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: Triton Substation Project	)))))	Application No. _____ (Filed November 21, 2008)

PROPONENT'S ENVIRONMENTAL ASSESSMENT
TRITON SUBSTATION PROJECT

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Executive Summary

ES.1 Introduction

ES.1.1 Background

This Proponents Environmental Assessment (PEA) evaluates the potential environmental impacts of Southern California Edison Company's (SCE) proposed Triton Substation Project, and its alternatives, located in Southwestern Riverside County (Electrical Needs Area). The Project would ensure the availability of safe and reliable electric service to meet customer electrical demand, and to maintain system reliability and enhance operational flexibility in the Electrical Needs Area.

This PEA and the associated Permit to Construct application are needed to comply with California Public Utilities Commission (CPUC) General Order (GO) 131-D.

SCE developed three System Alternatives and three Site Alternatives for construction. SCE proposes to construct System Alternative 1 (Preferred System Alternative) at Site Alternative A (Preferred Site Alternative), which together are analyzed in Chapter 4 as the Proposed Project. The Proposed Project is summarized below.

ES.1.2 Description of the Proposed Project

SCE proposes to construct the Triton Substation Project, which includes a new 56 megavolt ampere (MVA) 115/12 kilovolt (kV) substation (Triton Substation), one 115 kV subtransmission line loop-in from the existing subtransmission line into the proposed substation, two new underground 12 kV distribution duct banks, and a telecommunications system

ES.2 Purpose and Need

The Triton Substation Project would meet forecasted electrical demands of the Cities of Temecula and Murrieta, as well as adjacent areas of unincorporated Southwestern Riverside County. In addition to ensuring the availability of safe and reliable electric service to meet customer electrical demand, the Triton Substation Project would maintain system reliability and enhance operational flexibility in the Electrical Needs Area.

ES.3 Alternatives to the Proposed Project

Alternatives to the Triton Substation Project were developed and evaluated based on the Triton Substation Project objectives, purpose, and need. SCE identified three System Alternatives and three Site Alternatives. Two of the sites are located in the City of Temecula and the third site is located in unincorporated County of Riverside. System Alternative 1 and Site Alternative A are discussed above in Section ES.1.2 for the Proposed Project. The remaining System Alternatives and Site Alternatives are described below.

ES.3.1 System Alternatives

System Alternative 2: Permanent 33/12 kV Substation Project. The construction of a new and permanent 56 MVA 33/12 kV substation, four 12 kV distribution lines, and three new underground 33 kV lines would occur under System Alternative 2. Preliminary analysis shows that System Alternative 2 would not eliminate the need for a new substation in the Electrical Needs Area in the future. System Alternative 2 does not meet the project objectives relevant to System Alternatives and is, therefore, eliminated from further consideration in this PEA.

System Alternative 3: No Project Alternative. No construction or operation activities would occur under the No Project Alternative. The No Project Alternative does not meet the project objectives relevant to System Alternatives and is, therefore, eliminated from further consideration in this PEA.

ES.3.2 Site Alternatives

Site Alternative B: Site Alternative B is an approximately 12-acre property in the City of Temecula. The property has a land use designation of Very Low Residential and is zoned Very Low Density Residential. The property is unimproved and is located within a 100-year floodplain.

Site Alternative C: Site Alternative C is an approximately 4.4-acre property in an unincorporated area of County of Riverside, just north of the City of Temecula with a land use designation of Mixed Use Planning Area and zoned as Specific Plan. The property is undeveloped but previously has been graded and minimal additional grading would be required for substation construction.

ES.4 Environmental Overview

The PEA presents an evaluation of potential environmental impacts that may be associated with construction and operation of the proposed Triton Substation Project and alternatives. In addition, Chapter 4 presents the environmental setting and impacts assessment for the project and each alternative, including methodology of the assessment; applicable regulations, plans, and standards; and significance criteria.

Additionally, project design features (PDFs) were considered during the environmental analysis. PDFs include structural elements and practices that are incorporated into the Triton Substation Project to avoid and/or minimize potential impacts to environmental resources. These PDFs are part of the project and are distinguished from mitigation measures for potentially significant impacts under CEQA. PDFs will be implemented regardless of whether potential significant impacts were or were not identified during the CEQA environmental analysis.

PDFs are not identified for all resource areas. PDFs considered during the environmental review are provided in the applicable resource section impact analysis (and the PDF number is included in parentheses). The PDFs considered during the analysis of the Proposed Project and alternatives are provided in Chapter 4. Those project design features that apply specifically to the Proposed Project are also presented in Chapter 3 (see Table 3.11-1).

A summary of the construction and operation impacts by resource area for the Proposed Project, Site Alternative B, and Site Alternative C are provided in Table ES-1, Alternatives Impacts Summary Table. A detailed comparison of the alternatives is provided in Chapter 5, Comparison of Alternatives. Additionally, other CEQA considerations are provided in Chapter 6, Other CEQA Considerations.

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Table ES-1. Alternatives Impacts Summary Table
Triton 115/12 kV Substation Project PEA

CEQA Resource Area	Proposed Project	Site Alternative B	Site Alternative C
Aesthetics	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Agriculture Resources	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Air Quality	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Biological Resources	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Cultural and Paleontological Resources	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact
Geology and Soils	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact

Table ES-1. Alternatives Impacts Summary Table
Triton 115/12 kV Substation Project PEA

CEQA Resource Area	Proposed Project	Site Alternative B	Site Alternative C
Hazards and Hazardous Material	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Hydrology and Water Quality	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Land Use	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Mineral Resources	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Noise	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Population and Housing	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact

Table ES-1. Alternatives Impacts Summary Table
Triton 115/12 kV Substation Project PEA

CEQA Resource Area	Proposed Project	Site Alternative B	Site Alternative C
Public Services	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Recreation	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact
Transportation and Traffic	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Utilities and Service Systems	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact

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1. Purpose and Need

1.1 Project Overview

Southern California Edison Company (SCE) proposes to construct the Triton Substation Project, which includes a new 56 megavolt ampere (MVA) 115/12 kilovolt (kV) substation (Triton Substation), one 115 kV subtransmission line loop-in from an existing subtransmission line into the proposed substation, two new underground 12 kV distribution duct banks, and a telecommunications system (Project). The Project would meet forecasted electrical demands of the Cities of Temecula and Murrieta, as well as adjacent areas of unincorporated Southwestern Riverside County (as shown on Figure 1.1-1, Project Region). In addition to ensuring the availability of safe and reliable electric service to meet customer electrical demand, the Project would maintain system reliability and enhance operational flexibility in the Electrical Needs Area (see Figure 1.1-2, Electrical Needs Area Detail).

1.2 Project Purpose

The purpose of the Project is to ensure the availability of safe and reliable electric service to meet customer electrical demand. Under the rules, guidelines, and regulations of the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC), the Western Electricity Coordinating Council (WECC), and the California Public Utilities Commission (CPUC), electrical transmission, subtransmission, and distribution systems must have sufficient capacity to maintain safe, reliable, and adequate service to customers. System safety and reliability must be maintained under normal conditions, when all facilities are in service, and also under abnormal conditions. Abnormal conditions result 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 uses a multi-step planning process to ensure that development of appropriate system facilities is implemented in time to meet anticipated increased electrical demand. The planning process begins with development of a peak demand forecast for each substation. Peak demand forecasts are developed using historical data and trends in population data, urbanization data, and meteorological data. Technical engineering studies are then conducted to determine whether forecasted peak demand can be accommodated using existing transmission, subtransmission, and distribution systems. System facilities, such as substations and lines, have specific design loading limits. When projections indicate that these loading limits will be exceeded within a designated planning horizon (typically 10 years), a project is proposed to maintain the electrical system within designed loading limits. This multi-step process has identified the need for the Triton Substation Project.

1.3 Project Need

The Project is needed to ensure the availability of safe and reliable electric service to meet customer electrical demand. Additionally, the Project is needed to maintain system reliability and enhance operational flexibility in the Electrical Needs Area.

1.3.1 eeting Electrical Demand

The Electrical Needs Area is currently served by SCE's Canine 33/12 kV Substation, Moraga 115/12 kV Substation, and Auld 115/33/12 kV Substation. These substations provide electrical service to approximately 40,660 metered customers and several rapidly growing developments within the Electrical Needs Area.

Currently, the amount of electrical power that can be delivered into the Electrical Needs Area is limited to the maximum amount of combined electrical power the Canine, Moraga, and Auld Substations can transmit before their operating capacity limits are exceeded. The combined operating capacity of the three substations is presently limited to 309 megavolt amperes (MVA) under normal operating conditions, as shown in Table 1.3-1 (and, as noted below, this capacity includes an emergency 33/12 kV transformer bank at Auld Substation, which will be removed in 2010 when Triton Substation is operational). Canine Substation is a temporary facility with a designed capacity of 18 MVA, and is currently scheduled to be retired by June 2010.[1] Therefore, when Canine Substation is retired, the capacity of the remaining two substations in 2010 will be limited to 291 MVA.

Table 1.3-1. Electrical Needs Area Substation apacity and Peak Demand
Triton 115/12 kV Substation Project PEA

Planned Projected Capacity and Projected Demand	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Maximum Operating Limit (MVA)	309	309	291	291	291	291	291	291	291	291
Projected Peak Demand Normal Conditions (MVA)	249	263	301	311	321	325	314	319	321	331
Projected Peak Demand 1-in-10 Year Heat Storm (MVA)	264	288	330	341	351	356	343	350	357	363

Note: The increase in demand from 2009 to 2010 reflects that some load currently is served by an emergency 33/12 kV transformer bank at Auld Substation. This transformer bank is scheduled to be removed in 2010 (when Triton Substation is operational), and the load would be transferred to Triton Substation.

The Southern California Association of Governments (SCAG) forecasts that over a 20-year period from 2010 to 2030, the City of Temecula's population will increase by 17,618, resulting in approximately 8,291 new residential units. Over the same time period, the City of Murrieta is forecasted to have a population increase of 47,855, resulting in approximately 17,153 new residential units (SCAG, 2004). The Project would serve the increase in existing

[1]The lease agreement for Canine Substation is scheduled to expire at the end of May 2010.

demand as well as the new developments of Roripaugh Ranch within the City of Temecula, and Rancho Bella Vista and Johnson Ranch in adjacent unincorporated County of Riverside (Figure 1.1-2).

SCE's planning process is designed to ensure that the required capacity and operational flexibility is available to safely and reliably meet the projected peak electrical demands during normal conditions as well as periods of extreme heat. Periods of extreme heat are defined as time periods when the temperature exceeds the 10-year average peak temperature and are termed "1-in-10 year heat storms." SCE adjusts the normal condition peak demand to reflect the forecasted peak demand during a 1-in-10 year heat storm. When this adjusted peak demand exceeds the maximum operating limits of the existing electrical facilities, a project is proposed to keep the electrical system within specified loading limits.

SCE's current forecast shows that the demand in the Electrical Needs Area would exceed the designed operating limits of the existing distribution facilities serving this area as early as the summer of 2010. In 2007, the actual recorded normal condition peak demand for Canine, Moraga, and Auld Substations was collectively 230 MVA. The 2007 peak demand, as adjusted for a 1-in-10 year heat storm, was 245 MVA. SCE projects that the normal condition peak demand will increase at an average annual growth rate of 3.37 percent over the next 10 years. The existing capacity limits and forecasted peak demand projections for both normal and abnormal 1-in-10 year heat storm conditions are shown in Table 1.3-1 and Figure 1.3-1.

By 2010, the peak demand for a 1-in-10 year heat storm is forecasted to be 330 MVA. As discussed above, in 2010, the maximum capacity of substations within the Electrical Needs Area will be limited to 291 MVA. Therefore, the projected peak demand for 2010 exceeds the operating limits of the Moraga and Auld Substations, and additional electrical facilities are required to serve the Electrical Needs Area.

The Project is scheduled to be operational in June 2010. If the Project is not operational as scheduled, overload conditions may occur in the Electrical Needs Area during the summer of 2010 if actual demand exceeds the operating capacity of the transformers at Auld and Moraga Substations. To mitigate potential overload conditions prior to the operation of the Project, SCE would implement temporary operating procedures within the Electrical Needs Area. These operating procedures may include contracting emergency distributed generation, initiating demand response programs, dropping load, and/or implementing rolling blackouts. SCE would also extend the operational term of Canine Substation as needed. Continued operation of Canine Substation would serve only as a temporary emergency measure and will not be sufficient to serve projected demand in the Electrical Needs Area beyond the summer of 2010.

1.3.2 aintaining System eliability and Enhancing Operational lexibility

The Project is also needed to maintain system reliability and enhance operational flexibility. The distribution facilities must meet minimum voltage levels. As a distribution line increases in length and more load is demanded from the line, the voltage to the end user decreases, resulting in reliability problems. The distribution lines that currently serve the Electrical Needs Area originate from the Canine, Moraga, and Auld Substations. The length

of these distribution lines is approximately seven miles in some areas. Presently, various sections of the Electrical Needs Area are experiencing low voltage conditions caused by long distribution lines. Residential developments in the Electrical Needs Area have brought greater electrical demand, and to be able to accommodate the greater demand and future growth, the distribution lines need to be shortened to maintain adequate voltage levels at the end of the lines and allow operational flexibility.

With the construction of Triton Substation, the maximum lengths of the distribution lines would be shortened to approximately four miles. The shorter distribution line lengths allow SCE to transfer load between distribution lines and between substations in response to variations in demand, thereby enhancing operational flexibility. The shorter distribution line lengths also reduce the possibility of overloading the equipment, which can lead to equipment failure. Finally, shorter distribution line lengths are also necessary to maintain CPUC-mandated voltage levels. Therefore, the Project would not only ensure that capacity can adequately serve demand, but would also maintain system reliability and result in greater operational flexibility.

1.4 Project Objectives

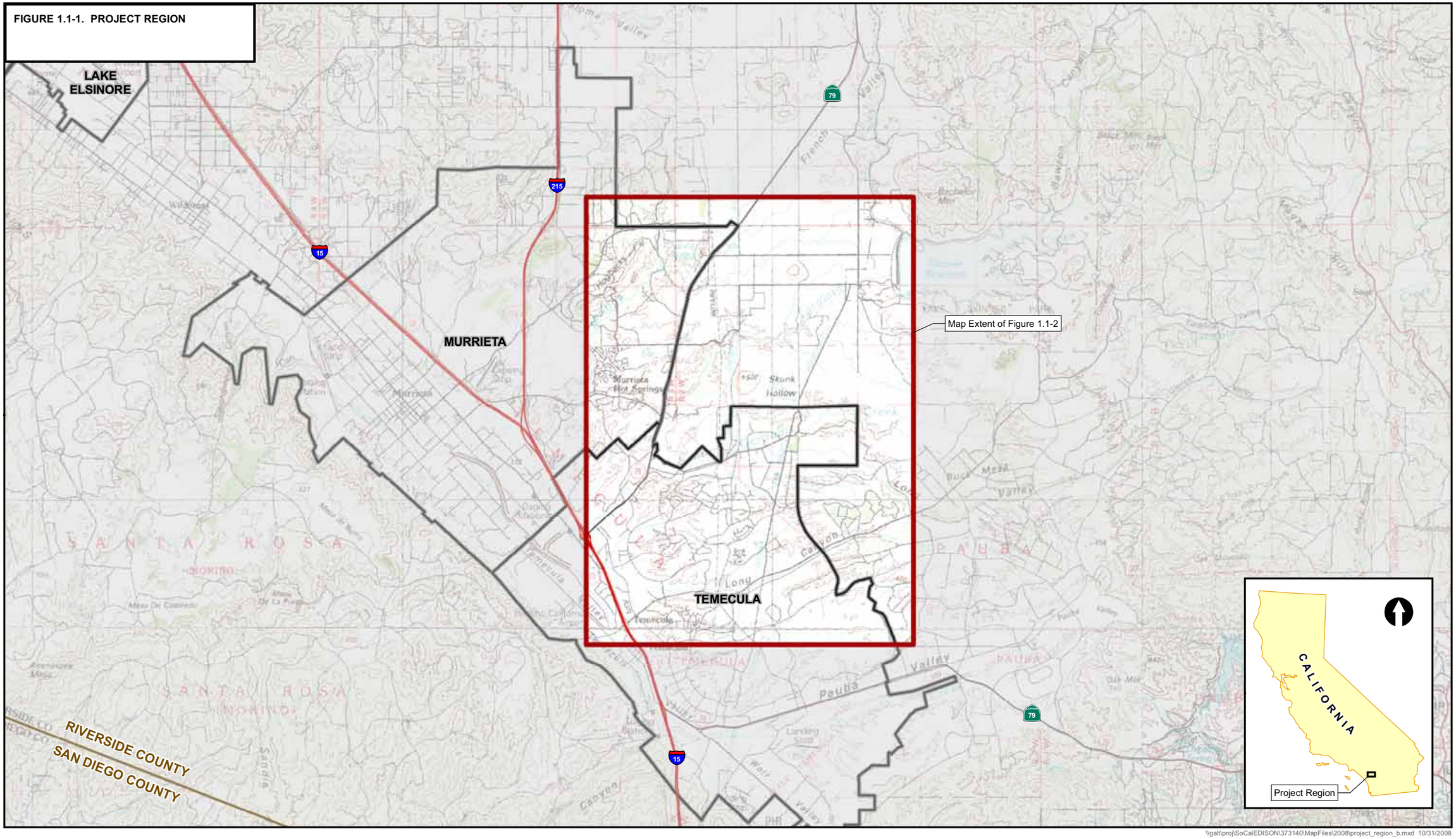
SCE has identified the following project objectives to meet the Project purpose and need described above:

- Serve long-term projected electrical demand requirements in the Electrical Needs Area beginning in 2010.
- Maintain system reliability within the Electrical Needs Area by locating the new electrical facilities in proximity to the demand.
- Enhance operational flexibility by providing the ability to transfer load between distribution lines and substations within the Electrical Needs Area.
- Use existing rights-of-way (ROW) to the extent feasible.
- Meet Project need while minimizing environmental impacts.

1.4.1 eferences

Southern California Association of Governments (SCAG). 2004. Regional Transportation Plan/Growth Vision: Socio-Economic Forecast Report. June 2008. http:// www.scag.ca.gov/ forecast/downloads/ 2004GF.xls? bcsi_scan_14332DAD E953FA8E=0&bcsi_scan_filename=2004GF.xls. Accessed June 2008.

FIGURE 1.1-1. PROJECT REGION



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LEGEND

- State Highway
- City Boundary
- County Boundary
- Map Extent of Figure 1.1-2

1:102,000
NAD 83 UTM ZONE 11N

1 inch equals 8,500 ft

0 17,000
Feet
0 3
Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:100,000 Topographic Maps - Santa Ana, Palm Springs, Oceanside, Borrego Valley

2008

TRITON SUBSTATION PEA

FIGURE 1.1-1. PROJECT REGION

SOUTHERN CALIFORNIA EDISON

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FIGURE 1.1-2. ELECTRICAL NEEDS AREA DETAIL

Auld
Canine
Moraga
French Valley Airport
RANCHO BELLA VISTA
JOHNSON RANCH
RORIPAUGH RANCH
WINCHESTER PROPERTIES
MURRIETA
TEMECULA
UNINCORPORATED RIVERSIDE COUNTY
AULD-MORAGA
VALLEY-AULD-PAUBA
MORAGA-PECHANGA
MORAGA-STADLER
STATE ROUTE 79/WINCHESTER RD
LOS ALAMOS RD
PORTH RD
LEON RD
POURROY RD
BENTON RD
AULD RD
ALLEN RD
BOREL RD
SKY CANYON DR
HUNTER RD
PROMONTORY PKY
MCGOWANS PAS
CENTRAL PARK DR
COMMERCE CT
CALISTOGA DR
MURRIETA HOT SPRINGS RD
LIEFER RD
NICOLAS RD
SOUTH LOOP RD
LOS CHORAS RANCH RD
CALLE MEDUSA
WALCOTT LN
LA SERENA WY
MEADOWS PKY
N GENERAL KEARNY RD
DEL REY RD
MARGARITA RD
RANCHO CALIFORNIA RD
RANCHO VISTA RD
PAUBA RD
YNEZ RD
15

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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- French Valley Airport
- Electrical Needs Area
- City of Temecula
- City of Murrieta
- Unincorporated Riverside County

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000
0 Feet 1
Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

2008

TRITON SUBSTATION PEA

FIGURE 1.1-2. ELECTRICAL NEEDS AREA DETAIL

SOUTHERN CALIFORNIA EDISON

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Figure 1.3-1. Electrical Needs Area Substation Capacity and Peak Demand

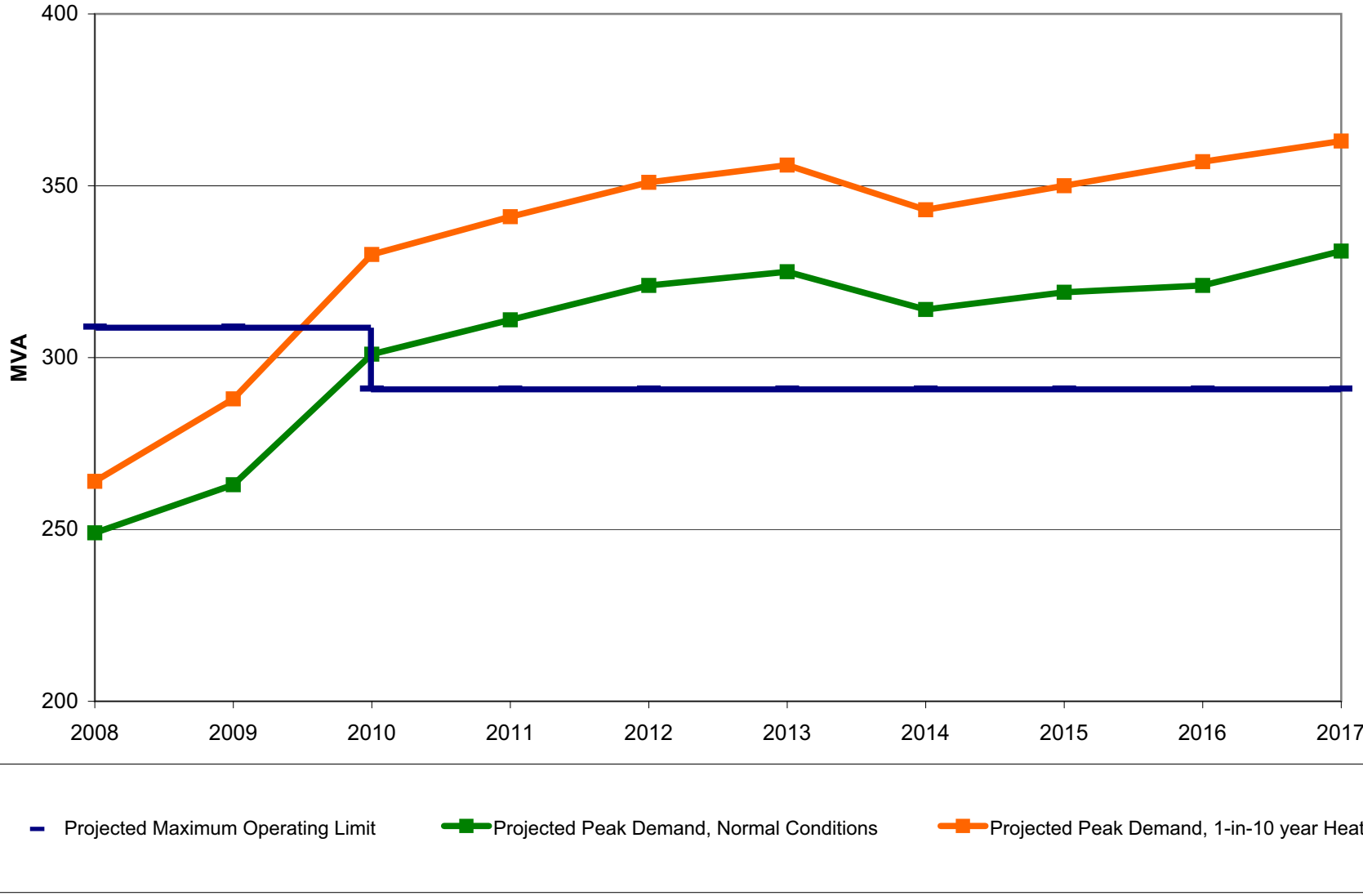

FIGURE 1.3-1. ELECTRICAL NEEDS AREA SUBSTATION CAPACITY AND PEAK DEMAND

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2. Project Alternatives

2.1 Overview

The California Environmental Quality Act (CEQA) and the CEQA Guidelines Section 15126.6(a) require consideration of a reasonable range of alternatives to a proposed project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. CEQA Guidelines Section 15126.6(d) requires that sufficient information about each alternative be included to allow meaningful evaluation, analysis, and comparison with the proposed project. In addition, CEQA Guidelines Section 15126.6(e) requires the 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).

Southern California Edison Company (SCE) first evaluates whether the existing electrical infrastructure can be modified to meet the project objectives, as described in Section 1.4. If not, then SCE evaluates what new infrastructure is required (System Alternative(s)) and where it would be located (Site Alternative(s)) in order to meet the project objectives. A summary of the System and Site Alternatives and whether each alternative is carried forward for further analysis or eliminated from further consideration is provided in Table 2.1-1 and described in detail below.

Table 2.1-1. Summary of System Alternatives and Site Alternatives
Triton 115/12 kV Substation Project PEA

Alternatives	Status
System Alternatives	
System Alternative 1: Triton Substation Project	Carried Forward
System Alternative 2: Permanent 33/12 kV Substation Project	Eliminated from Further Consideration
No Project Alternative	Eliminated from Further Consideration
Site Alternatives	
Site Alternative A	Carried Forward
Site Alternative B	Carried Forward
Site Alternative C	Carried Forward

The following sections describe the methodology for screening System Alternatives and Site Alternatives. Alternatives developed by these methodologies were analyzed for their ability to meet the project objectives. Some of the project objectives are specific to the System Alternatives, while others apply to the Site Alternatives. This chapter concludes with a brief

description of the alternatives retained for full analysis in this Proponent's Environmental Assessment (PEA).

2.2 System Alternatives Evaluation ethodology

SCE follows a four-step process to develop system alternatives. These steps are summarized below:

Step 1. Perform technical engineering analyses to determine whether modifying the existing electrical infrastructure would accommodate the forecasted peak electrical demand.

Step 2. If the forecasted electrical demand cannot be accommodated by modifying the existing electrical infrastructure, then develop system alternatives that include new facilities or upgrades/additions to existing infrastructure.

Step 3. Evaluate each system alternative in consideration of the following criteria:

- The extent to which an alternative would substantially meet the project objectives; and
- The capability of each alternative to accommodate future load growth taking into account capacity limits, ability to upgrade the system on existing sites, and economic viability.

Step 4. Eliminate the alternative from further consideration if it is not feasible. 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 Section 2.5, Site Alternatives Considered.

2.3 System Alternatives onsidered

Projected electrical loads indicate that by 2010 demand will exceed maximum operating limits at Auld and Canine Substations during 1-in-10 year heat storm conditions. These facilities cannot be modified to accommodate the forecasted peak electrical demand. Therefore, SCE developed the following three System Alternatives:

- **System Alternative 1: Triton Substation Project.** The construction of a new 56 megavolt ampere (MVA) 115/12 kV substation, one 115 kV subtransmission line loop-in from the existing subtransmission line into the proposed substation, two new underground 12 kV distribution duct banks, and a telecommunications system.
- **System Alternative 2: Permanent 33/12 kV Substation Project.** The construction of a new and permanent 56 MVA 33/12 kV substation, four 12 kV distribution lines, and three new underground 33 kV lines.
- **System Alternative 3: No Project Alternative.** No construction or operation activities associated with the Triton Substation Project would occur under the No Project Alternative.

In the sections below, each of these System Alternatives is individually evaluated against the criteria described in Step 3 above.

2.3.1 System Alternative 1 Triton Substation Project

System Alternative 1 would include the following elements and provide the following benefits:

2.3.1.1 System Alternative 1 Elements

- Construction of a new 56 MVA 115/12 kV substation (Triton Substation) optimally located in the Electrical Needs Area. The proposed Triton Substation would be an unattended, low-profile substation.
- Installation of a 115 kV switchrack, two 115/12 kV 28 MVA transformers, a 12 kV switchrack, and two 4.8 MVAR 12 kV capacitor banks.
- Installation of two new underground 12 kV distribution duct banks from the proposed substation to the nearest public streets to serve developments in the area.
- Installation of two new overhead 115 kV subtransmission line segments, each approximately 1,300 feet long, from the existing Valley-Auld-Pauba 115 kV subtransmission line to the proposed Triton Substation.
- Installation of a telecommunications system to connect Triton Substation to Auld and Moraga Substations. New telecommunication equipment would be installed in the Triton Substation Mechanical Electrical Equipment Room (MEER).

2.3.1.2 System Alternative 1 Benefits

- The proposed, new substation would provide 56 MVA of new capacity to meet the long-term projected electrical demand at least through 2018[2] in the Electrical Needs Area. This alternative also provides the capability for a future 56 MVA capacity increase to accommodate additional load growth, although at this time it is not feasible to predict when it will reach its ultimate capacity.
- The proposed substation would be centrally located in the Electrical Needs Area so that the length of the distribution circuits would be reduced. Shortened distribution circuits maintain system reliability and enhance operational flexibility, as described in Section 1.3.2.

Following CPUC approval and completion of final engineering, the Triton Substation Project would be constructed from approximately October 2009 to May 2010. The planned in-service date for the Triton Substation Project is June 2010. The estimated cost of System Alternative 1 is approximately $29.9 million in 2008 constant dollars[3].

[2] SCE's long-term planning horizon for projected electrical demand is 10 years.

[3] This is an order of magnitude estimate, prepared in advance of final engineering and prior to CPUC approval. Pension and benefits, administrative and general expenses, and allowance for funds used during construction (approximately 17 percent of project cost) are not included in this estimate.

2.3.2 System Alternative 2 Permanent 33 12 k Substation Project

System Alternative 2 would include the following elements and provide the following benefits:

2.3.2.1 System Alternative 2 Elements

- Construction of a new 56 MVA 33/12 kV substation in the Electrical Needs Area. The proposed Permanent Substation would be an unattended, low-profile substation.
- Installation of four new 12 kV distribution circuits.
- Installation of three new underground 33 kV distribution lines, each approximately seven miles long, to provide power from Auld Substation to the new 33/12 kV substation.

2.3.2.2 System Alternative 2 Benefits

- System Alternative 2 would meet the forecasted load through mid-2015 by providing 56 MVA of capacity; however, System Alternative 2 would not provide for any future capacity increases to accommodate additional load growth.

2.3.3 System Alternative 3 No Project Alternative

Under the No Project Alternative, the Triton Substation Project would not be constructed or operated. Therefore, the No Project Alternative would not provide additional capacity. Furthermore, when the Canine Substation is retired, the Electrical Needs Area would experience a capacity reduction.

2.3.4 System Alternative ecommendations

Recommendations for System Alternative 1, System Alternative 2, and the No Project Alternative are provided below.

System Alternative 1 (Triton Substation Project) would provide the required capacity to serve load in the Electrical Needs Area on a long-term basis. This alternative also provides the capability for future capacity increases to accommodate additional load growth. Further, System Alternative 1 would allow SCE to maintain system reliability and enhance operational flexibility because the substation would be optimally located in proximity to the demand. Therefore, SCE recommends System Alternative 1, the Triton Substation Project, as the Preferred System Alternative because it satisfies all the project objectives relevant to System Alternatives.

System Alternative 2 (Permanent 33/12 kV Substation Project) would not eliminate the need for a new substation in the Electrical Needs Area in the future. System Alternative 2 would provide a maximum of 56 MVA of capacity, which would only serve the projected load through mid-2015. Therefore, System Alternative 2 offers only an interim solution, and does not meet the project objective of serving long-term projected electrical demand. In addition, in order to serve new and existing electrical demand in the Electrical Needs Area, three new underground 33 kV distribution lines (each approximately seven miles long) would need to be constructed from Auld Substation to the new substation. Serving the forecasted increase

in electric demand with distribution lines of this length would result in the inability to maintain reliable voltage levels at the end of the line. Therefore, this alternative does not meet the project objective of maintaining system reliability. Furthermore, the longer distribution lines decrease operational flexibility, as explained in Section 1.3.2. Consequently, System Alternative 2 does not meet the project objectives relevant to System Alternatives and is, therefore, eliminated from further consideration in this PEA.

System Alternative 3 (No Project Alternative) would prevent SCE from providing safe and reliable electrical service to its customers in the Electrical Needs Area. This alternative would result in a reduced level of reliability, potentially leading to blackouts. Additionally, the No Project Alternative would result in noncompliance with the CPUC-mandated voltage levels, and would not meet the project objectives as defined in Section 1.4. Therefore, System Alternative 3 is eliminated from further consideration in this PEA.

2.4 Site Alternatives

2.4.1 Site Identification Screening and Evaluation ethodology

SCE recommends the construction of the Triton Substation Project (System Alternative 1), which includes a new substation, as the Preferred System Alternative. Therefore, SCE evaluated potential sites for the substation (Site Alternatives). The siting process includes the following four steps:

Step 1 – Identify Project Area. The first step is to identify constraints and project requirements that limit the area within which the project can be located.

The major project requirements and constraints include:

- A location that achieves load balancing by optimizing the distances between the new substation and existing nearby substations.
- A location that allows for the shortest possible distribution line lengths to serve load.
- Whenever possible, avoiding potential constraints such as: geologic hazards; the presence of high-pressure natural gas pipelines; special districts and redevelopment project areas; wildlife preserves and habitat conservation plans; waterways; cultural resources; and applicable land use policies.

The major constraint identified in the Triton Substation Project area was the French Valley Airport Land Use Compatibility Plan, which prohibits electrical substations in one zone, and limits the height of facilities in other zones. These restrictions limited the number of available sites that could be considered.

As a result of Step 1, SCE identified the Project Area (Figure 2.4-1) in which the substation must be located.

Step 2 – Locate Sites. Once the Project Area was identified, SCE located potential sites for the substation within this area. Several sites were identified; some sites were listed for sale, others were discussed with developers and homeowners in the area.

Step 3 – Screen Sites. Sites identified in Step 2 were then screened for critical factors, including those identified in Step 1. Geographic Information System data was analyzed and field work was conducted to collect information on sites within the Project Area to determine whether project requirements could be met. The screening factors included critical electrical needs, construction feasibility, and environmental factors, including:

- Sufficient size (approximately 3 acres) and shape (approximately square) to accommodate the substation and the required safety buffers
- Proximity to the existing electrical grid to bring power lines into the substation
- Access for distribution duct banks out of the substation
- Access to the site for construction and operations
- Presence/absence of waterways and channels on the site
- Applicability of restrictions imposed by the French Valley Airport Land Use Compatibility Plan

Step 4 – Evaluate Remaining Feasible Sites. In this step, multiple factors were used to evaluate the sites that are more compatible with the proposed substation. The evaluation factors included: environmental, local land use, land availability, and constructability. In order to provide sufficient information to choose preferred and alternate sites, additional data was collected, field work was conducted, and some sites were reevaluated.

Each potential site would have a similar substation design, with some differences related to the particular location and configuration of the site. Substation specifications would be the same for each proposed site. The 115 kV subtransmission lines would require different numbers of poles and length of conductor, depending on location. The telecommunications system would be of a similar specification but would require a different route and length of cable depending upon the Site Alternative selected.

2. Site Alternatives onsidered

As a result of the methodology described above, SCE identified three Site Alternatives (Figure 2.5-1). Two of the sites are located in the City of Temecula and the third site is located in unincorporated County of Riverside. The Site Alternatives considered for further evaluation in this PEA are described below.

2. .1 Site Alternative A

Site Alternative A is an approximately 10-acre property in the City of Temecula. It has a land use designation of Very Low Residential and is zoned Very Low Density Residential. Site Alternative A is located on the southeast corner of Nicolas Road and Calle Medusa. Vehicular access into the substation would be from Calle Medusa, approximately 570 feet south of the intersection with Nicolas Road (Figure 2.5-2).

The property is unimproved and currently contains temporary structures. Although the property is relatively flat, additional grading would be required to control drainage.

The substation would connect to the existing Valley-Auld-Pauba 115 kV subtransmission line, located approximately 1,300 feet to the west. To loop-in the existing subtransmission line, the line would be cut and brought into Triton Substation to form the Valley-Auld-Triton 115 kV and Pauba-Triton 115 kV subtransmission lines. This requires the installation of seven engineered tubular steel poles (TSPs), approximately 85 feet tall. The locations of these poles from Triton Substation to the existing corridor are identified in Chapter 3: Project Description. The line configuration is shown on Figure 2.5-3. Site Alternative A would also require fiber optic cables to connect Triton Substation to Auld and Moraga Substations.

Site Alternative A is bounded by Nicolas Road to the north, undeveloped land to the east, Calle Medusa Road to the west, and residences to the south. Site Alternative A is located approximately 1.5 miles from the French Valley Airport and is within Zone D and Zone E of the French Valley Airport Compatibility Plan. The Plan requires an airspace height review for approval of objects over 70 feet tall and 100 feet tall in Zones D and E, respectively.

Landscaping would be included on all four sides of the walled substation.

2. .2 Site Alternative B

Site Alternative B is an approximately 12-acre property in the City of Temecula. The property has a land use designation of Very Low Residential and is zoned Very Low Density Residential. Site Alternative B is located on the southwest corner of Nicolas Road and the unimproved Los Choras Ranch Road. Vehicular access into the substation would be through the existing Los Choras Ranch Road right-of-way (ROW) approximately 450 feet south of Nicolas Road (Figure 2.5-2).

The property is unimproved and is located within a 100-year floodplain. To address potential ponding and prevent standing surface water from entering the substation, soil may be imported to the site raising the pad elevation approximately one foot higher than the maximum 100-year flood zone level. Site Alternative B would require extensive grading. The final grading would be subject to permit conditions.

The substation would connect to the existing Valley-Auld-Pauba 115 kV subtransmission line, which traverses the Site Alternative B property along the west side (Figure 2.5-4).

Site Alternative B is bounded by Nicolas Road to the north, undeveloped land to the south, the unimproved portions of the Los Choras Ranch Road ROW to the east, and the existing 30-foot-wide SCE 115 kV subtransmission ROW to the west. Site Alternative B is located approximately 1.5 miles from the French Valley Airport and is within Zone D and Zone E of the French Valley Airport Compatibility Plan. The Plan requires an airspace height review for approval of objects over 70 feet tall and 100 feet tall for Zones D and E, respectively.

Landscaping would be included along the eastern, northern, and southern sides of the walled substation. The western side of the substation, adjacent to the 115 kV subtransmission corridor would not be landscaped.

2. .3 Site Alternative

Site Alternative C is an approximately 4.4-acre property in an unincorporated area of County of Riverside, just north of the City of Temecula. The property has a land use designation of Mixed Use Planning Area and is zoned as Specific Plan. Site Alternative C is located on the northwest corner of Commerce Street and Calistoga Drive. Vehicular access would be from Commerce Court approximately 450 feet west of Calistoga Drive (Figure 2.5-2).

The property is undeveloped but has previously been graded and minimal additional grading would be required for substation construction.

The substation would connect to the existing Valley-Auld-Pauba 115 kV subtransmission line, located approximately 3,750 feet to the east along Murrieta Hot Springs Road, via two routes (referred to as Line 1 and Line 2). Depending on final engineering, approximately 20 to 40 TSPs would be required for the subtransmission line component (Figure 2.5-5).

Site Alternative C is bounded by vacant land to the north and west, Commerce Court to the south, and Calistoga Drive to the east. Site Alternative C is located approximately 0.1 mile from the French Valley Airport and is within Zone B1 and Zone C of the French Valley Airport Compatibility Plan. The Plan requires an airspace height review for approval of objects over 35 feet tall and 70 feet tall in Zones B1 and C, respectively.

The site is currently planned for a proposed commercial center. Landscaping would be provided on the adjacent sloped sides, which would help prevent erosion of the slopes.

2. .4 Site Alternatives ecommendation

Recommendations for Site Alternative A, Site Alternative B, and Site Alternative C are provided below.

As Site Alternative A is flat and the majority of the site is not located in a 100-year floodplain, it is not prone to flooding, thus minimizing water-related drainage and erosion issues. Construction at this site would be more readily accomplished, enabling SCE to meet the scheduled operating date of June 2010 when the existing Canine 33/12 kV Substation is decommissioned. Canine Substation is located approximately 350 feet from Site Alternative A; this close proximity facilitates the transfer of load from Canine to the proposed substation. The Site Alternative A would be subject to height review for substation components over 100 feet tall and subtransmission poles over 70 feet tall, which is less restrictive than both Site Alternative B and Site Alternative C. Therefore, SCE recommends Site Alternative A as the Preferred Site Alternative.

Site Alternative B is located within a 100-year floodplain and would require the construction of an exterior retention basin. Constructing an open retention basin could result in the creation of biological habitat, visual impacts due to its location near street frontage, and the liability of open water outside the substation block wall. Construction of a substation on Site Alternative B would interrupt existing drainage patterns and may create issues for adjacent properties. Because of the topography of this site, the substantial grading necessary on Site Alternative B would likely cause erosion, thereby undermining Los Choras Ranch Road, which provides access to the substation and nearby residences. In addition, excavation

would destabilize the hillside and a retaining wall would be required to protect the substation from erosion. Site Alternative B would require significant excavation of the slope on the property, which is more likely to uncover paleontological resources on the site. Site Alternative B would be subject to an airspace height review for approval of objects over 70 and 100 feet tall for Zones D and E, respectively. Although it is not considered the Preferred Site Alternative, Site Alternative B is feasible and is carried forward in the PEA for further analysis.

Due to its distance from the existing Valley-Auld-Pauba 115 kV subtransmission line, Site Alternative C would require a greater amount of subtransmission line construction and associated ground disturbance, which could result in increased environmental impacts. Site Alternative C would be subject to an airspace height review for approval of objects over 35 feet tall. Although it is not considered the Preferred Site Alternative, Site Alternative C is feasible and is carried forward in the PEA for further analysis.

2. Summary

SCE proposes to construct the Triton Substation Project (Preferred System Alternative) on Site Alternative A (Preferred Site Alternative), which together are analyzed in Chapter 4 as the Proposed Project. The Proposed Project is described in detail in Chapter 3: Project Description. Site Alternative B and Site Alternative C, including subtransmission Line 1 and subtransmission Line 2, are also carried forward for further analysis.

