2 would not include or require the construction or expansion of recreational facilities. Therefore, the impacts to recreational resources would be the same as those for the Proposed Project. No impact to recreational resources would occur.

Figure 4.14-1 Recreational Areas within the Project Area

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to recreational resources.

4.14.8 References and Communications

City of Visalia. 2005a. Parks, Playground and Recreation. California Municipal Code. Retrieved October 2005 from www.amlegal.com

City of Visalia 2005b. Visalia City Parks and Recreation Homepage. Retrieved October 2005 http://www.ci.visalia.ca.us/parks/recreati.htm

City of Visalia 2005c. City of Visalia General Plan, Land Use Element Update 1991 Retrieved from http://www.ci.visalia.ca.us/community-development/cd-new.htm

City of Visalia. 2005d. Administrative Division, Personal Communication with Gayle Bond, Management Analyst. October 2005.

Tulare County. 2005. Section 6 – Environmental Resources Management Element: Policies, Recreation. General Plan Policy Summary. Retrieved October 2005 from: http://www.westplanning.com/docs/tulare/documents.htm

4.15 TRANSPORTATION AND TRAFFIC

This section addresses transportation and traffic issues related to the Proposed Project and consistency with associated transportation policies and regulations. Potential impacts, proposed mitigation measures, and alternatives are also discussed in this section.

4.15.1 Environmental Setting

Visalia is currently served by two freeways, that provide regional and statewide connections to Visalia. State Route (SR) 99 connects to Los Angeles, Bakersfield, Fresno and Sacramento. SR 198, a freeway within a portion of Visalia only, connects Hanford, Interstate 5 and SR 101 to the west, and Farmersville, Exeter, and Sequoia National Park to the east.

The City of Visalia's street network generally consists of a grid system of east/west and north/south arterials and collectors. Several arterials in Visalia serve regional functions, as well as local needs. Descriptions of the arterial streets located within the Project Area are listed below:

Demaree Street is a north/south roadway providing circulation through the west central portion of Visalia to the City of Tulare approximately 10 miles to the south. Demaree Street is known as County Road 108. The daily traffic volumes on this facility range from 4,400 to 17,600. (City of Visalia, 1996)

Dinuba Boulevard is a north/south oriented arterial originating at Houston Avenue and proceeding northward to Avenue 320. This roadway continues northward outside the Visalia urban area traversing just east of the City of Dinuba and through the communities of Cutler and Orosi. This facility serves as the alignment for SR 63 north of Visalia and provides access to the northwest portions of Tulare County. The most recent traffic volumes indicate this roadway carries 10,900 Average Daily Traffic (ADT) (City of Visalia, 1996).

Mooney Boulevard is a north/south roadway connecting the City of Visalia and the City of Tulare. This roadway is classified as a major arterial between Main Street and Avenue 272 and an arterial between Goshen Avenue and Riggin Avenue. Mooney Boulevard is the alignment for SR 63 south of SR 198. The daily traffic volumes on the two-lane facility north of Goshen Avenue vary from 1,200 to 3,350. The daily traffic volumes on the four-lane facility (SR 63) vary from 16,100 near Main Street to 29,000 between Tulare Avenue and Caldwell Avenue. (City of Visalia, 1996)

Riggin Avenue is an east/west arterial in the northern region of Visalia. Riggin Avenue connects the northwest region of the Visalia urban area to SR 63 (Dinuba Blvd) in the north central region. This arterial is a two-lane undivided roadway and carries between 3,000 and 3,250 ADT. (City of Visalia, 1996)

The substation site is located north of Riggin Avenue and east of Mooney Boulevard. The future Ranch Circle Drive off of Mooney Boulevard would serve as the access road in and out of the substation. Roads traversed by the Proposed Project are presented in Figure 2-1, Project Area, and Figure 4.15-1, Truck Routes within the Project Area.

The City of Visalia is planning to upgrade Riggin Avenue and anticipates that the upgrades would begin in the year 2009. Construction of the Proposed Project would be complete at this time. Upgrades to Mooney Boulevard are also planned, but would not coincide with the construction of the Proposed Project (City of Visalia, 2006).