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FIGURE 2.4-1. PROJECT AREA

Auld
Canine
Moraga
French Valley Airport
RANCHO BELLA VISTA
JOHNSON RANCH
WINCHESTER PROPERTIES
RORIPAUGH RANCH
MURRIETA
TEMECULA
UNINCORPORATED RIVERSIDE COUNTY
TEMECULA
UNINCORPORATED RIVERSIDE COUNTY
LOS ALAMOS RD
PORTH RD
STATE ROUTE 79/WINCHESTER RD
LEON RD
POURROY RD
BENTON RD
AULD RD
ALLEN RD
BOREL RD
SKY CANYON DR
AULD-MORAGA
VALLEY-AULD-PAUBA
HUNTER RD
PROMONTORY PKY
MCGOWANS PAS
CENTRAL PARK DR
MURRIETA HOT SPRINGS RD
COMMERCE CT
CALISTOGA DR
LIEFER RD
NICOLAS RD
SOUTH LOOP RD
LOS CHORAS RANCH RD
CALLE MEDUSA
WALCOTT LN
STATE ROUTE 79/WINCHESTER RD
N GENERAL KEARNY RD
DEL REY RD
LA SERENA WY
MEADOWS PKY
MORAGA-PECHANGA
MARGARITA RD
MORAGA-STADLER
RANCHO CALIFORNIA RD
YNEZ RD
RANCHO VISTA RD
PAUBA RD
15

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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- French Valley Airport
- Project Area
- Electrical Needs Area
- City of Temecula
- City of Murrieta
- Unincorporated Riverside County

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000
0 Feet 1
Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

2008

TRITON SUBSTATION PEA

FIGURE 2.4-1. PROJECT AREA

SOUTHERN CALIFORNIA EDISON

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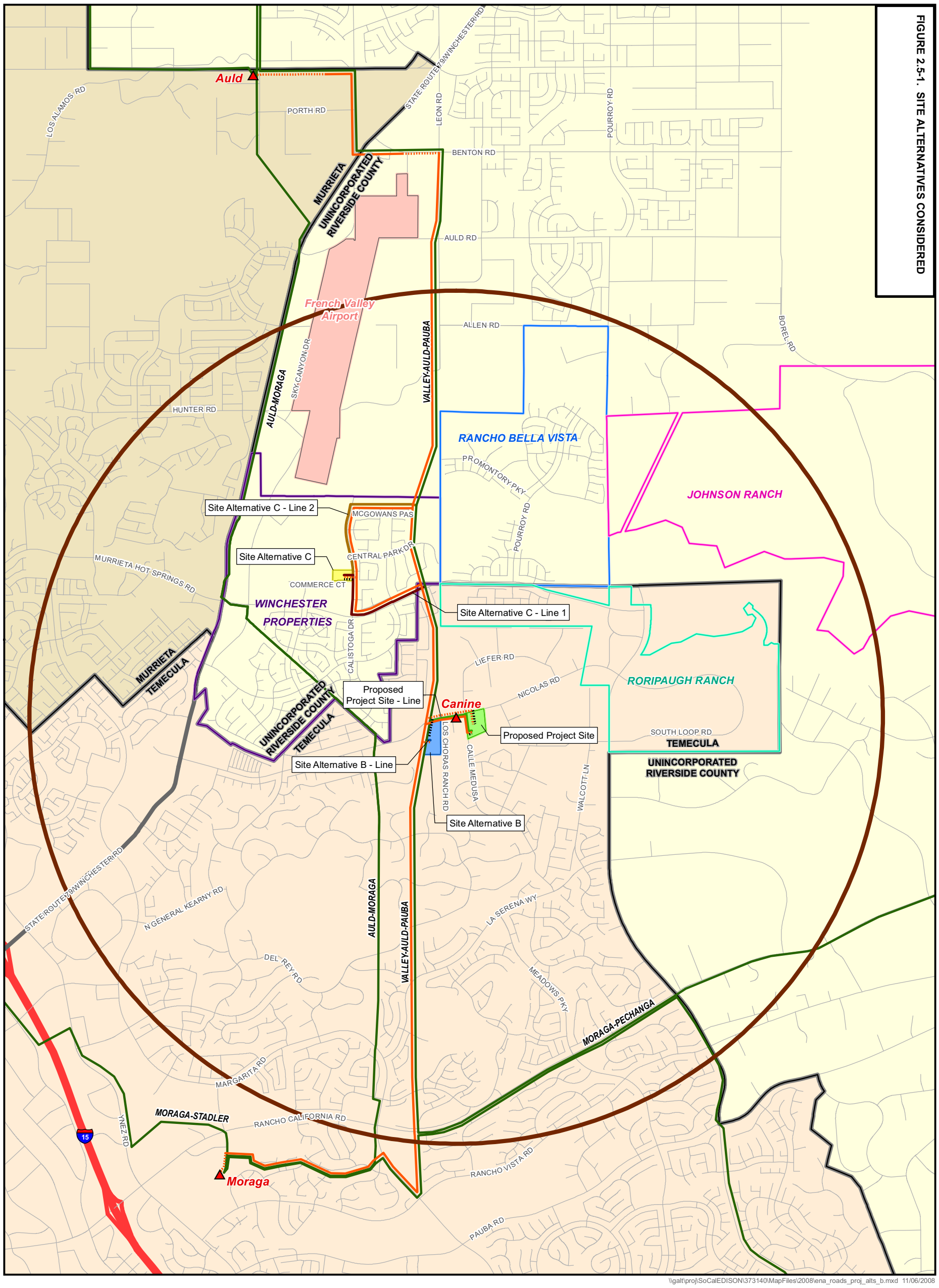
FIGURE 2.5-1. SITE ALTERNATIVES CONSIDERED



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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- French Valley Airport
- Electrical Needs Area
- City of Temecula
- City of Murrieta
- Unincorporated Riverside County

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000 Feet

0 1 Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

2008

TRITON SUBSTATION PEA

FIGURE 2.5-1. SITE ALTERNATIVES CONSIDERED

SOUTHERN CALIFORNIA EDISON

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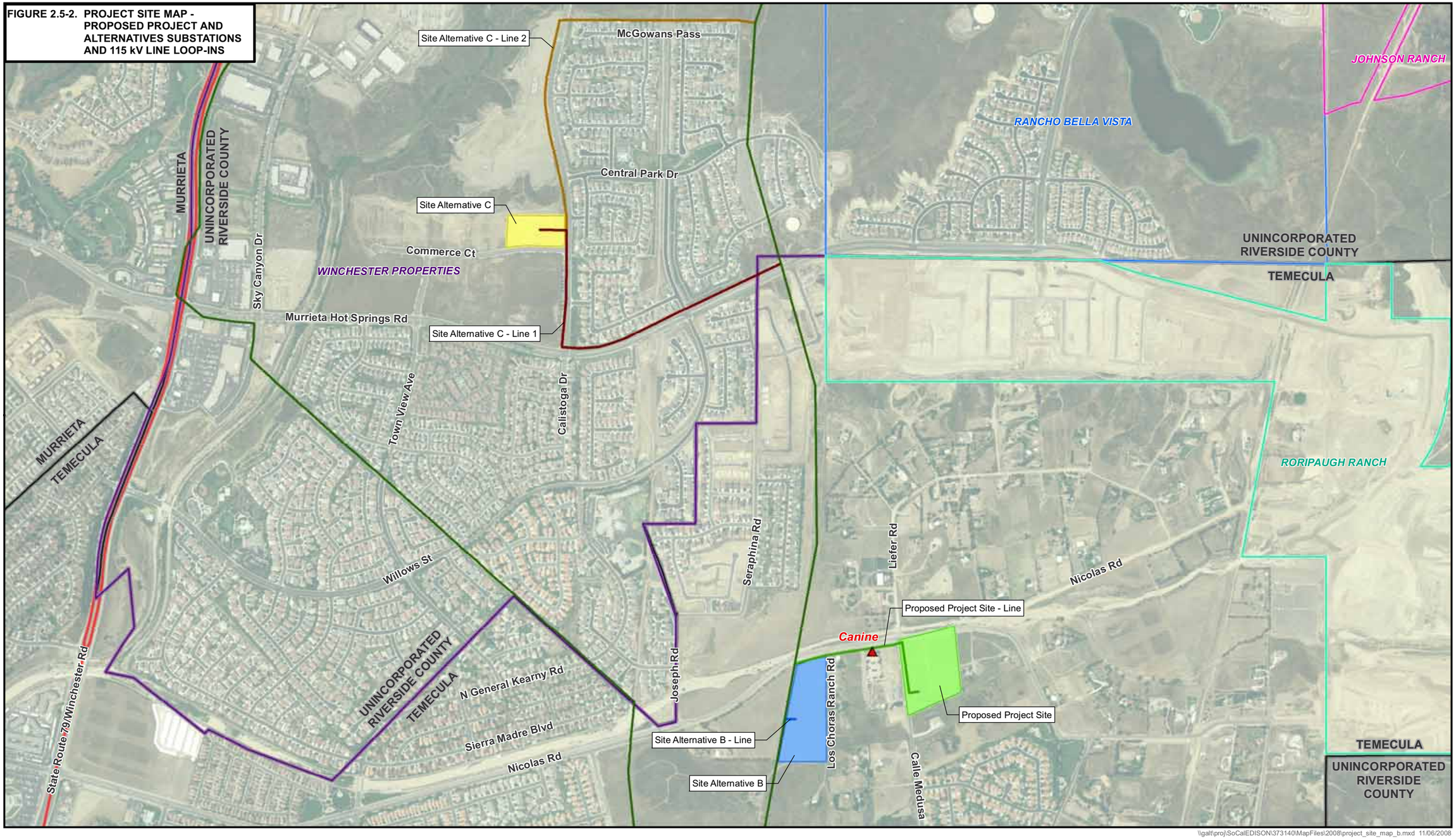
FIGURE 2.5-2. PROJECT SITE MAP - PROPOSED PROJECT AND ALTERNATIVES SUBSTATIONS AND 115 kV LINE LOOP-INS



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LEGEND

- Existing Substation
- State Highway
- Existing SCE 115 kV Subtransmission Line
- Jurisdictional Boundary

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project Site and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Note: Telecommunication routes and 12 kV duct banks are shown on Figure 2-3.

1:12,000
NAD 83 UTM ZONE 11N

1 inch equals 1,000 ft

0 2,000

0 Feet 0.25

Miles

Source: Southern California Edison; Riverside County
Image Source: USDA-FSA Aerial Photography Field Office

2008

TRITON SUBSTATION PEA

FIGURE 2.5-2. PROJECT SITE MAP - PROPOSED PROJECT AND ALTERNATIVES SUBSTATIONS AND 115 kV LINE LOOP-INS

SOUTHERN CALIFORNIA EDISON

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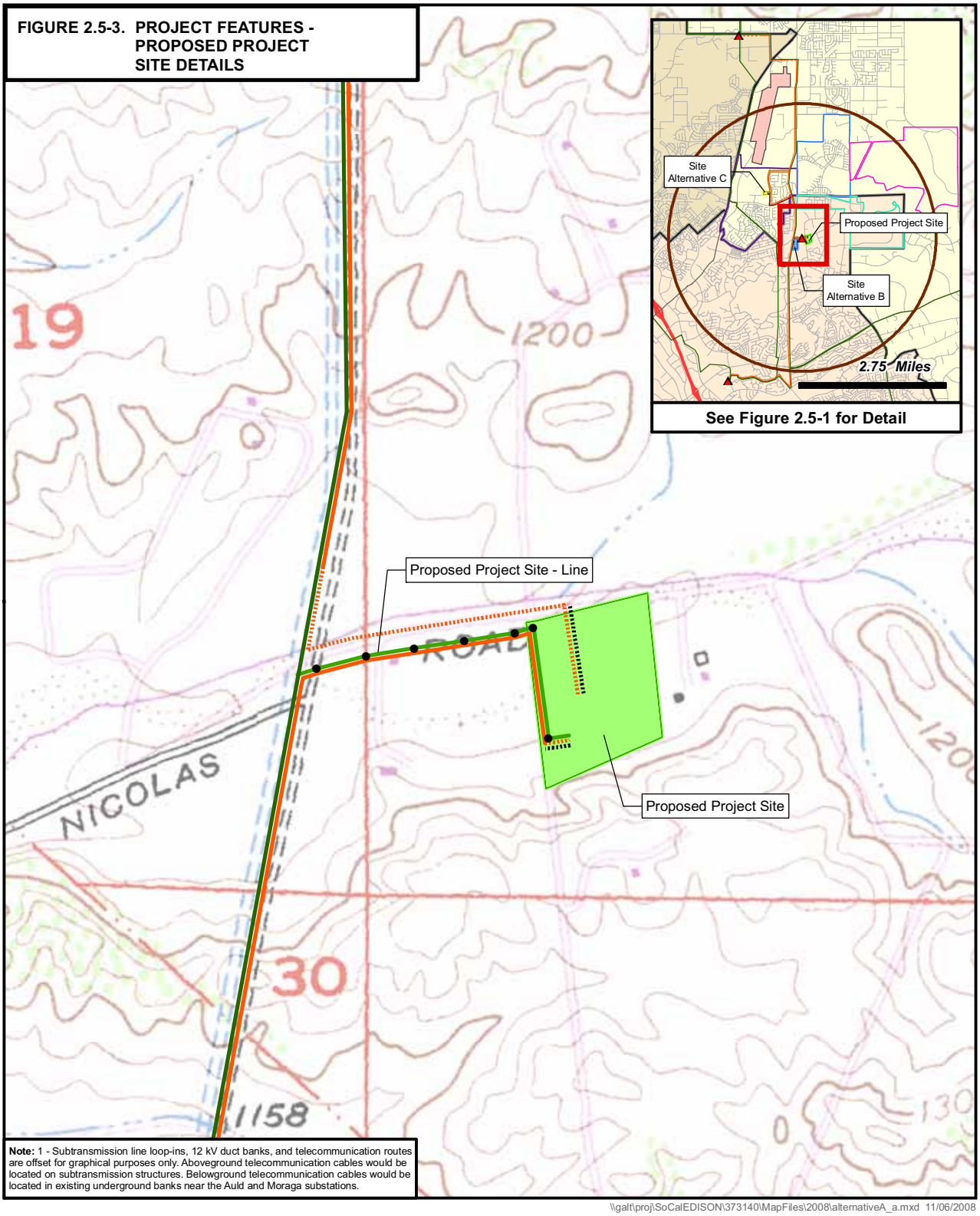
FIGURE 2.5-3. PROJECT FEATURES - PROPOSED PROJECT SITE DETAILS



Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

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LEGEND

- Proposed Pole Location
- Existing SCE 115 kV Subtransmission Line

Proposed Project and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

1:8,400
NAD 83 UTM ZONE 11N

1 inch equals 700 ft

0 1,400
Feet

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

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TRITON SUBSTATION PEA

FIGURE 2.5-3. PROJECT FEATURES - PROPOSED PROJECT SITE DETAILS

SOUTHERN CALIFORNIA EDISON

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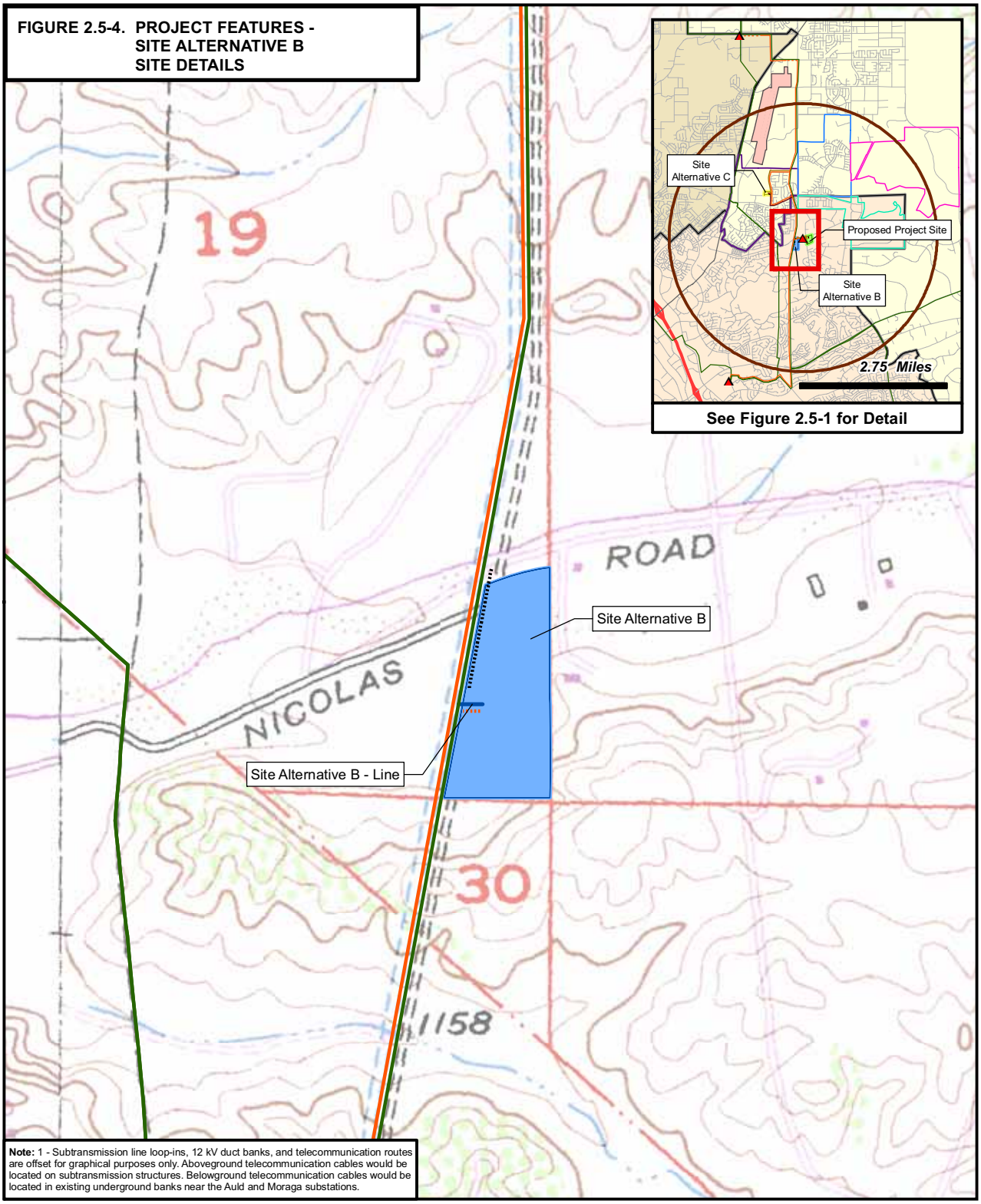
FIGURE 2.5-4. PROJECT FEATURES - SITE ALTERNATIVE B SITE DETAILS

See Figure 2.5-1 for Detail



Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

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LEGEND

- Proposed Pole Location
- Existing SCE 115 kV Subtransmission Line

Proposed Project and Site Alternatives B and C

Substations
- Proposed Project Site
- Site Alternative B
- Site Alternative C

Telecommunication Routes[1]
- Aboveground
- Belowground

Subtransmission Line Loop-ins[1]
- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

12 kV Duct Banks[1]
- Belowground

1:8,400
NAD 83 UTM ZONE 11N

1 inch equals 700 ft

0 1,400
Feet

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

2008

TRITON SUBSTATION PEA

FIGURE 2.5-4. PROJECT FEATURES - SITE ALTERNATIVE B SITE DETAILS

SOUTHERN CALIFORNIA EDISON

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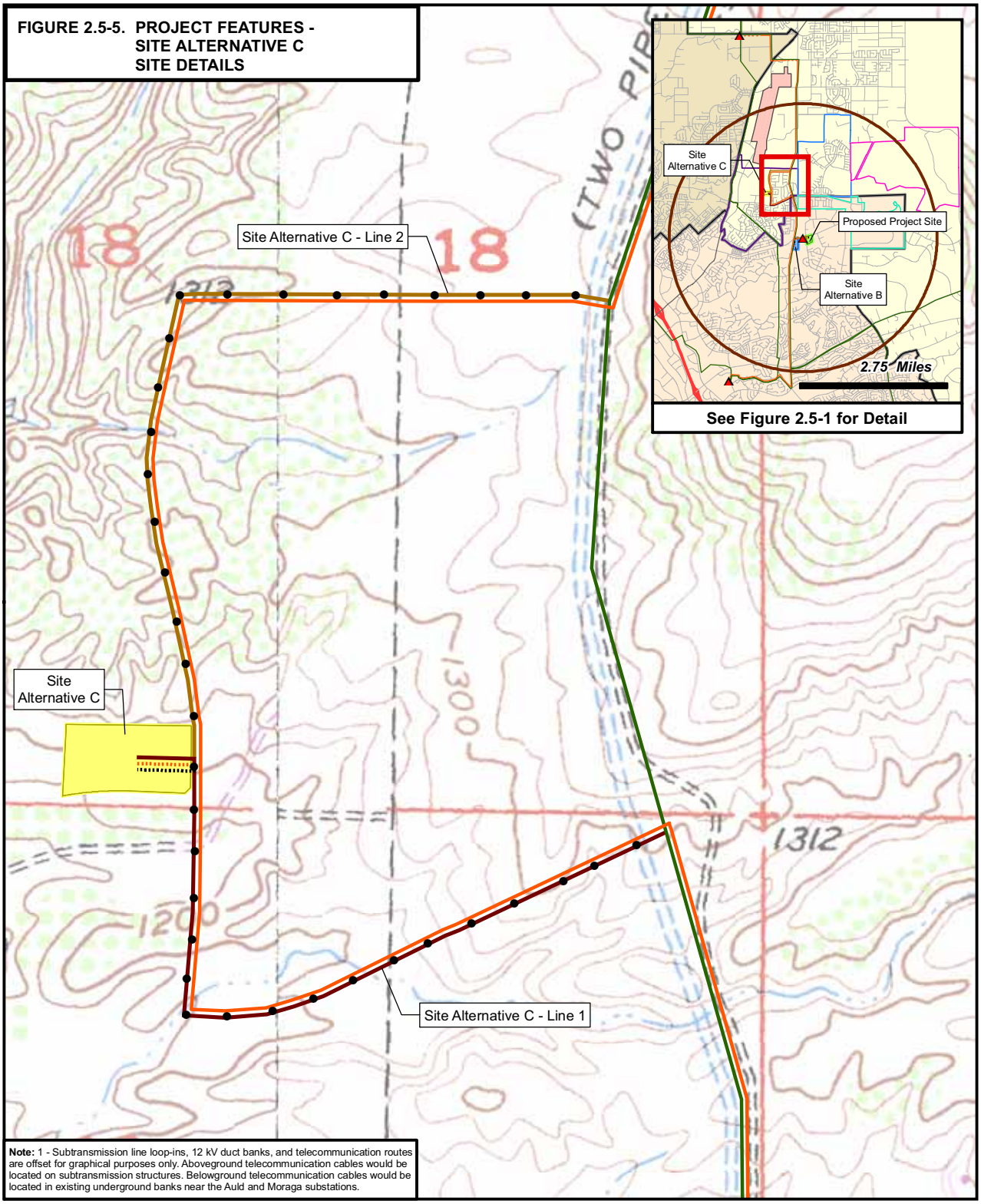
FIGURE 2.5-5. PROJECT FEATURES - SITE ALTERNATIVE C SITE DETAILS



Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

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LEGEND

- Proposed Pole Location
- Existing SCE 115 kV Subtransmission Line

Proposed Project and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

1:8,400
NAD 83 UTM ZONE 11N

1 inch equals 700 ft

0 1,400
Feet

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

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TRITON SUBSTATION PEA

FIGURE 2.5-5. PROJECT FEATURES - SITE ALTERNATIVE C SITE DETAILS

SOUTHERN CALIFORNIA EDISON

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3. Proposed Project Description

3.1 Project Overview

SCE proposes to construct the Proposed Project on an approximately 10-acre property in the City of Temecula, in the County of Riverside. Primary components of the Proposed Project are listed in Table 3.1-1 below.

Table 3.1-1. Summary of Project omponents
Triton 115/12 kV Substation Project PEA

Triton Substation
• 115 kV operating/transfer bus with five circuit breakers • Two 28 megavolt ampere (MVA) 115/12 kV transformer banks with associated high and low side disconnecting switches • 12 kV operating/transfer bus equipped for six new 12 kV circuits • Two 4.8 megavolt ampere reactive (MVAR) capacitor banks • Station Automation 2 (SA-2) System • Prefabricated Mechanical Electrical Equipment Room (MEER)
115 kV Subtransmission Line Loop-In
• One existing 115 kV subtransmission line located within an existing right-of-way west of the proposed substation site looped into the substation, resulting in the creation of two parallel 115 kV subtransmission line segments (each approximately 1,300 feet in length) • Seven tubular steel poles (TSPs) to support the new 115 kV subtransmission line segments
12 kV Distribution Duct Banks
• Two new underground 12 kV distribution duct banks from the new substation to the north property boundary at Nicolas Road and west property boundary at Calle Medusa
Telecommunications System
• New overhead/underground 48-strand fiber optic cables to connect the new substation to Auld and Moraga Substations • New fiber optic multiplex equipment and channel equipment in the MEER

3.2 Project ocation

The Proposed Project would serve the rapidly growing Cities of Temecula and Murrieta, in addition to adjacent areas of unincorporated Southwestern Riverside County. The Proposed Project location is described in terms of the Electrical Needs Area, the Project Area, the Substation Site, 12 kV Distribution Duct Banks, the Subtransmission Line Loop-in, and the Telecommunications Routes as summarized below:

- The **Electrical Needs Area** includes the Cities of Temecula and Murrieta, in addition to adjacent areas of unincorporated Southwestern Riverside County, as defined in Section 1.1 (Figure 1.1-2).

- The **Project Area** is the area in which the substation must be located in order to optimize load balancing and distribution line lengths. The Project Area is located in proximity to three residential developments in the City of Temecula: Roripaugh Ranch (currently under construction), Rancho Bella Vista, and the Johnson Ranch (Figure 2.4-1).
- The **Substation Site** is the Preferred Site Alternative (Site Alternative A), as described in Chapter 2: Project Alternatives. The Substation Site is an approximately 10-acre property located on the southeast corner of Nicolas Road and Calle Medusa Road in the City of Temecula. The location of the Substation Site for the Proposed Project is provided in Figure 2.5-2. Taking into account land for future street widening, the site comprises approximately 8.5 acres of constructible land.
- Two **12 kV Distribution Duct Banks**, each consisting of six 5-inch conduits, would start at the 12 kV switchrack power cable trench and would be routed out of the substation to the property boundary along two different paths: one towards the north to Nicolas Road and one towards the west to Calle Medusa (Figure 2.5-2).
- The **Subtransmission Line Loop-In** comprises two new 115 kV subtransmission line segments, each approximately 1,300 feet long, that would be constructed on new double-circuit structures to connect the substation to the existing Valley-Auld-Pauba 115 kV subtransmission line located west of the Substation Site (Figure 2.5-2).
- Two **Telecommunication Routes** originate at Triton Substation. The first route is approximately six miles long and terminates at Auld Substation. The second route is approximately four miles long and terminates at Moraga Substation (Figure 2.5–2).

3.3 Triton Substation and acilities Proposed Project

3.3.1 Triton Substation

3.3.1.1 eneral Description

Triton Substation would be an unattended, automated, 56 MVA 115/12 kV low-profile substation. The substation would be served by looping-in the existing Valley-Auld-Pauba 115 kV subtransmission line, located approximately 1,300 feet to the west.

The substation front entry would face Calle Medusa and would be set back approximately 60 feet east of the street. The north wall of the substation would be approximately 270 feet south of Nicolas Road. The substation footprint (area contained within the perimeter wall) would be approximately three acres (Figure 3.3-1).

Approximately 1.5 acres of land immediately outside the substation perimeter wall to the north, east, and south would be used for distribution duct banks, buffers, and landscaping. The property frontage along Calle Medusa, consisting of approximately one acre of land, would be used for subtransmission line access, distribution duct banks, landscaping, vehicular access driveway, and a front setback.

Site grading would occur over approximately five acres of the property. To the north and east side of the Substation Site, approximately 3.5 acres of the property would remain

undeveloped. SCE would conform to the street setback requirements of the City of Temecula to the extent feasible.

3.3.1.1.1 E uipment

The substation would incorporate low-profile design features, which would limit the height of electrical equipment and structures to approximately 30 feet. The substation would be equipped with two 28-MVA 115/12 kV transformer banks, two 4.8 MVAR 12 kV capacitor banks, five 115 kV switchrack positions and six 12 kV distribution circuit positions. Electrical equipment housed within the substation is summarized in Table 3.3-1, Substation Facility Equipment Summary.

The 115 kV switchrack would be designed with an operating and transfer bus configuration with one circuit breaker and three group-operated disconnect switches at each position, except for a bus-tie position that would have one circuit breaker and two group-operated disconnect switches. The 12 kV switchrack would be a low-profile design with an operating bus and a transfer bus. One prefabricated Mechanical and Electrical Equipment Room (MEER) would be erected to house control and relay racks, battery and battery chargers, AC and DC distribution switchboards, and telecommunication equipment.

Table 3.3-1. Substation acility E uipment Summary
Triton 115/12 kV Substation Project PEA

Equipment	Description
115 kV Switchrack	The proposed 115 kV, low-profile steel switchrack would consist of eight positions: two for feed lines, two for transformer banks, one bus tie, and three would be left vacant for future use. The operating and transfer buses would each be 240 feet long and consist of one 1590 kcmil (thousand circular mils) Aluminum Conductor Steel Reinforced (ACSR) per phase. Two line positions and two bank positions would each be equipped with a circuit breaker and three group-operated disconnect switches. The bus-tie position would be equipped with a circuit breaker and two group-operated disconnect switches. A control cable trench from the switchrack to the MEER would be installed. The switchrack dimensions would be approximately 29 ft high x 240 ft long x 99 ft wide.
Transformer Banks	Transformation would consist of two 28 MVA 115/12 kV transformer banks, each equipped with a group-operated isolating disconnect switch on the high-voltage side and the low-voltage side, surge arresters, and neutral current transformers. The transformer area dimensions would be approximately 15 ft high x 80 ft long x 42 ft wide.
12 kV Switchrack	The 12 kV low-profile switchrack would consist of a 9-position rack expandable to 12 positions with wrap-around arrangement; a power cable trench; and a control cable trench to the MEER. The switchrack dimensions would be approximately 17 ft high x 81 ft long x 34 ft wide.
Capacitor Banks	Two 12 kV, 4.8 MVAR capacitor banks would be installed. The capacitor bank enclosure dimensions would be approximately 17 ft high x 16 ft long x13 ft wide.
MEER	A MEER would be erected and equipped with air conditioning, control and relay panels, battery and battery charger, AC and DC distribution, human machine interface (HMI) rack, communication equipment, telephone, and local alarm. MEER dimensions would be approximately 12 ft high x 36 ft long x 20 ft wide.

Source: SCE 2008

The substation would be equipped with a Station Automation 2 (SA-2) System, which is a micro-processor-based system that controls the equipment at the site.

Under normal conditions, Triton Substation would not be illuminated at night. Lighting would be used when required for emergency repairs. Lighting would consist of high-pressure sodium lights located in the switchracks, around the transformer banks, and areas of the yard where emergency activities may be required. Lights would be controlled by a manual switch and would normally be in the off position. These lights would be directed downward and shielded to reduce glare outside the facility.

3.3.1.1.2 andscaping

Landscaping around the proposed substation would be designed to filter views for the surrounding community and other potential sensitive receptors near the substation. Landscaping would be established around the full perimeter of the substation. During final design, SCE would develop and implement a landscaping and irrigation plan that would be consistent with the surrounding community.

Irrigation and landscaping would be installed after the substation wall is constructed and water service is established.

3.3.1.1.3 Drainage

Stormwater drainage inside the substation wall would be designed to minimize stormwater impacts to the substation operation. The internal run-off would be released from the substation through surface drainage structures.

Drainage from the property would be collected and controlled by surface improvements. SCE would be responsible for directing stormwater run-off to the subsurface drainage system and would prepare and implement drainage plans for the substation. Final design of the site drainage would be subject to the conditions of the grading permit obtained from the City of Temecula prior to construction.

3.3.1.1.4 echanical and Electrical E uipment oom

Dimensions of a typical MEER are 12 feet high, 36 feet long, and 20 feet wide. Depending upon the vendor, the MEER would have light tan or beige walls and roof. Dark brown may trim the roofline, wall joints, and doorway. The MEER likely would not have eaves or roof overhangs. The roof and exterior walls would likely be steel.

3.3.1.1. estroom acility

A stand-alone prefabricated permanent restroom enclosure 10 feet high, 10 feet long, and 10 feet wide would be installed in close proximity to the MEER. This facility would be connected to water and sewer lines when available. SCE would obtain required permits from the City of Temecula prior to installation of the restroom facility and plumbing.

3.3.1.1. Security and Access

The proposed substation would be enclosed on four sides by an 8-foot-high perimeter wall. The wall would be consistent with the surrounding community standards and subject to SCE's safety requirements. The wall typically would be a light-colored decorative block and include periodic pilasters. A band of at least three strands of barbed wire would be affixed

near the top of the perimeter wall inside of the substation and would not be visible from the outside.

The substation entrance would have a 20-foot-wide asphalt concrete driveway leading from Calle Medusa to a locked gate for 2-way traffic access into the substation. The access would extend into the substation to facilitate vehicular movement. A decorative rolling access gate would be a minimum of 8 feet high by 24 feet wide.

3.3.2 12 k Distribution Duct Banks

3.3.2.1 eneral Description

Two underground distribution duct banks, each consisting of six 5-inch conduits, would start at the 12 kV switchrack power cable trench and be routed out of the substation to the property boundary along two different paths: one route would head north to Nicolas Road and one would head west to Calle Medusa. Each set of six 5-inch conduits would contain one conduit for telecommunications (discussed in Section 3.3.4), one for a spare, and the remaining four would be used to accommodate 12 kV distribution circuits.

3.3.2.2 E uipment

The equipment required would be the two duct banks, each consisting of six 5-inch conduits.

3.3.3 Subtransmission ine oop-In

3.3.3.1 eneral Description

The existing 115 kV Valley-Auld-Pauba subtransmission line would supply power to the new substation. Looping the existing 115 kV subtransmission line into Triton Substation would create two new 115 kV subtransmission line segments that would provide the source of power to the substation. Each of the two new 115 kV subtransmission line segments would be approximately 1,300 feet long and would be constructed on new double-circuit structures. This would create two new 115 kV subtransmission lines: the Valley-Auld-Triton 115 kV subtransmission line and the Pauba-Triton 115 kV subtransmission line.

The proposed locations of subtransmission structures from the existing corridor to Triton Substation are shown in Figure 2.5-3.

3.3.3.2 E uipment

The subtransmission line loop-in would require a total of approximately seven engineered tubular steel pole (TSP) structures. Six new TSPs would be installed from Triton Substation to the subtransmission ROW to the west. In addition, one TSP currently supporting the Valley-Auld-Pauba 115 kV subtransmission line would be modified or replaced with a new TSP to accommodate the line reconfiguration. Of the seven TSPs, two would be located along the east side of Calle Medusa and five would be located along the south side of Nicolas Road.

Presently, there are eight wood poles on the south side of Nicolas Road that support 33/12 kV distribution lines, and one pole that supports 12 kV distribution lines. These poles

would be removed and replaced with the TSPs described above, and the existing 33 kV distribution circuit on Nicolas Road would be relocated to the new structures and reenergized as a 12 kV distribution circuit.

The TSPs would have a non-specular galvanized surface. Steel cross-arms would be attached to each TSP with single gray polymer insulators with either dead-end or suspension assemblies in a vertical configuration. The approximate dimensions of these components are shown in Figure 3.3-2. The TSPs would support a 954-SAC conductor. Each of the two new subtransmission segments would consist of three conductors each approximately 1,300 feet in length, totaling approximately 7,800 feet of total conductor to be used for the subtransmission line loop-in.

3.3.4 Telecommunications System

3.3.4.1 eneral Description

Electrical equipment at Triton Substation would be monitored through SCE's telecommunications system. The new facilities for the Proposed Project would be connected to the telecommunications system through a diverse communication loop that would include routing to Auld Substation and Moraga Substation, as shown in Figure 2.5-3. The telecommunications cables would be routed out of the MEER through the new 12 kV distribution duct banks described above. Once the telecommunication cables leave the Substation Site, the cables will proceed above- and below-ground within existing ROW as shown in Figure 2.5-3 and described below.

In addition, minor upgrades to existing telecommunications equipment within the existing MEERs at Auld, Valley, Pauba, Moraga, Stadler, and Pechanga Substations would occur.

3.3.4.2 E uipment

The telecommunications system at Triton Substation would include a multiplexer in the MEER. The telecommunications conduit would contain a 48-strand fiber optic cable for communication and monitoring of substation equipment. The fiber optic cables would be installed in both underground duct banks and on above-ground structures as follows:

One cable route would commence on the north side of the MEER and would continue north to Nicolas Road. The cable would then turn west along Nicolas Road to the existing Valley-Auld-Pauba 115 kV subtransmission ROW, then turn north and continue along the existing 115 kV subtransmission ROW. The cable would then turn west, terminating at Auld Substation. The other cable route would commence on the west side of the MEER and would continue west to Calle Medusa. The cable would then turn north along Calle Medusa to Nicolas Road. At that point, the cable would turn west along Nicolas Road to the existing Valley-Auld-Pauba 115 kV subtransmission ROW, then turn south and continue along the existing 115 kV subtransmission ROW. This cable would then turn west, terminating at Moraga Substation (Figure 2.5-3).

3.4 onstruction Plan

The following sections provide details regarding the construction of the Proposed Project.

3.4.1 Stormwater Protection

Because construction of the Proposed Project would disturb a surface area greater than one acre, SCE would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from the San Diego Regional Water Quality Control Board (SDRWQCB). To acquire this permit, SCE would prepare a Storm Water Pollution Prevention Plan (SWPPP) that details project information; monitoring and reporting procedures; and Best Management Practices, such as dewatering procedures, stormwater runoff quality control measures, and concrete waste management, as necessary. The SWPPP would be based on final engineering design and would include all project components.

3.4.2 aterial Staging

Construction of the Proposed Project would require temporary staging and storage areas for materials and equipment during the construction process. The materials staging would take place at the Substation Site, and materials, including conductor reels, wire stringing equipment, poles, line trucks, cross arms, insulators, and other incidental materials, would also be stored on the Substation Site.

3.4.3 onstruction Access

Trucks would use Nicolas Road to access the area and enter the site from Calle Medusa. Construction traffic would be scheduled for off-peak hours to the extent possible. The telecommunications crews would additionally utilize public streets and existing SCE easements between the Proposed Triton Substation, and the existing Moraga and Auld Substations to install the telecommunication conduit on new and existing structures and in underground duct banks.

3.4.4 Triton Substation onstruction

3.4.4.1 Site Preparation and rading

The internal substation area would be graded at a consistent slope of between one and two percent and compacted to 90 percent of the maximum dry density. The areas outside the substation wall that would be used for buffers, landscaping, etc. would be sufficiently graded to provide drainage in keeping with the overall site drainage design. The northern and eastern portions of the overall property most likely would not be graded. Final design would be subject to the conditions of the grading permit obtained from the City of Temecula.

To prevent ponding within the substation wall, it is estimated that approximately 5,000 cubic yards of imported fill would be required if the substation is graded to a one percent slope. The actual quantity of fill to be imported to the site would be calculated as part of the final engineering and design.

The substation grading design would incorporate Spill Prevention Control and Countermeasure (SPCC) Plan requirements due to the operation of oil-filled transformers at the substation. Typical SPCC Plan measures include curbs and berms designed and installed to contain spills, should they occur. These design features would be part of final engineering.

3.4.4.2 Below- rade onstruction

After the Triton Substation site is graded, below-grade facilities would be installed. Below-grade facilities include a ground grid, trenches, equipment foundations, and the base of the substation wall. The design of the ground grid would be based on soil resistivity measurements collected during a geotechnical investigation that would be conducted prior to construction.

3.4.4.3 E uipment Installation

Substructures would be installed during the below-grade construction phase. After the installation of substructures, the above-grade installation of substation facilities (i.e., buses, capacitors, circuit breakers, transformers, steel structures, and the MEER) would then commence.

The transformers would be delivered by heavy-transport vehicles and off-loaded on site by large cranes with support trucks. A traffic control service would be used during transformer delivery.

3.4.4.4 Installation of Base aterials

Upon completion of the substation facilities installation, a 4-inch-thick layer of untreated crushed rock would be placed within the walled area of the Substation Site, except in driveways and the 115 kV low profile bus enclosures. These areas would be paved with asphalt concrete.

3.4.4. Testing and Energi ation

Prior to energization, the substation equipment would be tested. Upon completion of successful testing, the substation equipment would be energized.

3.4. 11 k Subtransmission ine oop-in

3.4. .1 TSP oundations

Erecting TSPs typically requires an excavated hole of that is seven to nine feet in diameter and approximately 30 feet deep (resulting in approximately 140 cubic yards of soil removed per pole). After excavating foundation holes, reinforced steel (rebar cages) would be installed and concrete placed as the TSP foundations.

3.4. .2 TSP Installation

The TSPs would be delivered to the foundations by truck on Nicolas Road and Calle Medusa. A traffic control service would be used during construction and SCE would obtain the necessary encroachment permits prior to installation activities. Cranes would be used to place the TSPs on the foundations. The TSPs would then be bolted to the foundations. One existing TSP within the SCE ROW would be modified or replaced.

3.4. .3 onductor Stringing

Conductor would be installed between the existing Valley-Auld-Pauba 115 kV subtransmission line and Triton Substation, which would likely be done in two conductor

pulls. The first pull would be from the first TSP outside Triton Substation to the 115 kV switchrack inside the substation. The second pull would be between the TSP supporting the Valley-Auld-Pauba 115 kV subtransmission line and the first TSP outside Triton Substation. The conductor stringing would not require additional ground disturbance.

Conductor pulling would be in accordance with SCE specifications and similar to process methods detailed in the Institute of Electrical and Electronics Engineers (IEEE) Standard 524-1992 (Guide to the Installation of Overhead Transmission Line Conductors). Conductors are pulled using individual reels, with ropes strung along the poles. Conductors are pulled from each pull location using a conductor pulling machine and are pulled three conductors at a time (one complete circuit per pull).

The cable dolly for pulling overhead conductor would be positioned within the substation and the conductor pulling machine would be placed within the streets of Nicolas Road and Calle Medusa. A traffic control service would be used during overhead conductor pulling activities and SCE would obtain the necessary encroachment permits prior to conducting pulling activities. No additional soil disturbance would occur as a result of the overhead conductor pulling activity.