4.15.2 Regulatory Setting

Federal

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 Project Area. The Hazardous Materials Regulations (49 CFR, Subtitle B, Chapter L, Subchapter C) addresses transportation of hazardous materials, types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. Additionally, the Motor Carrier Safety Regulations (49 CFR Subtitle B, Chapter III, Subchapter B) specifies safety considerations for the transport of hazardous materials over public roadways.

State

Any work in the ROW of a State highway would require an encroachment permit from the California Department of Transportation.

Local

Any encroachment into, on or over the road system of Tulare County would require a county encroachment permit.

A Movement of Heavy Vehicles and Equipment Permit would be required by the City of Visalia for trucks carrying loads greater than 14,000 pounds (City of Visalia, 1996). Construction trucks exceeding this limit would arrive to the site only by designated truck routes as is mandated in the City of Visalia Municipal Code 10.24.010. Trucks may use all other streets for access to particular destinations, with the exception of certain other streets from which they are expressly prohibited. The following streets within the Project Area have been designated as truck routes:

1. Mooney Boulevard between the southern City boundary and SR 198.

2. Dinuba Blvd between Houston Ave. and the northern City boundary.

3. All of SR 198 within the City limits.

4. Houston Avenue between Santa Fe Street and the eastern City boundary.

City of Visalia ordinances prohibit commercial vehicles exceeding a gross weight of 14,000 pounds from using the following streets surrounding the Project Area (City of Visalia, 1996):

1. Demaree Street between Caldwell and Goshen Avenue.

2. Ferguson Avenue between Dinuba Boulevard and Bridge Street.

3. Mooney Boulevard between Goshen Avenue and Riggin Avenue.

4. All of Giddings Street in the City limits between Houston Avenue and Riggin Avenue.

4.15.3 Significance Criteria

The significance criteria for assessing the impacts to transportation and traffic come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- 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);

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;

- Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);

- Result in inadequate parking capacity; or

- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Figure 4.15-1 Truck Routes within the Project Area

4.15.4 Impact Analysis

Construction. Construction traffic to and from the Proposed Project would include construction crews and construction equipment for substation construction, subtransmission line construction and telecommunication improvements. Construction activity, crew sizes and equipment to be transported through the City of Visalia for the Proposed Project are presented in Tables 3.2-1, 3.2-2, 3.3-1 and 3.4-1 of the Project Description.

Substation construction traffic would access the Proposed Project site via the future Ranch Circle Drive from Riggin Avenue. All material for the substation, including the transformers, would be delivered by truck. The majority of the truck traffic would use major streets and would be scheduled during off-peak traffic hours. Cement truck deliveries may need to be made during peak hours when footing work is being performed. The transformers would be delivered by heavy transport vehicles and off-loaded on site by large cranes with support trucks. A Movement of Heavy Vehicles and Equipment Permit would be required by the City of Visalia for trucks carrying the transformer as this load would be greater than 14,000 pounds. Construction trucks exceeding this limit would arrive to the site only by designated truck routes as is mandated in the City of Visalia Municipal Code 10.24.010 (City of Visalia, 2005). Designated truck routes are depicted in Figure 4.14-1, Truck Routes within the Project Area.

During construction of the subtransmission lines, periodic single lane closures along Riggin Avenue and Mooney Boulevard (north of Riggin Avenue) may be necessary and could have an effect on traffic along these routes. If lane closures are required, SCE would comply with best management practices established by the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee, 1996).

An estimated 280 truck trips would be necessary to import fill material during grading. SCE Proposed Measures include the use of off-peak hours when possible and staggering trips throughout the 4-week period of grading. Further, the trucks would use the designated truck routes to access the substation site.

Traffic caused by Proposed Project construction would be temporary, short-term and minimal, and would not result in the increased hazards due to design features, a loss of adequate emergency access, or a diminishment of the City's parking capacity. Construction impacts to traffic would be less than significant.

Operation. The substation would be unmanned and the electrical equipment within the substation would be remotely monitored and controlled by a power management system from Rector Substation. Due to the substation being remotely operated, SCE personnel would generally visit for electrical switching and routine maintenance. These visits are anticipated to occur only two or three times per week, and would have a negligible impact on traffic within the Project Area. Thus, with the exception of periodic site visits by SCE staff or contractors, operational activities at the Proposed Project would have no impact on transportation and traffic in the Project Area. In addition, the Project is not located in the vicinity of air or rail transport and as such would not result in any change

to air traffic or rail patterns. With the implementation of SCE Proposed Measures, set forth below, impacts to traffic and transportation would be less than significant.

SCE Proposed Measures

- To the extent feasible, truck traffic would be scheduled for off-peak hours to reduce impacts during periods of peak traffic.

- To the extent feasible, truck traffic would be staggered throughout the 4-week grading and site preparation construction phase.

- Truck traffic would use designated truck routes to access the substation site, the majority of which are currently designated Level of Service B.

- If lane closures are required, SCE would comply with best management practices established by the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee, 1996).

4.15.5 Mitigation

Because the Proposed Project would result in less than significant impacts to traffic and transportation, no mitigation measures are required.

4.15.6 Subtransmission Line Overhead Option

The Overhead Option would not require periodic lane closures for installation of the overhead 66 kV subtransmission lines. Therefore, impacts to traffic and transportation during construction would be less than those for the Proposed Project. In addition, impacts during operation would be the same as for the Proposed Project. Impacts to traffic and transportation would be less than significant.

4.15.7 Alternatives

Alternative 1

Alternative 1 would likely require a similar number of truck trips as the Proposed Project in order to import fill material to the site. During construction of the Alternative 1 underground 66 kV subtransmission lines, periodic single lane closures along Leila Street, the future Flagstaff Avenue, and Demaree Street may be necessary and could have an effect on traffic along these routes. Therefore, impacts to traffic and transportation during construction would be similar to those for the Proposed Project. In addition, impacts during operation would be the same as for the Proposed Project. Impacts to traffic and transportation would be less than significant.

Alternative 2

Alternative 2 would not require as many truck trips to import fill material as compared to the estimated 280 truck trips for the Proposed Project. Therefore, impacts to traffic and transportation during construction would be less than those for the Proposed Project. In addition, impacts during operation would be the same as for the Proposed Project. Impacts to traffic and transportation would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to transportation or traffic.

4.15.8 References and Communications

California Joint Utility Traffic Control Committee. 1996. *Work Area Protection and Traffic Control Manual*. April 1996.

City of Visalia. 2006. Civil Engineer, Personal communication with David Jacobs. February 2006.

City of Visalia. 2005. California Municipal Code. Retrieved October 2005 from: http://www.amlegal.com/library/ca/Visalia.shtml.

City of Visalia. 1996. General Plan, Circulation Element Update. Retrieved from hppt:www.ci.visalia.ca.us/community-development/cd-new.htm/circulationelement.

McCoy, Mike. 2005. Street Department Supervisor, City of Visalia. Personal Communication, October 2005.

Rounsfull, Myron. 2005. Traffic Engineer Specialist, City of Visalia. Personal Communication, October and November 2005.

Smith, Rick. 2005. City of Visalia Public Works Department. Personal Communication, October 18, 2005.

Stocker, Bob. 2005. Long Range Planning Branch, County of Tulare Association of Governments. Personal Communication, October 2005.

Tulare County. 2005. Commissioner for Weights and Measures. Personal communication with Gary Kunkel. October 2005.

Tulare County. 2005. Section 8 – Transportation/Circulation General Plan Policy Summary. Accessed online October 2005. http://www.westplanning.com/docs/tulare/documents.htm

4.16 UTILITIES AND SERVICE SYSTEMS

This section discusses the utilities within the Project Area. Where specific information pertaining to the utilities in the City of Visalia area could be obtained, it has been included in this section. When such information was not available for the City of Visalia area, more general information for Tulare County is provided.