3.4. .4 emoval of Existing ood Poles

Following installation of the TSPs, the existing 33 kV distribution line would be transferred to the new structures and the existing wood poles would be removed (including the below-ground portion). The standard work practice for removing a wood pole is to attach a sling at the upper end of the pole, using boom or crane equipment, while using a hydraulic jack a the base of the pole to vertically lift the pole until the pole can be physically lifted out of the ground. Excavation around the base of the wood pole is only required in the event the base of the pole has been encased in hardened soil or man-made materials (e.g., asphalt or concrete), or where there is evidence that the pole has deteriorated to the point that it would splinter or break apart by the jacking and pulling operation described above.

Once the wood pole is removed, the hole would be backfilled using imported fill in combination with fill that may be available as a result of excavation for the installation of the TSP foundations. The backfill material will be thoroughly tamped and the filled hole would be leveled to grade with no depression or mound. Holes located in areas subject to pedestrian traffic would be filled level to the walking surface. The last two inches of fill would consist of a firmly packed temporary blacktop patch or equivalent material until permanent walkway (e.g., concrete sidewalks) repairs can be made.

3.4. . Testing and Energi ation

The final step in completing the subtransmission line loop-in involves energizing the new conductors. The existing Valley-Auld-Pauba 115 kV subtransmission line would be de-energized in order to complete the loop-in. De-energizing and reconnecting lines to new poles could potentially be performed at night when electrical demand is lower, thereby reducing the potential for electric service outages. Once the connection (also known as a cut-over) is complete, the subtransmission line would be returned to service (re-energized).

3.4. 12 k Distribution Duct Banks

3.4. .1 onduit Installation

Installing the two underground duct banks for the 12 kV distribution circuits (and telecommunications systems) would involve excavating two trenches approximately 275 feet long from the 12 kV switchrack to Nicolas Road and 60 feet to Calle Medusa. Each trench, approximately 18 inches wide and 60 inches deep, would be excavated with a backhoe. Polyvinyl chloride (PVC) conduits that are 5 inches in diameter would be placed in each trench, covered with a layer of slurry, and paved. Two vaults would be installed at Nicolas Road, one at the end of each section of trench. A total of six 12 kV underground distribution lines would be installed in the two duct banks. Two of the distribution lines would rise up and connect to the new TSPs along Nicolas Road. The remaining four distribution lines will be routed to the property boundary. Beyond this point, the exact location and routing of these proposed lines have yet to be determined. The 12 kV distribution lines cannot be designed until the precise locations of the loads are determined, which would occur at a future date.

3.4. Telecommunications System

New telecommunications cable would be installed in new and existing underground duct banks and on new and existing above-ground structures. The overhead and underground segments of the telecommunications route are shown in Figure 2.5-3.

A new multiplexer system would be installed in the MEER at Triton Substation. Additionally, two multiplexer systems at Valley Substation and one single multiplexer system would require upgrading at each of the following substation: Auld, Moraga, Pauba, Stadler, and Pechanga.

3.4. .1 Overhead able Installation

Overhead cable would be installed by attaching cable to the existing cross arms on 115 kV subtransmission structures. A truck with a cable reel would be set up at one end of the section to be pulled, and a truck with a winch would be set up at the other end. Cable would be pulled onto the cross arms with pull rope. Cable, then, would be permanently secured to the cross arms, and fiber strands in the cable from one reel would be spliced to fiber strands in the cable from the next reel to form one continuous path. One reel typically holds 20,000 feet of cable. A crew can install up to 2,000 feet of cable in one day and complete three splices in one day. Installation of the overhead cable would occur at the same time as the installation of the 115 kV subtransmission line loop-in and a traffic control service would be used during installation activities.

3.4. .2 nderground able Installation

The underground portions of the telecommunications system would be placed in 5-inch-diameter conduits. As described above, the telecommunication conduits would be routed from the MEER to both Calle Medusa and Nicolas Road through the 12 kV underground distribution duct banks. After that point, the underground cables would be routed through both new and existing conduits. This may require installation of new

conduit in sections totaling approximately 2,000 feet. To install the new conduit, SCE would dig trenches that are approximately 18 inches wide and 36 inches deep.

Underground cable installed in duct banks would be sheathed within a 1.5-inch inner duct. This allows for additional protection within the 5-inch conduit if additional cable is pulled through the conduit. This inner duct would be pulled through the conduit, and the cable would then be pulled through the inner duct. After installation in the duct banks, the fiber strands in the cable from one section would be spliced to the fiber strands in the cable from the next section to form one continuous fiber optic cable path.

3. a ardous aterials sage

Construction and operation of the Triton Substation Project would require the limited use of hazardous materials, such as fuels, lubricants, and cleaning solvents. All hazardous materials would be stored, handled, and used in accordance with the applicable regulations. For all hazardous materials in use at the construction site, Material Safety Data Sheets would be made available to all site workers for emergencies.

The SWPPP prepared for the Proposed Project would provide details regarding locations where hazardous materials may be stored during construction and the protective measures, notifications, and cleanup requirements for any accidental spills or other releases of hazardous materials that could occur.

3. aste eneration

During construction of the Proposed Project, recyclable or salvageable items and materials would be processed by construction crews into roll-off boxes at the Materials Staging Area. Salvageable items (e.g., conductor, steel, hardware) would be received, sorted, and baled at a commercial metal-recycling facility in Los Angeles, and then sold on the open market. All waste materials that are not recycled would be categorized by SCE in order to guarantee proper final disposal. Examples of disposable waste include wood from cribbing and packing materials and miscellaneous refuse generated during construction.

Depending on their condition and original chemical treatment, the wood poles removed during the 115 kV subtransmission line installation could be reused by SCE, returned to the manufacturer, or disposed of in a licensed Class I hazardous waste landfill.

Sanitation waste (i.e., human generated waste) would be recycled according to sanitation waste management practices.

Soil excavated for the Proposed Project would either be used as fill at the Substation Site or disposed offsite at an appropriately licensed waste facility.

3. and Disturbance

The Substation Site would be located on an approximately 10-acre undeveloped property. The substation footprint (area contained within the perimeter wall) would be approximately

2.5 acres. Approximately 2.5 acres of land immediately outside the substation perimeter wall to the north, east and south would be used for distribution duct banks, buffers, and landscaping. Calle Medusa road is located west of the Substation Site. Site grading would encompass all of the above areas and total approximately five acres. The additional acreage would remain undisturbed by SCE along the north and east sides of the property.

The 2.5 acres inside the substation wall would consist of approximately 0.5 acres of impervious surface and approximately 2.0 acres covered with a loose layer of 4-inch-thick untreated crushed rock. Within the 2.5 acres outside the substation wall, approximately 0.1 acre would be impervious surfaces and approximately 2.4 acres would be reserved for subtransmission and distribution line access, and setbacks of landscaping.

Earthwork for the substation would result in approximately 800 cubic yards of excavated soil. To prevent ponding within the interior of the substation, it is estimated that approximately 5,000 cubic yards of imported fill would be required if the substation is graded to a 1 percent slope. The project element materials and volumes are summarized in Table 3.7-1.

Table 3. -1. Project Element aterials and olumes
Triton 115/12 kV Substation Project PEA

Element	Area in Square Feet	Material	Volume of Material Needed in Cubic Yards
Site Fill	180,000	Soil	5,000
Foundations/Drainage Structures	2,050	Concrete	140
Cable Trenches	1,900	Concrete	15
Asphalt Concrete Paving for 115 kV Bus Enclosures	10,800	Asphalt Concrete	135
Internal Driveway	11,800	Asphalt Concrete	110
		Class II Aggregate Base	220
External Driveway	1,160	Asphalt Concrete	12
		Class II Aggregate Base	22
Rock Surfacing	94,000	Crushed Rock	13,600
Block Wall	--	Concrete blocks	13,200
Block Wall Foundation	5,200	Concrete	240

*Quantities/measurements are approximate

3. abor and E uipment

Construction would be performed by SCE construction crews and/or by contractors under the direction of SCE field supervisors. Anticipated construction personnel and equipment are summarized in Table 3.8-1.

3. Schedule

SCE anticipates that construction of the Triton Substation Project would take approximately eight months to complete. Crews typically work five 10-hour days. Depending on local

permit requirements, weekend, evening, and night work may also be required due to the scheduling of system outages and construction schedules. Construction would commence following CPUC approval, final engineering, and procurement activities. Table 3.9-1, Triton Substation Project Construction Timetable, summarizes the length of time anticipated to construct each component of the Proposed Project. The Triton Substation Project is presently scheduled to begin operation in June 2010.

Table 3. -1. Triton Substation Project onstruction Timetable
Triton 115/12 kV Substation Project PEA

Proposed Project Component	Scheduled Beginning	Duration
Triton Substation Construction	October 2009	8 months
115 kV Subtransmission Line Installation	October 2009	3 months
12 kV Distribution Duct Banks	November 2009	2 weeks
Telecommunications System	November 2009	3 months

Source: SCE 2008

3.1 Operation and aintenance

Components of the Triton Substation Project would require routine maintenance and may require emergency repair for service continuity. Triton Substation would be unattended, and electrical equipment within the substation would be remotely monitored and controlled by an automated system (SA-2) from Valley Substation. SCE personnel would visit for electrical switching and routine maintenance purposes. Routine maintenance would include equipment testing, equipment monitoring, and repair. SCE personnel would generally visit the substation two times per month.

The new 115 kV subtransmission line would be maintained in a manner consistent with CPUC General Order 95, which requires SCE to maintain 30 feet of vertical clearance between wires and roads accessed by vehicles, and 25 feet of vertical clearance for areas not accessed by vehicles (pedestrian only). The subtransmission line loop-in and poles occasionally may require emergency repairs. Distribution line conduits would require only emergency repairs for service continuity.

The telecommunications system would require periodic routine maintenance, which would include equipment testing, monitoring, and repair.

3.11 Project Design eatures

Project design features (PDFs) include structural elements and practices that are incorporated into the Triton Substation Project to avoid and/or minimize potential impacts to environmental resources. These PDFs are part of the Proposed Triton Substation Project and are distinguished from mitigation measures for potentially significant impacts under CEQA. PDFs will be implemented regardless of whether potential significant impacts were or were not identified during the CEQA environmental analysis.

PDFs are not identified for all resource areas. PDFs considered during the environmental review are provided in the applicable resource section impact analysis (and the PDF number is included in parentheses). Those project design features that are part of the Proposed Project are provided in Table 3.11-1.

Table 3. -1. Triton Substation Project onstruction Personnel and E uipment Summary
Triton 115/12 kV Substation Project PEA

Construction Phase	Duration	Number of Personnel	Equipment	Estimated Usage/Day (Hrs)
Triton Substation				
Site Management	Length of Construction	12	1 Office Trailer (electric)	8
Civil Construction- Below Grade/ Perimeter Wall Construction and Localized Fine Grading	100 Days	12	2 Crew Trucks (gasoline or diesel)	2
			1 Dump Truck (diesel)	
			1 Cement Truck (diesel)	3
			1 Bobcat (diesel)	3
			1 Skip Loader (diesel)	4
			1 Forklift (diesel)	4
			1 Stake Truck (gasoline or diesel)	2
			1 Grader (diesel)	4
			1 Carry-all (gasoline)	2
			1 Water Truck (gasoline)	6
MEER	10 Days	4	1 Stake Truck (gasoline or diesel)	2
			2 Crew Trucks (gasoline or diesel)	2
Transformer Testing and Preparation	10 Days	15	1 Generator (diesel)	6
			1 Lift Truck (gasoline)	3
			2 Pick-up Trucks (gasoline or diesel)	2
			1 Boom Truck (diesel)	3
			1 Processing Trailer (electric)	6
			1 Forklift (diesel)	4
Electrical Construction	100 Days	10	1 Boom Truck (diesel)	3
			1 Tool Trailer (electric)	3
			3 Crew Trucks (gasoline or diesel)	2
			1 Flat Bed (gasoline)	2
			1 Crane (diesel)	4
Transformer Installation Crew	1 Day	6	1 Forklift (diesel)	6
			2 Crew Trucks (gasoline or diesel)	2
			1 Low-boy Hauler/Tractor Truck (diesel)	6
Paving Crew	10 Days	6	1 Stake Truck (gasoline or diesel)	4
			2 Crew Trucks (gasoline or diesel)	2
			1 Tractor (diesel)	3
			1 Bobcat (diesel)	4
			1 Asphalt Paver (diesel)	4
			1 Dump Truck (diesel)	3
			1 Barbergreen (diesel)	8
			Paddle Scraper (diesel)	6

Table 3. -1. Triton Substation Project onstruction Personnel and E uipment Summary
Triton 115/12 kV Substation Project PEA

Construction Phase	Duration	Number of Personnel	Equipment	Estimated Usage/Day (Hrs)
Test Crew	120 Days	2	1 Test Truck (gasoline)	3
115 kV Subtransmission Line Installation				
Installing Steel Pole Footings	14 Days	6	1 Utility Truck (diesel)	10
			1 Drill Rig (diesel)	
			1 Cement Truck (diesel)	
Setting New Steel Poles	7 Days	10	1 Cement Truck (diesel)	10
			1 Drill Rig (diesel)	
			1 Crane (diesel)	
			1 Crew Truck (diesel)	
			1 Utility Truck (diesel)	
			1 SUV (gasoline)	
Installing Overhead Conductor	5 Days	10	1 Conductor Pulling Machine (diesel)	10
			1 Cable Dolly (diesel)	
			1 Utility Truck (diesel)	
			1 Line Truck (diesel)	
			1 SUV (gasoline)	
12 kV Distribution Duct Banks				
Distribution Duct Bank Construction	2 weeks	8	1 – Crew Truck (gasoline or diesel)	1
			1 – Dump Truck (gasoline or diesel)	6
			1 – Backhoe (diesel)	6
Telecommunications				
Substation Communications Installation Crew	40 days	2	2 Vans (gasoline)	4
Overhead Communications Installation Crews	25 days	4	1 Bucket Truck	8
			1 Reel Truck	8
Underground Trenching Crew	6 days	3	1 Flatbed Truck	1
			1 Backhoe	8
			1 Stakebed Truck	2
			1 Crew Truck (gasoline or diesel)	2
Underground Cable Installation Crew	6 days	4	1 Bucket Truck (gasoline or diesel)	8
			1 Reel Truck (gasoline or diesel)	8

Source: SCE 2008

Table 3.11-1. Project Design eatures
Triton 115/12 kV Substation Project PEA

PDF Number	Project Design Feature
PDF AES-1	**Substation Setback.** The substation would be sited on the property in a way that provides setbacks, particularly from major streets.
PDF AES-2	**Low-Profile Substation Equipment.** Low-profile substation equipment would be used.
PDF AES-3	**Substation Lighting Control.** The substation lighting would be designed to be controlled by switch so that it can be turned on only when required for nighttime emergency repairs. The lighting would be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use.
PDF AES-4	**Non-Reflective Finish.** Equipment installed would have a dull, gray non-reflective finish to minimize reflectivity and to make the equipment appear to recede into the backdrop. Non-specular subtransmission cable would be installed for the new subtransmission line loop-in to minimize conductor reflectivity
PDF AES-5	**Substation Block Wall.** The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards.
PDF AES-6	**Substation Landscaping.** The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that relates to its surroundings. The landscape design would be developed later in the project design process.
PDF BIO-1	**Pre-Construction Surveys.** Pre-construction biological clearance surveys would be performed to minimize impacts on special-status plants and/or wildlife species.
PDF BIO-2	**Worker Environmental Awareness Program**. A Worker Environmental Awareness Program (WEAP) would be prepared and all construction crews and contractors would be required to participate in WEAP training prior to starting work on the Triton Substation Project. The WEAP training would include a review of the special-status species and other sensitive resources that could exist in the Triton Substation Project area, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained would be maintained.
PDF BIO-3	**Biological Monitors.** Biological monitors would only be utilized during construction of the Triton Substation Project within areas found to contain sensitive biological resources. The monitors would be responsible for ensuring that impacts on special-status species, native vegetation, wildlife habitat, or unique resources would be avoided to the fullest extent possible. Where appropriate, monitors would flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or special-status species. These restricted areas would be monitored to ensure their protection during construction. If non-listed sensitive resources are found within the project area, the monitor will relocate the individual out of the project area.
PDF BIO-4	**Avian Protection.** All transmission, sub-transmission, and distribution structures would be designed to be avian-safe in accordance with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee (APLIC), 2006).
PDF BIO-5	**Best Management Practices (BMPs).** Construction and Operations Crews would be directed to use Best Management Practices (BMPs) where applicable. These measures would be identified prior to construction and incorporated into the construction and maintenance operations.

Table 3.11-1. Project Design eatures
Triton 115/12 kV Substation Project PEA

PDF Number	Project Design Feature
PDF BIO-6	**Nesting Birds.** To minimize potential impacts to selected nesting special-status birds, raptors, or other MBTA bird species, planned vegetation clearing will take place during the non-breeding season (between September 1 and January 31), to the extent feasible. This will discourage the species from nesting within the work area. Trees, shrubs, or other vegetation occupied that would provide suitable structure for nesting would be removed. If vegetation clearing must take place during nesting season (February 15 – August 31), pre-construction nest surveys will be conducted by a biologist prior to clearing. If the biologist finds an active nest within or adjacent to the construction area and determines that there may be impacts to the nest, the biologist will delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the type of construction activity. Only construction activities (if any) approved by the biologist will take place within the buffer zone until the nest is vacated. If nests are found and cannot be avoided by the project activities, or if work is scheduled to take place in close proximity to an active nest, SCE would coordinate with the CDFG and USFWS and obtain written concurrence prior to moving the nest.
PDF BIO-7	**Burrowing Owls.** Pre-construction burrowing owl surveys are recommended for Proposed Project to determine presence or absence. A qualified Biologist will survey within 500 feet of the site for the presence of any active owl burrows within 30 days prior to the onset of construction activities. Any active burrow found during survey efforts will be mapped on the construction plans. If no active burrows are found, no further action would be required. If nesting activity is present at an active burrow, the active site will be protected until nesting activity has ended. Nesting activity for burrowing owl in the region normally occurs between March and August. To protect the active burrow during nesting, the following restrictions to construction activities will be required until the burrow is no longer active as determined by a qualified biologist: 1) clearing limits will be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified biologist and 2) access and surveying will be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the active burrow will only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest. If an active burrow is observed during the non-nesting season, the nest site will be monitored by a qualified biologist, and when the owl is away from the nest, the biologist will either actively or passively relocate the burrowing owl. The biologist will then remove the burrow so the burrowing owl cannot return to the burrow.
PDF BIO-9	**Lighting.** Night lighting would be directed away from open spaces adjacent to the selected site. Shielding would be incorporated in the final project design to ensure ambient lighting is not increased.
PDF BIO-10	**Noise.** If the construction noise levels are expected to potentially cause substantial impacts to wildlife species, as determined by a qualified biologist, proposed noise-generating activities shall incorporate temporary features such as setbacks, berms, or walls to minimize the effects of noise on open spaces adjacent to the selected site.
PDF CUL-1	**Historic and Archaeological Resources Stop Work.** In the event that subsurface historic resources or archaeological resources are encountered during the construction, excavation should be stopped and a qualified archaeologist consulted to evaluate the significance of the resource.
PDF CUL-2	**Paleontological Resources Stop Work.** If undisturbed sediments of the fossiliferous Pauba Formation and/or unnamed sandstone are exposed during excavation of the site, a qualified professional vertebrate paleontologist would

Table 3.11-1. Project Design eatures
Triton 115/12 kV Substation Project PEA

PDF Number	Project Design Feature
	need to be retained to develop a program to reduce potentially significant impacts to paleontological resources.
PDF CUL-3	**Human Remains Stop Work.** If human remains are encountered, all work must stop and the county coroner and a qualified archaeologist notified according to the provisions of Public Resources Code (PRC) Sections 5097.98 and 5097.99.
PDF GEO-1	**Seismic Design.** For new substation construction, specific requirements for seismic design would be per the requirements of the California Building Code (CBC) and the Institute of Electrical and Electronic Engineers (IEEE) 693 *Recommended Practices for Seismic Design of Substation*. Other project elements would be designed and constructed in accordance with the appropriate industry standards, including established engineering and construction practices and methods.
PDF HAZ-2	**Wood Pole Removal.** The wood poles removed during the 115 kV subtransmission line installation would be reused by SCE, returned to the manufacturer, recycled, or disposed of in a licensed Class I hazardous waste landfill.
PDF HAZ-3	**Health and Safety Plan.** SCE would prepare and implement a Health and Safety Plan to address site-specific health and safety issues related to site-specific hazard controls; personnel protection; communication; and training in the use of personal protective equipment and the implementation of required procedures.
PDF HAZ-4	**Traffic Control.** SCE would consult with local agencies, including California Department of Transportation (Caltrans), prior to initiation of construction activities that may affect traffic (i.e., equipment delivery necessitating lane closures, stringing of conductors), and would implement transportation and traffic project design features (see Section 4.15, Transportation and Traffic).
PDF HAZ-5	**Fire Prevention and Response Practices.** SCE would implement standard fire prevention and response practices that address construction activities for the Triton Substation Project. The Fire Prevention and Response Practices would establish standards and practices that would minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification. The Fire Prevention and Response Practices would address spark arresters, smoking and fire rules, storage and parking areas, use of gasoline-powered tools, road closures, use of a fire guard, and fire suppression equipment and training requirements. In addition, vehicle parking, storage areas, stationary engine site and welding areas would be cleared of vegetation and flammable materials. Areas used for dispensing or storage of gasoline, diesel fuel or other oil products would be cleared of vegetation and other flammable materials and no smoking would occur in these areas.
PDF HAZ-6	**Vegetation Clearance.** As applicable, SCE would maintain vegetation clearance during the life of the Triton Substation Project to reduce the fire hazard potential.
PDF HYDRO-1	**Storm Water General Construction Permit NPDES.** SCE would apply for a Storm Water General Construction Permit NPDES (order 99-08) and as a requirement of the Permit; a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented.
PDF HYDRO-2	**Hazardous Materials Near Drainages.** Hazardous materials would be used or stored greater than 50 feet from drainages.
PDF HYDRO-3	**Material Safety Data Sheets.** Material Safety Data Sheets would be made available to all site workers for cases of emergency.

Table 3.11-1. Project Design eatures
Triton 115/12 kV Substation Project PEA

PDF Number	Project Design Feature
PDF HYDRO-4	**SPCC Plan.** SCE would prepare and implement an SPCC Plan that includes the hazardous/non-hazardous materials used during the operation phase.
PDF HYDRO-6	**Jurisdictional Areas of Streams and Drainage.** No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways.
PDF HYDRO-7	**Facilitate Existing Drainage.** The substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts to erosion and siltation.
PDF HYDRO-8	**Drainage Control Features.** Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP.
PDF HYDRO-9	**Substation Stormwater Drainage.** Stormwater drainage inside the substation wall would be designed to minimize erosion and sediment control. The internal runoff would be released from the substation by means of surface drainage structures. Drainage from the property would be collected and controlled by surface improvements. SCE would direct stormwater runoff to the subsurface drainage system and prepare a Water Quality Management Plan (WQMP) for the substation. Final design of the site drainage would be subject to the conditions of the grading permit.
PDF HYDRO-10	**Existing Stormwater Drainage Systems.** Site facilities would be engineered to use existing stormwater drainage systems, including, but not limited to Santa Gertrudis Creek or County of Riverside stormwater collection facilities, as applicable.
PDF NOI-1	**Construction Equipment Working Order.** Construction equipment would be in good working order.
PDF NOI-2	**Construction Equipment Maintenance.** Construction equipment would be maintained per manufacturer's recommendations.
PDF NOI-3	**Construction Equipment Muffled.** Construction equipment would be adequately muffled.
PDF NOI-4	**Construction Equipment Idling Minimized.** Idling of construction equipment and vehicles would be minimized during the construction.
PDF NOI-5	**Hearing Projection for Workers.** Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan.
PDF NOI-6	**Low-Level Noise Equipment.** During final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable.
PDF PUB-1	**Fire Prevention Practices.** SCE would follow fire prevention practices as described in Section 4.7, Hazards and Hazardous Materials.
PDF PUB-2	**Traffic Control Services.** Traffic control services would be used for equipment, supply delivery, and conductor stringing, as applicable.
PDF PUB-3	**Construction Traffic Off Peak Hours.** Construction traffic would be scheduled for off-peak hours to the extent possible and would not block emergency equipment routes.

Table 3.11-1. Project Design eatures
Triton 115/12 kV Substation Project PEA

PDF Number	Project Design Feature
PDF PUB-4	**Substation Grounding.** The substation would be grounded to prevent electric shock and surges that could ignite fires.
PDF PUB-5	**O&M Vegetation Clearing.** SCE's operation and maintenance (O&M) procedures would include vegetation clearing, to minimize potential fire risks.
PDF REC-1	**Public Notification.** In the event short-term restrictions on recreation use of Veterans Park, existing bike lanes, bike paths, or trails are necessary during project construction, SCE will notify the public in coordination with the jurisdiction.
PDF TT-1	**Minimize Street Use.** Construction activities would be designed to minimize work on, or use of, local streets.
PDF TT-2	**Incorporate Protective Measures.** Any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity.
PDF TT-3	**Prepare Traffic Management Plans.** Traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling roadway work during periods of minimum traffic flow.
PDF TT-4	**Repair Damaged Streets.** Any damage to local streets would be repaired, and streets would be restored to their pre-project condition.
PDF UTIL-1	**Substation Landscaping.** Landscaping would be planted in accordance with a landscaping and irrigation plan approved by the local jurisdiction. The plan would incorporate the use of drought tolerant, native plants to conserve water.
PDF UTIL-2	**Storm Water General Construction Permit NPDES.** SCE would apply for a Storm Water General Construction Permit NPDES (order 99-08) and as a requirement of the Permit; a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented.
PDF UTIL-3	**Notice of Termination.** SCE would submit the Notice of Termination (NOT) upon reaching stabilization of the project area per the Stormwater General Construction Permit Order #99-08.
PDF UTIL-4	**Recycle Waste Materials.** Materials generated by removal of the existing lines and poles would be processed into roll-off boxes and sent to a commercial metal-recycling facility in Los Angeles where recyclable or salvageable items (e.g., conductor, steel, hardware) would be received, sorted, and baled, then sold on the open market. Waste materials that cannot be recycled would be categorized by SCE in order to assist with proper final disposal. Soil from drilling, site grading, or excavation for new pole foundations would be screened and separated for use as backfill material at the site of origin to the maximum extent possible.

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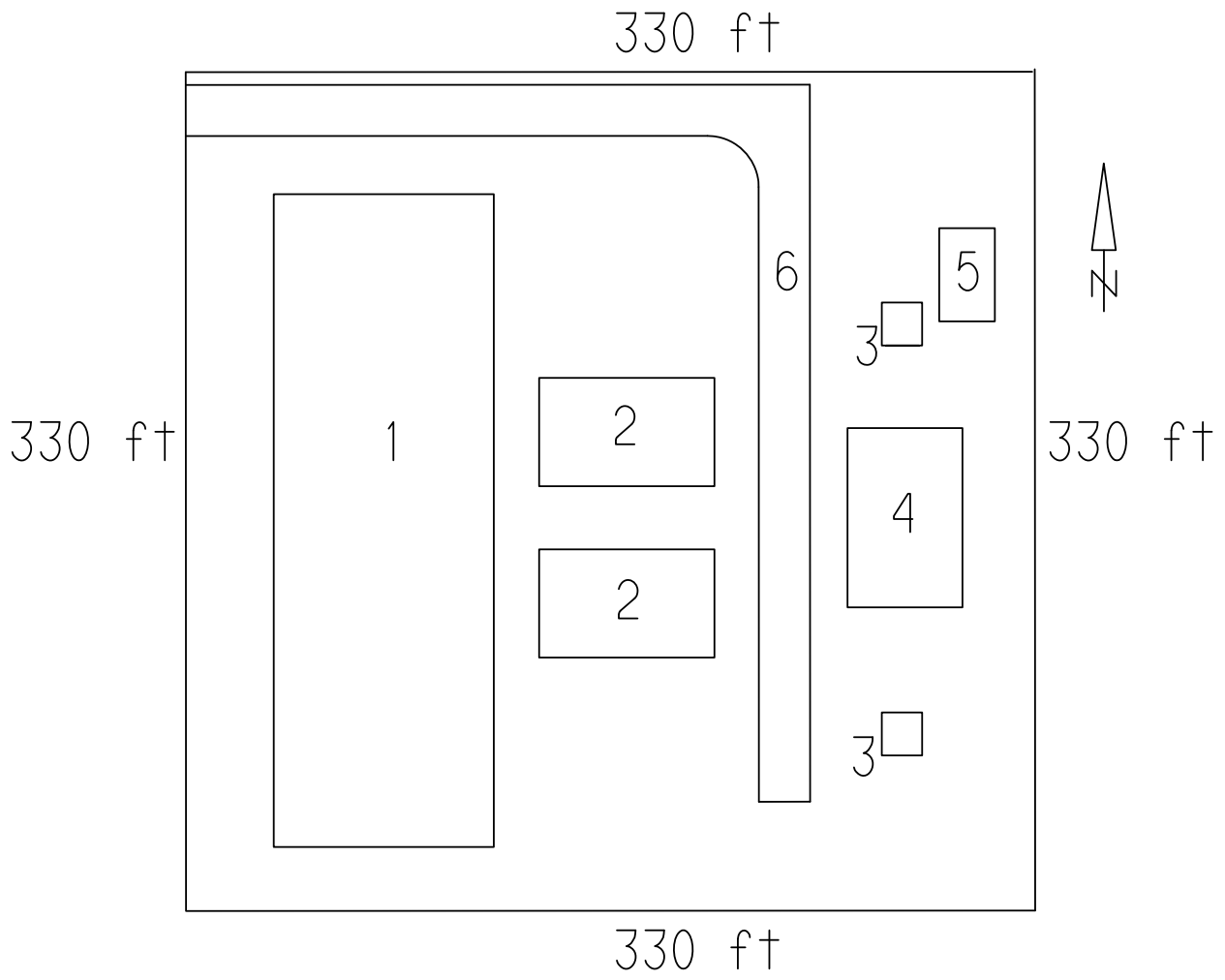
FIGURE 3.3-1. PROPOSED PROJECT SUBSTATION LAYOUT



1) 115 kV Switchrack

2) Transformer Bank

3) 12 kV Capacitor Bank

4) 12 kV Switchrack

5) MEER

6) Driveway

2008	TRITON SUBSTATION PEA	FIGURE 3.3-1. PROPOSED PROJECT SUBSTATION LAYOUT	SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

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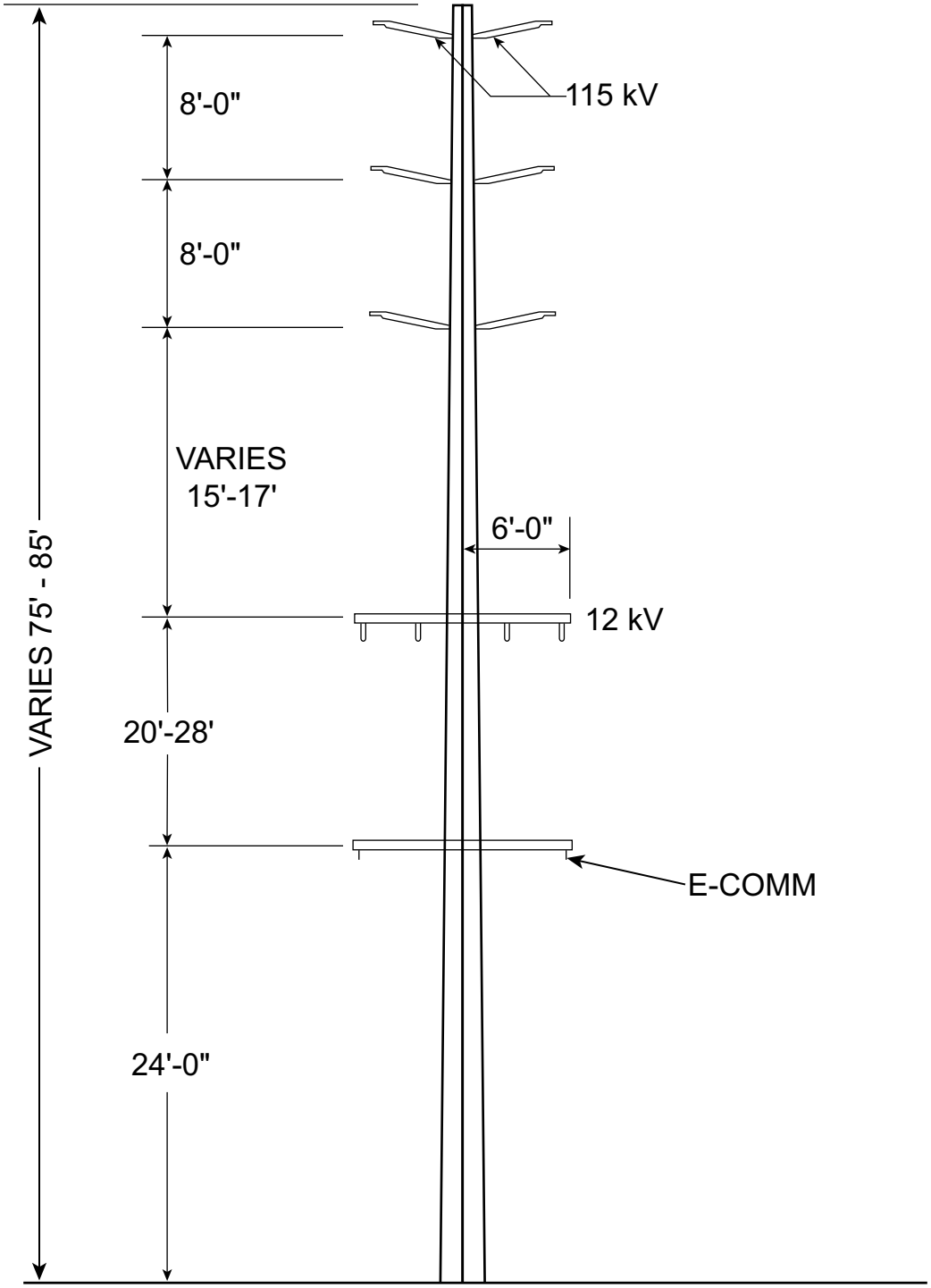
FIGURE 3.3-2. 115 kV TUBULAR STEEL POLE TYPICAL (DOUBLE-CIRCUIT)

115 kV DOUBLE-CIRCUIT POLE WITH SINGLE-CIRCUIT 12 kV UNDERBUILD AND TELECOMMUNICATIONS (E-COMM) CABLE



NOT TO SCALE

2008	TRITON SUBSTATION PEA	FIGURE 3.3-2. 115 kV TUBULAR STEEL POLE TYPICAL (DOUBLE-CIRCUIT)	SOUTHERN CALIFORNIA EDISON

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4. Environmental Analysis

4. Introduction

4. .1 Overview

This chapter of the PEA presents an environmental evaluation of potential impacts that would be associated with construction and operation of the Southern California Edison (SCE) proposed Triton Substation Project. The project includes a 56 megavolt ampere (MVA) 115/12 kilovolt (kV) substation (Triton Substation), one 115 kV subtransmission line loop-in from an existing subtransmission line into the proposed substation, two new underground 12 kV distribution duct banks, and a telecommunications system (Chapter 3.0 Proposed Project Description).

The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the CEQA Guidelines.

4. .2 Organi ation of the Triton Substation Project Environmental eview

The environmental review of the Triton Substation Project is provided in Chapter 4, Chapter 5, and Chapter 6 of this PEA.

Chapter 4 presents the analysis: methodology; applicable regulations, plans, and standards; significance criteria; the Proposed Project and alternatives (Site Alternative B and Site Alternative C) analysis; project design features; conclusion; and references for each environmental resource evaluated. The Proposed Project and alternatives analysis includes the environmental setting, impact evaluation, mitigation measures, and significance after mitigation. Tables and figures referenced in specific environmental resources sections are included at the end of each section.

Chapter 4 is organized as follows:

- 4.0 Introduction
- 4.1 Aesthetic Resources
- 4.2 Agricultural Resources
- 4.3 Air Quality
- 4.4 Biological Resources
- 4.5 Cultural and Paleontological Resources
- 4.6 Geology and Soils
- 4.7 Hazards and Hazardous Materials
- 4.8 Hydrology and Water Quality
- 4.9 Land Use and Planning
- 4.10 Mineral Resources
- 4.11 Noise
- 4.12 Population and Housing

- 4.13 Public Services and Utilities
- 4.14 Recreation
- 4.15 Transportation and Traffic
- 4.16 Utilities and Service Systems

A comparison of the alternatives, including a discussion of the environmentally superior alternative, is presented in Chapter 5, Comparison of Alternatives. Other CEQA considerations, including cumulative impacts, growth-inducing impacts, and greenhouse gas effects, are presented in Chapter 6, Other CEQA Considerations. The CEQA Checklist, in which the potential impacts of the Triton Substation Proposed Project are summarized, is provided in Appendix A.

4. .3 Existing Environment and Study Areas

The following descriptions of the Proposed Project, Site Alternative B, and Site Alternative C apply to the existing environment for each environmental resource and were considered during the impact analysis. The regional and/or local or site-specific study area for each environmental resource is defined in the methodology subsections of Chapter 4.

4. .3.1 Proposed Project

The Proposed Project including the Substation Site, 12 kV Distribution Duct Banks, Subtransmission Line Loop-In, and Telecommunication Routes (between the Substation Site and the interconnect to the existing Valley-Auld-Pauba 115 kV subtransmission line) would be located in the County of Riverside, entirely within the City of Temecula.

The proposed telecommunication lines north and south of the Proposed Project subtransmission line loop-in interconnects would be underbuilt on the existing Valley-Auld-Pauba 115 kV subtransmission line poles or within existing underground banks within the existing Valley-Auld-Pauba 115 kV subtransmission ROW (N/S Telecommunication Lines). The N/S Telecommunication Lines would be located in unincorporated County of Riverside and the Cities of Temecula and Murrieta.

4. .3.2 Site Alternative B

Site Alternative B including the Substation Site, 12 kV Distribution Duct Banks, Subtransmission Line Loop-In, and Telecommunication Routes (between the Substation Site and the interconnect to the existing Valley-Auld-Pauba 115 kV subtransmission line) would be located in the County of Riverside, entirely within the City of Temecula.

Similar to the Proposed Project, the N/S Telecommunication Lines would be located in unincorporated County of Riverside and the Cities of Temecula and Murrieta.

4. .3.3 Site Alternative

Site Alternative C including the Substation Site, 12 kV Distribution Duct Banks, Subtransmission Line Loop-In, and Telecommunication Routes (between the Substation Site and the interconnect to the existing Valley-Auld-Pauba 115 kV subtransmission line) primarily would be located in unincorporated County of Riverside, except for

approximately 272 feet of subtransmission Line 1, which would be located in the City of Temecula.

Similar to the Proposed Project, the N/S Telecommunication Lines would be located in unincorporated County of Riverside and the Cities of Temecula and Murrieta.

4. .4 Project Design eatures

Project Design Features (PDFs) include structural elements and practices that are incorporated into the Triton Substation Project to avoid and/or minimize potential impacts to environmental resources. These PDFs are part of the Proposed Triton Substation Project and are distinguished from mitigation measures for potentially significant impacts under CEQA. PDFs will be implemented regardless of whether potential significant impacts were or were not identified during the CEQA environmental analysis.

PDFs are not identified for all resource areas. PDFs considered during the environmental review are provided in the applicable resource section impact analysis (and the PDF number is included in parentheses). The PDFs considered during the analysis of the Proposed Project and alternatives are provided in Chapter 4. Those project design features that apply specifically to the Proposed Project are also presented in Chapter 3 (see Table 3.11-1).

4. . alifornia Public tilities ommission eneral Order No. 131-D

The California Public Utilities Commission (CPUC) has primary jurisdiction over the Triton Substation Project because it authorizes the construction, operation, and maintenance of public utility facilities in the state of California. CPUC General Order (GO) No. 131-D (GO 131-D) governs the approval of substation and subtransmission projects, such as the Triton Substation Project.

Section XI B of GO 131-D provides: "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As a result, the Triton Substation Project is exempt from local land use and zoning regulations and permitting.

Although SCE is not required to comply with local requirements, GO 131-D Section III C directs the public utilities "to communicate with, and obtain the input of local authorities regarding land use matters and obtain any non-discretionary local permits." Accordingly, in August 2007, SCE initiated contact with pertinent local jurisdictions and requested relevant data. Official briefings to apprise local elected officials of the Triton Substation Project took place in early April 2008. In addition, this PEA considers local regulations where applicable as part of the environmental review process.

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4.1 Aesthetics

4.1.1 Overview

This analysis describes the potential impacts to visual resources that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to aesthetics.

4.1.2 ethodology

Aesthetics, or visual resources, are the natural and cultural features of the landscape that can be seen and that contribute to the public's appreciative enjoyment of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics and potential visibility and the extent to which the project's presence would change the perceived visual character and quality of the environment in which it would be located.

4.1.2.1 The ederal ighway Administration isual Impact Assessment ethodology

This analysis was conducted using the evaluative process set out by the Federal Highway Administration in *Visual Impact Assessment for Highway Projects* (FHWA, 1988). The study areas defined through this process for the alternatives are described under Environmental Setting. This analysis approach was developed by a major federal agency that invested considerable resources in its creation, testing, and implementation, and as a result, this approach is robust and is now widely used to provide systematic and objective evaluations of visual change.

The FHWA visual quality and aesthetics assessment method used for this analysis addresses three primary questions:

- What are the visual qualities and characteristics of the existing landscape in the project area?
- What are the potential effects of the project's proposed alternatives on the area's visual quality and aesthetics?
- Who would see the project, and what is their likely level of concern about or reaction to how the project visually fits within the existing landscape?

Applying the FHWA visual quality assessment method entails six steps:

1. Establish the project's area of visual influence by identifying contiguous "landscape units." A landscape unit is an identifiable segment or area that contains views of a project. These units are often framed by natural or man-made features to make "outdoor rooms."
2. Determine who has views of and from the project ("viewer").

3. Describe and assess the landscape that exists before project construction ("affected environment").
4. Assess the response of viewers looking at and from the project, before and after project construction ("viewer sensitivity or concern").
5. Determine and evaluate views of the project for before and after project construction (simulations).
6. Describe the potential visible changes to the project area and its surroundings that would result from the project.

The first three steps were conducted for the Triton Substation Project, in order to identify landscape areas that constitute logical units for analysis, and to establish the baseline conditions that exist within them. The Triton Substation Project's potential changes to the visible landscape and likely viewer responses to those changes were then assessed and systematically compared against the baseline conditions to determine the nature and degree of potential impacts to visual resources.