4.16.1 Environmental Setting

SCE provides electrical services for the Project Area and Southern California Gas Company provides natural gas services. The City of Visalia Department of Public Works and the California Water Service (located in Visalia) are responsible for the design, construction, operation, maintenance, and repair of sewers, water supply, flood control, and water conservation facilities within the City. Numerous telecommunication companies provide service to the Project Area, including SBC, MCI, and Verizon. Solid waste facilities in the City are managed by the City of Visalia Public Works Solid Waste Management Department (City of Visalia, 2005).

4.16.2 Regulatory Setting

Federal

There are no applicable federal regulations regarding utilities.

State

California Public Utilities Commission (CPUC). Regulates intrastate and local natural gas distribution facilities and services, natural gas procurement, water utilities, pipelines, and production and gathering. In addition, regulations related to natural gas services at the local level include the California Building Code, the California Health and Safety Code, the California Fire Code, and their associated implementing ordinances of Tulare County.

Local

The City of Visalia has laid the foundation for future facilities and services through the Wastewater Treatment Plant Master Plan (1987), Storm Drainage Master Plan (1988) and Circulation Element update (1989) (City of Visalia, 2005).

4.16.3 Significance Criteria

The significance criteria for assessing the impacts to utilities and service systems come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- 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;

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

- Result in determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or

- Not comply with federal, state, and local statutes and regulations related to solid waste.

4.16.4 Impact Analysis

Construction. Small volumes of construction-related debris may require disposal during construction, but these volumes are not expected to impact landfills serving the Project Area. Water, wastewater services, and other utilities would not be required for construction of the Proposed Project. Underground construction could inadvertently contact underground utilities, possibly leading to short term service interruptions. As with all SCE underground construction, Underground Service Alert would be contacted at least 48 hours prior to excavation in order to minimize impacts to other utilities.

Operation. The substation would not require wastewater disposal and thus, would not exceed wastewater treatment capacity in the area. The operation of the substation would require irrigation of the surrounding landscaping and would require a tie-in from a municipal water source. Operation of the substation would not require construction or expansion of wastewater or solid waste disposal facilities, or new or expanded water entitlements.

Construction and operation of the Proposed Project would have less than significant impacts to utilities and service systems.

4.16.5 Mitigation

Because the Proposed Project would not result in significant impacts to utilities and service system, no mitigation measures are required.

4.16.6 Subtransmission Line Overhead Option

The Overhead Option is located at the same site as the Proposed Project. Therefore, the impacts to utilities and service systems would be the same as those for the Proposed Project. Impacts to utilities and service systems would be less than significant.

4.16.7 Alternatives

Alternative 1

Alternative 1 would not require water, wastewater services, or other utilities for construction. The operation of Alternative 1 would have similar effects on utilities and service systems as described for the Proposed Project. Therefore, the impacts to utilities and service systems would be the same as those for the Proposed Project. Impacts to utilities and service systems would be less than significant.

Alternative 2

Alternative 2 would not require water, wastewater services or other utilities for construction. The operation of Alternative 2 would have similar adverse effects on utilities and service systems as described for the Proposed Project. Therefore, the impacts to utilities and service systems would be the same as those for the Proposed Project. Impacts to utilities and service systems would be less than significant.

No Project Alternative

The No Project Alternative would maintain existing conditions; therefore, the No Project Alternative would have no significant impacts to utilities or service systems.

4.16.8 References and Communications

City of Visalia. (2005). Utilities Department Internet Retrieved from:
http://www.ci.visalia.ca.us/solid_waste/sw-home.htm

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5.0 COMPARISON OF ALTERNATIVES

This section compares the environmental impacts of the alternatives. CEQA Guidelines (Section 15126.6 (d)) require that an environmental impact report include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.

The Project Objectives, developed in Section 1.4, are as follows:

- Meet projected electrical load requirements in the Electrical Needs Area beginning in 2008 and extending beyond 2010 in order to meet the 10 year planning criterion;
- Provide enhanced system reliability by locating the substation within the Project Area;
- Provide greater operational flexibility by providing the ability to perform load transfers between lines located nearer to their source substations;
- Meet project need with limited environmental impact; and
- Meet project need in a cost effective manner.

These objectives guide SCE in developing a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives. All of the alternatives evaluated in the PEA, with the exception of the No Project Alternative, satisfy the project objectives.

The alternatives differ in the geographical location of the substation, in the length of new subtransmission lines required, and/or whether the new subtransmission lines would be underground or overhead. The Proposed Project requires 1,200 feet of new underground 66 kV subtransmission lines, the Overhead Option requires 1,200 feet of new overhead 66 kV subtransmission lines, while Alternative 1 requires 1,500 feet of new underground 66 kV subtransmission lines and Alternative 2 requires 3.5 miles (approximately 18, 500 feet) of new overhead 66 kV subtransmission lines.

As evaluated in Section 4, all of the alternatives result in either no impacts or less than significant impacts for all resource categories evaluated. CEQA does not require a review of alternatives for an initial study/negative declaration. However, General Order No. 131-D requires that an Application for a Permit to Construct include the "[r]easons for adoption of the power line route or substation location selected, including comparison with alternative routes or locations, including the advantages and disadvantages of each."

Compared to the Proposed Project, the other alternatives result in more, similar, or less environmental impacts. Table 5-1 compares the Proposed Project, Overhead Option, Alternative 1, and Alternative 2 by CEQA resource category, and summarized in the following:

- The Overhead Option leads to more impacts to aesthetics. The Overhead Option leads to less impacts to cultural resources, geology and soils, hydrology and water quality, and transportation and traffic.

- Alternative 1 leads to more impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, and noise. Alternative 1 leads to less impacts to agricultural resources.

- Alternative 2 leads to more impacts to aesthetics and biology. Alternative 2 leads to less impacts to agricultural resources and transportation and traffic.

- The No Project Alternative has no environmental impacts but does not meet the project objectives as set forth in Section 1.4.

SCE has selected the Proposed Project as the preferred alternative for several reasons. The Proposed Project requires 1,200 feet of new underground 66 kV subtransmission lines, while Alternative 1 requires 1,500 feet of underground subtransmission lines. The greater surface disturbance for Alternative 1 leads to greater impacts to biological resources, cultural resources, geology and soils and hydrology and water quality. Alternative 2 requires 3.5 miles (approximately 18,500 feet) of new overhead 66 kV subtransmission lines. The amount of surface disturbance is similar to the Proposed Project. However, the poles associated with Alternative 2 would have greater long-term impacts to aesthetics and biological resources than for the Proposed Project. Similarly, the poles required for the Overhead Option would have greater long-term impacts to aesthetics than for the Proposed Project.

Typically, SCE constructs transmission and subtransmission lines overhead. In this case, underground distribution lines are proposed to support future development in the area. Placing facilities overhead would be inconsistent with the planned residential development, and may pose significant visual impacts. Therefore, SCE has proposed undergrounding the 66 kV subtransmission lines associated with the Proposed Project rather than selecting the Overhead Option.