4.1.2.2 Speciali ed Tools and ocabulary

The FHWA system uses a generally accepted set of tools and well-defined terminology. The following fundamental terminology is used throughout this analysis and is defined in the glossary:

- Landscape unit
- Simulations
- Views – viewpoints from which these representative views are seen are called Key Observation Points (KOPs)
- Viewers
- Viewer sensitivity (or level of concern)
- Visual character
- Viewing distance – the distance between the viewed object and the viewer. The closer the viewer is to a viewed object the more detail can be seen and the greater the potential influence the object has on visual quality. For this analysis, three viewing distances were used. They are (1) immediate foreground (between 0 and approximately 300 feet of the viewers), (2) foreground (between 300 feet and 0.5 mile), and (3) middleground (between 0.5 and 4 miles).[1]
- Visual quality – quality is evaluated and discussed using these terms: Vividness, Intactness, and Unity

[1]This categorization of distance zones is well established among visual resource analysis practitioners and has been adopted by the United States Forest Service as part of its Scenery Management System (United States Department of Agriculture Forest Service, 1995)

4.1.2.3 Study Procedure

The study process began with a review of maps, on which the project features had been plotted, and site visits to document the existing visual conditions in the Triton Substation Project area. Photographs were taken toward the locations of the project features from representative viewpoints and, from this set of views, key observation points (KOP) were selected to use as the basis for the analysis.

As a part of the process of evaluating the visual sensitivity of the views in each of the landscape units, a review was made of the plans, regulations, ordinances, and design standards adopted by each of the jurisdictions through which the Triton Substation Project would pass to identify any provisions that designate specific landscape areas or features as scenic resources deserving of special protection.

For the view from each of the KOPs, a photograph was selected to provide the basis for development of a simulation to depict the view as it would appear with the completed project in place. The photographs used as the basis for the simulations, were all taken with a digital camera set to take photos equivalent to those taken with a 35-mm camera using a 50-mm focal length. For KOP 1 and 4, several individual photo frames were spliced together to create wide angle views. For KOPs 2 and 3, single-frame images were used. For each view, computer modeling and rendering techniques were used to produce the simulated images. Existing topographic and site data provided the basis for developing an initial digital model. Project engineers provided site plans and digital data for the proposed facilities. These were used to create three-dimensional (3-D) digital models of the subtransmission and substation structures. These models were then combined with the digital site model to produce a complete computer model of the Triton Substation Project.

For each simulation viewpoint, a viewer location was digitized from topographic maps and scaled aerial photographs, using five feet as the assumed viewer eye level. Computer "wire frame" perspective plots were then overlaid on the photographs of the views from the simulation viewpoints to verify scale and viewpoint location. Digital visual simulation images were produced as a next step based on computer renderings of the 3-D model combined with high-resolution digital versions of base photographs. The final "hardcopy" visual simulation images that appear in this document were produced from the digital image files using a color printer.

Comparison of the "before" photographs with the simulations of the project as it would appear after construction provided the basis for determining project impacts on views and visual quality. Because landscape plans for the substation have not yet been prepared, it was not possible to include the landscaping in the simulations. As a consequence, the simulations depict the substations as they would appear immediately after construction and before landscaping has been installed. The assessment of impacts for the substation on the Proposed Project and Site Alternative B entailed a two-step process in which an assessment of impacts was first made based on comparison of the existing views and the simulations of the views as they would appear with the substation in place without landscaping, and then a qualitative evaluation was made of the impacts that would exist five years after the landscaping has been installed.

In comparing the pre-construction and post-construction conditions, use was made of the numerical rating sheets that the FHWA has devised as an aid to implementation of its visual impact procedure. Comparison of the FHWA rating scores for the existing views with the FHWA rating scores for the simulations of the views as they would appear with the Triton Substation Project constructed, provided a systematic and consistent basis for evaluating the degree of visual change that would occur as a result of the project's development. The numerical rating process and the comparison of the numerical ratings for the before and after views provided the backdrop for the qualitative assessments of visual conditions and visual change presented in this analysis.

4.1.3 egulations Plans and Standards

4.1.3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on aesthetics.

4.1.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on aesthetics 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
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

4.1. Proposed Project and Alternatives

The following visual resource-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF AES-1 **Substation Setback.** The substation would be sited on the property in a way that provides setbacks, particularly from major streets.

PDF AES-2 **Low-Profile Substation Equipment.** Low-profile substation equipment would be used.

PDF AES-3 **Substation Lighting Control.** The substation lighting would be designed to be controlled by switch so that it can be turned on only when required for nighttime emergency repairs. The lighting would be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use.

PDF AES-4 **Non-Reflective Finish.** Equipment installed would have a dull, gray non-reflective finish to minimize reflectivity and to make the equipment appear to recede into the backdrop. Non-specular subtransmission cable would be installed for the new subtransmission line loop-in to minimize conductor reflectivity

PDF AES-5 **Substation Block Wall.** The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards.

PDF AES-6 **Substation Landscaping.** The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that relates to its surroundings. The landscape design would be developed later in the project design process.

4.1. .1 Proposed Project

4.1. .1.1 Environmental Setting

4.1.5.1.1.1 Designated Scenic Vistas and Scenic Resources

There are no designated scenic vistas or scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway in the Proposed Project study area.

4.1.5.1.1.2 Landscape Setting, Conditions on the Project Site, and Potential Project Visibility

The Proposed Project Substation site is a ten-acre parcel located at the southeast corner of Nicolas Road and Calle Medusa in the northeastern portion of the City of Temecula (Figures 1.1-1, 2.5-1, and 4.1-1). The site lies within a small valley along the upper reaches of Santa Gertrudis Creek that is approximately 0.25 mile wide and defined by hills that rise approximately 80 feet above the valley floor on the south and 45 feet above the valley floor on the north. This valley lies within a developing area. Development consists mainly of subdivisions of single-family residences. The existing residential subdivisions that surround the Proposed Project study area to the south, west, and north are visible on Figure 4.1-1.

The area in the immediate Proposed Project vicinity is a pocket of rural residential development that extends about 1.3 miles along Nicolas Road and is about 0.7 mile wide. This area, encompassing the floor of the valley along Santa Gertrudis Creek, as well as the hillsides that define the valley is considered for the purposes of this analysis to be the Landscape Unit in which the Proposed Project substation site is located. This area is characterized by three- to five-acre parcels that are either undeveloped or occupied by single-family residences. This area has an informal and quasi-rural character because of the low density of development; the general absence of sidewalks, curbs, and gutters associated with standard subdivisions; and many of the parcels are used in part for small-scale agriculture. The parcel to the immediate west of the Proposed Project substation site across Calle Medusa of the Proposed Project site is occupied by Grace Presbyterian Church. This church complex, which was completed in 2006, includes a church sanctuary, an 11,000-square-foot multipurpose building, and a landscaped parking lot. The parcel to the west of the Grace Presbyterian Church is occupied by another church complex that is home

to Calvary Baptist Church. A small area in the northeast corner of the Calvary Baptist Church property is the site of the existing Canine substation. Canine substation is a small, substation with a low-profile design surrounded by a block wall that occupies an area that is approximately 28 feet by 30 feet. This substation is scheduled for retirement in 2010, and when the proposed Triton Substation is brought online, the Canine Substation would be retired. The existing Valley-Auld-Pauba 115 kV subtransmission line is located approximately 1,300 feet west of the Proposed Project site. This subtransmission line consists of a double-circuit set of conductors carried on tubular steel poles (TSPs) that, in this area, occupy a north-south right of way located perpendicular to Nicolas Road, as indicated on Figure 4.1-1.

Current conditions on the Proposed Project site are depicted in Figure 4.1-2a and 4.1-3a. As these photographs indicate, at present, the site has a generally open appearance. Structures on the site include two older temporary structures located in the area with trees at the southern end of the site adjacent to the base of a bluff that rises up to the south of the parcel. Although the site appears to be generally flat, from Nicolas Road, it slopes gently upward to the foot of the bluff at the site's southern edge. The most distinctive vegetation on the site consists of thick clusters of non-native trees along the site's southern edge.

The substation would only be visible in the immediately surrounding portions of the upper Santa Gertrudis Creek rural residential landscape unit, because the substation would have a low-profile design. The substation would have little visibility beyond approximately one-quarter mile of the site due to the screening effect of topography and vegetation. The new subtransmission line that would loop the substation to the existing Valley-Auld-Pauba 115 kV subtransmission line would be most readily visible in the 1,300-foot-long corridor along Nicolas Road between the substation and the existing Valley-Auld-Pauba 115 kV subtransmission line and immediate nearby areas. Topography and vegetation would also restrict its visibility to areas that are within approximately 0.5 mile.

4.1.5.1.1.3 Key Observation Points - Existing View Conditions and Sensitivity

KOP 1 – Liefer Road

KOP 1 is a view toward the Proposed Project substation site, from a point on Liefer Road, immediately to the north of the intersection of Liefer Road and Nicolas Road (Figure 4.1-2a). KOP 1 provides a good basis for understanding the Proposed Project's potential visual effects on the site and the view from the surrounding rural residential landscape unit, because this viewpoint is close to the Proposed Project substation site and provides a full view of it. This view is sensitive in that it is seen by the occupants of the hillside rural residential properties along Liefer Road, and by travelers on Liefer Road and Nicolas Road.

At present, the visual character of this view is that of a rural residential area in transition to a more suburban level of development. The site itself has an open, quasi-rural appearance, but the suburban homes on the top of the bluff behind the site and the new sidewalk on the west side of Calle Medusa to the south of Nicolas Road provide evidence of a shift to development that is more suburban in character. The overall level of visual quality of this view, as determined based on evaluation using the FHWA rating system, is moderately low to average.

KOP 2 – Calle Medusa

KOP 2 is a view from Calle Medusa adjacent to the southern portion of the Proposed Project substation site looking northeastward toward the site, which provides a view over the site and toward the hills that frame the northern edge of the small valley along Santa Gertrudis Creek (Figure 4.1-3a). This view was selected to provide an understanding of the site and Proposed Project's appearance as seen in views from the hillside to the south and from the northbound lanes of Calle Medusa. The views from these areas are sensitive, in that they represent the views of residents to the south and southwest of the substation site and roadway users and that they also represent views of drivers exiting from the parking lot at the southern end of the church property on the west side of Calle Medusa.

At present, this view has an open, rural residential character, and the overall level of visual quality of the view, as determined based on evaluation using the FHWA rating system, is moderately low to average.

KOP 3 – Nicolas Road

KOP 3 is a view from Nicolas Road, west of the Proposed Project, looking east along the proposed alignment of the 115 kV subtransmission line loop-in that would connect the Proposed Project substation to the existing Valley-Auld-Pauba 115 kV subtransmission line (Figure 4.1-4a). This view was chosen to provide a basis for evaluating the visual impacts of the proposed subtransmission line loop-in on views from Nicolas Road and the surrounding area. The sensitivity of this view is moderate for motorists traveling on Nicolas Road, but is high for the occupants of adjacent residences and the users of the two church complexes that border Nicolas Road in this area.

The existing character of this view is a roadway environment that is not highly groomed and that travels through a low density, partially suburbanized setting. Based on evaluation using the FHWA rating system, the overall level of visual quality of the existing view is low to moderately low.

4.1. .1.2 Impact Analysis

4.1.5.1.2.1 Description of Project-Related Visual Changes

Development of a substation on the Proposed Project would entail grading approximately five acres of the site and the construction of the low profile substation on a three-acre portion of the ten-acre site as indicated on Figure 3.3-1. The Proposed Project substation would have a setback of approximately 270 feet from Nicolas Road and a setback of approximately 80 feet from Calle Medusa. The groupings of large trees located at the southern end of the site would be retained. The Proposed Project substation would be surrounded on all four sides by an eight-foot-high block wall and landscaping designed to screen views of the facility and to visually relate the project to its surrounding context. The 12 kV duct banks that would connect the substation to the local distribution network would be underground and would not be visible. Nine wood poles on the south side of Nicolas Road would be removed and replaced by seven 85-foot TSPs along Nicolas Road and Calle Medusa, as indicated on Figure 2.5-3. The TSPs would carry the double-circuit subtransmission conductors needed to loop the substation into the existing Valley-Auld-Pauba 115 kV subtransmission line. At the time this line is developed, the existing wood pole distribution line that now occupies the right of way this subtransmission line loop-in

would follow would be removed, and the distribution circuits would be attached to cross-arms on the new steel poles. The line configuration is shown in Figure 3.3-2. One of the proposed telecommunications lines would be attached to a cross-arm on the new tubular steel poles along Nicolas Road. At the existing Valley-Auld-Pauba 115 kV subtransmission line, it would be attached to cross-arms on the existing Valley-Auld-Pauba 115 kV subtransmission line steel poles and would be carried south for approximately four miles to the Moraga Substation. The other telecommunication line would run underground along the north side of Nicolas Road between the substation and the existing Valley-Auld-Pauba 115 kV subtransmission line. At the Valley-Auld-Pauba line, it would transition to above ground, and would be carried overhead on cross-arms on the existing Valley-Auld-Pauba 115 kV subtransmission line poles for approximately six miles to the Auld substation. As indicated on Figure 2.5-3, although the telecommunication lines would be above ground for most of their routes, the telecommunication lines would travel underground for short distances as they approach the substations where the lines would terminate. The installation of the overhead telecommunications lines would add a single line to the existing subtransmission poles located for the most part in existing subtransmission corridors. Because this change would represent a relatively small modification to an existing landscape feature, this element of the Proposed Project has no potential to create a significant visual impact and for that reason, the telecommunications lines are not evaluated further in this analysis.

4.1.5.1.2.2 Project Impacts and Impact Significance

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

Construction Impacts

Construction of the Proposed Project would not have a substantial adverse effect on a scenic vista as designated by applicable agencies, as there are no developed or designated scenic vistas in the Proposed Project area. Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not have a substantial adverse effect on a scenic vista as there are no developed or designated scenic vistas in the Proposed Project area. Therefore, operation of the Proposed Project would result in no impact under this criterion.

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

Construction Impacts

Construction of the Proposed Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway because there are no adopted state scenic highways in the vicinity of the Proposed Project. Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state

scenic highway because there are no adopted state scenic highways in the vicinity of the Proposed Project. Therefore, operation of the Proposed Project would result in no impact under this criterion.

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

Construction Impacts

Construction of the Proposed Project would last approximately eight months for the substation, including 12 kV duct banks, construction and approximately three months for the subtransmission and telecommunications lines. Visual effects would include a laydown area at the substation site; trucks, cranes, and other construction equipment at the substation site and along the subtransmission and telecommunication line sites; and parked vehicles of construction workers. These activities would be temporary and short–term. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not substantially degrade the existing character or quality of the site and its surroundings as discussed below.

KOP 1

Figure 4.1-2b is the simulated view of the Proposed Project site from Liefer Road, immediately to the north of the intersection with Nicolas Road depicting the Proposed Project as it would appear with the substation and subtransmission line in place, but before the installation of the substation landscaping. Review of this simulation (Figure 4.1-2b) indicates that development of the Proposed Project would alter the character of the view to some degree by adding infrastructure elements that contrast with the view's rural residential/suburban character. The Proposed Project would also create a reduction in the visual quality of this view. The vividness of the view, which is related primarily to the bluff in the backdrop and the groves of large trees at the foot of the bluff at the proposed substation site and the hills, vegetation, and rural fences in the area of the subtransmission lines, would be unchanged. The major change would be a reduction in the intactness of the view, which would be altered by the presence of the substation equipment and the up to 85-foot-high subtransmission poles, which could be perceived to be intrusive elements in this setting. The placement of these new infrastructure elements in the view would also produce a reduction in the view's visual unity as a result of the larger scale of the tubular steel versus the wood poles that would be replaced and the increased numbers of overhead wires visible in the view.

The substation would be sited on the property in a way that provides setbacks, particularly from major streets (PDF AES-1). Low-profile substation equipment would be used (PDF AES-2). The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards (PDF AES-5).

The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that relates to its surroundings. The

landscape design would be developed later in the project design process. (PDF AES-6). Installation of the landscaping around the Proposed Project's substation would screen the substation wall and much of the substation equipment from view, and would have the effect of visually integrating the facility into the view. With landscaping, the change in the visual character of the view would be substantially reduced. The screening of the substation equipment would also substantially reduce the Proposed Project's effects on view intactness and unity. With the project's landscaping in place, the project's effects on the visual character and quality of this view would be less than significant. Therefore, a less than significant impact would occur due to the operation of the Proposed Project under this criterion.

KOP 2

Figure 4.1-3b is the simulated view of the Proposed Project site from Calle Medusa, adjacent to the southwestern edge of the Proposed Project, that depicts the site as it would appear with the substation and subtransmission line in place but before the installation of the substation landscaping. Review of this simulation indicates that development of the Proposed Project would alter the character of the view by adding substation equipment and up to 85-foot-high subtransmission poles that occupy an area that is now open, and which contrast with the view's rural residential/suburban character. The Proposed Project would also create a reduction in the visual quality of this view. The vividness of the view, which is related primarily to the hills, vegetation, and rural fences seen in the backdrop, would be unchanged. The major changes would be a reduction to the intactness and unity of the view, which would be altered by the presence of the substation equipment and the subtransmission poles, which could be perceived to be intrusive and inharmonious elements in this setting.

Low-profile substation equipment would be used (PDF AES-2). The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards (PDF AES-5). The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that relates to its surroundings. The landscape design would be developed later in the project design process. (PDF AES-6). Installation of the landscaping around the substation that is proposed as a part of this project would screen the substation wall and much of the substation equipment from view and would have the effect of visually integrating the facility into the landscape setting. With landscaping, the change in the visual character of the view would be substantially reduced. The screening of the substation equipment would also substantially reduce the Proposed Project's effects on view intactness and unity. With the project's landscaping in place, the Proposed Project's effects on the visual character and quality of this view would be less than significant.

KOP 3

Figure 4.1-4b is the simulated view of the segment of Nicolas Road immediately west of the Proposed Project as it would appear with the proposed subtransmission line loop-in in place. As comparison of the simulation with the existing view indicates, the nine existing wood utility poles along Nicolas Road would be removed and replaced with five subtransmission poles. In addition, two new subtransmission poles would be installed along the east side of Calle Medusa adjacent to the project site. These poles would carry the new

loop-in subtransmission circuits, the overhead utility lines that now exist in this corridor, and the new telecommunication cable that would be a part of this project. With this change, most elements of the view remain the same. The character of the view would be altered to a small degree in that the electric infrastructure elements would be a more prominent part of the view. The effect on the overall visual quality of this view is relatively small. The vividness and unity of the view remain the same, but there is a small decrease in the level of intactness related to the larger scale of the tubular steel poles versus the wood poles that they replaced and the increased numbers of overhead wires visible in the view.

Low-profile substation equipment would be used (PDF AES-2). The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards (PDF AES-5). The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that relates to its surroundings. The landscape design would be developed later in the project design process (PDF AES-6). Installation of the landscaping around the substation that is proposed as a part of this project would screen the substation wall and much of the substation equipment from view and have the effect of visually integrating the facility into the landscape setting. With landscaping, the change in the visual character of the view would be substantially reduced. The screening of the substation equipment would also substantially reduce the Proposed Project's effects on view intactness and unity. With the project's landscaping in place, the Proposed Project's effects on the visual character and quality of this view would be less than significant.

Based on the analysis presented above from each of the KOPs, operation of the Proposed Project would result in a less than significant impact under this criterion.

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

Construction Impacts

Construction of the Proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Night lighting of the Triton Substation Project would be temporary and of short duration during construction, if used. The substation lighting would be designed to be controlled by switch so that it can be turned on only when required for nighttime emergency repairs. The lighting would be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use (PDF AES-3). Additionally, construction lighting would be temporary. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area because under normal conditions, the substation would not be illuminated at night. In addition during operation, lighting would be used only when required for emergency repairs. This lighting would consist of high-pressure sodium lights located in the switchracks, around the transformer banks, and in areas of the yard where emergency activities may be required. The substation lighting would be designed to be controlled by switch so that it can be

turned on only when required for nighttime emergency repairs. The lighting would be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use (PDF AES-3).

Daytime glare would not result from operation of the Proposed Project. The standard definition of glare is an effect created by a light source that is so much brighter than the background lighting conditions that it interferes with vision. Examples of light sources commonly thought of as causing glare include direct sunlight; sunlight reflected off large, highly reflective surfaces; or artificial light sources beamed directly into the eyes such as high beam car headlights at night. Equipment installed would have a dull, gray non-reflective finish to minimize reflectivity and to make the equipment appear to recede into the backdrop. Non-specular subtransmission cable would be installed for the new subtransmission line loop-in to minimize conductor reflectivity (PDF AES-4). The substation would not create a new source of substantial daytime glare. In addition, because the tubular steel poles to be used for the subtransmission line loop-in would have a dulled finish and because non-specular conductors would be used, the subtransmission line would not have the potential to create substantial reflectivity. To the extent that there could be times of the day when sunlight is reflected off the subtransmission line conductors or steel poles, given the relatively small dimensions of the surfaces of these features, it is doubtful that the small and dispersed areas of reflectivity produced would be considered to constitute glare. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

4.1. .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.1. .2 Site Alternative B

4.1.5.2.1.1 Designated Scenic Vistas and Scenic Resources

There are no designated scenic vistas or scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway in the Site Alternative B study area.

4.1.5.2.1.2 Landscape Setting, Conditions on the Project Site, and Potential Project Visibility

Site Alternative B is a 12-acre parcel located approximately 800 feet west of the Proposed Project site (Figures 1.1-1, 2.5-1, and 4.1-1). On the east, the Site Alternative B site is bordered by Los Choras Ranch Road, an unimproved dirt road and a rural residence on a large lot. On the west, the site is bordered by the existing Valley-Auld-Pauba 115 kV subtransmission line and a large, open parcel. The overall landscape setting of this site is the same as that described for the Proposed Project site.

Current conditions on Site Alternative B are presented in Figure 4.1-4a. As this photograph indicates, the site has an open appearance and slopes slightly upward toward a knoll to the south. At present, there are no structures on this site and no trees, shrubs, or other large-size vegetation. The substation would only be visible in the immediately surrounding portions of the upper Santa Gertrudis Creek rural residential landscape unit, because low-profile

substation equipment would be used. Furthermore, the screening effect of topography and vegetation would result in the Site Alternative B substation having little visibility beyond approximately one-quarter mile of the site.

4.1.5.2.1.3 Key Observation Points - Existing View Conditions and Sensitivity

KOP 4 – Site Alternative B

KOP 4 is a view toward Site Alternative B from a point on Nicolas Road approximately 800 feet west of the site (Figure 4.1-5a). This view provides a relatively full view of the site and is representative of views toward the site seen by eastbound travelers on Nicolas Road and occupants of residences located on the north side of Nicolas Road. This view is sensitive in that it is seen by nearby residential viewers and viewers on Nicolas Road.

This view looks through the trees that line the roadside adjacent to the property to the west of the site. The adjacent property is seen in the immediate foreground of the view and Site Alternative B is seen in the area between the steel subtransmission poles and the hill in the backdrop. The visual character of this view is that of a rural residential area. The overall level of visual quality of this view, as determined based on evaluation using the FHWA rating system, is average with a moderately high level of visual unity.

4.1. .2.2 Impact Analysis

4.1.5.2.2.1 Description of Project-Related Visual Changes

Development of a substation on Site Alternative B would entail substantial grading into the hillside, construction of a retaining wall, and in addition, creation of a retention basin. The layout of the substation and its location on the site are indicated on Figure 2.5-4. The substation would have an approximately 340-foot setback from Nicolas Road. The substation would be surrounded on all four sides by an eight-foot-high block wall. Landscaping designed to screen views of the facility and to visually relate the project to its surrounding context would be installed on the substation's southern, eastern, and northern perimeters, but not on its west side where the existing Valley-Auld-Pauba 115 kV subtransmission line is located. The 12 kV duct banks that would connect the substation to the local distribution network would be underground and would not be visible. Because the existing Valley-Auld-Pauba, 115 kV subtransmission line crosses the substation property, it would be directly connected to this existing subtransmission line and no loop-in connector with poles would be required outside the property boundary. In addition, the new telecommunication lines would tie directly to the existing Valley-Auld-Pauba 115 kV subtransmission line poles and would follow the same routes identified in the description of the Proposed Project. As described for the Proposed Project, the new telecommunication lines are a minor addition to the visual effect of the subtransmission line itself, and they have not been subjected to further analysis.

4.1.5.2.2.2 Project Impacts and Impact Significance

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative B would be as described under the Proposed Project because as is the case with the Proposed Project site, there are no developed or designated scenic vistas as designated by applicable agencies, in the Site Alternative B area. Therefore, construction of Site Alternative B would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

There are no developed or designated scenic vistas in the Site Alternative B study area. Therefore, operation of Site Alternative B would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative B would be as described under the Proposed Project because there are no adopted state scenic highways in the vicinity of Site Alternative B. Therefore, construction of Site Alternative B would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

There are no adopted state scenic highways in the vicinity of Site Alternative B. Therefore, operation of Site Alternative B would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative B would be similar to those described under the Proposed Project and, because this alternative does not require a subtransmission line loop-in outside the substation property boundary, there would be no construction impacts associated with development of a subtransmission line outside the substation property boundary. Therefore, construction of Site Alternative B would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

Operation of the Site Alternative B would not substantially degrade the existing character or quality of the site and its surroundings as discussed below.

KOP 4 – Site Alternative B

Figure 4.1-5b is the simulated view of the project site as seen from Nicolas Road that depicts Site Alternative B as it would appear with the substation in place but before the installation of the substation landscaping. Review of this simulation indicates that development of the

project would alter the character of the view to some degree by adding an infrastructure element to a view that is now open.

The substation would be sited on the property in a way that provides setbacks, particularly from major streets (PDF AES-1). Low-profile substation equipment would be used (PDF AES-2). The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards (PDF AES-5). The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that relates to its surroundings. The landscape design would be developed later in the project design process (PDF AES-6). However, because of the substation's low-profile design, it would be relatively well-absorbed into the view and would not dominate it. Because of the substation's good visual integration into the view, the overall visual quality of the view would not be affected. There would be no loss of the view's most distinctive elements, and the visual intactness and unity of the view would not be adversely affected. After installation of the planned landscaping, the substation would be better integrated into the view, and any potential for an adverse effect on the view would be further reduced.

Based on the analysis presented above from the KOP, operation of Site Alternative B would result in a less than significant impact under this criterion, which is the same impact as would occur under the Proposed Project.

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative B would be as described under the Proposed Project. Night lighting of the Triton Substation Project would be temporary and of short duration during construction, if used. The lighting would be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use (PDF AES-3). Therefore, construction of Site Alternative B would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

As would be the case with the Proposed Project, under normal conditions, the substation would not be illuminated at night. In addition during operation, lighting would be used only when required for emergency repairs. This lighting would consist of high-pressure sodium lights located in the switchracks, around the transformer banks, and in areas of the yard where emergency activities may be required. The substation lighting would be designed to be controlled by switch so that it can be turned on only when required for nighttime emergency repairs (PDF AES-3).

Daytime glare would not result from operation of Site Alternative B. Equipment installed would have a dull, gray non-reflective finish to minimize reflectivity and to make the equipment appear to recede into the backdrop. Non-specular subtransmission cable would be installed for the new subtransmission line loop-in to minimize conductor reflectivity (PDF AES-4). The substation would not create a new source of substantial daytime glare. Because the loop-in connector to the Valley-Auld-Pauba subtransmission line would be very

short and would not require new subtransmission poles outside of the substation, there would be only limited potential for light to reflect off of the line loop-in, and in any case, the areas of subtransmission line-related reflectivity that might exist at times would be too small and dispersed to create a glare effect.

Therefore, operation of Site Alternative B would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

4.1. .3 Site Alternative

4.1.5.3.1.1 Designated Scenic Vistas and Scenic Resources

There are no designated scenic vistas or scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway in the Site Alternative C study area.

4.1.5.3.1.2 Landscape Setting, Conditions on the Project Site, and Potential Project Visibility

Site Alternative C is a vacant, rectangular, 4.4-acre parcel located on the northwest corner of Commerce Court and Calistoga Drive in unincorporated County of Riverside (Figures 1.1-1, 2.5-1, and 4.1-1). The site lies within an area that has been subdivided into commercial parcels and in which grading has occurred and streets and utilities have been installed. The substation site has been graded and is generally flat and clear of structures and major vegetation (Figure 4.1-6). The substation would have an approximately 105-foot setback from Calistoga Drive and an approximately 20-foot setback from Commerce Court.

To the north and east, the site is bounded by steep upslopes. The parcels in the commercial center to the south and west of the site are vacant and available. The land above the slope, to the north of the site is undeveloped. The area across Calistoga Drive, to the east of the site, has been developed as part of a larger subdivision of single-family homes. The substation would have the greatest potential to be seen in the area set aside for commercial development to the south and west, but would have no visibility from areas to the north and very limited visibility from the residential area to the east, because Site Alternative C is located at a lower elevation than the areas to the north and east and low-profile substation equipment would be used.

This site lies approximately 2,200 feet to the west of existing Valley-Auld-Pauba 115 kV subtransmission line to loop into this line; this alternative would require the construction of new 115 kV subtransmission lines that extend both north and south along Calistoga Drive. The northern line (Line 1) would turn east on the north side of the residences along McGowans Pass and extend eastward to the existing Valley-Auld-Pauba 115 kV subtransmission line. The southern line (Line 2) would turn east at Murrieta Hot Springs Road and extend along the north side of the road until tying into the existing Valley-Auld-Pauba 115 kV subtransmission line (Figure 2.5-1). As structures and trees are closely spaced in the relatively dense residential subdivisions, the 85-foot-high subtransmission poles and lines would only be intermittently visible from the nearby residential areas.

4.1.5.3.1.3 Existing View Conditions and Sensitivity

A view toward Site Alternative C from Commerce Court looking toward the northeast is shown in Figure 4.1-6. This photograph provides a good view of the portion of the site on which the substation would be developed, and is representative of views toward the site seen from the commercial subdivision in which the site is located. This viewpoint was selected to represent the views in which the site would be most visible. Because this view is from an area that has been set aside for commercial uses, the level of visual sensitivity is low. The views from the residential subdivisions to the east have the potential to be more sensitive, but because the substation facility would be located at a lower elevation which would effectively limit its visibility from this direction and because it would be largely screened in views from this area by intervening vegetation, the substation would not be readily visible from these areas. As a consequence, views from this area were not selected for analysis The visual character of the view seen in Figure 4.1-6 is of vacant graded land in a developed subdivision. The overall level of visual quality of this view, based on evaluation using the FHWA rating system, is moderately low, reflecting a low level of vividness.

4.1. .3.2 Impact Analysis

4.1.5.3.2.1 Description of Project-Related Visual Changes

Because Site Alternative C has been cleared and graded, little additional grading would be required to build the proposed substation on this site. The layout of the substation and its location on the site are indicated on Figure 2.5-5. The substation would have an approximately 105-foot setback from Calistoga Drive to the east. The substation would be surrounded on all four sides by an eight-foot-high block wall. Landscaping designed to screen views of the facility and to visually relate the project to its surrounding context would be installed on the substation's eastern, southern, and western perimeters, but not on its north side where the substation would not be visible offsite because of the steep upslope in that area. The 12 kV duct banks that would connect the substation to the local distribution network would be underground and would not be visible. The substation on this site would be connected to the existing Valley-Auld-Pauba 115 kV subtransmission line by loop-in Lines 1 and 2, requiring the installation of 20 to 40 tubular steel poles, which would have the same design as described in the Proposed Project. The new telecommunication lines would travel overhead on the line loop-in from the substation to the existing Valley-Auld-Pauba 115 kV subtransmission line, and then would be attached to the existing Valley-Auld-Pauba 115 kV subtransmission line poles and follow the same routes identified in the description of the Proposed Project.

4.1.5.3.2.2 Project Impacts and Impact Significance

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative C would be as described under the Proposed Project because as is the case with the Proposed Project site, there are no developed or designated scenic vistas as designated by applicable agencies, in the Site Alternative C area. Therefore, construction of Site Alternative C would result in no

impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

Potential impacts resulting from the operation of Site Alternative C would be as described under the Proposed Project because as is the case with the Proposed Project site, there are no developed or designated scenic vistas as designated by applicable agencies, in the Site Alternative C area. Therefore, operation of Site Alternative C would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative C would be as described under the Proposed Project because there are no adopted state scenic highways in the vicinity of Site Alternative C. Therefore, construction of Site Alternative C would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

There are no adopted state scenic highways in the vicinity of Site Alternative C. Therefore, operation of Site Alternative C would result in no impact under this criterion, which is the same impact that would occur under the Proposed Project.

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative C would be as described under the Proposed Project. Therefore, construction of Site Alternative C would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

Operation of Site Alternative C would not substantially degrade the existing visual character or quality of the site and its surroundings. Development of Site Alternative C would alter the character of the view seen in Figure 4.1-6 to some degree, by adding the substation and subtransmission poles to a view that is now open. However, the substation's low-profile design and its surrounding block wall, and landscaping, would integrate the substation into the view and would be consistent with the commercial/industrial character of this area as it develops.

The substation would be sited on the property in a way that provides setbacks, particularly from major streets (PDF AES-1). Low-profile substation equipment would be used (PDF AES-2). The substation facility would be surrounded with an eight-foot-high block wall for screening. The block wall would be designed in a manner consistent with community standards (PDF AES-5). The perimeter of the substation facility would be landscaped with plantings designed to screen the substation and create a composition that

relates to its surroundings. The landscape design would be developed later in the project design process (PDF AES-6). The presence of the substation is likely to have relatively little effect on the overall visual quality of the view. The addition of the 85-foot-high steel subtransmission poles and the conductors, 12 kV distribution lines, and telecommunication cables suspended from structures would create an incremental alteration of the character of the views along their routes, increasing the perceived intensity of development, and adding an infrastructure element to the view. The presence of the poles and conductors is likely to lower the visual quality of the views to some degree, but not to a level that would be so substantial as to be significant. Therefore, operation of Site Alternative C would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

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

Construction Impacts

Potential impacts resulting from the construction of Site Alternative C would be as described under the Proposed Project. Night lighting of the Triton Substation Project would be temporary and of short duration during construction, if used. The lighting would be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use (PDF AES-3). Additionally, construction lighting would be temporary. Therefore, construction of the Site Alternative C would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

Operation Impacts

As would be the case with the proposed project, under normal conditions, the substation would not be illuminated at night. In addition during operation, lighting would be used only when required for emergency repairs. This lighting would consist of high-pressure sodium lights located in the switchracks, around the transformer banks, and in areas of the yard where emergency activities may be required. The substation lighting would be designed to be controlled by switch so that it can be turned on only when required for nighttime emergency repairs (PDF AES-3).

Daytime glare would not result from operation of the Site Alternative C. Equipment installed would have a dull, gray non-reflective finish to minimize reflectivity and to make the equipment appear to recede into the backdrop. Non-specular subtransmission cable would be installed for the new subtransmission line loop-in to minimize conductor reflectivity (PDF AES-4). The substation would not create a new source of substantial daytime glare. In addition, because the tubular steel poles to be used for the two subtransmission loop-in lines would have a dulled finish and because non-specular conductors would be used, the subtransmission line would not have the potential to create substantial reflectivity. To the extent that there could be times of the day when sunlight is reflected off the subtransmission line conductors or steel poles, given the relatively small dimensions of the surfaces of these features, it is doubtful that the small and dispersed areas of reflectivity produced would be considered to constitute glare.

Therefore, operation of the Site Alternative C would result in a less than significant impact under this criterion, which is the same impact that would occur under the Proposed Project.

4.1. onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to aesthetics.

4.1. eferences

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. June 21.

City of Temecula. 2005. *Temecula General Plan.* 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

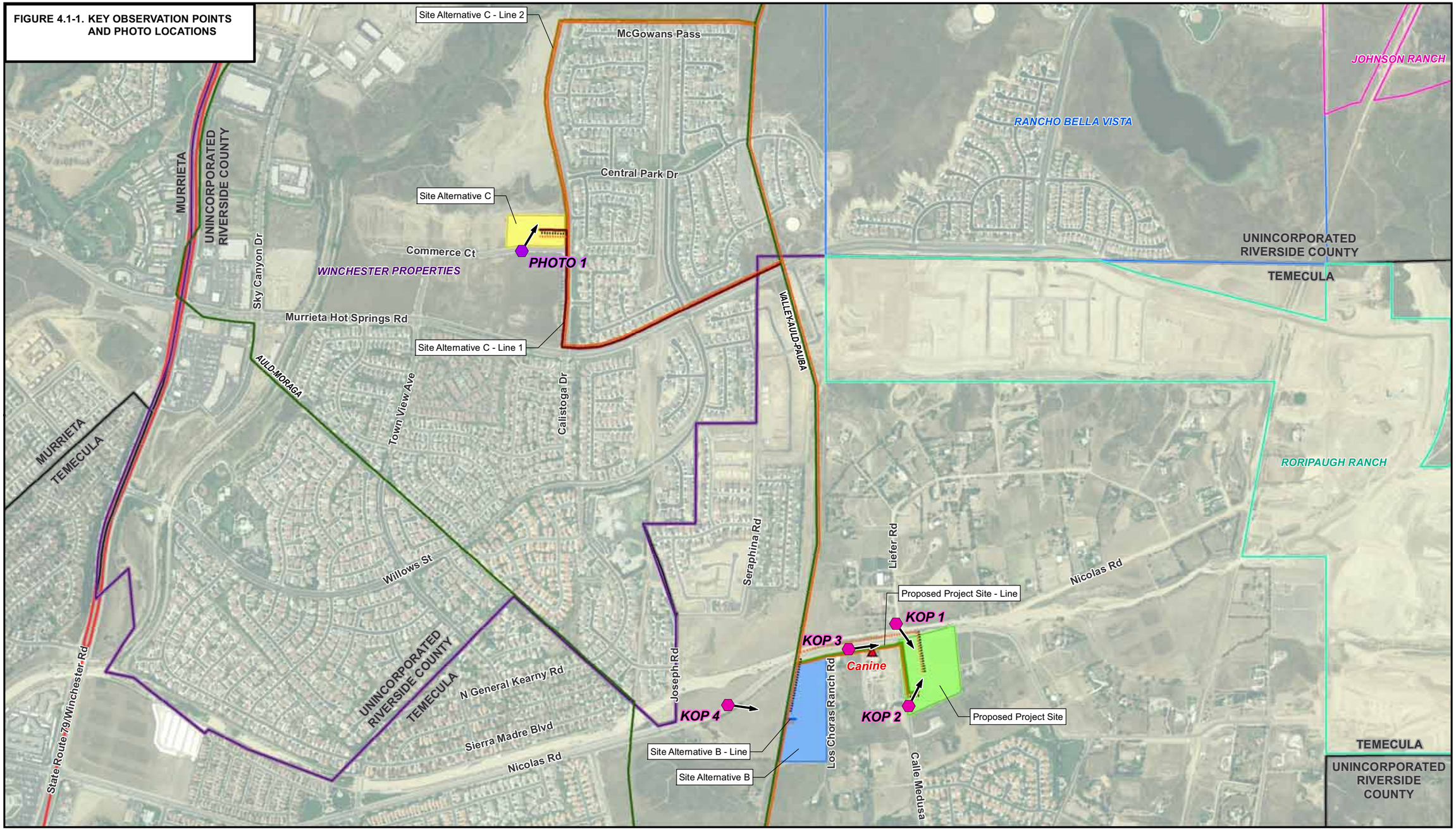
County of Riverside (COR). 2003a. *County of Riverside General Plan*. October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

———. 2003b. *County of Riverside General Plan, Southwest Area Plan*. October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

United States Department of Agriculture, Forest Service. 1995. *Landscape Aesthetics, A Handbook for Scenery Management*. December.

United States Department of Transportation, Federal Highway Administration. 1988. *Visual Impact Assessment for Highway Projects*.

FIGURE 4.1-1. KEY OBSERVATION POINTS AND PHOTO LOCATIONS



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LEGEND

- Existing Substation
- Key Observation Point
- Photo Location
- Photo Direction
- State Highway
- Existing SCE 115 kV Subtransmission Line
- Jurisdictional Boundary

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project Site and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

*Telecommunication Routes***

- Aboveground
- Belowground

*12 kV Duct Banks***

- Belowground

1:12,000
NAD 83 UTM ZONE 11N

1 inch equals 1,000 ft

0 2,000

0 Feet 0.25 Miles

Source: Southern California Edison; Riverside County
Image Source: USDA-FSA Aerial Photography Field Office
**Telecommunication routes and 12 kV distribution line duct banks offset for graphical purposes only. Aboveground telecommunication cables would be located on new and existing subtransmission structures. Belowground telecommunication cables would be located in new underground banks.

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FIGURE 4.1-1. KEY OBSERVATION POINTS AND PHOTO LOCATIONS

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FIGURE 4.1-2. KOP 1

a. KOP 1 - Existing view of the Proposed Project Site looking southeast from Liefer Road at a point immediately north of the intersection with Nicolas Road.

b. KOP 1 - Simulated view of the Proposed Project Site looking southeast from Liefer Road at a point immediately north of the intersection with Nicolas Road that depicts the view as it would appear with the substation and subtransmission line in place.

2008 | TRITON SUBSTATION PEA | FIGURE 4.1-2. KOP 1

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FIGURE 4.1-3. KOP 2

a. KOP 2 - Existing view of the Proposed Project Site looking northeast from Calle Medusa.

b. KOP 2 - Simulated view of the Proposed Project Site looking northeast from Calle Medusa that depicts the view as it would appear with the substation and subtransmission line in place.

2008	TRITON SUBSTATION PEA	FIGURE 4.1-3. KOP 2	SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

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FIGURE 4.1-4. KOP 3

a. KOP 3 - Existing view looking east-southeast from Nicolas Road west of the Proposed Project Site.

b. KOP 3 - Simulated view of the Proposed Project Site location as it would appear from Nicolas Road west of the Proposed Project Site.

2008 | TRITON SUBSTATION PEA | FIGURE 4.1-4. KOP 3 | SOUTHERN CALIFORNIA EDISON

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FIGURE 4.1-5. KOP 4

a. KOP 4 - Existing view of Site Alternative B looking southeast from Nicolas Road.

b. KOP 4 - Simulated view of Site Alternative B looking southeast from Nicolas Road as it would appear with the substation in place.

2008

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FIGURE 4.1-5. KOP 4

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FIGURE 4.1-6. PHOTO 1

Photo 1 - View of Site Alternative C looking northeast from Commerce Street

2008	TRITON SUBSTATION PEA	FIGURE 4.1-6. PHOTO 1	SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL™ Company

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4.2 Agricultural esources

4.2.1 Overview

This analysis describes the potential impacts to agricultural resources that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts during construction and operation to agricultural resources.

4.2.2 ethodology

The study area for this section was the footprint of the project features or property boundary for each alternative. Maps of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (Farmland) prepared by the California Department of Conservation (CDOC) as part of the Farmland Mapping and Monitoring Program (FMMP) were overlain with the locations of the Triton Substation Project components, including the substation site, underground 12 kV distribution duct banks, subtransmission line loop-in, and telecommunication lines. Impacts were assessed by estimating the potential numbers of acres of agricultural land, including Farmland and other agricultural land (e.g., local importance and grazing land), that would be disturbed either temporarily or permanently by construction and operation of the Triton Substation Project. These data were used to:

- Determine number of acres of temporary and permanent disturbance to agricultural land by project component.
- Calculate the number of miles of each agricultural land type traversed by the Triton Substation Project.

4.2.3 egulations Plans and Standards

4.2.3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on agricultural resources.

4.2.3.2 alifornia Department of onservation armland apping and onitoring Program

The CDOC FMMP was established to determine the location and quantity of agricultural lands and track their conversion to non-agricultural uses. The NRCS soil classifications, land inventories, and monitoring criteria are used by the FMMP to prepare digitized maps of agricultural lands in California. The maps and associated statistical data are updated every two years. The CDOC FMMP (CDOC; 2004a, 2004b) maps eight categories of lands, five of which relate to agricultural uses:

- Prime Farmland: Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- Unique Farmland: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- Farmland of Statewide Importance: Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. Farmland of Local Importance is not defined as Farmland (i.e., Prime Farmland, Unique Farmland, of Farmland of Statewide Importance) under CEQA, but is included as an agricultural use for consideration during analysis of impacts to agricultural lands.
- Grazing Land: Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres. Grazing land is not defined as Farmland (i.e., Prime Farmland, Unique Farmland, of Farmland of Statewide Importance) under CEQA, but is included as an agricultural use for consideration during analysis of impacts to agricultural lands.

4.2.3.3 alifornia and onservation Act illiamson Act

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was enacted to encourage preservation of agricultural lands. The Williamson Act provides incentives to landowners through reduced property taxes to create an agricultural preserve and agree to keep their land in agricultural production (or other related open space use) for at least 10 years. The erection, construction, alteration, or maintenance, of gas, electric, water, or communication facilities are considered compatible with Williamson Act contracts, unless local organizations declare otherwise (Section 51238 of the Williamson Act).

4.2.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on agricultural resources if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

4.2. Proposed Project and Alternatives

4.2. .1 Proposed Project

4.2. .1.1 Environmental Setting

The CDOC's Riverside County Important Farmland Data (CDOC, 2004b) designates the Proposed Project site (with the exception of the N/S Telecommunication Lines) as Other Land. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) and other agricultural land is designated under the CDOC within the Proposed Project study area.

The City of Temecula designates the Proposed Project site (with the exception of the N/S Telecommunication Lines) land use as Very Low Residential (COT, 2005) and the zoning as Very Low Density Residential (COT, 2008a).

No land under a Williamson Act contract is located within the Proposed Project study area.

The CDOC important farmland categories and land use designations of the land underlying the existing Valley-Auld-Moraga 115 kV subtransmission line are not discussed in this PEA because the N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur under the Triton Substation Project.

4.2. .1.2 Impact Analysis

Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California resources Agency, to non-agricultural use?

Construction Impacts

The Proposed Project site (with the exception of the N/S Telecommunication Lines) is designated as Other Land (CDOC, 2004b). No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is located within the Proposed Project boundaries and no Farmland would be converted to non-agricultural use as a result of construction of the Proposed Project.

The proposed N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur due to construction of the Proposed Project.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is located within the Proposed Project site and no Farmland would be converted to non-agricultural use as a result of operation of the Proposed Project. The proposed N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur due to operation of the Proposed Project.

Therefore, operation of the Proposed Project would result in no impact under this criterion.

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

Construction Impacts

The Proposed Project site (with the exception of the N/S Telecommunication Lines) is zoned as Very Low Density Residential (COT, 2008a), designated Other Lands by the CDOC (CDOC, 2004b), and is not located on lands under a Williamson Act contract. No conflict with existing zoning for agricultural use or Williamson Act contracts would result from construction of the Proposed Project. The N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur due to construction of the Proposed Project.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

The Proposed Project is not located on lands under a Williamson Act contract. No conflict with existing zoning for agricultural use or Williamson Act contracts would result from operation of the Proposed Project. The proposed N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur due to operation of the Proposed Project.

Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Construction Impacts

No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is located within the project boundaries and no Farmland would be converted to non-agricultural use as a result of other changes in the existing environment, due to their location or nature, as a result of construction of the Proposed Project.

The proposed N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur due to construction of the Proposed Project.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is located within the project boundaries and no Farmland would be converted to non-agricultural use as a result of other changes in the existing environment, due to their location or nature, as a result of operation of the Proposed Project.

The N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur due to operation of the Proposed Project.

Therefore, operation of the Proposed Project would result in no impact under this criterion.

4.2. .1.3 itigation easures

Implementation of the Proposed Project would result in no impacts during construction and operation; therefore, no mitigation is required.

4.2. .2 Site Alternative B

4.2. .2.1 Environmental Setting

The CDOC's Riverside County Important Farmland Data designates Site Alternative B site (with the exception of the N/S Telecommunication Lines) as Other Land (CDOC, 2004b). The City of Temecula designates the Site Alternative B site (with the exception of the N/S Telecommunication Lines) land use as Very Low Residential (COT, 2005) and the zoning as Very Low Density Residential (COT, 2008a).

No Farmland or other agricultural land is designated under the CDOC, the County of Riverside, and the City of Temecula within the Site Alternative B area and no land under a Williamson Act contract is located within the Site Alternative B area.

The CDOC important farmland categories and land use designations of the land underlying the existing Valley-Auld-Moraga 115 kV subtransmission line are not included because the N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur under the Triton Substation Project.

4.2. .2.2 Impact Analysis

No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as designated by the CDOC, is located in the Site Alternative B agricultural resources study area. Additionally, no Farmland of Local Importance or Grazing Land, as designated by the CDOC, would be impacted. Because Site Alternative B is designated Very Low Residential and zoned Very Low Density Residential, construction and operation of this alternative would not conflict with zoning for agricultural use. In addition, because there are no Williamson Act contracts in the area, construction and operation would not conflict with a Williamson Act contract. Finally, because this site is currently undeveloped, construction and operation of this alternative would not result in the conversion of Farmland to non-agricultural use. Therefore, construction and operation of Site Alternative B would result in no impacts under these criteria.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in no impacts to agricultural resources.

4.2. .3 Site Alternative

4.2. .3.1 Environmental Setting

Substation Site. The County of Riverside designates the substation site land use as Mixed Use Planning Area (COR, 2003) and the zoning as Specific Plan (COR, 2003). The City of Temecula designates the substation site land use as Professional Office (COT, 2005) and the zoning as Planned Development Overlay (COT, 2008a).

No Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (Farmland) is designated under the CDOC; however, the Riverside County Important Farmland Data (CDOC, 2004b) designates approximately 1.86 acres of the substation site as Grazing Land and approximately 2.52 acres of the substation site as Farmland of Local Importance. No land under a Williamson Act contract is located within the Site Alternative C substation site (COR, 2008b).

Subtransmission Lines 1 and 2 Routes. The County of Riverside designates the subtransmission Line 1 route land use as Mixed Use Planning Area and Medium Density Residential (COR, 2003) and the zoning as Specific Plan (COR, 2003). The County of Riverside designates the subtransmission Line 2 route land use as Mixed Use Planning Area, Business Park, and Conservation (COR, 2003) and the zoning as Specific Plan (COR, 2008).

The City of Temecula designates the subtransmission Line 1 route land use located within County of Riverside as Professional Office and Low Medium Residential (COT, 2005) and the subtransmission Line 1 route land use located within the City of Temecula as Open Space (COT, 2005) and zoning as Parks and Recreation District (COT, 2008a).

The City of Temecula designates the subtransmission Line 2 route land use as Professional Office, Open Space, and Industrial Park (COT, 2005) and the zoning as Planned Development Overlay (COT, 2008a).

Segments of the Site Alternative C subtransmission Line 1 and Line 2 routes are designated as Farmland of Local Importance. Additionally, segments of the subtransmission Line 2 route are designated as Grazing Land. The remaining portions of the subtransmission Line 1 and Line 2 routes are designated as Urban and Built-Up Land and Other Land (CDOC, 2004b). No land under a Williamson Act contract is located within the Site Alternative C subtransmission Line 1 and Line 2 routes (COR, 2008b).

The CDOC important farmland categories and land use designations of the land underlying the existing Valley-Auld-Moraga 115 kV subtransmission line are not included because the proposed N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to the existing conditions would occur under the Triton Substation Project.

4.2. .3.2 Impact Analysis

No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as designated by the CDOC, is located in the Site Alternative C agricultural resources study area. Farmland of Local Importance and Grazing Land, as designated by the CDOC, would be impacted because the substation subtransmission loop-in Line 1 is located on land with these designations. Additionally, subtransmission loop-in Line 2 also crosses Grazing Land, as designated by the CDOC. However, because Site Alternative C is zoned Specific Plan #213, construction and operation of this alternative would not conflict with zoning for agricultural use. In addition because there are no Williamson Act contracts in the area, construction and operation would not conflict with a Williamson Act contract. Finally, because this site is currently undeveloped and not under agricultural production, construction and operation of this alternative would not result in the conversion of Farmland to non-agricultural use. Therefore, construction and operation of Site Alternative C would result in no impacts to agricultural resources.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in no impacts to agricultural resources.

4.2. onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts during construction and operation to agricultural resources.

4.2. eferences

California Department of Conservation, Division of Land Resource Protection (CDOC). 2008. *Williamson Act Program*. http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx Accessed July 22.

———. 2004a. *A Guide to the Farmland Mapping and Monitoring Program*. http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp_guide_2004.pdf. Accessed July 22.

———. 2004b. *Riverside County Important Farmland Data.* http://redirect.conservation.ca.gov/dlrp/fmmp/county_info_results.asp. Accessed July 22.

California Resource Agency (CRA). 2007. *State CEQA Guidelines.* 2007. Amended July 25, 2007. http://ceres.ca.gov/ceqa. Accessed July 17.

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. June 21.

City of Temecula (COT). 2008a. *City of Temecula GIS Viewer*. http://chtemp.cityoftemecula.org/GIS_ArcIMS/Viewer/Top/Viewer.asp?app=parcels. Accessed July 22.

———. 2008b. *City of Temecula Zoning Classifications/Uses*. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/zoningclassifications.htm. Accessed July 22.

———. 2005. *Temecula General Plan.* 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

County of Riverside (COR). Planning Department. 2008a. *Specific Plans – Approved Documents & Land Use Maps.* http://www.rctlma.org/planning/content/splans/sp_docs.html. Accessed July 17.

———. Assessor's Office. 2008b. Williamson Act Properties. Email from Jim Harlow/Agricultural Division to Colleen Bredensteiner/CH2M HILL. July 30.

———. 2003. *County of Riverside General Plan, Area Plans Volume I.* October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

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4.3 Air uality

4.3.1 Overview

This analysis describes the potential impacts to air quality that may result from the construction and operation of the Proposed Project and alternatives. Potential greenhouse gas effects are discussed in Chapter 6, Other CEQA Considerations. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to air quality.

4.3.2 ethodology

The air quality study area for CEQA evaluation is the South Coast Air Basin (SCAB) (Figure 4.3-1).

The construction and operation emissions were analyzed following the procedures in the *CEQA Air Quality Handbook* (SCAQMD, 1993) and the supplemental information to the *CEQA Air Quality Handbook* sections on SCAQMD's website (SCAQMD, 2008a).

The following assumptions were used as a basis for the calculation of air quality emissions: (1) construction of the project alternatives is expected to take approximately eight months; (2) project construction involves building the Triton substation, the 115 kV subtransmission line loop-in, the two underground 12 kV distribution duct banks, and the telecommunications system; (3) construction activities include site preparation and grading, excavation, soil handling, equipment installation, and equipment testing; and (4) operation of the project would involve vehicle trips to the project site for routine maintenance. To assist with the evaluation of air quality impacts, emissions calculations were conducted for the following, as discussed in detail below:

- Construction equipment exhaust
- Fugitive dust
- Worst-case daily
- Operations

The significance of the air quality impacts that would result from construction and operation of the Triton Substation Project are assessed in accordance with criteria presented in Appendix G of the CEQA Guidelines.

4.3.2.1 onstruction E uipment Exhaust Emissions

Construction equipment would be used during site preparation and project construction to perform activities such as clearing, grading, excavating, and constructing project structures. These activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants such as CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$. Emissions associated with the construction of the project were estimated using projected construction activities, phases, and estimated hours of equipment operations. Specific construction information consisted of:

- Projected construction schedule for each phase of the alternatives
- Maximum area to be disturbed (daily)
- Number and type of construction equipment
- Equipment usage rates (hours per day)
- Vehicle miles traveled
- Number of daily construction workers onsite during a typical peak construction day

Offroad construction equipment and onroad vehicle emission factors for CO, NO_X, ROG, SO_X, and PM_{10} were obtained from the supplemental information to the SCAQMD *CEQA Air Quality Handbook* (SCAQMD, 2008a). These emission factors were derived by SCAQMD using CARB's Offroad2007 and EMFAC2007 programs using SCAB fleet information. Whenever $PM_{2.5}$ emission factors are not available, the $PM_{2.5}$ emissions are calculated following the methodology recommended by SCAQMD and using the $PM_{2.5}$ fraction of PM_{10} (SCAQMD, 2006).

It was assumed that the round trip distance for each worker's commute and onroad delivery trucks would be approximately 40 miles. Number of round trips per day of each vehicle was estimated based on the operating hours specified in the construction schedule.

Detailed construction schedules, equipment usage, and emission calculations are presented in Appendix F1-A. Summaries of the emissions factors and their sources are listed in Appendix F1-B.

4.3.2.2 ugitive Dust Emissions

Particulate matter emissions are associated primarily with soil disturbance such as excavation, grading, material handling, entrained dusts, etc. Fugitive dust emissions from construction of the project were calculated based on the number of acres of site grading and the vehicle miles traveled during construction.

The fugitive dust emissions due to construction vehicles and equipment movements within the construction site were estimated using an uncontrolled PM_{10} emission factor of ten pounds per acre per day. Fugitive dust emissions from the construction sites were assumed to be reduced by 50 percent by watering the disturbed areas at least two times a day. The fugitive dust $PM_{2.5}$ emissions were calculated following the methodology recommended by SCAQMD and using the $PM_{2.5}$ fraction of PM_{10} (SCAQMD, 2006).

Fugitive dust emissions from paved roads were calculated following the methodology listed in the U.S. Environmental Protection Agency (EPA) *Compilation of Air Pollutant Emission Factors (AP-42)* (EPA, 2008a) with conservative assumptions of vehicle weight and road conditions. Fugitive dust emissions from unpaved roads are not included in this analysis, because all material delivery trucks would be expected to travel on paved roads.

4.3.2.3 orst- ase Daily Emissions

Because equipment usage would vary by construction activity, the projected construction schedules were used to determine the combination of overlapping construction activities that yielded the highest emissions.

4.3.2.4 Operation Emissions

Vehicle emission factors for CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$ were obtained from the supplemental information to the *CEQA Air Quality Handbook* (SCAQMD, 2008a), which was derived from EMFAC2007. Air pollutant emissions were estimated based on the expected vehicle miles traveled by maintenance personnel.

4.3.3 egulations Plans and Standards

4.3.3.1 lean Air Act

The EPA adopted the Clean Air Act (CAA) in 1970 and its amendments of 1977 and 1990. Under the authority of the CAA, EPA has established nationwide air quality standards to protect public health and welfare with an adequate margin of safety. These federal standards, known as the national ambient air quality standards (NAAQS), represent the maximum allowable atmospheric concentrations and were developed for seven "criteria" pollutants: ozone (O_3), nitrogen dioxide (NO_2), CO, PM_{10} and $PM_{2.5}$, sulfur dioxide (SO_2), and lead (Pb).

To protect human health and the environment, EPA set primary and secondary maximum ambient thresholds in the NAAQS. The primary standards protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. The secondary standards protect public welfare, including protection against decreased visibility, or damage to animals, crops, vegetation, and buildings.

The 1977 CAA required each state to develop and maintain a state implementation plan (SIP) for each criteria pollutant that violates the applicable NAAQS. The SIP is a legal agreement between each state and the federal government to commit resources to improving air quality. The SIP includes submitted attainment plans, emissions reduction programs, district rules, state regulations, and federal controls. The SIP serves as a template for conducting regional and project-level air quality analysis. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for criteria pollutants.

4.3.3.2 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on air quality.

4.3.3.2.1 alifornia lean Air Act

The California Air Resources Board (CARB) oversees California air quality policies. California ambient air quality standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent than the NAAQS and include four additional pollutants: sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulates. In 1976, the California State Legislature adopted the Lewis Air Quality Management Act which created air quality management districts (AQMDs) and air pollution control districts (APCDs) throughout the state. In 1988, these districts were required, by the California CAA, to prepare an air quality management plan (AQMP) that demands attainment of the CAAQS. AQMPs establish the strategies used to achieve

compliance with the respective federal and state regulations that apply to the particular district. Each district's AQMP is submitted to CARB for review, approval, and incorporation into the SIP.

The NAAQS and CAAQS are summarized in Table 4.3-1 and represent safe levels of each pollutant to avoid specific adverse effects to human health and the environment.

Table 4.3-1. Ambient Air uality Standards
Triton 115/12 kV Substation Project PEA

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
			Primary[c]	Secondary[d]
O_3	8 Hours	0.07 ppm [e]	0.075 ppm	0.075 ppm
	1 Hour	0.09 ppm	— [e]	— [e]
CO	8 Hours	9.0 ppm	9 ppm	—
	1 Hour	20 ppm	35 ppm	—
NO_2	Annual Average	0.03 ppm	0.053 ppm	0.053 ppm
	1 Hour	0.18 ppm	—	—
$S0_2$	Annual Average	—	0.030 ppm	—
	24 Hours	0.04 ppm	0.14 ppm	—
	3 Hours	—	—	0.5 ppm
	1 Hour	0.25 ppm	—	—
$PM_{2.5}$	Annual Geometric Mean	12 µg/m^3	15 µg/m^3	15 µg/m^3
	24 Hours	—	35 µg/m^3	35 µg/m^3
PM_{10}	Annual Arithmetic Mean	20 µg/m^3	—	—
	24 Hours	50 µg/m^3	150 µg/m^3	150 µg/m^3
Lead	30-Day Average	1.5 µg/m^3	—	—
	Calendar Quarter	—	1.5 µg/m^3	1.5 µg/m^3
Sulfates	24 Hours	25 µg/m^3	—	—
Hydrogen Sulfide	1 Hour	0.03 ppm	—	—
Vinyl Chloride	24 Hours	0.010 ppm	—	—

Notes:
[a]California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded.
[b]National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
[c]National Primary Standards represent the levels of air quality necessary, with an adequate margin of safety, to protect the public health.
[d]National Secondary Standards represent the levels of air quality necessary to protect the environment, including public welfare, from any known or anticipated adverse effects of a pollutant.
[e]On June 15, 2005, the 1-hour ozone standard of 0.12 parts per million (ppm) was revoked for all areas except the 8-hour ozone nonattainment Early Action Compact (EAC) areas. (Those areas do not yet have an effective date for their 8-hour designations.)

ppm parts per million by volume
µg/m^3 micrograms per cubic meter

Source: CARB, 2008a, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, updated 06/26/2008

4.3.3.2.2 South oast Air uality anagement District

The Triton Substation Project would be located within the SCAB. The SCAQMD is the local agency responsible for ensuring that NAAQS and CAAQS are attained and maintained in the greater Los Angeles area, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The most recent SIP applied to the region, the Final 2007 AQMP/SIP (SCAQMD, 2007), was adopted by the SCAQMD Board on June 1, 2007. The final 2007 AQMP was submitted to EPA for approval on November 28, 2007.

The construction activities would be in compliance with SCAQMD fugitive dust Rule 403. SCAQMD Rule 403 requires specific actions or measures to prevent, reduce, or mitigate particulate matter emissions generated from man-made fugitive dust sources. Required actions for each fugitive dust source within the active operation are listed in Rule 403 Table 1, Best Available Control Measures. Additional requirements for large operations with 50 acres or more of disturbed surface area, or with a daily earth-moving or throughput volume of 5,000 cubic yards, are listed in Rule 403 Tables 2 and 3. However, the requirements for larger operations do not apply to this project (SCAQMD, 2008c).

4.3.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on air quality 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
- Create objectionable odors affecting a substantial number of people

4.3.4.1 onstruction egional Impacts Thresholds

Air quality impacts resulting from construction are deemed significant if daily emission estimates are above the significance thresholds for construction emissions provided in the supplemental information to the SCAQMD *CEQA Air Quality Handbook* (SCAQMD, 2008a). The construction emission mass daily thresholds are provided below.

- 75 pounds per day ROG
- 100 pounds per day NO_X
- 550 pounds per day CO
- 150 pounds per day PM_{10}

- 55 pounds per day $PM_{2.5}$
- 150 pounds per day SO_X

The use of regional impact thresholds for construction is voluntary, to be implemented at the discretion of local public agencies acting as a lead agency pursuant to CEQA.

4.3.4.2 Operational egional Impacts Thresholds

For operational air quality impacts resulting from vehicle emissions, a project would be considered significant if it would create a new CO, PM_{10}, and $PM_{2.5}$ violation of NAAQS or would exacerbate an existing violation, as indicated by hot spot analyses. The operational mass daily emission thresholds, as provided in the supplemental information to the SCAQMD *CEQA Air Quality Handbook* (SCAQMD, 2008a) are provided below.

- 55 pounds per day ROG
- 55 pounds per day NO_X
- 550 pounds per day CO
- 150 pounds per day PM_{10}
- 55 pounds per day $PM_{2.5}$
- 150 pounds per day SOX

The use of regional impact thresholds for operations is voluntary, to be implemented at the discretion of local public agencies acting as a lead agency pursuant to CEQA.

4.3.4.3 ocal Significant Thresholds for onstruction and Operation

When a project disturbs less than five acres, local significant thresholds (LSTs) can be used to determine the significance of air quality impacts to local sensitive receptors. For CEQA analysis, sensitive receptors include schools, residential areas, parks, hospitals, nursing homes, and any other areas likely to house children and/or the elderly. LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative I-4. The LST methodology was approved by the SCAQMD in 2005 and has since been periodically revised, including the adoption of $PM_{2.5}$ LSTs in October of 2006 (SCAQMD, 2008b). LSTs are now applicable to NO_X, CO, PM_{10}, and $PM_{2.5}$ and represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. LSTs were developed based on the ambient air concentration of each pollutant for a source receptor area and distance to the nearest sensitive receptor (SCAQMD, 2008b). The use of LSTs is voluntary, to be implemented at the discretion of local public agencies acting as a lead agency pursuant to CEQA.

4.3. Proposed Project and Alternatives

4.3. .1 Proposed Project

4.3. .1.1 Environmental Setting

Because air quality calculations considered the substation site, 12 kV duct banks, 115 kV subtransmission line, and telecommunication lines of the Proposed Project, the air quality environmental setting describes the airshed in which all these elements would be located.

The Proposed Project area is in the eastern portion of the SCAB in the County of Riverside, bounded closely by Orange County to the west and San Diego County to the south. The SCAB experiences a mild and fairly dry climate, with mean average temperatures ranging from approximately 50.5 degrees Fahrenheit (°F) in the winter to approximately 79°F during the summer. Average annual rainfall is approximately 9.96 inches, occurring primarily during a five-month period between November and March (WRCC, 2008). Winds in the SCAB are light, and inland areas record slightly lower wind speeds than downtown Los Angeles. The normal daily wind pattern is characterized by a daytime sea breeze and a weak nighttime land breeze. Region-wide elevated temperature inversions are common in the SCAB and can occur at any time of the year. The usually mild climatological pattern of the area is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The SCAB is bounded by the Pacific Ocean to the west, by the San Gabriel Mountains to the north, by the San Bernardino Mountains to the east, and by the Santa Ana Mountains to the south. The surrounding elevated terrain, combined with temperature inversions and low wind speeds, often results in very poor air circulation in the area and, consequently, poor air quality. Air quality is generally worse in the eastern portion of the SCAB, where emissions from the metropolitan area of Los Angeles can accumulate.

The concentration of a pollutant in the atmosphere is dependent on the amount of pollutant released, the nature of the source, and the ability of the atmosphere to transport and disperse the pollutant. The main determinants of transport and dispersion are wind, atmospheric stability, topography, and solar radiation for some photochemically active pollutants.

The potential for high pollution levels varies seasonally for many contaminants. In the summer, longer daylight hours and more intense sunlight combine to cause a reaction between ROG and NO_X to form photochemical oxidants, mainly O_3. In the winter, high levels of CO can exist because of extremely low inversions, causing air stagnation during the late night and early morning hours. When strong inversions are formed on winter nights and are coupled with near-calm winds, CO from automobile exhausts can become highly concentrated. Ambient air quality near the City of Temecula is generally worse than other locations in the SCAB because of its inland location. Average wind speeds and ventilation inland are less than in the coastal areas.

4.3. .1.2 Ambient Air uality

The following provides a summary of the criteria pollutants and monitoring data for the last five years during 2003 through 2007. A summary of the attainment status for the SCAB is also included.

4.3.5.1.2.1 Criteria Pollutants

In conjunction with EPA and CARB, SCAQMD operates networks of ambient air quality monitoring stations in the SCAB. There are three SCAB monitoring stations in the County of Riverside that provide ambient air quality data representative of local conditions. The Lake Elsinore – W. Flint Street Monitoring Station, located at 506 W. Flint St., is approximately 15 miles northwest of the City of Temecula and is the closest station to the Proposed Project area. The Lake Elsinore station monitors CO, NO_2, and O_3. The Perris Monitoring Station, located at 237 ½ N. D St., is the closest station monitoring PM_{10}. The Perris Monitoring

Station is approximately 20 miles northwest of the City of Temecula. The Riverside – Rubidoux Monitoring Station, located at 5888 Mission Blvd., is the closest station that monitors $PM_{2.5}$ and SO_2. The Riverside – Rubidoux Monitoring Station is approximately 32 miles northwest of the City of Temecula.

Ambient air quality data for the monitoring years of 2003 through 2007 are summarized in Table 4.3-2, which lists maximum pollutant levels measured and the number of days each year the ambient concentrations exceeded federal and state standards at the applicable monitoring stations. The locations of SCAB monitoring stations in western Riverside County with respect to the Triton Substation Project area are shown in Figure 4.3-1.

Table 4.3-2. Summary of aximum Ambient Air onitoring evels
Triton 115/12 kV Substation Project PEA

Pollutant [d]	Averaging Time	2003	2004	2005	2006	2007
CO (ppm) [a]	1-Hour [f]	4.0	2.0	1.7	1.4	1.6
	Days of State Exceedance [g]	0	0	0	0	0
	Days of Federal Exceedance	0	0	0	0	0
	8-Hour [e]	1.39	1.14	1.00	1.01	1.40
	Days of State Exceedance	0	0	0	0	0
	Days of Federal Exceedance	0	0	0	0	0
O_3 (ppm) [a]	1-Hour [e]	0.154	0.130	0.149	0.142	0.129
	Days of State Exceedance	50	34	32	42	26
	8-Hour [e]	0.138	0.114	0.119	0.109	0.109
	Days of State Exceedance	82	78	71	71	56
	Days of Federal Exceedance	36	21	15	24	35
NO_2 (ppm) [a]	Annual Arithmetic Mean [f]	0.018	0.015	0.014	0.015	0.015
	State Exceedance	0	0	0	0	0
	Federal Exceedance	0	0	0	0	0
	1-Hour [e]	0.074	0.090	0.065	0.072	0.064
	Days of State Exceedance	0	0	0	0	0
SO_2 (ppm) [b]	Annual Average [f]	0.003	0.004	0.004	0.001	0.002
	Federal Exceedance	0	0	0	0	0
	24-Hour [e]	0.012	0.015	0.011	0.003	0.004
	Days of State Exceedance	0	0	0	0	0
	Days of Federal Exceedance	0	0	0	0	0
	3-Hour [f]	0.015	0.016	0.012	0.007	0.007
	Days of Federal Exceedance	0	0	0	0	0
	1-Hour [f]	0.018	0.017	0.024	0.012	0.016
	Days of State Exceedance	0	0	0	0	0
PM_{10} (µg/m^3) [c]	Annual Arithmetic Mean [f]	44	41	39	451	76
	State Exceedance	1	1	1		1
	24-Hour [e]	142	83	80	125	1212
	Days of State Exceedance	17	15	18	18	31
	Days of Federal Exceedance	0	0	0	0	12

Table 4.3-2. Summary of aximum Ambient Air onitoring evels
Triton 115/12 kV Substation Project PEA

Pollutant [d]	Averaging Time	2003	2004	2005	2006	2007
$PM_{2.5}$ (µg/m^3) [b]	Annual Arithmetic Mean [f]	24.8	22.1	21.0	19.2	19.8
	State Exceedance	1	1	1	1	1
	Federal Exceedance	1	1	1	1	1
	24-Hour [e]	104.3	91.7	98.7	68.4	75.6
	Days of Federal Exceedance	8	5	4	1	3

Notes:
[a]Monitoring data from the Lake Elsinore – W. Flint St. Monitoring Station (060659001) monitor.
[b]Monitoring data from the Riverside – Rubidoux Monitoring Station (060658001) monitor.
[c]Monitoring data from the Perris Monitoring Station (060656001) monitor.
[d]Hydrogen sulfide, vinyl chloride, and visibility-reducing particles are not monitored at this site.
[e]Source: *ADAM Air Quality Database* www.arb.ca.gov/adam/welcome, as of August 2008
[f]Source: EPA, 2008b, www.epa.gov/air/data, as of August 2008
[g]All exceedances were evaluated based on CAAQS and NAAQS (primary) listed in Table 4.3-1.
ppm parts per million
µg/m^3 micrograms per cubic meter

Carbon Monoxide

In the Proposed Project study area, maximum ambient concentrations of CO range from 1.4 to 4.0 ppm for the 1-hour average and from 1.00 to 1.40 ppm for the 8-hour average during the last five years. Neither the state nor federal CO standards have been exceeded for the years 2003 through 2007 for either averaging period at the Lake Elsinore Monitoring Station.

O one

Maximum ambient concentrations of 1-hour O_3 measured at the Lake Elsinore Monitoring Station for the years 2003 through 2007 range from 0.129 to 0.154 ppm. The 8-hour O_3 maximum ambient concentrations range from 0.109 to 0.138 ppm. Both the 1-hour state and the 8-hour federal and state standards were repeatedly exceeded during all five years.

Nitrogen Dioxide

The maximum annual average concentrations measured at the Lake Elsinore Monitoring Station range from 0.014 to 0.018 ppm for the years 2003 through 2007. The federal NO_2 standards were not exceeded during these years. The maximum 1-hour average concentrations range from 0.064 to 0.090 ppm for the years 2003 through 2007. The state and federal NO_2 standards have not been exceeded during these years for either averaging period.

Sulfur Dioxide

The 1-hour SO_2 concentrations measured at the Riverside – Rubidoux Monitoring Station during the years 2003 through 2007 range from 0.012 to 0.024 ppm. The 3-hour average SO_2 concentrations range from 0.007 to 0.016 ppm. The 24-hour SO_2 concentrations range from 0.003 to 0.015 ppm during the last five years. The annual average SO_2 concentrations range from 0.001 to 0.004 ppm during the years 2003 through 2007. The state and federal standards for SO_2 during the years 2003 through 2007 were not exceeded.

Particulate Matter

The maximum 24-hour PM_{10} concentration measured at the Perris Monitoring Station during the years 2003 through 2007 was 1,212 micrograms per cubic meter ($\mu g/m^3$). The maximum annual concentration (arithmetic mean) for the same time period was 76 $\mu g/m^3$. Both maximum concentrations were measured in the year 2007. The state standard for the 24-hour PM_{10} concentration was exceeded repeatedly in all five years. The federal standard for the 24-hour concentration was exceeded only twice, in 2007. The federal standard for annual average PM_{10} concentration was exceeded only once, in 2007.

The maximum 24-hour $PM_{2.5}$ concentration measured at the Riverside – Rubidoux Monitoring Station during the years 2003 through 2007 was 104.3 $\mu g/m^3$. The maximum annual concentration (arithmetic mean) for the same time period was 24.8 $\mu g/m^3$. Both maximum concentrations were measured in the year 2003. The federal standards for the $PM_{2.5}$ annual average concentration and the 24-hour concentration were exceeded in all five years.

4.3.5.1.2.2 ttainment Status

The federal CAA requires the EPA to classify areas in the country as attainment or non-attainment, with respect to each criteria pollutant, depending on whether the areas meet the NAAQS. Similarly, the California CAA requires the CARB to classify areas in the state as attainment or non-attainment, depending on whether the areas meet the CAAQS. Areas that do not have sufficient data for a determination are designated as unclassified areas and are not considered to be non-attainment. Both acts require areas designated as non-attainment to prepare comprehensive attainment plans that contain a strategy and time frame for meeting the standards. In each state, attainment plans prepared pursuant to the federal CAA are incorporated in a single SIP.

Table 4.3-3 presents the current air quality designations for the County of Riverside, which includes the Triton Substation Project. It is the responsibility of the SCAQMD to lead the regional effort in the SCAB to attain state and federal standards. The SCAQMD is charged with the overall development and implementation of the AQMP, and with reducing emissions from industries and some mobile sources and consumer products.

Table 4.3-3. State and ederal Air uality Designations for the Proposed Project Area
Triton 115/12 kV Substation Project PEA

Pollutant	State Designation	Federal Designation
Ozone (8-hour)	Non-attainment	Non-attainment
Ozone (1 hour)	Non-attainment	Revoked [70 FR 44470] [a]
PM_{10}	Non-attainment	Serious Non-attainment
$PM_{2.5}$	Non-attainment	Non-attainment
CO	Attainment	Attainment/Maintenance
All Others	Attainment/Unclassified	Attainment/Unclassified

Notes:

[a] On June 15, 2005, the 1-hour ozone standard of 0.12 ppm was revoked for all areas except the 8-hour ozone nonattainment Early Action Compact (EAC) areas. (Those areas do not yet have an effective date for their 8-hour designations.)

Data source: CARB, 2008c, State Area Designations, http://www.arb.ca.gov/desig/adm/adm.htm, accessed August 2008, and EPA, 2008c, http://www.epa.gov/air/oaqps/greenbk/index.html, accessed August 2008.

4.3. .1.3 Impact Analysis

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

Construction Impacts

Air quality plans are strategies designed to reduce long-term operational emissions and comply with the federal and state ambient air quality standards. The SCAQMD planning document applicable to the Proposed Project is the regional AQMP. The most current version of the plan, the final 2007 AQMP, was adopted by the AQMD governing board on June 1, 2007 (SCAQMD, 2007).

The 2007 AQMP includes emission budgets from offroad equipment, such as construction equipment and fugitive dust. The emissions associated with the Proposed Project construction would be temporary and last for approximately eight months. The amount of the emissions would be negligible, compared to the regional emission inventory included in the 2007 AQMP, and thus is not expected to contribute a significant burden to the regional emission budget. In addition, construction of the project would be in compliance with the applicable SCAQMD regulations and required emission controls, and is thus consistent with the AQMP strategy. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Potential operation emissions are considered to be negligible because the primary sources of emissions would be from two maintenance vehicles infrequently used by workers to visit the substation. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

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

Construction Impacts

Construction emissions include emissions from equipment used during site preparation and project construction. These activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants such as CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$. Emissions of NO_X and ROG would contribute to the formation of ozone, and NO_X would also contribute to the formation of $PM_{2.5}$.

To determine whether implementation of the Proposed Project would violate any air quality standards or contribute substantially to an existing or projected air quality violation, a worst-case scenario approach was taken to estimate the construction emissions, and to ensure that all potential air quality impacts were assessed. As such, emissions occurring during peak construction activities were quantified and used to determine air quality impacts. The emission estimation methodology is presented in Section 4.3.2. Detailed assumptions and calculations are in Appendixes F1 and F2. The Proposed Project construction emissions are presented in Table 4.3-4.

As shown in Table 4.3-4, the worst-case daily construction emissions of all criteria pollutants would be below the SCAQMD air quality significance thresholds. Additionally, the Proposed Project construction activities would be in compliance with SCAQMD fugitive

dust Rule 403. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Table 4.3-4. aximum Daily onstruction Emissions
Triton 115/12 kV Substation Project PEA

	CO (lb/day)	NO_X (lb/day)	ROG (lb/day)	SO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Maximum Construction Equipment and Vehicle Exhaust	47	82	10	0.1	3.7	3.4
Maximum Workers Commute	28	2.9	2.8	0.03	0.24	0.15
Maximum Fugitive Dust	NA	NA	NA	NA	40.2	6.9
Maximum Daily Emissions [a]	**70**	**85**	**12**	**0.12**	**44**	**10**
SCAQMD Regional Thresholds	550	100	75	150	150	55
Exceeding Regional Thresholds?	NO	NO	NO	NO	NO	NO

Note:
[a] The maximum daily emissions from equipment exhaust, fugitive dust, and workers commute do not always occur on the same day.

Operation Impacts

Operation emissions would be associated with the two maintenance vehicles traveling to the substation. There are no other anticipated emissions from project operation. Emissions from the maintenance vehicles are summarized in Table 4.3-5 and compared to the SCAQMD air quality significance thresholds for operation. Criteria pollutants emissions from project operation would be below the SCAQMD significance thresholds. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Table 4.3- . aximum Daily Operation Emissions
Triton 115/12 kV Substation Project PEA

	CO (lb/day)	NO_X (lb/day)	ROG (lb/day)	SO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Maximum Vehicle Exhaust	0.775	0.080	0.079	0.00085	0.0069	0.0043
Maximum Fugitive Dust	NA	NA	NA	NA	0.95	0.16
Maximum Daily Emissions	**0.77**	**0.080**	**0.079**	**0.00085**	**0.96**	**0.17**
SCAQMD Regional Thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Exceeding Regional Thresholds?	NO	NO	NO	NO	NO	NO

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

Construction Impacts

According to the SCAQMD white paper "Potential Control Strategies to Address Cumulative Impacts from Air Pollution", Appendix D Cumulative Impact Analysis Requirements Pursuant to CEQA (SCAQMD, 2003), projects that do not exceed the significance thresholds are generally not considered to be cumulatively significant. As shown in Table 4.3-4, the construction emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)), would be less than the SCAQMD significance thresholds. Therefore, the cumulative impact from the Proposed Project construction would be less than significant. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As shown in Table 4.3-5, the project operation emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)) are less than the SCAQMD significance thresholds. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction Impacts

Sensitive receptors are defined as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities. The sensitive populations that may be located at these receptors include children, the elderly, the acutely ill, and the chronically ill.

Air quality impacts to the sensitive receptors in area of the Triton Substation Project were evaluated using SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD, 2008b). The project construction involves construction of the substation, 115 kV subtransmission line loop-in, 12 kV underground distribution duct banks, and telecommunication system. It was assumed that the construction emissions from the overlaying construction phases would occur within the substation boundary at the same time. This is a conservative approach and will overestimate the maximum onsite emissions, because some of the emissions would occur outside of the substation boundary. Consistent with SCAQMD's localized significance threshold methodology, offsite delivery vehicle emissions were not included in this evaluation.

The Proposed Project substation construction site would be located in rural and suburban areas in the Temecula Valley source receptor area. The construction site would be approximately 2.5 acres. To be conservative, the closest residential receptor is approximately 25 meters (82 ft). Table 4.3-6 shows the applicable LSTs for a 2.5-acre site and the comparison to the estimated onsite construction emissions. The LSTs were interpolated using the SCAQMD published LSTs of two-acre and five-acre sites.

The analysis indicated that onsite construction emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ would be below the SCAQMD LST thresholds, even with the most conservative assumptions. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Table 4.3- . Temecula alley ocal Significance Thresholds 2. Acres of and Disturbed Sensitive eceptor at 2 eters 2 ft
Triton 115/12 kV Substation Project PEA

	CO (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Maximum Construction Equipment Exhaust	47	82	3.7	3.4
Maximum Workers Commute	28	2.9	0.24	0.15
Maximum Fugitive Dust	NA	NA	2.7	0.6
Maximum Combined Daily Emissions	**70**	**85**	**6.6**	**4.0**
SCAQMD LST Thresholds	1,097	257	8	5
Exceeding Thresholds?	NO	NO	NO	NO

Notes:

Source:

SCAQMD, 2008b. *Final Localized Significance Threshold Methodology*, Appendix C. (http://www.aqmd.gov/ceqa/handbook/lst/Method_final.pdf).

SCAQMD, 2006. *Final Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds*, Appendix B. (http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html).

m = meter
lb = pound

Operation Impacts

Operation emissions would include vehicle emissions from periodic inspection, maintenance, and repair of the proposed substation and subtransmission lines. The emissions from two maintenance vehicles would be negligible. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

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

Construction Impacts

SCE would use diesel construction equipment, which emits a distinctive odor that may be considered offensive to certain individuals. These odors would be temporary and would not affect a substantial number of people. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

The operation of the substation is not expected to have odorous emissions. The substation equipment would be enclosed within the substation property and away from all sensitive receptors. If there is any odor emitted from the maintenance activities, it would most likely only be detected by workers servicing the substation equipment. Therefore, the operation of the Proposed Project would result in a less than significant impact under this criterion.

4.3. .1.4 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.3. .2 Site Alternative B

4.3. .2.1 Environmental Setting

The regional environmental setting for Site Alternative B, including criteria pollutants and attainment status, would be the same as the Proposed Project regional environmental setting (Section 4.3.5.1.1).

4.3. .2.2 Impact Analysis

Construction and operation of Site Alternative B would not conflict with or obstruct implementation of the applicable air quality plan because the construction emissions associated with Site Alternative B would be temporary and only last for about eight months. The amount of emissions would be negligible, compared to the regional emission inventory included in the 2007 AQMP, and, thus, is not expected to contribute a significant burden to the regional emission budget. In addition, construction of Site Alternative B would be in compliance with the applicable SCAQMD regulations and required emissions controls, and is consistent with the AQMP strategy. Potential operations emissions are considered to be negligible because the primary sources of emission would be from the two maintenance vehicles infrequently used by workers to visit the substation. Therefore, implementation of the Site Alternative B would result in less than significant impacts under this criterion.