Table 5-1 Comparison of Alternatives

Section	Proposed Project (PP)	Overhead Option	Alternative 1 (Undergrounding)	Alternative 2 (Overhead)
Aesthetics	Less Than Significant Impact	More than for the PP	More than for the PP	More than for the PP
Agriculture Resources	Less Than Significant Impact	Same as the PP	Less than for the PP	Less than for the PP
Air Quality	Less Than Significant Impact	Similar to the PP	More than for the PP	Similar to the PP
Biological Resources	Less Than Significant Impact	Similar to the PP	More than for the PP	More than for the PP
Cultural Resources	Less Than Significant Impact	Less than for the PP	More than for the PP	Similar to the PP
Geology and Soils	Less Than Significant Impact	Less than for the PP	More than for the PP	Similar to the PP
Hazards and Hazardous Materials	Less Than Significant Impact	Similar to the PP	Similar to the PP	Similar to the PP
Hydrology and Water Quality	Less Than Significant Impact	Less than for the PP	More than for the PP	Similar to the PP
Land Use and Planning	Less Than Significant Impact	Same as the PP	More than for the PP	Similar to the PP
Mineral Resources	No Impact	Same as the PP	Same as the PP	Same as the PP
Noise	Less Than Significant Impact	Similar to the PP	More than the PP	Similar to the PP
Population and Housing	No Impact	Same as the PP	Same as the PP	Same as the PP
Public Services	Less Than Significant Impact	Same as the PP	Same as the PP	Same as the PP
Recreation	No Impact	Same as the PP	Same as the PP	Same as the PP
Transportation and Traffic	Less Than Significant Impact	Less than for the PP	Similar to the PP	Less than for the PP
Utilities and Service Systems	Less Than Significant Impact	Same as the PP	Same as the PP	Same as the PP

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6.0 MANDATORY FINDINGS OF SIGNIFICANCE

This section discusses broader questions posed by CEQA. These include significant effects that cannot be mitigated to less than significant levels, irreversible/irretrievable commitment of resources, the balance between short- and long-term uses of the environment, growth-inducing impacts, and cumulative impacts.

6.1 SIGNIFICANT ENVIRONMENTAL EFFECTS OF PROPOSED PROJECT THAT CANNOT BE MITIGATED TO INSIGNIFICANCE

Effects on all environmental resources were evaluated to determine any impacts that would remain significant after mitigation. The Proposed Project would have either no impact or a less than significant for all environmental resource categories.

6.2 IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES; SHORT- AND LONG-TERM USES OF THE ENVIRONMENT

The CEQA Guidelines (Section 15126.2(c)) require that an environmental document identify significant irreversible environmental changes that would be caused by the project. Construction of the Proposed Project would require fossil fuels, a nonrenewable resource, to power construction vehicles. The operation phase of the Proposed Project would allow for the transmission of electricity produced by both renewable and non-renewable resources, although the Project itself would not utilize significant amounts of non-renewable resources. While the Project would facilitate the delivery of non-renewable resources, these resources would be exploited and expended now and in the near future regardless of the Proposed Project. Additional resources that could be irretrievably lost could include soils (resulting from water and wind erosion in disturbed areas) and water (used for dust control).

The Proposed Project would meet the need to provide a reliable source of electricity to this portion of Visalia and Tulare County. Its construction and operation would be consistent with federal and State policies for reliability. For these reasons, limited irreversible and irretrievable resource commitments are acceptable.

6.3 GROWTH INDUCING EFFECTS/INDIRECT EFFECTS

The CEQA Guidelines require the consideration and discussion of growth-inducing impacts of a project in an environmental document. As specified in Sections 15126.2(d) of the CEQA Guidelines, an environmental document would:

> Discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion if a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring

construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The following six criteria are used as a guide in evaluating the growth-inducing potential of the Proposed Project:

(1) Would the Project foster growth or remove obstacles to economic or population growth?

The Proposed Project has been developed based upon a demonstrated need for enhanced electrical transmission in this portion of Tulare County and the City of Visalia. Section 1.0, Introduction, and Figure 1-2, SCE Rector System within Electrical Needs Area, describe this in greater detail. The demand for electricity is a result of, not a precursor to, development in the region. Although the Proposed Project would increase the efficiency with which electricity is made available, the project objective is not to provide a new source of electricity. The region is not dependent solely on this Project for delivery of electricity.

(2) Would the Project provide new employment?

The Proposed Project would provide temporary employment for up to 25 workers during peak construction. No new permanent positions would result from operation of the Project.

(3) Would the Project provide new access to undeveloped or under developed areas?

The Proposed Project does not involve the creation of any new permanent roads. The Project would use only existing ROW for construction and operation activities. The Project does not provide new access to undeveloped or under developed areas.

(4) Would the Project extend public services to a previously unserved area?