Emissions occurring during peak construction activities and operations quantified for the Proposed Project would be the same for Site Alternative B. The worst-case daily construction emissions of all criteria pollutants would be below the SCAQMD air quality significance thresholds. Additionally, Site Alternative B construction activities would be in compliance with SCAQMD fugitive dust Rule 403. Operation emissions would be associated with the two maintenance vehicles and criteria pollutant emissions from Site Alternative B would be below SCAQMD significance thresholds. Therefore, implementation of Site Alternative B would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and would result in a less than significant impact under this criterion.

Construction and operation of Site Alternative B would not 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 because, according to the SCAQMD white paper "Potential Control Strategies to Address Cumulative Impacts from Air Pollution", Appendix D Cumulative Impact Analysis Requirements Pursuant to CEQA (SCAQMD, 2003), projects that do not exceed the significance thresholds are generally not considered to be cumulatively significant. As shown in Table 4.3-4, the construction emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)), would be less than the SCAQMD significance thresholds. Additionally, as shown in Table 4.3-5, the project operation emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and

VOCs)) are less than the SCAQMD significance thresholds. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Air quality impacts to the sensitive receptors in the area of the Triton Substation Project were evaluated using SCAQMD's *Final Localized Significance Threshold (LST) Methodology* (SCAQMD, 2008b). The analysis indicated that onsite construction emissions of CO, NOx, PM_{10}, and $PM_{2.5}$ would be below the SCAQMD LST thresholds, even with the most conservative assumptions, as discussed under the Proposed Project. Additionally, operation emissions, including vehicle emissions from periodic inspection, maintenance, and repair of Site Alternative B, would be negligible. The implementation of Site Alternative B would, therefore, not result in a considerably cumulative impact to air quality. Therefore, implementation of Site Alternative B would result in less in significant impact under this criterion.

Diesel construction equipment, which emits a distinctive odor that may be considered offensive by individuals, would be used temporarily during construction; however the odor is not anticipated to affect a substantial number of people. The operation of Site Alternative B is not expected to have odorous emission. The substation equipment would be enclosed by a block wall on the property and away from sensitive receptors. If an odor is emitted during maintenance activities, it would most likely only be detected by workers servicing the substation equipment. Therefore, implementation of Site Alternative B would result in less than significant impacts under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts to air quality.

4.3. .3 Site Alternative

4.3. .3.1 Environmental Setting

The regional environmental setting for Site Alternative C, including criteria pollutants and attainment status, would be the same as the Proposed Project regional environmental setting (Section 4.3.5.1.1).

4.3. .3.2 Impact Analysis

Construction and operation of Site Alternative C would not conflict with or obstruct implementation of the applicable air quality plan because the construction emissions associated with Site Alternative C would be temporary and only last for about eight months. The amount of emissions would be negligible, compared to the regional emission inventory included in the 2007 AQMP, and, thus, is not expected to contribute a significant burden to the regional emission budget. In addition, construction of Site Alternative C would be in compliance with the applicable SCAQMD regulations and required emissions controls, and is consistent with the AQMP strategy. Potential operations emissions are considered to be negligible because the primary sources of emission would be from the two maintenance vehicles infrequently used by workers to visit the substation. Therefore, implementation of the Site Alternative C would result in less than significant impacts under this criterion.

Emissions occurring during peak construction activities and operations quantified for the Proposed Project would be the same for Site Alternative C. The worst-case daily

construction emissions of all criteria pollutants would be below the SCAQMD air quality significance thresholds. Additionally, Site Alternative C construction activities would be in compliance with SCAQMD fugitive dust Rule 403. Operation emissions would be associated with the two maintenance vehicles and criteria pollutant emissions from Site Alternative C would be below SCAQMD significance thresholds. Therefore, implementation of Site Alternative C would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and would result in a less than significant impact under this criterion.

Construction and operation of Site Alternative C would not 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 because, according to the SCAQMD white paper (SCAQMD, 2003), projects that do not exceed the significance thresholds are generally not considered to be cumulatively significant. As shown in Table 4.3-4, the construction emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)), would be less than the SCAQMD significance thresholds. Additionally, as shown in Table 4.3-5, the project operation emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)) are less than the SCAQMD significance thresholds. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Air quality impacts to the sensitive receptors in the area of the Triton Substation Project were evaluated using SCAQMD's *Final Localized Significance Threshold (LST) Methodology* (SCAQMD, 2008b). The analysis indicated that onsite construction emissions of CO, NOx, PM_{10}, and $PM_{2.5}$ would be below the SCAQMD LST thresholds, even with the most conservative assumptions, as discussed under the Proposed Project. Additionally, operation emissions, including vehicle emissions from periodic inspection, maintenance, and repair of Site Alternative C, would be negligible. The implementation of Site Alternative C would, therefore, not result in a considerably cumulative impact to air quality. Therefore, implementation of Site Alternative C would result in less in significant impact under this criterion.

Diesel construction equipment would be used temporarily during construction; however the odor is not anticipated to affect a substantial number of people. The operation of Site Alternative C is not expected to have odorous emission. The substation equipment would be enclosed by a block wall on the property and away from sensitive receptors. If an odor is emitted during maintenance activities, it would most likely only be detected by workers servicing the substation equipment. Therefore, implementation of Site Alternative C would result in less than significant impacts under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts to air quality.

4.3. onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to air quality

4.3. eferences

California Air Resources Board (CARB). 2007. *EMFAC2007 Release*. http://www.arb.ca.gov/msei/onroad/latest_version.htm. Accessed August 13, 2008.

California Air Resources Board (CARB). 2008a. Ambient Air Quality Standards. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, updated 06/26/2008

California Air Resources Board (CARB). 2008b. *ADAM Air Quality Database*. http://www.arb.ca.gov/adam/welcome.html. Accessed August 11, 2008.

California Air Resources Board (CARB). 2008c. *State Area Designations*. http://www.arb.ca.gov/desig/adm/adm.htm. Accessed August 12, 2008.

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. June 21.

City of Temecula (COT). 2005. *Temecula General Plan.* 1993; Updated 2005.

County of Riverside (COR). 2003a. *County of Riverside General Plan.* October.

South Coast Air Quality Management District (SCAQMD). 1993, *California Environmental Quality Act (CEQA) Air Quality Handbook.*

South Coast Air Quality Management District (SCAQMD). 2003, *Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, *Appendix D Cumulative Impact Analysis Requirements Pursuant to CEQA.*

South Coast Air Quality Management District (SCAQMD). 2006. *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds*. http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

South Coast Air Quality Management District (SCAQMD). 2007. *Air Quality Management Plan*. June.

South Coast Air Quality Management District (SCAQMD). 2008a. *California Environmental Quality Act (CEQA) Air Quality Handbook.* http://www.aqmd.gov/ceqa/hdbk.html. Accessed August 13, 2008.

South Coast Air Quality Management District (SCAQMD). 2008b. *Final Localized Significance Threshold Methodology*. Revised July 2008. http://www.aqmd.gov/ceqa/handbook/lst/Method_final.pdf.

South Coast Air Quality Management District (SCAQMD). 2008c. *Rules and Regulations.* Revised August 29, 2008. http://www.aqmd.gov/rules/index.html. Accessed September 12, 2008.

U.S. Environmental Protection Agency (EPA). 2008a. *Compilation of Air Pollutant Emission Factors, Fifth Edition (*AP-42). Office of Air Quality Planning and Standards (amended through 2008), http://www.epa.gov/ttn/chief/ap42/.

U.S. Environmental Protection Agency (EPA). 2008b. *AIRData Monitor Values.* http://www.epa.gov/air/data.html. Accessed August 11, 2008.

U.S. Environmental Protection Agency (EPA). 2008c. *Green Book: Criteria Pollutants*. http://www.epa.gov/air/oaqps/greenbk/index.html. Accessed August 13, 2008.

Western Regional Climate Center (WRCC). 2008. *Western U.S. Climate Historical Summaries*. http://www.wrcc.dri.edu/CLIMATEDATA.html. Accessed August 13, 2008.

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FIGURE 4.3-1. AIR QUALITY MONITORING STATIONS - WESTERN RIVERSIDE COUNTY SOUTH COAST AIR BASIN

SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
CALIMESA
BEAUMONT
MORENO VALLEY
RIVERSIDE
Riverside
Station #060658001
32 Miles NW of Project
Perris
Station #060656001
20 Miles NW of Project
PERRIS
SAN JACINTO
HEMET
CANYON LAKE
LAKE ELSINORE
Lake Elsinore
Station #060659001
15 Miles NW of Project
ORANGE COUNTY
RIVERSIDE COUNTY
Electrical Needs Area
Site Alternative C
Proposed Project Site
Site Alternative B
MURRIETA
TEMECULA
RIVERSIDE COUNTY
SAN DIEGO COUNTY

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LEGEND

- Air Quality Monitoring Station
- County Boundary
- City Boundary
- Electrical Needs Area

Proposed Alternatives

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

1:240,000
NAD 83 UTM ZONE 11N

1 inch equals 20,000 ft

0 40,000
0 Feet 7
Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:250,000 Topographic Maps - Santa Ana and San Bernardino

2008

TRITON SUBSTATION PEA

FIGURE 4.3-1. AIR QUALITY MONITORING STATIONS - WESTERN RIVERSIDE COUNTY SOUTH COAST AIR BASIN

SOUTHERN CALIFORNIA EDISON

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4.4 Biological esources

4.4.1 Overview

This analysis describes the potential impacts to biological resources that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to biological resources.

4.4.2 ethodology

At the request of Southern California Edison (SCE), BonTerra Consulting conducted a biological resources assessment for the proposed Triton Substation Project. The assessment included focused biological surveys and habitat suitability assessments for special-status plant and wildlife species within the potential sites selected for the Triton Substation (BonTerra Consulting, 2008). This analysis includes biological information for the Proposed Project, Site Alternative B, and Site Alternative C. For each of these sites, the installation of associated overhead and underground telecommunication, and distribution lines as well as overhead subtransmission lines is also addressed.

4.4.2.1 iterature eview

The biological resources section is based on background data review and field reconnaissance surveys. Prior to field surveys, a literature review was performed to identify special-status plants, wildlife, and habitats known to occur in the vicinity of the Triton Substation Project site. This search included a review of Murrieta and Bachelor Mountain USGS 7.5-minute quadrangles in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2008) and California Department of Fish and Game's (CDFG) California Natural Diversity Database (CDFG, 2008). CDFG lists of special-status plant and wildlife species were also reviewed (CDFG, 2006 and 2007). The Assessor's Parcel Numbers (APNs) for the parcels were run through the Riverside County Integrated Project (RCIP) Conservation Summary Report Generator for the Multiple Species Habitat Conservation Plan (MSHCP) (RCIP, 2008).

4.4.2.2 Survey ethods

Biological reconnaissance surveys were conducted to describe the vegetation present on the Triton Substation Project site and to evaluate the potential of the habitats to support special-status species. General plant and wildlife surveys for Site Alternatives B and C were completed on March 29, 2007; vegetation mapping for Site Alternatives B and C was conducted concurrent with special-status plant surveys on May 18, 2007. The general plant and wildlife surveys for the Proposed Project, including vegetation mapping, were completed on June 27, 2008. General plant and wildlife surveys of the proposed distribution duct banks, subtransmission line loop-in, and telecommunication line alignments along with an overview field assessment of the existing Valley-Auld-Moraga 115 kV subtransmission line were conducted on October 29, 2008. Vegetation was mapped in the field on an aerial photograph at a scale of 1 inch equals 200 feet (1 in = 200 ft').

Nomenclature for vegetation types generally follows that of The Vegetation Classification and Mapping Program: List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database (CDFG, 2003). Photographs were also taken during the site visits.

All species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) and Munz (1974). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris into their original location. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Fisher and Case (1997) for amphibians and reptiles, American Ornithologists Union (1998) for birds, and Baker et al. (2003) for mammals.

For detailed methodology regarding special-status plant habitat assessments for Site Alternatives B and C, focused burrowing owl (*Athene cunicularia*) habitat assessments/burrow surveys for Site Alternatives B and C, and focused coastal California gnatcatcher (*Polioptila californica californica*) surveys for Site Alternative C, refer to the full Biological Technical Report (BonTerra Consulting, 2008).

Results from the biological assessments conducted for the proposed substation locations can be found in Appendix F2 (Bon Terra Consulting, 2008).

4.4.3 egulations Plans and Standards

This biological report has been prepared to support the California Environmental Quality Act (CEQA) environmental analysis for the Triton Substation Project. This information has been reported in accordance with accepted scientific and technical standards that are consistent with the requirements of the U.S. Fish and Wildlife Service (USFWS) and the CDFG, and includes discussions regarding compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

4.4.3.1 ederal egulations

4.4.3.1.1 ederal Endangered Species Act ESA 1 S 1 3 et se .

The Federal Endangered Species Act of 1973 (FESA) protects plants and animals that are listed by the federal government as "Endangered" or "Threatened." The FESA is implemented by enforcing Sections 7 and 9 of the Act. A federally listed species is protected from unauthorized "take" pursuant to Section 9 of the FESA. "Take," as defined by the FESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or to attempt to engage in any such conduct. All persons are presently prohibited from taking a federally listed species unless and until: (1) the appropriate Section 10(a) permit has been issued by the USFWS or (2) an incidental Take Statement is obtained as a result of formal consultation between a federal agency and the USFWS pursuant to Section 7 of the FESA and the implementing regulations that pertain to it (50 *Code of Federal* Regulations [CFR] 402). "Person" is defined in the FESA as an individual, corporation, partnership, trust,

association, or any private entity; any officer, employee, agent, department or instrumental of the federal government; any State, Municipality, or political subdivision of the state; or any other entity subject to the jurisdiction of the United States. The Project Applicant is a "person" for purposes of the FESA.

4.4.3.1.2 Section 4 1 and 4 4 of the lean ater Act of 1 2 33 nited States ode S 12 1 et se .

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredge-and-fill material into waters of the United States including wetlands. Dredge and fill activities are typically associated with development projects; water-resource related projects; infrastructure development and wetland conversion to farming; forestry; and urban development. The U.S. Army Corps of Engineer (USACE) is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations.

Under CWA Section 401, an activity requiring a USACE Section 404 permit must obtain a State Water Quality Certification (or waiver thereof) to ensure that the activity will not violate established State water quality standards. The State Water Resources Control Board (SWRCB), in conjunction with the nine California Regional Water Quality Control Boards (RWQCB), is responsible for administering the Section 401 water quality certification program.

Under Section 401 of the federal CWA, an activity involving discharge into a water body must obtain a federal permit and a State Water Quality Certification to ensure that the activity will not violate established water quality standards. The U.S. Environmental Protection Agency (USEPA) is the federal regulatory agency responsible for implementing the CWA. However, it is the SWRCB in conjunction with the nine RWQCBs who essentially have been delegated the responsibility to administer the water quality certification (401) program.

4.4.3.1.3 igratory Bird Treaty Act of 1 1 BTA 1 nited States ode S 3 to 11

The Migratory Bird Treaty Act (MBTA) makes it unlawful, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird. . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." (16 U.S.C. 703)

4.4.3.1.4 Bald and olden Eagle Protection Act 1 S

This Act provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. The 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. A 1994 Memorandum (59 F.R. 22953, April 29, 1994)

from President William J. Clinton to the heads of Executive Agencies and Departments sets out the policy concerning collection and distribution of eagle feathers for Native American religious purposes.

4.4.3.2 State egulations

4.4.3.2.1 alifornia Endangered Species Act ESA ish and ame ode Section 2 et se .

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the Fish and Game Code, an incidental take permit from the CDFG is required for projects that could result in the take of a state-listed Threatened or Endangered species. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass," as the federal act does. As a result, the threshold for a take under the CESA is higher than that under the FESA. An incidental take permit authorized by the CDFG under Section 2081(b) would be required where a project could result in the take of a state-listed Threatened or Endangered Species. The application for an incidental take permit under Section 2081(b) has a number of requirements including the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan.

The State of California considers an Endangered Species as one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened Species as one present in such small numbers throughout its range that it is likely to become an Endangered Species in the near future in the absence of special protection or management; and a Rare Species as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. The Rare Species designation applies only to California native plants. The CESA authorizes the CDFG to issue permits authorizing incidental take of Threatened and Endangered Species. A California Species of Special Concern is an informal designation which the CDFG uses for some declining wildlife species that are not State candidates. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFG.

4.4.3.2.2 alifornia Environmental uality Act E A ish and ame ode Section 1 2

State law confers upon the CDFG the trustee responsibility and authority for the public trust resource of wildlife in California. The CDFG may play various roles under the CEQA process. By State law, the CDFG has jurisdiction over the conservation, protection, and management of the wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. The CDFG shall consult with lead and responsible agencies and shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities.

As a trustee agency, the CDFG has jurisdiction over certain resources held in trust for the people of California. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project (CEQA Guidelines, Section 15386). The CDFG, as a trustee agency, must be notified of CEQA documents regarding projects involving fish and wildlife of the state, as well as rare and endangered native plants, wildlife areas, and ecological reserves. Although, as a trustee

agency the CDFG cannot approve or disapprove a project, lead and responsible agencies are required to consult with the CDFG. The CDFG, as the trustee agency for fish and wildlife resources, shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities and shall make recommendations regarding those resources held in trust for the people of California (*Fish and Game Code,* Section 1802).

4.4.3.2.3 alifornia ish and ame ode Sections 1 through 1 1

All diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream, or lake in California that supports wildlife resources and/or riparian vegetation are subject to CDFG regulations, pursuant to Section 1600 through Section 1603 of the California *Fish and Game Code.* Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake designated by CDFG as waters within their jurisdiction, nor can a person use any material from the streambeds, without first notifying CDFG of such activity. For a project that may affect stream channels and/or riparian vegetation regulated under Sections 1600 through 1603, CDFG authorization is required in the form of a Streambed Alteration Agreement.

4.4.3.2.4 Additional alifornia Department of ish and ame odes

Sections 1900 et seq., or Native Plant Protection Act: This section lists threatened, endangered, and rare plants so designated by the California Fish and Game Commission.

Sections 3511, 4700, 5050, and 5515: These sections provide a provision for the protection of bird, mammal, reptile, amphibian, and fish species that are "fully protected." Fully protected animals may not be harmed, taken, or possessed.

Section 3503, 3503.5, and 3513: This section states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 explicitly provides protection for all birds-of-prey, including their eggs and nests. Section 3513 makes it unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Title 14, California Code of Regulations, Sections 670.2 and 670.5: These Sections list animals designated as threatened or endangered in California. The California Department of Fish and Game (DFG) designates species considered to be indicators of regional habitat changes, or candidate species for future state listing, as California species of special concern.

4.4.3.2. alifornia Porter- ologne ater uality ontrol Act

Pursuant to the California Porter-Cologne Water Quality Control Act, the SWRCB and the nine RWQCBs may require permits ("waste discharge requirements" or "WDRs") for the fill or alteration of the waters of the State. The term "waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (*Water Code,* Section 13050[e]). The State and Regional Boards have interpreted their authority to require WDRs to extend to any proposal to fill or alter waters of the State, even if those same waters are not under USACE jurisdiction. Pursuant to this authority, the State

and Regional Boards may require the submission of a "report of waste discharge" under Section 13260, which is treated as an application for WDRs.

4.4.3.3 ocal urisdictions

4.4.3.3.1 estern iverside ultiple Species abitat onservation Plan S P

The Project is in the coverage area of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is a comprehensive, multi-jurisdictional plan that focuses on conservation of species and their associated habitats in western Riverside County. This MSHCP will allow Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts. The MSHCP Plan Area encompasses 1.26 million acres in western Riverside County.

This MSHCP has 146 "Covered Species" (including 14 Narrow Endemic plant species). Of the 146 "covered species", 118 species (including 13 of the 14 Narrow Endemic plant species) are considered "adequately conserved" within the MSHCP. A covered species is considered adequately conserved when enough designated "Criteria Area" (i.e., geographic area, soils and/or habitat that supports, or has the potential to support, the Covered Species) has been acquired, or designated for acquisition, for that species in the MSHCP. For species not deemed adequately conserved, additional dedication and/or purchase of conservation land may be required, as determined on a case-by-case basis. A Narrow Endemic species has a limited geographic distribution (e.g., Santa Rosa Plateau or San Jacinto River Valley), an affinity for a particular soil-type (e.g., Domino, Travers, or Willow), and/or is restricted to a specific habitat (e.g., coastal sage scrub, vernal pools, etc.).

The MSHCP requires that project sites be evaluated for a number of factors to assess how they meet the criteria identified in the MSHCP. As part of this evaluation, the project site has been assessed for riparian/riverine resources, vernal pools, areas under the jurisdiction of the USACE and/or CDFG, urban/wildlands interface issues, and potential for special-status species. If it is determined that there is potential for one of these resources and/or if the site is located within a Criteria Area that indicates potential for particular wildlife species or narrow endemic plant species, focused surveys may be required. For projects which seek regulatory permit coverage as a participant of the MSHCP, focused surveys must follow MSHCP protocol guidelines which typically limit surveys to certain seasonal time periods and require a set number of surveys to be conducted. In addition, Criteria Area requirements may restrict the level of development allowable within the site.

SCE has included sensitive species information from the MSHCP in this document, and is following the intent of the Plan in the creation of its Project Design Features to protect sensitive species and habitat. SCE is a Participating Special Entity under the MSHCP and is not required to participate in the plan. SCE has exercised the option to not participate in the plan.

4.4.3.3.2 ounty of iverside Tree Ordinance

The County of Riverside Ordinance #559 regulates the removal of trees in unincorporated areas of the County. This ordinance requires a permit prior to removal of any native tree

(which is not less than six inches in diameter measured four feet above the ground) on any parcel or property greater than one-half acre in size, located in an area above 5,000 feet in elevation. Any activities conducted by a public utility are exempt from this ordinance. The three alternative sites addressed in this document are all located at a much lower elevation and therefore this ordinance would not apply to the proposed project.

4.4.3.3.3 ity of Temecula Proposed eritage Tree Ordinance

During the April 2008 Planning Commission meeting, the City of Temecula proposed development of a Heritage Tree Ordinance to be incorporated into the City's municipal code. However, at this time no information is available concerning what tree species/sizes would be protected by the proposed ordinance. A draft ordinance is anticipated for public hearing in October or November of 2008.

4.4.3.3.4 ity of urrieta Tree Preservation Ordinance

The City of Murrieta's Tree Preservation Ordinance protects the following trees: any native oak with a diameter of four inches or greater, as measured 4.5 feet above the root crown; trees of historical or cultural significance as identified by council resolution; significant groves or stands of trees; mature trees (with a diameter of 9.5 inches or greater in total for all major stems, as measured 4.5 feet above the root crown) located on a parcel of one acre or more; or any tree required to be planted or preserved as environmental mitigation for a discretionary permit. According to this ordinance, no protected tree shall be removed, cut down, or otherwise destroyed, unless a tree removal permit has been obtained. Pruning or trimming that does not endanger the life of a protected tree is exempt from this ordinance.

4.4.4 Significance riteria

The actual and potential occurrence of special-status biological resources on the Triton Substation Project site was correlated with the following significance criteria to determine whether the impacts of the Triton Substation Project on these resources would be considered significant, less than significant, or would result in no impact.

4.4.4.1 E A uidelines

Appendix G of the CEQA Guidelines contains the Initial Study Environmental Checklist form which includes questions relating to biological resources. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this impact analysis. Accordingly, a project may create a significant environmental impact if one or more of the following occurs:

- If the project has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- If the project has a substantial adverse effect on any riparian habitat or other natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS.

- If the project has 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.
- If the project interferes substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.
- If the project conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- If the project conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Section 15065(a), Mandatory Findings of Significance, of the CEQA Guidelines states that a project may have a significant effect on the environment if "… the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species."

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, state or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

Section 15380 of CEQA indicates that a lead agency can consider a non-listed species to be Rare or Endangered for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special-status species was considered according to the definitions for Rare and Endangered listed in Section 15380 of CEQA Guidelines.

4.4. Proposed Project and Alternatives

The following biological resources-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF BIO-1 **Pre-Construction Surveys.** Pre-construction biological clearance surveys would be performed to minimize impacts on special-status plants and/or wildlife species.

PDF BIO-2 **Worker Environmental Awareness Program.** A Worker Environmental Awareness Program (WEAP) would be prepared and all construction crews

and contractors would be required to participate in WEAP training prior to starting work on the Triton Substation Project. The WEAP training would include a review of the special-status species and other sensitive resources that could exist in the Triton Substation Project area, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained would be maintained.

PDF BIO-3 **Biological Monitors.** Biological monitors would only be utilized during construction of the Triton Substation Project within areas found to contain sensitive biological resources. The monitors would be responsible for ensuring that impacts on special-status species, native vegetation, wildlife habitat, or unique resources would be avoided to the fullest extent possible. Where appropriate, monitors would flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or special-status species. These restricted areas would be monitored to ensure their protection during construction. If non-listed sensitive resources are found within the project area, the monitor will relocate the individual out of the project area.

PDF BIO-4 **Avian Protection.** All transmission, sub-transmission, and distribution structures would be designed to be avian-safe in accordance with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee (APLIC), 2006).

PDF BIO-5 **Best Management Practices (BMPs).** Construction and Operations Crews would be directed to use Best Management Practices (BMPs) where applicable. These measures would be identified prior to construction and incorporated into the construction and maintenance operations.

PDF BIO-6 **Nesting Birds.** To minimize potential impacts to selected nesting special-status birds, raptors, or other MBTA bird species, planned vegetation clearing will take place during the non-breeding season (between September 1 and January 31), to the extent feasible. This will discourage the species from nesting within the work area. Trees, shrubs, or other vegetation occupied that would provide suitable structure for nesting would be removed. If vegetation clearing must take place during nesting season (February 15 – August 31), pre-construction nest surveys will be conducted by a biologist prior to clearing. If the biologist finds an active nest within or adjacent to the construction area and determines that there may be impacts to the nest, the biologist will delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the type of construction activity. Only construction activities (if any) approved by the biologist will take place within the buffer zone until the nest is vacated. If nests are found and cannot be avoided by the project activities, or if work is scheduled to take place in close proximity to an active nest, SCE would coordinate with the CDFG and USFWS and obtain written concurrence prior

to moving the nest.

PDF BIO-7 **Burrowing Owls.** Pre-construction burrowing owl surveys are recommended for Proposed Project and Site Alternative B to determine presence or absence. A qualified Biologist will survey within 500 feet of the site for the presence of any active owl burrows within 30 days prior to the onset of construction activities. Any active burrow found during survey efforts will be mapped on the construction plans. If no active burrows are found, no further action would be required. If nesting activity is present at an active burrow, the active site will be protected until nesting activity has ended. Nesting activity for burrowing owl in the region normally occurs between March and August. To protect the active burrow during nesting, the following restrictions to construction activities will be required until the burrow is no longer active as determined by a qualified biologist: 1) clearing limits will be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified biologist and 2) access and surveying will be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the active burrow will only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest. If an active burrow is observed during the non-nesting season, the nest site will be monitored by a qualified biologist, and when the owl is away from the nest, the biologist will either actively or passively relocate the burrowing owl. The biologist will then remove the burrow so the burrowing owl cannot return to the burrow.

PDF BIO-8 **Special-Status Plants.** For the sites indicated in Table 4.4-1 as having potential to support special-status plants (Site Alternative B and C), focused botanical surveys should be repeated in the spring following a winter season of adequate rainfall. If any special-status plant species is identified and will be impacted by the Triton Substation Project, then implementation of this project design feature may be necessary. This may involve transplantation and/or seed collection to establish the species in a suitable replacement site. A qualified biologist will be selected to prepare and implement a monitoring and reporting plan, if needed, which will include detailed descriptions of maintenance appropriate for the replacement site, monitoring requirements, and annual report requirements, and will have the full authority to suspend any operation which is, in the qualified biologist's opinion, not consistent with the monitoring and reporting plan.

PDF BIO-9 **Lighting.** Night lighting would be directed away from open spaces adjacent to the selected site. Shielding would be incorporated in the final project design to ensure ambient lighting is not increased.

PDF BIO-10 **Noise.** If the construction noise levels are expected to potentially cause substantial impacts to wildlife species, as determined by a qualified biologist, proposed noise-generating activities shall incorporate temporary

features such as setbacks, berms, or walls to minimize the effects of noise on open spaces adjacent to the selected site.

4.4. .1 eneral Biological esources

The three potential sites occur within a developed portion of the County of Riverside. The topography in the area is generally flat or gently sloped, with an approximate elevation of 1,200 feet. The Proposed Project and Site Alternative B are located in a low-density residential community within the City of Temecula. Site Alternative C is located adjacent to a high-density residential development within unincorporated Riverside County, approximately one mile to the northwest of the Proposed Project and Site Alternative B. These sites have been previously disturbed, and are composed of limited native vegetation. The habitats in these areas are of poor quality and contain low potential to support native plants and wildlife.

4.4. .2 egetation Type Descriptions

Disturbed coastal sage scrub is dominated within the sites by California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and deerweed (*Lotus scoparius*). It is disturbed due to the presence of high density non-native weeds, including tocalote (*Centaurea melitensis*) and shortpod mustard (*Hirschfeldia incana*).

Annual grassland is dominated within the sites by non-native species including foxtail chess (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), and shortpod mustard. Native species present include telegraph weed (*Heterotheca grandiflora*) and the occasional California buckwheat shrub.

Disturbed annual grassland is dominated within the sites by foxtail chess, shortpod mustard, tocalote, and red-stemmed filaree (*Erodium cicutarium*). Native species present include telegraph weed, doveweed (*Eremocarpus setigerus*), and the occasional California buckwheat shrub. It is disturbed due to the presence of abundant patches of unvegetated exposed soil due to recent mechanical disturbance.

Ruderal areas have been altered by past mechanical disturbance and soil compaction activities. These areas are dominated within the sites by non-native weeds, including shortpod mustard, red-stemmed filaree, and tocalote. Other non-native plant species found within these areas include Russian thistle (*Salsola tragus*) and foxtail chess. Scattered native species are also present, including rancher's fiddleneck (*Amsinckia menziesii*), salt heliotrope (*Heliotropium curassavicum*), jimson weed (*Datura wrightii*), cocklebur (*Xanthium strumarium*), Pomona locoweed (*Astragalus pomonensis*), telegraph weed, and deerweed.

Ornamental areas are landscaped plantings of non-native species. These areas are dominated within the sites by hottentot fig (*Carpobrotus edulis*), gum (*Eucalyptus* sp.), prostrate acacia (*Acacia redolens*), American sweetgum (*Liquidambar styraciflua*), and turf grass. Disturbed areas located within the sites are those generally devoid of vegetation; these areas contain exposed soil due to recent mechanical disturbance. Developed areas include paved roadways.

4.4. .2.1 Soil Types

Soil types within the three sites include: Arlington and Greenfield fine sandy loams, Greenfield sandy loam, Hanford coarse sandy loam, Hanford fine sandy loam, Honcut sandy loam, Las Posas loam, Ramona sandy loam, Ramona very fine sandy loam, riverwash, and rough broken land (USDA, 2007).

4.4. .2.2 ommon ildlife

Due to the severe level of disturbance, the sites provide only low quality habitat for native wildlife. Bird species observed include the mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), house finch (*Carpodacus mexicanus*), and lesser goldfinch (*Carduelis psaltria*). Other wildlife species observed on the sites include common reptile species, such as the western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*); and common mammal species, such as the California ground squirrel (*Spermophilus beecheyi*).

4.4. .2.3 Special-Status Plants

Special-status plant species known to occur in the project vicinity but not expected to occur on the three potential alternative substation sites due to lack of suitable habitat include: chaparral sand-verbena (*Abronia villosa* var. *aurita*), Munz' onion (*Allium munzii*), rainbow manzanita (*Arctostaphylos rainbowensis*), San Diego milk-vetch (*Astragalus oocarpus*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), Orcutt's brodiaea (*Brodiaea orcuttii*), round-leaved filaree (*California* [*Erodium*] *macrophyllum*), Payson's jewel-flower (*Caulanthus simulans*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), many-stemmed dudleya (*Dudleya multicaulis*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), little mousetail (*Myosurus minimus* ssp. *apus*), spreading navarretia (*Navarretia fossalis*), prostrate navarretia (*Navarretia prostrata*), California Orcutt grass (*Orcuttia californica*), white rabbit-tobacco (*Pseudognaphalium* [*Gnaphalium*] *leucocephalum*), San Miguel savory (*Satureja chandleri*), southern skullcap (*Scutellaria bolanderi* ssp. *austromontana*), San Bernardino aster (*Symphyotrichum defoliatum*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*).

Special-status plant species with potential to occur on any of the three sites are listed in a Table within each of the sections below. Each potential for occurrence is based on the potential suitability of the site, the level and frequency of disturbance, and the results of partially completed focused plant surveys.

4.4. .2.4 Special-Status ildlife

Special-status wildlife species known to occur in the project vicinity, but not expected to occur on the three potential alternative substation sites due to lack of suitable habitat include: Riverside fairy shrimp (*Streptocephalus woottoni*), quino checkerspot butterfly (*Euphydryas editha quino*), Santa Ana sucker (*Catostomus santaanae*), arroyo chub (*Gila orcuttii*), Coast Range newt (*Taricha torosa torosa*), western spadefoot (*Spea* [*Scaphiopus*] *hammondii*), arroyo toad (*Bufo californicus*), California red-legged frog (*Rana aurora draytonii*),

southwestern pond turtle (*Actinemys marmorata pallida*), coast [San Diego] horned lizard (*Phrynosoma coronatum* [*blainvillii* population]), Coronado skink (*Eumeces skiltonianus interparietalis*), orange-throated whiptail (*Aspidoscelis hyperythra*), silvery legless lizard (*Anniella pulchra pulchra*), two-striped garter snake (*Thamnophis hammondii*), northern red-diamond rattlesnake (*Crotalus ruber rubber*), golden eagle [nesting and wintering] (*Aquila chrysaetos*), northern harrier [nesting] (*Circus cyaneus*), white-tailed kite [nesting] (*Elanus leucurus*), bald eagle [nesting and wintering] (*Haliaeetus leucocephalus*), western yellow-billed cuckoo [nesting] (*Coccyzus americanus occidentalis*), least Bell's vireo [nesting] (*Vireo bellii pusillus*), yellow warbler [nesting] (*Dendroica petechia brewsteri*), yellow-breasted chat [nesting] (*Icteria virens*), western red bat (*Lasiurus blossevillii*), western mastiff bat (*Eumops perotis californicus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Stephens' kangaroo rat (*Dipodomys stephensi*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), San Diego desert woodrat (*Neotoma lepida intermedia*), southern grasshopper mouse (*Onychomys torridus ramona*), and American badger (*Taxidea taxus*).

Special-status wildlife species with potential to occur on any of the three sites are listed in a Table within each of the sections below. Each potential for occurrence is based on the potential suitability of the site, the level and frequency of disturbance, and the results of focused wildlife surveys.

4.4. .2. Special-Status abitats

Resource agencies generally consider vegetation types to have special status if they: support concentrations of special-status plant or wildlife species; are of relatively limited distribution; or offer particular value to wildlife. Although these vegetation types are not afforded legal protection unless they support protected species, potential impacts on them may increase concerns and mitigation suggestions by the resource agencies. Although it offers limited biological value due to its highly disturbed and/or fragmented condition, the disturbed coastal sage scrub existing on Site Alternative B may be considered special status by the CDFG.

4.4. .2. urisdictional aters and etlands

No wetland/drainage resources potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), or the CDFG are present on the Proposed Project site or Site Alternatives B and C.

4.4. .3 Overall Impact Analysis

4.4. .3.1 Direct Impacts

The actual and potential occurrence of biological resources within the Triton Substation Project vicinity was correlated with the significance criteria described in (Section 4.4.4) to determine whether impacts from the Triton Substation Project on these resources would be significant. Potential direct impacts are grouped below according to topic.

Depending on the site selected, the proposed project may impact the following types of vegetation: annual grassland, disturbed annual grassland, and extremely small, low-quality, isolated patches of disturbed coastal sage scrub. In addition, the proposed project may impact ruderal, ornamental, disturbed, and developed areas. All of these areas have low

biological value because they are mainly composed of unvegetated areas or are vegetated predominantly with non-native species. These areas generally provide limited habitat for native plant and wildlife species, although they may occasionally be used by native species. Therefore, impacts to vegetation are considered less than significant.

Construction of the proposed project would similarly result in a minimal loss of low-quality wildlife habitat that provides limited nesting, foraging, roosting, and/or denning opportunities for some species. The loss of limited wildlife habitat is considered an adverse impact. However, the impact is considered less than significant due its marginal quality and minimal quantity relative to the amount available in the region.

Many regulated biological resources are known to occur in the project region, including special-status plant and wildlife species, jurisdictional drainage features, and nesting bird activity. For each of the sites, the direct impacts to biological resources, either with or without MSHCP participation, were assessed. Based on these assessments, it was decided that SCE would not participate in the MSHCP as a 'Participating Special Entity.'

Direct impact analysis is subject to final project design. Although additional surveys are recommended below, no special-status species have been observed on any of the sites. The sites generally have low biological value because they are highly disturbed and/or vegetated with non-native species. These areas generally provide limited habitat for native wildlife species, although they may occasionally be used by native species for nesting, foraging, roosting, and denning. If presence of a special-status species is detected, it is likely to be no more than one or a few individuals of a relatively common species of the region. No federally or state-listed species is expected to occupy any of the sites. There is potential for the burrowing owl and a few special-status plant species to occur on two of the three sites due to the presence of potentially suitable habitat, additional surveys are recommended as described below in Table 4.4-1). In all cases the likelihood of occurrence is very low due to the limited amount of habitat and its low quality. The potential for nesting birds is present for all three sites as well, but construction will be phased so as to temporarily avoid these areas. With implementation of the avoidance and project design features discussed in the below section, potentially significant impacts to common and special-status species would be considered less than significant.

Table 4.4-1. ecommended Additional Surveys
Triton 115/12 kV Substation Project PEA

Site	Special-Status Plant Survey (Approx. May – July)	Burrowing Owl Pre-construction Survey (30 days prior to construction)	Nesting Bird Pre-construction Survey (Feb 15 – Aug 31)
Proposed Project (Proposed Project)		✓	✓
Site Alternative B	✓	✓	✓
Site Alternative C	✓		✓

4.4. .3.2 ultiple Species abitat onservation Plan S P Issues

SCE has the option to participate in the Western Riverside County MSHCP (MSHCP) as a Participating Special Entity. Therefore, in addition to conducting biological assessments for special-status plants and wildlife and their associated habitats, the sites were also reviewed for wildlife movement and urban/wildlands interface issues, presence of riparian/riverine areas and vernal pools, and other MSHCP requirements to ensure SCE coverage under the MSHCP; should SCE choose to participate in the plan. SCE has exercised the option to not participate in the MSHCP as a Participating Special Entity; however, SCE will protect special-status species and habitats in a manner that is consistent with the Western Riverside County MSHCP.

ildlife Movement and rban ildlands Interface

The three potential sites occur within a developed portion of the County of Riverside with minimal natural open space. Proposed Project and Site Alternative B are bordered by rural residential properties and disturbed open spaces. Site Alternative C is bordered by high density residential tract housing. In addition, potential habitat on all of the sites is degraded or highly disturbed and has minimal value for most wildlife species in the region. As a result, development of any one of the sites is not expected to inhibit movement of wildlife or affect the current state of the urban/wildlands interface.

Riparian Riverine reas and Vernal Pools

No riparian/riverine areas or vernal pools are present on the Proposed Project site or Site Alternative B and C.

Special-Status Plants

According to the RCIP Summary Report Generator, habitat assessments for special-status plant species are required for Narrow Endemic Species [Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*)] on Alternative Site C; assessments for Criteria Area Species [Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), Parish's brittlescale (*Atriplex parishii*), thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens*), round-leaved filaree (*Erodium macrophyllum*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), and little mousetail (*Myosurus minimus* ssp. *apus*)] are also required on Alternative Site C. According to the RCIP, no habitat assessments or surveys are required on the Proposed Project site or Site Alternative B.

urrowing Owl

The burrowing owl is a California Species of Special Concern and an MSHCP-covered species. According to the RCIP Summary Report Generator, a burrowing owl habitat assessment is required for all of the sites.

4.4. .3.3 Indirect Impacts

Indirect impact analysis is subject to final project design. It is anticipated that there may be some indirect impacts resulting from the project; possible indirect impacts are described below and in Chapter 6.

Lighting

Night lighting of the Triton Substation Project during and after construction is expected. This lighting could inadvertently affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife adjacent to the selected site. Of greatest concern is the impact on small ground-dwelling animals that use the darkness to hide from predators, and on owls that are specialized night foragers. In addition, night lighting could deter wildlife movement and/or inhibit wildlife from using the habitat adjacent to lighted areas. Implementation of the Proposed Project would result in a less than significant impact due to lighting; however, by incorporating shielding into the project design to ensure that ambient light is not increased (as set forth in project design feature PDF BIO-9) would further reduce indirect impacts.

Noise

Noise levels on the selected site are expected to increase over present levels during construction of the Triton Substation Project. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for wildlife species. Although noise impacts may also increase over present levels due to normal operation of the Triton Substation, the substation noise increase would be minor. Wildlife species stressed by noise may disperse from the habitat located in the vicinity of the selected site. Implementation of the proposed project would result in a less than significant impact due to noise; however, by incorporating noise reduction techniques (as set forth in project design feature PDF BIO-10) when needed, indirect impacts would further be reduced.

Construction Impacts

Construction of the Triton Substation Project may result in several indirect impacts on biological resources. These impacts could include increased runoff that may affect water quality, increased dust accumulation on surrounding vegetation, impacts on nesting birds, increased fire danger, and spread of exotic species. Implementation of the proposed project would result in a less than significant impact due to construction. Indirect impacts would further be reduced by conducting pre-construction biological surveys, training all construction personnel on the biological sensitivities within the area, providing biological monitors wherever special-status species have the potential to occur, implementing best management practices, planning vegetation removal outside of the nesting season, and implementing additional measures identified within the MSHCP, should SCE decide to participate in the plan, (as set forth in project design features PDF BIO-1, PDF BIO-2, PDF BIO-3, PDF BIO-5, and PDF BIO-6).

4.4. .4 Proposed Project

4.4. .4.1 Environmental Setting

Proposed Project Site

The Proposed Project substation site consists mainly of disturbed annual grassland (see Figure 4.4-1). Ornamental, disturbed, and developed areas are also present. The overhead subtransmission line loop-in associated with Proposed Project is also located within the City of Temecula and will involve the installation of seven new tubular steel poles (TSPs); of these, five will be located on the south side of Nicolas Road and in franchise (within existing

public right-of-ways [ROWs]). This overhead route is positioned within disturbed areas along the shoulder of Nicolas Road and adjacent to non-native ornamental trees. No special-status plant species are expected to occur on Proposed Project due to lack of suitable habitat (see Table 4.4-2). This site contains potential foraging habitat for two special-status wildlife species: the loggerhead shrike (*Lanius ludovicianus*) and the spotted bat (*Euderma maculatum*). The habitat at Proposed Project may also be potentially suitable for the burrowing owl (*Athene cunicularia*), see Table 4.4-3.

The underground distribution/telecommunication lines, also within existing public ROWs, would be installed under developed (paved) Nicolas Road and disturbed areas along the shoulder of the road. There is a drainage ditch located along the north side of Nicolas Road that is not anticipated to be impacted by the Proposed Project. Installation of the underground distribution and telecommunication lines would involve the excavation of two trenches, approximately 275 feet long from the 12 kV connection to Nicolas Road and 60 feet long to Calle Medusa Road.

N S elecommunication Lines

The proposed project includes telecommunication cables to be underbuilt on the existing Valley-Auld-Moraga 115 kV subtransmission line poles. Beginning at the Auld Substation near Los Alamos Road, the Valley-Auld-Moraga 115 kV subtransmission line alignment extends southward through mostly disturbed rural residential lots before turning in a southeasterly direction and traverses approximately 1,000 feet of undisturbed open space occupied by native vegetation. From this point the alignment turns south and runs along the eastern shoulder of Winchester Road, where tower locations are mainly disturbed. At the Murrieta Hot Springs Road intersection, the line crosses southeast through a dense residential development, then at Nicolas Road it turns south and crosses a small amount of native habitat mixed with less dense residential development. Finally, the line continues south and then (after crossing Rancho California Road) west through dense residential development to end at the Moraga Substation.

4.4. . Impact Summary for the Proposed Project

As mentioned above and described further in the following section, there is limited potential for the burrowing owl and nesting birds to occur on this site due to the presence of potentially suitable habitat. If this site is chosen, additional surveys will identify any potential impacts to special-status species.

The overhead subtransmission, distribution, and telecommunication line routes do not support vegetation, so anticipated impact to biological resources would be less than significant. The drainage located along the north side of Nicolas Road is not anticipated to be impacted as a result of the proposed project activities. Impacts associated with subtransmission, telecommunication, and distribution lines for this site would be less than significant (see below).

Due to the minimal impact and temporary nature of the impact, project implementation would result in minimal impacts to biological resources when additional telecommunication cable is added to the existing Auld-Moraga subtransmission line poles. Although native vegetation and associated wildlife occur along the corridor in some location, they are not expected to incur measurable impacts.

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

Construction and operation of the Proposed Project will not have a substantial adverse effect on any special-status species. The Proposed Project is not expected to support any special-status plant species due to lack of suitable habitat, so no impacts to special-status plant species are anticipated. No special-status wildlife species were observed during field investigations. Although the loggerhead shrike and spotted bat may occur on the site for foraging, due to the marginal quality and minimal quantity of the potentially suitable foraging habitat, the loss of this habitat would have a less than significant impact on regional populations of these species. The only special-status wildlife species identified to have potential to occur on the site due to the presence of limited potentially suitable habitat is the burrowing owl (*Athene cunicularia*). Although no burrowing owls were observed during the site visit, there is potentially suitable burrowing owl habitat present within this site. Potential impacts to this species would be considered less than significant due to the marginal quality and minimal quantity of the potentially suitable habitat that would be lost. However, potential impact to this species would be further reduced by conducting pre-construction biological surveys, training all construction personnel on the biological sensitivities within the area, providing biological monitors wherever special-status species have the potential to occur, incorporating avian safe design to existing and new structures, planning vegetation removal outside of the nesting season, conducting pre-construction burrowing owl surveys to ensure owls and their appropriate buffer area are avoided if found, incorporating shielding into the project design to ensure that ambient light is not increased, and by incorporating noise reduction techniques as needed (as set forth in project design features PDF BIO-1, PDF BIO-2, PDF BIO-3, PDF BIO-4, PDF BIO-6, PDF BIO-7, PDF BIO-9, and PDF BIO-10).

There are a number of ornamental trees that could provide suitable habitat for nesting birds. Therefore, construction-related impacts to nesting birds could occur. This would involve potential disruption of nesting activity, or destruction of active nests. Construction disturbance during the breeding season (February 15 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment is considered take. Disturbances that cause nest abandonment and/or loss of reproductive effort is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513 (see Regulatory Setting above). The potential for this impact to occur during construction would be reduced to less than significant by conducting pre-construction biological surveys, training all construction personnel on the biological sensitivities within the area, providing biological monitors to avoid protected nests and their delineated buffer when located within the construction area, incorporating avian safe design to existing and new structures, planning vegetation removal outside of the nesting season, incorporating shielding into the project design to ensure that ambient light is not increased, and by incorporating noise reduction techniques as needed (as set forth in project design features PDF BIO-1, PDF BIO-2, PDF BIO-3, PDF BIO-4, PDF BIO-6, PDF BIO-9, and PDF BIO-10).

Due to the minimal impact and temporary nature of the impact, the impacts of adding additional telecommunication cable on the Existing Valley-Auld-Moraga subtransmission line poles would not have a substantial adverse effect on any special-status species and would be considered less than significant.

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

Construction and operation of the Proposed Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural vegetation type. The project as proposed is not expected to cause impacts to the drainage located along the north side of Nicolas Road. This drainage is outside of the substation site and the subtransmission, distribution, and telecommunication line footprint; and would be completely avoided by direct grading and construction impacts. However, incidental or accidental impacts could occur and these impacts are potentially significant. The potential of this impact would be reduced to less than significant by providing construction personnel with training illustrating the location and necessity to avoid this sensitive habitat (as set forth in project design features PDF BIO-2) and by implementing best management practices (as set forth in project design feature PDF BIO-3).

Due to the minimal impact and temporary nature of the impact, the impacts of adding additional telecommunication cable on the Existing Valley-Auld-Moraga subtransmission line poles would not have a substantial adverse effect on any riparian habitat or other sensitive natural vegetation type and would be considered less than significant.

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool [*sic*], coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No federal wetlands as defined by Section 404 of the Clean Water Act are present on the Proposed Project site, or in the immediate vicinity. This includes the drainage mentioned above, which is not a wetland. Construction and operation of the Proposed Project will not have a substantial adverse effect on federally protected wetlands. Therefore, implementation of the Proposed Project would result in no impacts to federally protected wetlands.

Due to the minimal impact and temporary nature of the impact, the impacts of adding additional telecommunication cable on the Existing Valley-Auld-Moraga 115 kV subtransmission line poles would not have a substantial adverse effect on federally protected wetlands and will not have a substantial adverse effect on any special-status species and would be considered less than significant.

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

Construction and operation of the Proposed Project will not interfere with wildlife movement or nursery sites. The project site and adjacent areas have not been identified as a

corridor for movement or migration of wildlife species, or as native wildlife nursery sites. Therefore, implementation of the Proposed Project would result in a less than significant impact under this criterion.

Due to the minimal impact and temporary nature of the impact, the impacts of adding additional telecommunication cable on the Existing Valley-Auld-Moraga 115 kV subtransmission line poles would not have a substantial adverse effect on federally protected wetlands and will not interfere with wildlife movement or nursery sites and will not have a substantial adverse effect on any special-status species and would be considered less than significant.

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

Construction and operation of the Proposed Project does not conflict with any local policies or ordinances protecting biological resources. Although the City of Temecula is proposing a Heritage Tree Ordinance, it has not yet been finalized. A draft ordinance is anticipated for public hearing in October or November of 2008. Additionally, the County of Riverside Tree Ordinance regulates the removal of trees in unincorporated areas of the County above 5,000 feet in elevation; the Proposed Project is far below this elevation and therefore this ordinance would not apply to this alternative. Due to the minimal effect and temporary nature of the activities, including adding telecommunication cable on the Existing Valley-Auld-Moraga 115 kV subtransmission line poles, construction of the Proposed Project would not conflict with any local policies or ordinances protecting biological resources and the impact would be considered less than significant.

Activities associated with operation and maintenance of the line are exempt under local ordinances and operation of the Proposed Project would, therefore, result in no impact under this criterion.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction and operation of the Proposed Project will not conflict with habitat conservation plans. The Proposed Project is in the coverage area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). As a public utility provider, SCE operates facilities and/or owns land within the MSHCP area as a Participating Special Entity, and may request take authorization for its activities pursuant to the MSHCP permits. SCE will protect sensitive and protected species and habitats in a manner that is consistent with the Western Riverside County MSHCP. Therefore, implementation of the Proposed Project would result in a less than significant impact under this criterion. The construction and operation of the Proposed Project would not create significant impacts to provisions of an adopted HCP.

Due to the minimal impact and temporary nature of the impact, the impacts of adding additional telecommunication cable on the Existing Valley-Auld-Moraga 115 kV subtransmission line poles would not conflict with habitat conservation plans and would

not have a substantial adverse effect on any special-status species and would be considered less than significant.

4.4. . .1 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.4. . Site Alternative B

4.4. . .1 Environmental Setting

The Site Alternative B substation would be located south of Nicolas Road on approximately 9.6 acres. The substation property consists mainly of previously disturbed areas (see Figure 4.4-1) with minimal ruderal areas and disturbed coastal sage scrub vegetation. No special-status plant or animal species were observed at the site.

Special-status plant species with potential to occur on Site Alternative B are listed in the Table 4.4-4 and include: Plummer's mariposa lily (*Calochortus plummerae*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), and Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*). Special-status wildlife species with potential to occur on Site Alternative B are listed in Table 4.4-5 and include: burrowing owl (*Athene cunicularia*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and Dulzura pocket mouse (*Chaetodipus californicus femoralis*). These special-status plant and wildlife species have a limited potential of occurring on the substation site based on the presence of limited potentially suitable habitat.

The substation site contains potential foraging habitat for two special-status wildlife species: the loggerhead shrike (*Lanius ludovicianus*) and the spotted bat (*Euderma maculatum*). Site Alternative B also contains potentially suitable habitat for nesting birds. This substation site is crossed by the existing Valley-Auld-Pauba 115 kV subtransmission line; therefore, only two new poles would need to be installed within the site boundaries.

As stated above, Site Alternative B is located immediately adjacent to the existing subtransmission line corridor, so proposed distribution and telecommunication line connection impacts would remain within the substation property boundary and no additional biological resources information regarding the location these project elements is required.

N S elecommunication Line

The existing environment for the proposed N/S Telecommunication Lines would be the same as discussed previously for the Proposed Project.

4.4. . .2 Impact Summary for the Site Alternative B

As mentioned above and described further in the following section, there is limited potential for special-status plants, burrowing owl, and nesting birds to occur on this site due to the presence of potentially suitable habitat. If this site is chosen, additional surveys will identify any potential impacts to special-status species, so that they can be mitigated to below a level of significance. Possible indirect impacts including lighting, noise, and/or construction impacts are also anticipated for this site, if selected. Site Alternative B is located

immediately adjacent to the existing subtransmission line corridor; therefore, line connection impacts (including the installation of two new poles) would remain within the site boundaries. Therefore, no additional impacts associated with subtransmission, distribution, and telecommunication lines for this site are anticipated (see below).

Construction Impacts

Construction of Site Alternative B would result in either less than significant or no impacts to biological resources. Nevertheless, there are differences in the degree of impact when Site Alternative B is compared to the Proposed Project alternatives as discussed below. The potential construction impacts to the N/S Telecommunication Lines would be similar to the Proposed Project and are not discussed further is this impact analysis.

Project design features to reduce impacts to plant and wildlife species include conducting pre-construction biological surveys (PDF BIO-1); training all construction personnel on the biological sensitivities within the area (PDF BIO-2); providing biological monitors wherever special-status species have the potential to occur (PDF BIO-3); incorporating avian safe design to existing and new structures (PDF BIO-4); incorporating BMPs into construction and operation activities (PDF BIO-5); planning vegetation removal outside of the nesting season (PDF BIO-6); conducting pre-construction burrowing owl surveys to ensure owls and their appropriate buffer area are avoided if found (PDF BIO-7); conducting focused botanical surveys to ensure that potential impacts to special-status plants are avoided and/or minimized (PDF BIO-8); during the incorporating shielding into the project design to ensure that ambient light is not increased (PDF BIO-9); and incorporating noise reduction techniques as needed (PDF BIO-10).

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

Site Alternative B has the potential to support the following special-status plant species: Plummer's mariposa lily, intermediate mariposa lily, Parry's spineflower, and Robinson's peppergrass. Potential impacts to these plant species may be considered significant if they are present within Site Alternative B and would be impacted by the proposed project, and if the size and status of the population warrant a finding of significance under the California Environmental Quality Act (CEQA), as determined in conjunction with the lead agency. Site Alternative B has a potentially greater impact than the Proposed Project because the Proposed Project site is not expected to support any special-status plant species due to lack of suitable habitat. Pre-construction focused botanical surveys (PDF BIO-8) would be conducted to determine if plant species are present on Site Alternative B. Implementation of project design features would minimize these potential impacts to less than significant. As a result of the potential to support special-status plant species, the potential impacts to biological resources at Site Alternative B are greater than for the Proposed Project.

Site Alternative B has limited potential to support a few California species of special concern, including: burrowing owl; San Diego black-tailed jackrabbit; and Dulzura pocket mouse, while the only special-status wildlife species identified to have potential to occur on the Proposed Project site is the burrowing owl.

Potential impact to the loggerhead shrike and spotted bat would be approximately the same at Site Alternative B as would occur at the Proposed Project site.

Site Alternative Site B contains potentially suitable habitat for nesting birds as does the Proposed Project site, which supports a number of ornamental trees that could provide suitable habitat for nesting birds. Similar to the Proposed Project, selection Site Alterative B could result in construction-related impacts to nesting birds, including potential disruption of nesting activity or destruction of active nests. Construction disturbance during the breeding season (February 15 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment, is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513. The potential for this impact to occur during construction would be minimized to less than significant through implementation of project design features.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

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

Site Alternative B would have no potential impact to riparian habitat, while the Proposed Project would result in a less than significant impact to riparian habitat.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool [*sic*], coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No federal wetlands as defined by Section 404 of the Clean Water Act are present on the Site Alternative B, which is the same for the Proposed Project. However, wetlands may be present along the N/S Telecommunication Lines route. Therefore, implementation of Site Alternative B would result in less than significant impacts to federally protected wetlands.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

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

Construction and operation of Site Alternative B would not interfere with wildlife movement or nursery sites, which is the same as the Proposed Project. The project sites and adjacent areas have not been identified as a corridor for movement or migration of wildlife

species, or as native wildlife nursery sites. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

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

Construction and operation of Site Alternative B does not conflict with any local policies or ordinances protecting biological resources. Although the City of Temecula is proposing a Heritage Tree Ordinance, it has not yet been finalized. A draft ordinance is anticipated for public hearing in October or November of 2008. Additionally, the County of Riverside Tree Ordinance regulates the removal of trees in unincorporated areas of the County above 5,000 feet in elevation; Site Alternative B is far below this elevation and therefore this ordinance would not apply to this alternative. Due to the minimal effect and temporary nature of the activities, including adding telecommunication cable on the Existing Valley-Auld-Moraga 115 kV subtransmission line poles, construction of Site Alternative B would not conflict with any local policies or ordinances protecting biological resources and the impact would be considered less than significant.

Activities associated with operation and maintenance of the line are exempt under local ordinances and operation of Site Alternative B would, therefore, result in no impact under this criterion.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction and operation of Site Alternative B would not conflict with habitat conservation plans. Site Alternative B is within the coverage area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). As a public utility provider, SCE operates facilities and/or owns land within the MSHCP area as a Participating Special Entity, and may request take authorization for its activities pursuant to the MSHCP permits. SCE would protect sensitive and protected species and habitats in a manner that is consistent with the Western Riverside County MSHCP. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion, which is the same as the Proposed Project.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

Operation Impacts

Operation of Alternative Site B would result in either less than significant or no impacts to biological resources. Additionally, there are no substantial differences in the degree of impact between the alternatives because operation activities would consist of minor maintenance and emergency repairs as discussed under the Proposed Project.

4.4. . .3 itigation easures

Implementation of the Site Alternative B would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.4. . Site Alternative

4.4. . .1 Environmental Setting

The Site Alternative C substation would be located on a previously graded, approximately 4.4 acres property within a proposed industrial park located north of Murrieta Hot Springs Road and east of Temecula Creek. The substation property consists mainly of disturbed annual grassland (see Figure 4.4-1). Undisturbed annual grassland, ruderal areas, ornamental vegetation, and disturbed areas are also present. No special status plant or animal species were observed at the site.

One special-status plant species has potential to occur on Site Alternative C as listed in Table 4.4.3: San Diego ambrosia (*Ambrosia pumila*). Special-status wildlife species and their potential to occur on Site Alternative C are listed in Table 4.4-4.

The substation site contains potential foraging habitat for two special-status wildlife species: the loggerhead shrike (*Lanius ludovicianus*) and the spotted bat (*Euderma maculatum*). Site Alternative C also contains potentially suitable habitat for nesting birds. Due to the presence of potentially suitable habitat immediately adjacent to Site Alternative C, focused surveys for the federally threatened California gnatcatcher were conducted. Results of the survey were negative and no impact to this species is expected to occur from project implementation on Site Alternative C (BonTerra Consulting, 2008).

The overhead subtransmission and telecommunication lines for Site Alternative C would include installation of between 20 and 40 new TSPs, most of which would be within ornamental, developed, and disturbed areas devoid of native vegetation. The Line 1 TSP locations for Site Alternative C would only include a few locations (at the southeastern line end adjacent to the water tower) within disturbed coastal sage scrub habitat with limited potential to support special-status plants and wildlife. However, the Line 2 TSP locations for Site Alternative C starting at the north end of Calistoga Drive, leading eastward behind the houses on McGowans Pass Road fall within high quality native habitat with potential to support special-status plants and wildlife, and a few TSP locations would be located directly adjacent to a jurisdictional drainage. This portion of the alignment includes revegetated (restored) coastal sage scrub habitat dominated by California buckwheat and black sage (*Salvia mellifera*); other commonly occurring native species include white sage (*Salvia apiana*) and prickly pear (*Opuntia* sp.). The jurisdictional drainage appears to have been created when the houses were constructed (stretching the length of eight houses) and is vegetated with southern willow scrub habitat dominated by red willow (*Salix laevigata*), but also including mulefat (*Baccharis salicifolia*) and other willow species (*Salix* ssp.).

N S elecommunication Lines

The existing environment for the proposed N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project.

4.4. . .2 Impact Summary for the Site Alternative

As mentioned above and described further in the following section, there is limited potential for special-status plants and nesting birds to occur on this site due to the presence of potentially suitable habitat. If this site is chosen, additional surveys will identify any potential impacts to special-status species, so that they can be mitigated to below a level of significance. Possible indirect impacts including lighting, noise, and/or construction impacts are also anticipated for this site.

Additional impacts associated with subtransmission, distribution, and telecommunication lines for this site include installation of new TSPs within restored high quality coastal sage scrub habitat with potential for special-status plants and wildlife, and a few TSP locations immediately adjacent to a jurisdictional drainage supporting southern willow scrub habitat. If this alternative is selected for the substation construction, pole installation would cause impacts to biological resources. However, the placement of poles would be monitored by a qualified biologist and oriented to avoid such impacts.

Due to the minimal impact and temporary nature of the impact of hanging additional telecommunication lines to the existing Valley-Auld-Moraga 115 kV subtransmission line, minimal impacts to biological resources are expected. Although native vegetation and associated wildlife occur along the corridor in some location, they are not expected incur measurable impacts.

Construction Impacts

Construction of Site Alternative C would result in either less than significant or no impacts to biological resources. Nevertheless, there are differences in the degree of impact when Site Alternative C is compared to the Proposed Project alternatives as discussed below. The potential construction impacts to the N/S Telecommunication Lines would be similar to the Proposed Project and are not discussed further is this impact analysis.

Project design features to reduce impacts to plant and wildlife species include conducting pre-construction biological surveys (PDF BIO-1); training all construction personnel on the biological sensitivities within the area (PDF BIO-2); providing biological monitors wherever special-status species have the potential to occur (PDF BIO-3); incorporating avian safe design to existing and new structures (PDF BIO-4); incorporating BMPs into construction and operation activities (PDF BIO-5); planning vegetation removal outside of the nesting season (PDF BIO-6); conducting pre-construction burrowing owl surveys to ensure owls and their appropriate buffer area are avoided if found (PDF BIO-7); conducting focused botanical surveys to ensure that potential impacts to special-status plants are avoided and/or minimized (PDF BIO-8); during the incorporating shielding into the project design to ensure that ambient light is not increased (PDF BIO-9); and incorporating noise reduction techniques as needed (PDF BIO-10).

Due to the minimal impact and temporary nature of the impact, the impacts of adding additional telecommunication cables on the Existing Valley-Auld-Moraga 115 kV subtransmission line will not have a substantial adverse effect on any special-status species and would be considered less than significant.

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

Site Alternative C has limited potential to support one special-status plant species, San Diego ambrosia, which is a federally listed Endangered species and a California Native Plant Society (CNPS) List 1B species (considered Rare, Threatened, or Endangered in California and elsewhere by the CNPS). Proposed Project site lacks potentially suitable habitat to support any special-status plant species; therefore, Site Alternative C has a potentially greater impact to special-status plant species than the Proposed Project. Potential impacts to this plant species would be considered significant if it occurs within Site Alternative C and would be impacted by the proposed project. Pre-construction focused botanical surveys (PDF BIO-8), would be necessary to determine if this plant species is present within Site Alternative C. Implementation of project design features would reduce this potential impact to less than significant. As a result of the potential to support special-status plant species, the potential impacts to biological resources at Site Alternative C are greater than for the Proposed Project.

Due to the presence of potentially suitable habitat immediately adjacent to Site Alternative C, focused surveys for the federally threatened California gnatcatcher were conducted. Results of the survey were negative and no impact to this species is expected to occur from project implementation on Site Alternative C. The Proposed Project site does not contain any sage scrub habitat potentially suitable to support the threatened California gnatcatcher.

Potential impact to the loggerhead shrike and spotted bat would be approximately the same at Site Alternative C as would occur at the Proposed Project site.

Site Alternative C contains potentially suitable habitat for nesting birds as does the Proposed Project site. Both sites support a number of ornamental trees that could provide suitable habitat for nesting birds. Similar to the Proposed Project, selection Site Alternative C could result in construction-related impacts to nesting birds, including potential disruption of nesting activity, or destruction of active nests. Construction disturbance during the breeding season (February 15 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513 (see Regulatory Setting above). The potential for this impact to occur during construction would be minimized to less than significant by implementation of project design features.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

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

Site Alternative C would have no potential impact to riparian habitat, while the Proposed Project would result in a less than significant impact to riparian habitat.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool [*sic*], coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No federal wetlands as defined by Section 404 of the Clean Water Act are present on Site Alternative C, which is the same for the Proposed Project. Therefore, implementation of Site Alternative C, as well as with the Proposed Project, would result in no impacts to federally protected wetlands.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

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

Construction and operation of Site Alternative C, which is the same as the Proposed Project, would not interfere with wildlife movement or nursery sites. The project sites and adjacent areas have not been identified as a corridor for movement or migration of wildlife species, or as native wildlife nursery sites. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

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

Construction and operation of Site Alternative C does not conflict with any local policies or ordinances protecting biological resources. Although the City of Temecula is proposing a Heritage Tree Ordinance, it has not yet been finalized. A draft ordinance is anticipated for public hearing in October or November of 2008. Additionally, the County of Riverside Tree Ordinance regulates the removal of trees in unincorporated areas of the County above 5,000 feet in elevation; Site Alternative C is far below this elevation and therefore this ordinance would not apply to this alternative. Due to the minimal effect and temporary nature of the activities, including adding telecommunication cable on the Existing Valley-Auld-Moraga 115 kV subtransmission line poles, construction of Site Alternative C would not conflict with any local policies or ordinances protecting biological resources and the impact would be considered less than significant.

Activities associated with operation and maintenance of the line are exempt under local ordinances and operation of Site Alternative C would, therefore, result in no impact under this criterion.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction and operation of the Site Alternative C would not conflict with habitat conservation plans. Site Alternative C is within the coverage area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). As a public utility provider, SCE operates facilities and/or owns land within the MSHCP area as a Participating Special Entity, and may request take authorization for its activities pursuant to the MSHCP permits. SCE will protect sensitive and protected species and habitats in a manner that is consistent with the Western Riverside County MSHCP. Therefore, implementation of the Proposed Project would result in a less than significant impact under this criterion. The construction and operation of Site Alternative C would not create significant impacts to provisions of an adopted HCP.

The impacts that would result due to implementation of the N/S Telecommunication Lines would be approximately the same as discussed previously for the Proposed Project and would be considered less than significant under this criterion.

Operation Impacts

Operation of Alternative Site C would result in either less than significant or no impacts to biological resources. Additionally, there are no substantial differences in the degree of impact between the alternatives because operation activities would consist of minor maintenance and emergency repairs as discussed under the Proposed Project.

4.4. . .3 itigation easures

Implementation of the Site Alternative C would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.4. onclusions

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to biological resources.

4.4. eferences

American Ornithologists' Union. 1998. *Check-list of North American Birds, 7th ed.* American Ornithologists' Union, Washington, D.C.

Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA.

Baker, R. J., L. C. Bradley, R. D. Bradley, J. W. Dragoo, M. D. Engstrom, R. S. Hoffmann, C. A. Jones, F. Reid, D. W. Rice, C. Jones. 2003 (December). *Revised Checklist of North American*

Mammals North of Mexico, 2003. Occasional Papers (No. 229). Waco, TX: Museum of Texas Tech University.

BonTerra Consulting. 2008. *Biological Technical Report for the Triton Substation Project, Riverside County, California.* Pasadena, California: BonTerra Consulting.

California Department of Fish and Game (CDFG). 2008. *California Natural Diversity Database.* Records of Occurrence for Murrieta and Bachelor Mountain quadrangle maps. Sacramento, CA: CDFG, Natural Heritage Division.

California Department of Fish and Game (CDFG). 2007. *Special Vascular Plants, Bryophytes, and Lichens List*. Sacramento, CA: CDFG, Natural Heritage Division.

California Department of Fish and Game (CDFG). 2006. *Special Animals*. Sacramento, CA: CDFG, Natural Heritage Division.

California Department of Fish and Game (CDFG). 2003. The Vegetation Classification and Mapping Program: List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch, Sacramento, California. http://www.dfg.ca.gov/whdab/html/natural_communities.html

California Native Plant Society (CNPS). 2008. *Electronic Inventory of Rare and Endangered Vascular Plants of California* (v7-08b). Records of Occurrence for Murrieta and Bachelor Mountain quadrangle maps. Sacramento, CA: CNPS. http://www.cnps.org/inventory.

Fisher, R. N. and T. J. Case. 1997. *A Field Guide to the Reptiles and Amphibians of Coastal Southern California.* San Mateo, CA: Lazer Touch.

Hickman, J.C. Editor. 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, California.

Munz, P.A. 1974. A Flora of Southern California. University of California Press, Berkeley, California.

Riverside County Integrated Project (RCIP). 2008. *Multiple Species Habitat Conservation Plan (MSHCP)*. http://www.rcip.org

Riverside County Integrated Project (RCIP). 2003. *Final Multiple Species Habitat Conservation Plan (MSHCP): Volume II-B: Species Accounts - Plants.* Riverside, California.

Roberts, F. M., S. D. White, A. C. Sanders, D. E. Bramlet, and S. Boyd. 2004. *The Vascular Plants of Western Riverside County, California: An Annotated Checklist*. San Luis Rey, CA: F. M. Roberts Publications.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2007. Soil Survey Geographic (SSURGO) database for Western Riverside Area, California. NRCS, Fort Worth, Texas.

Table 4.4-2. Special-Status Plant Species with Potential to Occur on Proposed Project for the Triton Substation Project
Triton 115/12 kV Substation Project PEA

Species	Status			Suitable Habitat	Potential to Occur on Each Site [Yes(Y)/No(N)]
	USFWS	CDFG	CNPS		Proposed Project
Ambrosia pumila San Diego ambrosia	FE	-	1B.1	Found in seasonally wet areas with alkaline soils (Roberts et al. 2004); occurs in ruderal habitat and non-native grassland on Garretson gravelly fine sandy loam and Las Posas loam (RCIP, 2003).	N
Calochortus plummerae Plummer's mariposa lily	-	-	1B.2	Found in chaparral and coastal sage scrub (Roberts et al., 2004).	N
Calochortus weedii var. intermedius intermediate mariposa lily	-	-	1B.2	Found in chaparral and coastal sage scrub (Roberts et al., 2004).	N
Chorizanthe parryi var. *parryi* Parry's spineflower	-	-	3.2	Found on open sites, often on gravely slopes (Roberts et al., 2004).	N
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	-	-	1B.2	Found on rocky slopes or among shrubs, and often in fissures of boulders or other relatively sterile sites (Roberts et al., 2004).	N

Legend:

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate

State (CDFG)
SE Endangered
ST Threatened
SR Rare
SC Candidate

California Native Plant Society (CNPS) List Categories
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3 Plants About Which We Need More Information - A Review List
List 4 Plants of Limited Distribution – A Watch List

California Native Plant Society (CNPS) Threat Rank Extensions
.1 Seriously threatened in California (high degree/immediacy of threat)
.2 Fairly threatened in California (moderate degree/immediacy of threat)
.3 Not very threatened in California (low degree/immediacy of threat or no current threats known)

Table 4.4-3. Special-Status Wildlife Species with Potential to Occur on Proposed Project for the Triton Substation Project
Triton 115/12 kV Substation Project PEA

Species	Status		Preferred Habitat	Potential for Occurrence on Each Site
	USFWS	CDFG		Proposed Project
Athene cunicularia Burrowing owl (burrow sites & some wintering sites)	–	SSC	Breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain; nest in burrows, typically in open habitats most often along banks and roadsides.	LIM
Lanius ludovicianus loggerhead shrike (nesting)	–	SSC	It occurs in open country with short vegetation: pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. Breeders usually settle near isolated trees or large shrubs.	NEB, MAYF
Polioptila californica californica coastal California gnatcatcher	FT	SSC	This species has an obligate association with Diegan, Riversidian, and Venturan subassociations of coastal sage scrub which is a Mediterranean plant community consisting of various waist-high, drought-deciduous shrubs. Species composition of coastal sage scrub varies substantially along gradients of proximity to coast, latitude, slope and slope aspect, and soil type; not all mixes of the plant community equally likely to be occupied by California gnatcatchers.	NE
Euderma maculatum Spotted bat	–	SSC	Occurs in a range of habitats from arid desert and grasslands through mixed conifer forests. It forages near open water; known roosting habitat consists of rock crevices.	NER, MAYF
Lepus californicus bennettii San Diego black-tailed jackrabbit	–	SSC	Intermediate canopy stages of shrub habitats, and open shrub/herbaceous and tree/herbaceous edges provide suitable habitat.	NE
Chaetodipus californicus femoralis Dulzura pocket mouse	–	SSC	It occurs in chaparral and in grassland, but probably reaches its greatest abundance where these 2 habitats occur in close proximity. Occurs in brushy areas but probably is attracted to grass-chaparral edge. Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance.	NE

Legend:

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate

State (CDFG)
SE Endangered
ST Threatened
SSC Species of Special Concern
FP Fully Protected

Potential to Occur on the Site
OBS Observed foraging on site
EXP Expected to occur; suitable habitat
MAY May occur; potentially suitable habitat
LIM Limited potential to occur; limited potentially suitable habitat
NEB, MAYF Not expected for breeding; may occur for foraging
NER, MAYF Not expected for roosting; may occur for foraging
NE Not expected to occur; no suitable habitat
NES Not expected to occur; suitable habitat present, but not observed during focused surveys

Table 4.4-4. Special-Status Plant Species with Potential to Occur on Site Alternative B for the Triton Substation Project
Triton 115/12 kV Substation Project PEA

Species	Status			Suitable Habitat	Potential to Occur on Each Site [Yes(Y)/No(N)]
	USFWS	CDFG	CNPS		Site Alternative B
Ambrosia pumila San Diego ambrosia	FE	-	1B.1	Found in seasonally wet areas with alkaline soils (Roberts et al. 2004); occurs in ruderal habitat and non-native grassland on Garretson gravelly fine sandy loam and Las Posas loam (RCIP, 2003).	N
Calochortus plummerae Plummer's mariposa lily	-	-	1B.2	Found in chaparral and coastal sage scrub (Roberts et al., 2004).	Y
Calochortus weedii var. intermedius intermediate mariposa lily	-	-	1B.2	Found in chaparral and coastal sage scrub (Roberts et al., 2004).	Y
Chorizanthe parryi var. *parryi* Parry's spineflower	-	-	3.2	Found on open sites, often on gravely slopes (Roberts et al., 2004).	Y
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	-	-	1B.2	Found on rocky slopes or among shrubs, and often in fissures of boulders or other relatively sterile sites (Roberts et al., 2004).	Y

Legend:

Federal (USFWS)

FE	Endangered
FT	Threatened
FC	Candidate

State (CDFG)

SE	Endangered
ST	Threatened
SR	Rare
SC	Candidate

California Native Plant Society (CNPS) List Categories

List 1A	Plants Presumed Extinct in California
List 1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2	Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3	Plants About Which We Need More Information - A Review List
List 4	Plants of Limited Distribution – A Watch List

California Native Plant Society (CNPS) Threat Rank Extensions

.1	Seriously threatened in California (high degree/immediacy of threat)
.2	Fairly threatened in California (moderate degree/immediacy of threat)
.3	Not very threatened in California (low degree/immediacy of threat or no current threats known)

Table 4.4- . Special-Status ildlife Species with Potential to Occur on Site Alternative B for the Triton Substation Project
Triton 115/12 kV Substation Project PEA

Species	Status		Preferred Habitat	Potential for Occurrence on Each Site
	USFWS	CDFG		Site Alternative B
Athene cunicularia Burrowing owl (burrow sites & some wintering sites)	–	SSC	Breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain; nest in burrows, typically in open habitats most often along banks and roadsides.	LIM
Lanius ludovicianus loggerhead shrike (nesting)	–	SSC	It occurs in open country with short vegetation: pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. Breeders usually settle near isolated trees or large shrubs.	NEB, MAYF
Polioptila californica californica coastal California gnatcatcher	FT	SSC	This species has an obligate association with Diegan, Riversidian, and Venturan subassociations of coastal sage scrub which is a Mediterranean plant community consisting of various waist-high, drought-deciduous shrubs. Species composition of coastal sage scrub varies substantially along gradients of proximity to coast, latitude, slope and slope aspect, and soil type; not all mixes of the plant community equally likely to be occupied by California gnatcatchers.	NE
Euderma maculatum Spotted bat	–	SSC	Occurs in a range of habitats from arid desert and grasslands through mixed conifer forests. It forages near open water; known roosting habitat consists of rock crevices.	NER, MAYF
Lepus californicus bennettii San Diego black-tailed jackrabbit	–	SSC	Intermediate canopy stages of shrub habitats, and open shrub/herbaceous and tree/herbaceous edges provide suitable habitat.	LIM
Chaetodipus californicus femoralis Dulzura pocket mouse	–	SSC	It occurs in chaparral and in grassland, but probably reaches its greatest abundance where these 2 habitats occur in close proximity. Occurs in brushy areas but probably is attracted to grass-chaparral edge. Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance.	LIM

Legend:

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate

State (CDFG)
SE Endangered
ST Threatened
SSC Species of Special Concern
FP Fully Protected

Potential to Occur on the Site
OBS Observed foraging on site
EXP Expected to occur; suitable habitat
MAY May occur; potentially suitable habitat
LIM Limited potential to occur; limited potentially suitable habitat
NEB, MAYF Not expected for breeding; may occur for foraging
NER, MAYF Not expected for roosting; may occur for foraging
NE Not expected to occur; no suitable habitat
NES Not expected to occur; suitable habitat present, but not observed during focused surveys

Table 4.4- . Special-Status Plant Species with Potential to Occur on Site Alternative for the Triton Substation Project
Triton 115/12 kV Substation Project PEA

Species	Status			Suitable Habitat	Potential to Occur on Each Site [Yes(Y)/No(N)]
	USFWS	CDFG	CNPS		C
Ambrosia pumila San Diego ambrosia	FE	-	1B.1	Found in seasonally wet areas with alkaline soils (Roberts et al. 2004); occurs in ruderal habitat and non-native grassland on Garretson gravelly fine sandy loam and Las Posas loam (RCIP, 2003).	Y
Calochortus plummerae Plummer's mariposa lily	-	-	1B.2	Found in chaparral and coastal sage scrub (Roberts et al., 2004).	N
Calochortus weedii var. intermedius intermediate mariposa lily	-	-	1B.2	Found in chaparral and coastal sage scrub (Roberts et al., 2004).	N
Chorizanthe parryi var. *parryi* Parry's spineflower	-	-	3.2	Found on open sites, often on gravely slopes (Roberts et al., 2004).	N
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	-	-	1B.2	Found on rocky slopes or among shrubs, and often in fissures of boulders or other relatively sterile sites (Roberts et al., 2004).	N

Legend:

Federal (USFWS)

FE	Endangered
FT	Threatened
FC	Candidate

State (CDFG)

SE	Endangered
ST	Threatened
SR	Rare
SC	Candidate

California Native Plant Society (CNPS) List Categories

List 1A	Plants Presumed Extinct in California
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.3	Not very threatened in California (low degree/immediacy of threat or no current threats known)

Table 4.4- . Special-Status ildlife Species with Potential to Occur on Site Alternative for the Triton Substation Project
Triton 115/12 kV Substation Project PEA

Species	Status		Preferred Habitat	Potential for Occurrence on Each Site
	USFWS	CDFG		Site Alternative C
Athene cunicularia Burrowing owl (burrow sites & some wintering sites)	–	SSC	Breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain; nest in burrows, typically in open habitats most often along banks and roadsides.	NE
Lanius ludovicianus loggerhead shrike (nesting)	–	SSC	It occurs in open country with short vegetation: pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. Breeders usually settle near isolated trees or large shrubs.	NEB, MAYF
Polioptila californica californica coastal California gnatcatcher	FT	SSC	This species has an obligate association with Diegan, Riversidian, and Venturan subassociations of coastal sage scrub which is a Mediterranean plant community consisting of various waist-high, drought-deciduous shrubs. Species composition of coastal sage scrub varies substantially along gradients of proximity to coast, latitude, slope and slope aspect, and soil type; not all mixes of the plant community equally likely to be occupied by California gnatcatchers.	NES
Euderma maculatum Spotted bat	–	SSC	Occurs in a range of habitats from arid desert and grasslands through mixed conifer forests. It forages near open water; known roosting habitat consists of rock crevices.	NER, MAYF
Lepus californicus bennettii San Diego black-tailed jackrabbit	–	SSC	Intermediate canopy stages of shrub habitats, and open shrub/herbaceous and tree/herbaceous edges provide suitable habitat.	NE
Chaetodipus californicus femoralis Dulzura pocket mouse	–	SSC	It occurs in chaparral and in grassland, but probably reaches its greatest abundance where these 2 habitats occur in close proximity. Occurs in brushy areas but probably is attracted to grass-chaparral edge. Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance.	NE

Legend:

Federal (USFWS)

FE	Endangered
FT	Threatened
FC	Candidate

State (CDFG)

SE	Endangered
ST	Threatened
SSC	Species of Special Concern
FP	Fully Protected

Potential to Occur on the Site

OBS	Observed foraging on site
EXP	Expected to occur; suitable habitat
MAY	May occur; potentially suitable habitat
LIM	Limited potential to occur; limited potentially suitable habitat
NEB, MAYF	Not expected for breeding; may occur for foraging
NER, MAYF	Not expected for roosting; may occur for foraging
NE	Not expected to occur; no suitable habitat
NES	Not expected to occur; suitable habitat present, but not observed during focused surveys

Figure 4.4-1. Vegetation Types

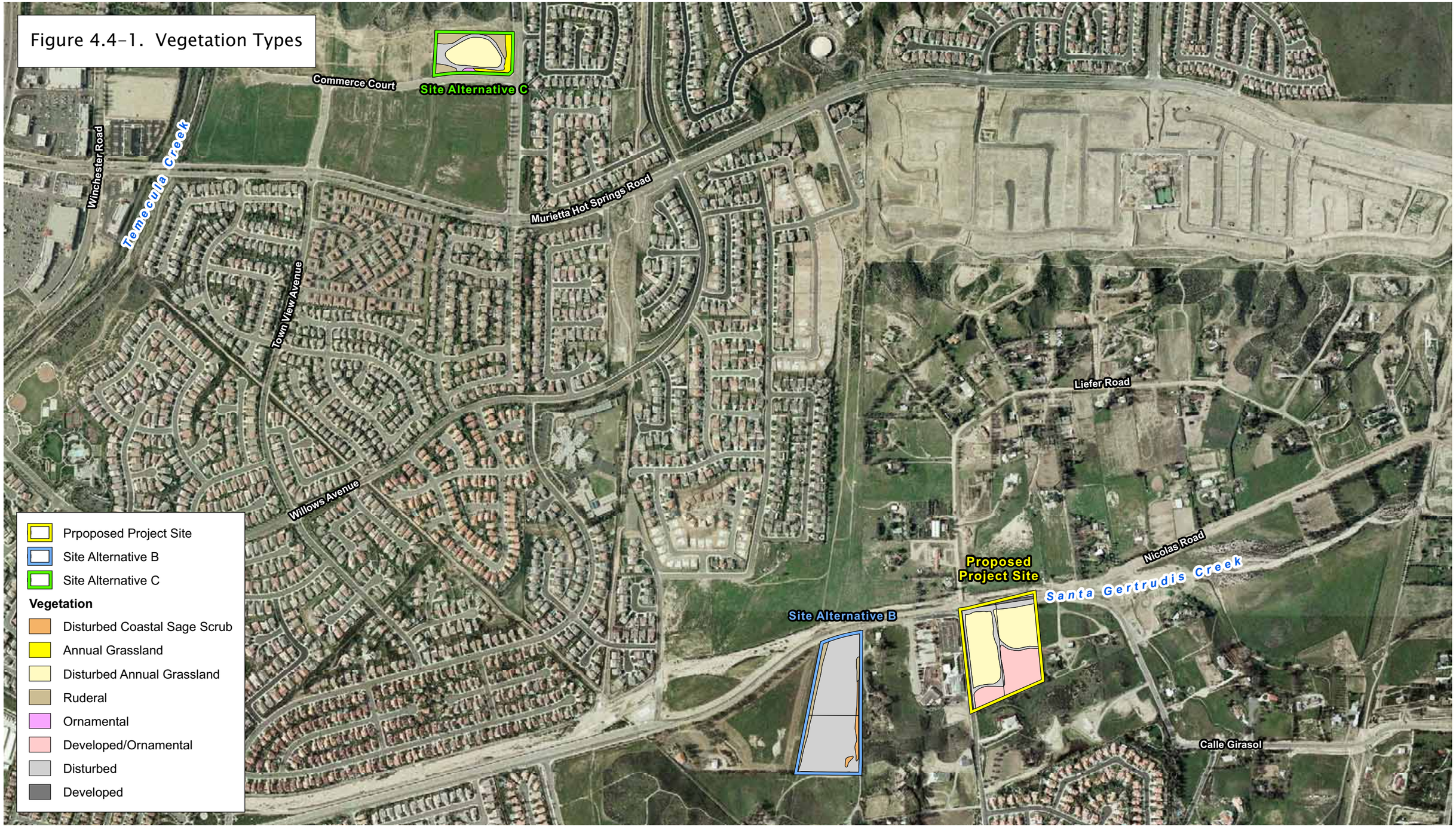

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Figure 4.4-1. Vegetation Types

Triton Substation Project, Riverside County, California

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4.5 Cultural and Paleontological Resources

4.5.1 Overview

This analysis describes the potential impacts to cultural and paleontological resources that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and no impacts during operation to cultural and paleontological resources.