The Proposed Project would not extend public service to areas currently unserved by electricity. The Project is responding to existing growth and demand trends.

(5) Would the Project tax existing community services?

The amount of temporary, non-local workers would be small compared to current populations in the Project Area. Additionally, the local community has adequate infrastructure and services to meet the need of temporary workers associated with the Proposed Project.

(6) Would the Project cause development elsewhere?

The Proposed Project would not extend public service to areas currently unserved by electricity. The Project is responding to existing growth and demand trends.

Indirect Effects

The CEQA Guidelines (Section 15358 (a) (2)) require discussion of potential indirect effects of a project. Indirect impacts, also referred to as secondary impacts, are impacts caused by a project that occur later in time or are farther removed in distance, but are still reasonably foreseeable.

The previous section concludes that the Proposed Project would not have growth-inducing impacts. The Proposed Project is not anticipated to induce growth rather, it would allow SCE to provide reliable electrical service, as required by the CPUC, to current and future consumers in the Electrical Needs Area. Growth and development in the City of Visalia and Tulare County is managed at the local and county level and is anticipated to occur consistent with general and specific plans prepared and approved by each jurisdiction with appropriate CEQA review. Thus, to ensure adequate electrical capacity is available to serve planned development, the Proposed Project would be considered an essential utility.

The Proposed Project could be considered growth-inducing if growth resulted from the direct and indirect employment needed to construct, operate, and maintain the Proposed Project, and/or if growth resulted from the additional electrical power that would be transmitted by the Proposed Project.

As documented in the project description (Section 3.0), the construction and operation of the Proposed Project would not affect employment in the Project Area. SCE anticipates that SCE personnel or contract workers would construct the Proposed Project. If contract workers were employed, they would not cause growth in the area due to the short-term and temporary nature of their employment. The Proposed Project is an unmanned substation and therefore would require no full-time personnel. Due to the substation being remotely operated, SCE personnel would generally visit for electrical switching and routine maintenance. Routine maintenance would include equipment testing, equipment monitoring and repair, as well as emergency and routine procedures for service continuity, and preventive maintenance. SCE personnel would generally visit the substation two to three times per week.

The Proposed Project would not induce this growth, but follow it. No long-term indirect changes or growth can be attributed to the Proposed Project. Therefore, approval of the Proposed Project would not have indirect effects.

6.4 CUMULATIVE IMPACT ANALYSIS

CEQA requires lead agencies to consider the cumulative impacts of proposals under their review. Section 15355 of the CEQA Guidelines defines cumulative impacts as “two

or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact "consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts (Section 15130[a][1]). The cumulative impacts analysis "would examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects" (Section 15130[b][(3]).

Section 15130 (a)(3) also states that an environmental document may determine that a project's contribution to a significant cumulative impact would be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of mitigation measure(s) designed to alleviate the cumulative impact.

Projects Analyzed for Cumulative Impacts

In conducting a cumulative impacts analysis, impacts are referenced to the temporal span and spatial areas in which the Proposed Project would cause impacts. Additionally, a discussion of cumulative impacts must include either: (1) a list of past, present, and reasonably future projects including, if necessary, those outside the lead agency's control; or (2) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact provided that such documents are referenced and made available for public inspection at a specified location (Section 15130[b][1]). "Probable future project" includes approved projects that have not yet been constructed; projects that are currently under construction; projects requiring an agency approval for an application that has been received at the time a Notice of Preparation is released; and projects that have been budgeted, planned, or included as a later phase of a previously approved project (Section 15130[b][1][B][2]).

Planning staff at Tulare County and the City of Visalia were contacted to compile a list of projects that could be used to evaluate cumulative impacts of the Proposed Project. This list of planned development is included as Appendix I, Projects Proposed in the Project Area. Based on the information received from the planning staff, it cannot be determined whether construction of these projects would coincide with construction of the Proposed Project. This list also includes other projects identified by SCE. Figure 6.4-1, Location of Projects for Cumulative Impact Analysis, is a map showing the projects located within the Project Area.

Other commercial and residential development is planned in the Project Area which may coincide with the construction activities for the Proposed Project. The Proposed Project has less than significant impacts to all environmental resource categories. However, incremental impacts of the Proposed Project when added to the other past, present or reasonably foreseeable future projects could result in cumulatively significant impacts to transportation and traffic, water quality, and air quality.

Figure 6.4-1 Location of Projects for Cumulative Impact Analysis

To ensure that the Proposed Project would not result in a cumulatively significant impact, SCE would comply with regional plans for these (and other) resources to ensure cumulative impacts remain less than significant. In addition, SCE has included SCE Proposed Measures which further reduce the less than significant impacts in these resource categories. These include:

Transportation and Traffic

- To the extent feasible, truck traffic would be scheduled for off-peak hours to reduce impacts during periods of peak traffic.

- To the extent feasible, truck traffic would be staggered throughout the 4-week grading and site preparation construction phase.

- Truck traffic would use designated truck routes to access the substation site, the majority of which are currently designated Level of Service B.

- If lane closures are required, SCE would comply with best management practices established by the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee, 1996).

These measures would result in less than significant cumulative impacts to transportation and traffic.

Water Quality

SCE would comply with the Statewide General Construction NPDES permit and prepare a SWPPP. Compliance with this regional master-planning permit would result in less than significant cumulative impacts to water quality.

Air Quality

The Proposed Project is located in an area of non-attainment for some air quality criteria. Although the Proposed Project has insignificant air emissions, they would contribute to an existing cumulatively-significant impact. For the Proposed Project, it is necessary to view the Project's small insignificant impacts in a regional context of past, present, and future projects. With regard to air quality, sources of emissions are only created with the construction of the Project, not with the operation. These sources include combustion and dust emissions from the construction of the substation and the undergrounding of the subtransmission line. As discussed in Section 4, it is not expected that either source of emissions would result in significant impacts.

The topographical and climatologic conditions of San Joaquin Valley causes the region to have difficulty meeting State and federal air quality standards. Due to strict air quality management regulations, emission levels in the San Joaquin Valley have decreased

over the past 15 years with the exception of PM_{10}, and indicators predict that the downward trend in emission levels would continue. These decreases are predominately due to motor vehicle controls and reductions in evaporative and fugitive emissions (Reclamation and Exchange Contractors, 2004). However, the Project Area is still not in attainment with State and federal air quality standards including ozone and particulate matter, and is designated as a severe nonattainment area.

Based on the existing air quality conditions in the Project Area, the Proposed Project would have an incremental contribution to a cumulative effect. However, that contribution would not be cumulatively considerable based on the fact that the project would comply with "specific requirements in a previously approved plan…" (Remy et al, 1999). As required by the CAA, the SJVAPCD must develop attainment plans to demonstrate how they would comply with the standards for which they are nonattainment (PM and ozone). Subsequently, the District must propose and approve air quality regulations to address the pollution problems identified in the required attainment plans. The USEPA approved the 2003 PM_{10} Plan for the San Joaquin Valley. The approval by the USEPA helps to facilitate the emission reductions as proposed in the attainment plan. The District has also adopted a 2006 PM_{10} Plan which has been submitted to the CARB. Consequently, the incremental contribution of the Proposed Project to air quality problems in the region would not be cumulatively considerable based on the Project's compliance with the SJVAPCD control measures as listed in Table 4.3-3 that are required under Regulation VIII and included as part of the PM attainment plans.

Conclusion

The Proposed Project in combination with the projects listed in Appendix I would not result in cumulatively significant impacts.

6.5 REFERENCES AND COMMUNICATIONS

Remy, Michael et. al. Guide to the California Environmental Quality Act (CEQA). October 1999. Solano Press Books. Point Arena, California.

US Department of the Interior, Bureau of Reclamation, and San Joaquin River Exchange Contractors Water Authority, *Final EIS/EIR, Water Transfer Program for the San Joaquin River Exchange Contractors Water Authority 2005-2014*, December 2004.