4.5.2 Methodology

4.5.2.1 Pre-Fieldwork Research – Cultural Resource Record Search

A cultural resource records search was conducted at the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC), Department of Anthropology, University of California, Riverside and included a review of previously recorded cultural resources and surveyed areas; historical maps and archival documents; and local, state, and federal lists of recognized archaeological and historical resources, including properties listed on or eligible for listing on the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR).

4.5.2.2 Paleontological Resources

The San Bernardino County Museum (SBCM) performed the paleontological records search. For this review, Craig R. Manker of the Division of Geological Sciences, SBCM conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM.

4.5.2.3 Fieldwork

An intensive pedestrian survey of the parcels on which the proposed and alternative substation sites would be located was conducted by Susan Hogan-Conrad, MA, RPA, of Earth Tech, Inc., on April 11 and 23, 2007, and by Christopher Doolittle, M.A., RPA, or Earth Tech, Inc., on June 28, 2008. In addition, a pedestrian survey was conducted of the area within 100 feet from the centerline of the proposed subtransmission line loop-in and the distribution duct banks containing the proposed telecommunication lines (study area). These areas were surveyed by walking transects at 15-meter intervals or less to ensure that all surface-exposed artifacts and sites within the study area would be identified. Photographs were taken of the surveyed areas to document general condition and environmental setting.

4.5.2.4 Archaeological and Paleontological Resources Reports

Archaeological and paleontological surveys were conducted by qualified consultants of SCE in 2007 and 2008 and are included as appendices, and summarized in: Archaeological Survey Report for Southern California Edison's Triton Substation Temecula and Murrieta Hot Springs Areas, Riverside County, California (Earth Tech, 2008) and Paleontology Literature and Records Review, Southern California Edison, Triton Substation Project, Riverside, CA (Scott, 2007) (Appendix F4).

4.5.3 Regulations, Plans, and Standards

4.5.3.1 State Regulations

The California Public Utilities Commission is tasked with compliance of all provisions in the California Environmental Quality Act (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.

4.5.3.1.1 CEQA Archaeological Site Significance Criteria

Cultural and historic resources are defined as prehistoric or historic archaeological sites, buildings, structures, districts, artifacts, or other physical evidence of human activity. In general cultural and historic resources must be a minimum of 45 years old to be considered historic for the purposes of CEQA. However, according to CEQA, cultural resources can also include places used for traditional Native American observances or places with special cultural significance. CEQA states that if a project would result in significant impacts to cultural and historical resources, then alternative plans or mitigation measures must be considered. However, only significant resources need to be addressed. A significant cultural or historical resource as is a resource listed or eligible for listing on the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] Section 5024.1). A resource may be eligible for inclusion on the CRHR if it:

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

b) Is associated with the lives of persons important in our past;

c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d) Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, cultural and historical resources must also contain enough integrity to be recognizable as historical resources. Integrity is evaluated with regard to the retention of location, setting, design, workmanship, materials, feeling, and association. CEQA Guidelines (Section 15064.5) also require consideration of unique archaeological sites. If an archaeological site does not meet the criteria for inclusion in the CRHR, but does meet the definition of a unique archeological resource as outlined in the PRC Section 21083.2, it may be treated as a significant historical resource.

Paleontological resources consist of fossilized evidence of prehistoric plants or animals preserved in rock or soil, that are of paleontological interest and that provide information

about the history of life on earth, with the exception of materials associated with cultural resources.

4.5.4 Significance Criteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.), which indicate that a proposed project would have a significant impact on cultural resources and paleontological resources if it would:

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

4.5.5 Cultural Setting

The Triton Substation Project is located in the Murrieta and Temecula region of Southern California. Much of what archaeologists have postulated about cultural chronology of this area is derived from sites outside of this region; namely along the coast and in the deserts. No consensus has been reached as to the specific timing of events for any one area, much less the larger region. For this reason we briefly discuss the regions culture history in a geological time frame.

Early Holocene Period (10,000-7000 B.P.) – During much of the preceding Pleistocene period, rivers, lakes, and vast woodlands dominated the prehistoric landscape. This lush environment supported megafauna such as horses, camels, and mammoths. The terminal Pleistocene was characterized by increased aridity and many plant and animal species retreated to cooler and moister zones at higher elevations. These climatic shifts also lead to the eventual extinction of the megafauna (Grayson 1993). The earliest inhabitants of the region, often referred to as the San Dieguito culture, are generally thought of as megafauna or big game hunters (Rogers 1939; Warren 1967). Artifacts from this period are characterized by flaked lithic tools such as scrapers and large bifaces and projectile points. While evidence suggests that Paleoindian period population groups were highly mobile and hunted large mammals, current research suggests participants in this culture employed a much broader subsistence strategy than originally thought. The Elsinore site, a few miles southwest of the study area, contained archaeological material from this period supporting this hypothesis (Grenda, 1997). However, Early Holocene sites are the exception throughout the region as they are across the United States.

Middle Holocene Period (7000-3500 B.P.) – The Middle Holocene was characterized by an extremely variable climate with several episodes of increased moisture or aridity. The Middle Holocene cultures are often referred to as Archaic or Milling Stone cultures. As the name implies, ground stone implements are common and the gathering of plant resources

and shellfish predominate. Coastal sites from this period exhibit moderate to thick middens while inland sites found near the Triton Substation Project are predominantly surficial. This period lasts nearly 4,000 years until the Late Holocene cultures make their appearance around 3,500 years ago.

Late Holocene Period (3500-200 B.P.) – Late Holocene archaeological sites reflect a greater diversity of cultures and adaptations. Where once broad cultural labels could be placed over much of southern California, now the region was carved into more distinct groups, partly based on the intrusion of Shoshonean tribes around A.D. 500. The San Luis Rey culture is common in the Temecula Valley and this culture is thought to be ancestral to the Luiseño who were present at the time of European contact. Subsistence activities of the San Luis Rey culture included hunting with the bow and arrow and gathering with an emphasis on acorn harvesting (Moratto, 1984).

4.5.5.1 Ethnographic Background

At the time of Spanish contact, the Triton Substation Project was occupied by several autonomous lineages of Luiseño Indians who had divided the valley and surrounding hillsides into tracts of land identified with specific village territories (Bean and Shipek 1978; Dubois 1908; Kroeber 1907, 1908; Phillips 1975; Shipek 1977; Sparkman 1908; Strong 1929). It is presumed that the Luiseño are the descendants of the late prehistoric peoples who occupied the area and represent one linguistic group of the Takic (Shoshonean) speakers who are postulated to have entered the area from the Great Basin at least 1200 years ago. The term Luiseño has historical origins that indicate they came within the jurisdiction of Mission San Luis Rey, founded in 1798. A dialect of the same language was spoken by the native peoples in the area around Mission San Juan Capistrano, who were known historically as the Juaneño. Although they did not consider themselves as a unified group, the aboriginal inhabitants of the region recognized a common ancestry, language, tradition, cosmology, and lifeway. They were also related by culture, exchange, and linguistic affinity to the Gabrielino, Serrano, Cahuilla, and Cupeño who together form the historically recognized divisions of the "Shoshonean wedge," thought to have moved into southern California from the deserts. These groups cannot be equated with tribal structure or political boundaries. Specific dialectical differences, histories, and specific ecological niches serve best to differentiate among groups and sub-groups within each designation. The village, usually represented by a dispersed ranchería with seasonally occupied temporary camps and territorially ascribed resource collection areas, comprises the basic Luiseño sociopolitical unit.

The Luiseño were culturally similar to other Takic-speaking tribes, but possessed a more rigid social structure and greater population density. A complicated system of social status, well-defined ruling families that linked rancherias within tribal territories, a sophisticated philosophical system associated with toloache rituals, and elaborate ritual paraphernalia, including sand paintings, are features that reflect the social structure and dense population of the Luiseño (Bean and Shipek 1978:550). Strong (1929) suggested that social organization was more complex among the populous coastal villages, and less so among smaller valley settlements. Exploitation of resource areas was strictly controlled by ownership of resource territories along family, lineage, and village lines. Sedentary villages were located in diverse ecological zones. Luiseño subsistence was also mixed, but acorns were the primary food

resource. Villages appear to have been located near the necessary water sources for acorn leaching.

4.5.5.2 Historical Background

The historical period in western Riverside County can be divided into three distinct periods: the Spanish Mission period, the Mexican Rancho period, and the American period.

The Spanish Mission period in Riverside County can be defined by the Spanish exploration of the area beginning in 1769 and the establishment of the San Diego Presidio and the Missions San Diego, San Luis Rey, and San Juan Capistrano. However, the inland area remained relatively unexplored as the Spaniards clung to the coast near their missions and presidios. The area was first explored by Juan Bautista de Anza in 1774 when his expedition camped along the San Jacinto Valley. The county's first European resident, Leandro Serrano, obtained permission from the padres at Mission San Luis Rey to take five leagues of land in Temescal Valley in 1818. His proven ability with the Christianized native population during his service as majordomo at the mission made him a logical choice for settling the valley and securing the territory north of the mission against the Luiseños and Cupeño.

In 1821, Mexico successfully fought for independence from Spain. With Mexico's independence and the establishment of Serrano's Rancho the Mexican Rancho period (1821-1948) started (Gunther, 1984). The Mexican Rancho period was a lively and colorful period of California history. The rancheros were known for unrivaled horsemanship and unending hospitality, not to mention a penchant for long celebrations in the form of week-long rodeos and fiestas to celebrate weddings and holy days. The Mexican Rancho period ended in confusion and bloodshed in 1848 as the Mexican War, which had been raging for nearly two years, came to a close. After Mexico was defeated and the Treaty of Guadalupe Hidalgo was signed in 1848, California was ceded to the United States, beginning the American Period (1848–present).

The effects of California's statehood in 1850 were twofold. For the rancheros, the end of the Rancho period was met with financial ruin. The validity of the land grants issued by Mexican Governors was questioned by the Land Commission. Many of the rancheros, like the heirs of Leandro Serrano, never officially gained their land patents. With the flood of new settlers, the American period was marked by unprecedented growth and industry. In Riverside County was marked with increased settlement, the growth of commercial resource extraction, and the development of transportation.

Agriculture and mineral extraction continue to play a vital role in the region's economy, although the boom era of the 1880s has yet to be surpassed in industrial growth. Many small-scale family farms still operate in western Riverside County. Pacific Clay continues to process clay into bricks and other construction materials and is an important source of employment for Alberhill area residents. The construction of State Highway 74 and Interstate 15 allowed for travel into other sections of Riverside County and beyond, including Los Angeles, making the region an inexpensive bedroom community for Riverside County's commuter workforce. The two main historic themes: rural settlement; and commercial, industrial, and agricultural development; continue to influence western Riverside County and constitute the contexts by which historical resources within the area of potential effect (APE) can be interpreted and evaluated.

4.5.6 Proposed Project and Alternatives

The following cultural and paleontological resources-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF CUL-1 **Historic and Archaeological Resources Stop Work**. In the event that subsurface historic resources or archaeological resources are encountered during the construction, excavation should be stopped and a qualified archaeologist consulted to evaluate the significance of the resource.

PDF CUL-2 **Paleontological Resources Stop Work.** If undisturbed sediments of the fossiliferous Pauba Formation and/or unnamed sandstone are exposed during excavation of the site, a qualified professional vertebrate paleontologist would need to be retained to develop a program to reduce potentially significant impacts to paleontological resources.

PDF CUL-3 **Human Remains Stop Work.** If human remains are encountered, all work must stop and the county coroner and a qualified archaeologist notified according to the provisions of Public Resources Code (PRC) Sections 5097.98 and 5097.99.

4.5.6.1 Proposed Project

4.5.6.1.1 Existing Environment

The Proposed Project site is located in the County of Riverside, entirely within the City of Temecula.

Cultural Resource Records Search

A record search showed a portion of the parcel had been previously surveyed, but eight cultural surveys have occurred within ½-mile. Additionally, there are no cultural resources within ½-mile of Proposed Project.

Paleontological Resources

The results of the record search showed that the Murrieta region is located upon surface exposures of two distinct lithological units: the sandstone member of the Pauba Formation (=unit Qpfs) and Quaternary alluvial channel deposits (=Qya). Of these lithologies, the Quaternary alluvial channel deposits have low potential to contain significant fossil resources, and therefore are assigned low paleontologic sensitivity. In contrast, the Pauba Formation is highly fossiliferous throughout its extent, and is therefore assigned high paleontologic sensitivity. Vertebrate fossils recovered from the Pauba Formation include mammoths, mastodons, ground sloths, saber-toothed cats, tapirs, horses, camels, and llamas, as well as abundant small vertebrates (Reynolds and others, 1991; Bowden and Scott, 1992; Scott, 1992, 1998, 1999; Pajak, 1993; Scott and Cox, 1993; Pajak, Scott and Bell, 1996).

The Proposed Project is located on surficial deposits of Quaternary alluvial channel deposits. These deposits occur along the floors of canyons which incise the older hills and bluffs by the Pauba Formation. Although alluvial channel deposits have low potential to contain significant nonrenewable paleontological resources, these deposit likely overlie the

Pauba Formation and/or an unnamed sandstone of Kennedy (1977) at depth. If older Pleistocene sediments lithologically dissimilar to the younger alluvial channel deposits are encountered at depth during construction excavation, the older sediments would have high potential to contain significant nonrenewable paleontological resources.

The results of this records search indicated that no previously-known paleontologic localities are recorded within the boundaries of the Proposed Project site and there is a low potential to adversely impact significant fossil resources. However, more than 400 paleontologic resource localities are known from the Pauba Formation and an underlying unnamed sandstone and conglomerate formation in the Murrieta and Temecula areas. SBCM localities 5.6.109 - 5.6.111, 5.6.228, 5.6.839 - 5.6.841 are recorded within ¼ to ½ mile of the study areas. These localities have produced fossil vertebrates including two species of ground sloth, mammoth, mastodon, two species of horse, tapir, camel, llama, pronghorn, dire wolf, short-faced bear and sabre-toothed cat. The deposits have also yielded important small vertebrate fossils including rodent, rabbit, bat, shrew, bird, lizard, turtle and tortoise. The abundance of these fossils from this area, and the proximity of these localities to the Proposed Project properties, demonstrates the high paleontologic sensitivity of the region.

Cultural ieldwor

A cultural resource survey was conducted for the Proposed Project on June 28, 2008. No cultural resources were identified during the survey. The site has had previous ground disturbance. Some of the natural topography remains and there is potential, albeit low, for buried resources to exist.

4.5.6.1.2 Impact Analysis

The impact analysis of the Proposed Project considered the results of the records search and fieldwork and evaluated the results against the CEQA Significance Criteria.

Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Construction Impacts

The record search and pedestrian survey reported that no historical resources are within the proposed area of construction for the Proposed Project.

Impacts could occur to historical resources if, during surface disturbance for construction of the project components, previously undiscovered historical resources were encountered. The Proposed Project was previously graded; therefore, a significant impact to a previously undiscovered resource is unlikely. If present, damage to or destruction of the resource by construction equipment could result in an adverse impact.

In the event that subsurface historic resources or archaeological resources are encountered during the construction, excavation should be stopped and a qualified archaeologist consulted to evaluate the significance of the resource (PDF CUL-1). This PDF would ensure that any impacts from the construction of the substation on historical resources would be less than significant.

Operation Impacts
Maintenance and operation of the Proposed Project would not involve the disturbance of subsurface soils or geologic formations. Therefore, operation of the Proposed Project would have no impact to historical resources.

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Construction Impacts
The record search and pedestrian survey reported that no archaeological resources are within the proposed area of construction for the Proposed Project.

Impacts could occur to archaeological resources if during surface disturbance for construction of the project elements; previously undiscovered archaeological resources were encountered. The Proposed Project was previously graded; therefore, a significant impact to a previously undiscovered resource is unlikely. If present, damage to or destruction of the resource by construction equipment could result in an adverse impact.

In the event that subsurface historic resources or archaeological resources are encountered during the construction, excavation should be stopped and a qualified archaeologist consulted to evaluate the significance of the resource (PDF CUL-1). This PDF would ensure that any impacts from the construction of the substation on archaeological resources would be less than significant.

Operation Impacts
Maintenance and operation of the Proposed Project would not involve the disturbance of subsurface soils or geologic formations. Therefore, operation of the Proposed Project would have no impact to archaeological resources.

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Construction Impacts
The record search and pedestrian survey reported that no unique paleontological resources are within the proposed area of construction for the Proposed Project.

Impacts could occur to paleontological resources if during surface disturbance for construction of the project elements, previously undiscovered paleontological resources were encountered. The Proposed Project was previously graded; therefore, a significant impact to a previously undiscovered resource is unlikely. If present, damage to or destruction of the resource by construction equipment could result in an adverse impact.

If undisturbed sediments of the fossiliferous Pauba Formation and/or unnamed sandstone are exposed during excavation of the site, a qualified professional vertebrate paleontologist would need to be retained to develop a program to reduce potentially significant impacts to paleontological resources (PDF CUL-2). This PDF would ensure that any impacts from the construction of the substation on paleontological resources would be less than significant.

Operation Impacts
Maintenance and operation of the Proposed Project would not involve the disturbance of subsurface soils or geologic formations. Therefore, operation of the Proposed Project would have no impact to paleontological resources.

Would the project disturb any human remains, including those interred outside of formal cemeteries?

Construction Impacts
The Proposed Project will not disturb any human remains, including those interred outside of formal cemeteries. The record search and pedestrian survey reported that no cultural resources are within the proposed area of construction for the Proposed Project. Encountering human remains is unlikely as there are no known cultural resources.

Impacts could occur to human remains if during surface disturbance for construction of the project elements, previously undiscovered human remains were encountered. The Proposed Project was previously graded; therefore, undiscovered human remains are unlikely. If present, damage to or destruction of the human remains by construction equipment would result in a significant impact.

If human remains are encountered, all work must stop and the county coroner and a qualified archaeologist notified according to the provisions of Public Resources Code (PRC) Sections 5097.98 and 5097.99 (PDF CUL-3). This PDF would ensure that any impacts from the construction of the substation on human remains would be less than significant.

Operation Impacts
Maintenance and operation of the Proposed Project would not involve the disturbance of subsurface soils or geologic formations. Therefore, operation of the Proposed Project would have no impact to human remains.

4.5.6.1.3 Mitigation Measures

Implementation of the Proposed Project would result in less than significant impacts during construction and no impacts during operation; therefore, no mitigation is required.

4.5.6.2 Site Alternative B

4.5.6.2.1 Existing Environment

Site Alternative B is located in Riverside County, entirely within the City of Temecula. This section describes the existing cultural resources and paleontological conditions in the Site Alternative B study area, which are substantially identical to the Proposed Project, except as distinguished below.

Cultural Resource Records Search
A records search showed the parcel had not been previously surveyed, but five cultural surveys have occurred within ½ mile. Additionally, there are no cultural resources within ½ mile of Site Alternative B.

Paleontological Resources

The results of the records search showed that Site Alternative B has a similar paleontological resource environment to the Proposed Project.

Cultural ieldwor

A cultural resource survey was conducted for Site Alternative B on April 11, 2007. No cultural resources were identified during the survey. The parcel has had previous ground disturbance. Some of the natural topography remains and there is potential, albeit low, for buried resources to exist.

4.5.6.2.2 Impact Analysis

Construction of Site Alternative B would not result in a substantial adverse change in the significance of a historical resource or archaeological resources as defined in Section 156064.5 because no resources were identified during the records search or identified during a pedestrian survey of the proposed area of construction. Construction of Site Alternative B would not directly or indirectly destroy a unique paleontological resource or unique geologic feature because no unique paleontological resources or unique geologic features were identified during the records search or identified during a pedestrian survey of the proposed area of construction. No disturbance to human remains, including those interred outside of formal cemeteries would occur during the construction and operation of Site Alternative B because no cultural resources were are within the proposed area of construction and, therefore, encountering human remains is unlikely. Additionally, the substation site has been previously graded and discovery of a previously unknown resource is unlikely. Work would be stopped if historical, archaeological, paleontological or unique geologic resources, or human remains are encountered during construction activities (i.e., ground-disturbing activities) and would not resume until the resources are appropriately evaluated (PDF CUL-1, Historical and Cultural Resources Stop Work; PDF CUL-2, Paleontological Resource Stop Work; and PDF CUL-3, Human Remains Stop Work). No ground-disturbing activities would occur during operation of Site Alternative B. Therefore, implementation of Site Alternative B would result in less than significant impacts during construction and no impacts during operation under these criteria.

In conclusion, similar to the Proposed Project, construction of Site Alternative B would result in less than significant impacts and operation would result in no impacts to cultural and paleontological resources.

4.5.6.3 Site Alternative C

4.5.6.3.1 Existing Environment

Site Alternative C is located in unincorporated Riverside County, except for approximately 272 feet of Subtransmission Line 1, which is located in the City of Temecula. This section describes the existing cultural resources and paleontological conditions in the Site Alternative B study area, which are substantially identical to the Proposed Project, except as distinguished below.

Cultural Resources Records Search
A records search showed the parcel had been previously surveyed with no cultural resources observed. Two additional cultural surveys have been conducted within ½ mile of Site Alternative C with no cultural resources observed.

Paleontological Resources
The results of the paleontological records search showed that Site Alternative C has similar paleontological resource environment as the Proposed Project.

Cultural ieldwor
A cultural resource survey was conducted for Site Alternative C on April 23, 2007. No cultural resources were identified during the survey. The site has had previous ground disturbance. Some of the natural topography remains and there is potential, albeit low, for buried resources to exist.

4.5.6.3.2 Impact Analysis

Construction of Site Alternative C would not result in a substantial adverse change in the significance of a historical resource or archaeological resources as defined in Section 156064.5 because no resources were identified during the records search or identified during a pedestrian survey of the proposed area of construction. Construction of Site Alternative C would not directly or indirectly destroy a unique paleontological resource or unique geologic feature because no unique paleontological resources or unique geologic features were identified during the records search or identified during a pedestrian survey of the proposed area of construction. No disturbance to human remains, including those interred outside of formal cemeteries would occur during the construction and operation of Site Alternative C because no cultural resources were are within the proposed area of construction and, therefore, encountering human remains is unlikely. Additionally, the substation site has been previously graded and discovery of a previously unknown resource is unlikely. Work would be stopped if historical, archaeological, paleontological or unique geologic resources, or human remains are encountered during construction activities (i.e., ground-disturbing activities) and would not resume until the resources are appropriately evaluated (PDF CUL-1, Historical and Cultural Resources Stop Work; PDF CUL-2, Paleontological Resource Stop Work; and PDF CUL-3, Human Remains Stop Work). No ground-disturbing activities would occur during operation of Site Alternative C. Therefore, implementation of Site Alternative C would result in less than significant impacts during construction and no impacts during operation under these criteria.

In conclusion, similar to the Proposed Project, construction of Site Alternative C would result in less than significant impacts and operation would result in no impacts to cultural and paleontological resources.

4.5.7 Conclusion

As discussed, implementation of the Proposed Project and Site Alternatives B and C would result in less than significant impacts during construction and no impacts during operation to cultural and paleontological resources.

4.5.8 References

Bean, Lowell John and Florence C. Shipek. 1978. Luiseño. In *Handbook of North American Indians, Vol. 8 California*, edited by Robert Heizer, pp. 550-563. Smithsonian Institution, Washington, D.C.

Bowden, J.K. and E. Scott. 1992. New record of Smilodon fatalis (Leidy), 1868 (Mammalia; Carnivora; Felidae) from Riverside County, California in J. Reynolds (ed), *Abstracts of Proceedings, 6th Annual Mojave Desert Quaternary Research Symposium*. Redlands: SBCM Association Quarterly 39(2): 22.

Campbell, K.E., Jr., E. Scott, and K.B. Springer. 1999. A new genus for the Incredible Teratorn (Aves: Teratornithidae) in S.L. Olsen (ed.), *Avian Paleontology at the Close of the 20th and Evolution, Washington, D.C., 4-7 June 1996*. Smithsonian Contributions to Paleobiology 89: 169-175.

Du Bois, C. G. 1908. The Religion of the Luiseño and Diegueño Indians of Southern California. *University of California Publications in American Archaeology and Ethnology* 8(3):69–186. Berkeley.

Grayson, Donald K. 1993. *The Desert's Past: A Natural Prehistory of the Great Basin*. Washington: Smithsonian Institution Press.

Grenda, Donn. 1997. Continuity and Change: 8,500 years of Lacustrine Adaptation on the Shores of Lake Elsinore. Statistical Research Technical Series 59. Tucson, Arizona.

Gunther, Jane Davies. 1984. *Riverside County, California, Place Names: Their Origins and Stories*. Rubidoux Printing Co., Riverside.

Kennedy, M.P. 1977. Recency and character of faulting along the Elsinore Fault Zone in southern Riverside County, California. In *California Division of Mines and Geology Special Report 131*: 12p.

Kroeber, A. L. 1907. Shoshonean Dialects of California. *University of California Publications in American Archaeology and Ethnology* 4(3):66–164. Berkeley.

Kroeber, A.L. 1908. Notes on the Luiseño. University of California Publications in American Archaeology and Ethnology 8(3):369–380. Berkeley.

Moratto, Michael. 1984. *California Archaeology*. Academic Press, Orlando, Florida.

Pajak, A.F. III. 1993. The second record of *Tapirus* from the Temecula Valley, Southern California, and biostratigraphic implications. In J. Reynolds (ed.), *Abstracts of Proceedings, 1993 Desert Research Symposium*. Redlands: SBMC Association Quarterly 40(2): 30.

Pajak, A.F. III, E. Scott, and C.J. Bell. 1996. A review of the biostratigraphy pf Pliocene and Pleistocene sediments in the Elsinore Fault Zone, Riverside County, California. In C. J. Bell and S.S. Sumida (eds), *The uses of vertebrate fossils in biostratigraphic correlation*. PaleoBios 17(2-4): 27-48.

Phillips, G. H. 1975. *Chiefs and Challengers: Indian Resistance and Cooperation in Southern California*. University of California Press, Berkeley.

Reynolds S.F.B., R. L. Reynolds, and A.F. Pajak III. 1991. Blancan, Irvingtonian and Rancholabrean (?) Land Mammal Age faunas from western Riverside County, California. In M.O. Woodburne, S.F.B. Reynolds, and D.P. Whistler (eds), *Inland Southern California: the last 70 million years*. SBCM Association Quarterly 38(3&4): 37-40.

Rogers, Malcolm. 1939. *Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas.* San Diego Museum of Man Papers 3. San Diego.

Scott, E. 1992. New specimens of Pleistocene *Equus* (Mammalia, Perissodactyla, Equidae) from Riverside County, California. *Journal of Vertebrae Paleontology* 12(3): 51A.

Scott, E. 1998. Equua scotti from southern California. *Journal of Vertebrae Paleontology* 18(3): 76-A.

Scott, E. 1999. The *Equus (Plesippus) –Equus scotti* transition in western North America. *Journal of Vertebrae Paleontology* 19(3): 74-A.

Scott, E., and S.M. Cox. 1993. Arctodus simus (COPE), 1879 from Riverside County, California. In R.J. Dundas and D.J. Long (eds), *New additions to the Pleistocene vertebrae record of southern California.* PaleoBios 15(2): 27-36.

Shipek, Florence C. 1977. A Strategy for Change: The Luiseño of Southern California. Unpublished Ph.D. dissertation, Department of Anthropology, University of Hawaii, Honolulu.

Sparkman, Philip S. 1908. *The Culture of Luiseño Indians*. University of California Publications in American Archaeology and Ethnology, Berkeley University Press. Vol. 8 No. 4, pp. 187-234.

Strong, William D. 1929. *Aboriginal Society in Southern California.* University of California Publication in American Archaeology and Ethnology 26(1):1–358. Berkeley.

Warren, Claude N. 1967. The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32(2):233-236.

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4. eology and Soils

4. .1 Overview

This analysis describes the potential impacts to geology and soils that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation from geology and soils.

4. .2 ethodology

The study area is defined as the alternatives substation sites and the routes for subtransmission and telecommunication lines; for seismic conditions, the regional geology was also considered. Existing conditions within the study area were determined through the review of available published and unpublished literature and online sources for the Electrical Needs Area (Figure 1.1-2). Descriptions of geologic units in the study area are based on published geologic quadrangle maps by Kennedy and Morton (2003), and Morton and Kennedy (2003), and preliminary digital geologic map of the Santa Ana 30' X 60' quadrangle (Morton 2004). Other sources of geologic information included the Southern California Earthquake Center (SCEC) and the U.S. Geological Survey (USGS). The study area was evaluated for landslide and liquefaction hazards, primarily through the review of published geologic quadrangle maps available from the California Geological Survey (CGS) Seismic Hazards Mapping Program.

The study area was also assessed for fault rupture hazard and ground shaking hazard by reviewing fault mapping, catalogs, and interactive maps, primarily available from the CGS or USGS and including:

- Probabilistic Seismic Hazard Assessment (PSHA) for the State of California
- Earthquake Fault Zones Maps
- Fault Evaluation Reports
- Probabilistic Seismic Hazards Mapping Ground Motion
- Quaternary Fault and Fold Database of the United States

Soils information for the study area was obtained from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey database (USDA, 2008).

Furthermore, a preliminary geotechnical evaluation for the Proposed Project was prepared by SCE that documented the findings of a geologic visual evaluation conducted on July 3, 2008 (SCE, 2008a). The *Southern California Edison Preliminary Geotechnical Evaluation Triton 115/12kV Substation - City of Temecula, Riverside County, California* report (SCE 2008a) provides a brief description of the regional and site geologic setting of the Proposed Project substation site. It also provides details on groundwater and geological hazards that include faulting, liquefaction, and subsidence at the Proposed Project site. The *Southern California Edison Geotechnical Evaluation Triton 115/12kV Substation - City of Temecula, Riverside County, California* (SCE, 2008b) has been completed and included in the analysis.

The potential for impacts to the physical environment that would result from the Triton Substation Project were considered. The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4. .3 egulations Plans and Standards

4. .3.1 Earth uake ault oning Act alifornia Public esources ode Section 2 23 a ode of egulations Title 2 Section 12 2 b and c .

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. The Act provides for the adoption and administration of zoning laws, ordinances, rules, and regulations by cities and counties in implementation of their general plan. It is intended to provide policies and criteria to assist cities, counties, and state agencies in the exercise of their responsibility to prohibit the location of developments and structures for human occupancy across the trace of active faults. Further, it is the intent of the Act to provide the citizens of the state with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings, including historic buildings, against ground shaking.

While this Act does not specifically regulate substations, it does help define areas where fault rupture is most likely to occur by grouping faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geologic explorations in order to determine whether building setbacks should be established.

4. .3.2 Seismic a ards apping Act alifornia Public esource ode Section 2 a 1 and 3 - .

The Seismic Hazards Mapping Act of 1990 directs the CGS to delineate Seismic Hazard Zones and requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones. It addresses the effects of strong ground shaking, liquefaction, landslides, or other ground failure and other seismic hazards caused by earthquakes. The Act also addresses tsunamis and seiches. It states that maps may include potential effects of tsunami and seiche when information becomes available from other sources and the State Geologist determines the information is appropriate for use by local government. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by CGS in their land use planning and permitting processes.

4. .3.3 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on geology and soils.

4. .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on geologic or soil conditions or be impacted by geologic, seismic, or soil conditions if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

4. . Proposed Project and Alternatives

The following geological and soils resource-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF GEO-1 **Seismic Design.** For new substation construction, specific requirements for seismic design would be per the requirements of the California Building Code (CBC) and the Institute of Electrical and Electronic Engineers (IEEE) 693 *Recommended Practices for Seismic Design of Substation*. Other project elements would be designed and constructed in accordance with the appropriate industry standards, including established engineering and construction practices and methods.

PDF GEO-2 **Geotechnical Study.** Prior to final design of substation facilities and pole foundations, a geotechnical study would be performed to identify site-specific geologic conditions and potential geologic hazards. The geotechnical study would be performed by professional civil or geotechnical engineers *or* engineering geologists licenses in the State of California and would provide design and construction recommendations, as appropriate, to reduce potential impacts from geologic hazards or soil conditions.

4. . .1 Proposed Project

4. . .1.1 Environmental Setting

Physiographic Setting

The Proposed Project would be located in the Santa Gertrudis Valley, within the Perris Block portion of the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges are a northwest-southeast oriented complex of mountain ranges and valleys. The Peninsular Ranges are characterized by subunit blocks separated by similarly trending strike-slip faults. The Perris Block is bound on the north by the eastern San Gabriel Mountains, on the west by the Santa Ana Mountains, on the east by the San Jacinto Mountains, and a non-defined southern boundary. These mountains are respectively separated from the Perris Block by the Cucamonga Fault, the Elsinore Fault zone, and the San Jacinto Fault zone (SCE, 2008a). The Proposed Project has elevations ranging from 1,150 feet above mean sea level (amsl) to 1,180 feet amsl.

eologic Setting

The Santa Gertrudis Valley area represents a structural depositional depression, which has undergone erosion and the filling in of sediments from the surrounding granitic bedrock outcrops and the San Jacinto Mountains. The site is underlain by younger valley floor alluvium and Pleistocene age bedrock of the Pauba Formation (SCE, 2008a). Figure 4.6-1a presents the regional geologic map for the Electrical Needs Area.

- **Geologic Units.** Geologic units encountered in the Proposed Project study area are presented in Table 4.6-1 and are based on the Bachelor Mountain 7.5 minute geologic map (1:24,000 scale) (Morton and Kennedy, 2003).

Table 4. -1. eologic onditions Proposed Project
Triton 115/12 kV Substation Project PEA

Geologic Unit/Structure	Formation Name	Description/Comments
Qya	Young alluvial channel deposits (Holocene and latest Pleistocene)	Fluvial deposits along canyon floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium
Qpfs	Pauba Formation Sandstone member	Brown, moderately well-indurated, cross-bedded sandstone containing sparse cobble- to boulder-conglomerate beds

Source: Bachelor Mountain 7.5 min Geology Map (Morton and Kennedy, 2003 (1:24,000 scale)).

- **Soils.** The soils in the Proposed Project area reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of modification by humans. Soils data for the Proposed Project area were obtained from the Web Soil

Survey database for the County of Riverside (USDA, 2008). Characteristics of major soil units underlying the Proposed Project area, including the description, erosion hazard, and shrink-swell potential of the major soil units, are presented in Table 4.6-2. Characteristics of major soils units underlying the existing Valley-Auld-Moraga 115 kV subtransmission line are not included because the proposed N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to existing soils, including ground-disturbing activities, would occur.

- **Faulting and Seismicity.** The Proposed Project would be located in a seismically very active area given the proximity and number of potential seismic sources. Figure 4.6-2 presents a regional fault and epicenter map showing the approximate location of the Proposed Project relative to seismic sources and past earthquakes. Active and potentially active faults have been mapped in the region and documented by a number of government agencies and scientific entities. A list of active faults within approximately 50 kilometers of the Electrical Needs Area is presented in Table 4.6-3. It is likely that the study area would experience minor to moderate earthquakes and potentially a major earthquake (moment magnitude M7, or greater) during the operation of the Triton Substation Project.

eologic a ards

- **Fault Rupture/Fault Displacement.** Primary ground damage due to earthquake fault rupture typically results in a relatively small percentage of the total damage in an earthquake, but proximity to a rupturing fault can cause profound damage. No known active fault or potentially active fault crosses the Proposed Project site. The N/S Telecommunication Lines cross the Murrieta Springs fault. The Murrieta Springs fault is an east-west trending fault segment of the Elsinore Fault Zone. Although the Murrieta Springs fault is not considered an Alquist-Priolo Earthquake Fault Zone, it is considered a potentially active fault.

- **Ground Motions.** Probabilistic Seismic Hazard Assessment (PSHA) models developed by USGS depict ground motions associated with a 10 percent probability of exceedance in a 50-year period. For the Proposed Project, the ground motion estimate is approximately 0.36 of the gravitational acceleration (g) (USGS, 2008). Additionally, SCE prepared a Final Geotechnical Report (SCE, 2008b) in which seismic site coefficients were determined in accordance with the 2007 California Building Code and ASCE 7-05 Standard (ASCE, 2005) using the United States Geological Survey Earthquake Motion Parameters, Version 5.0.8, program (USGS, 2007). The seismic site coefficents determined under the new code for Maximum Credible Earthquake (MCE) ground motion and Design Earthquake ground motion were 1.500 g for 0.2 second Short Period Spectral Response, Ss/Short Period Spectral Response, SDs, and 0.600 g for 1 second Spectral Response, S1/1 second Spectral Response, SD1 (SCE, 2008b).

- **Liquefaction.** Liquefaction occurs primarily in saturated, loose, fine to medium grained soils in areas where the groundwater table is within approximately 50 feet of the ground surface. Shaking causes the soils to lose strength and behave as a liquid. The Proposed Project study area has a moderate liquefaction potential as designated by the County of Riverside (COR, 2003). However, due to the absence of shallow groundwater, the Proposed Project study area is not considered susceptible to liquefaction (SCE, 2008b).

- **Landslides.** Landslides, rockfalls, and debris flows occur continuously on all slopes; some processes act very slowly, while others occur very suddenly, with potentially disastrous results. The County of Riverside General Plan shows that the Proposed Project study area has a low to locally moderate susceptibility to seismically induced landslides and rockfalls (COR, 2003). The site topography is relatively level and the absence of nearby slopes precludes slope stability hazards (SCE, 2008b).
- **Subsidence.** Land subsidence and fissuring have been well-documented in the County of Riverside and most of the early documented cases of subsidence affected agricultural land or open space. The Proposed Project study area has been designated by the County of Riverside as susceptible to subsidence (COR, 2003).
- **Expansive Soils.** Expansive soils can be widely dispersed and can be found in hillside areas as well as low-lying alluvial basins (COR, 2003). The Proposed Project study area is not on a hillside or within a low-lying alluvial basin. Testing conducted on the Proposed Project Site indicated that the expansive index at the site is very low to low (SCE, 2008b).
- **Collapsible Soils.** In the County of Riverside, collapsible soils occur predominantly at the base of mountains, where Holocene-age alluvial fan and wash sediments have been deposited during rapid runoff events (COR, 2003). The Proposed Project study area is not at the base of a mountain and testing conducted on the Proposed Project substation site soils indicate "none" to "moderate" potential for collapse (SCE, 2008b).

4. . .1.2 Impact Analysis

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Construction Impacts

The Proposed Project would be located in a seismically very active area given the proximity and number of potential seismic sources. The closest mapped fault, the Murrieta Springs fault, is not considered an active fault and, therefore, is not delineated on the most-recent Alquist-Priolo Fault Zoning Map (CGS, 2007); however, the fault is considered potentially active and was considered during this environmental analysis.

The Murrieta Springs fault does not cross the Proposed Project site. However, as part of preliminary design, SCE completed a geotechnical evaluation of the Proposed Project site (SCE, 2008b) (Appendix F6), the result of which would be incorporated into final design and engineering. For new substation construction, specific requirements for seismic design would be per the requirements of the California Building Code (CBC) and the Institute of Electrical and Electronic Engineers (IEEE) 693 *Recommended Practices for Seismic Design of Substation*. Other project elements would be designed and constructed in accordance with the appropriate industry standards, including established engineering and construction practices and methods (PDF GEO-1).

Although the proposed N/S Telecommunication Lines would cross the Murrieta Springs fault, no change to the existing conditions would occur during construction under the Proposed Project.

Additionally, construction of the Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault because it is not located in an area delineated by CGS (CGS, 2007) as a fault rupture hazard zone.

Therefore, construction of Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

The Proposed Project would be located in a seismically very active area given the proximity and number of potential seismic sources. The closest mapped fault, the Murrieta Springs fault, is not considered an active fault and, therefore, is not delineated on the most-recent Alquist-Priolo Fault Zoning Map (CGS, 2007); however, the fault is considered potentially active and was considered during this environmental analysis.

Operation of the Proposed Project would not alter the seismic design and engineering incorporated into the Proposed Project during construction. Additionally, operation of the Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault because it is not located in an area delineated by CGS (CGS, 2007) as a fault rupture hazard zone.

Therefore, operation of Proposed Project would result in a less than significant impact under this criterion.

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Construction Impacts

The Proposed Project would be located in a seismically very active area given the proximity and number of potential seismic sources. While there is a potential for an earthquake to occur during construction of the Proposed Project, including the N/S Telecommunication Lines, construction of the Proposed Project would not be the cause of the earthquake.

As part of preliminary design, SCE completed a geotechnical evaluation of the Proposed Project site (SCE, 2008b) (Appendix F6), the result of which would be incorporated into final design and engineering. For new substation construction, specific requirements for seismic design would be per the requirements of the CBC and the IEEE 693 *Recommended Practices for Seismic Design of Substation*. Other project elements would be designed and constructed in accordance with the appropriate industry standards, including established engineering and construction practices and methods (PDF GEO-1), which would minimize the potential for substation, subtransmission line, and telecommunication line failure in the event of an

earthquake. No change to the existing conditions would occur during construction of the N/S Telecommunication Lines for the Proposed Project.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

While there is a potential for an earthquake to occur during operation of the Proposed Project, including along the N/S Telecommunication Lines, operation of the Proposed Project would not be the cause of the earthquake.

Operation of the Proposed Project would not alter the seismic design and engineering incorporated into the Proposed Project during construction that would minimize the potential for substation, subtransmission line, and telecommunication line failure in the event of an earthquake.

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Construction Impacts

While the County of Riverside has designated the Proposed Project study area (with the exception of the N/S Telecommunication Lines) as having a moderate liquefaction potential, SCE completed a geotechnical study to identify site-specific geologic conditions and potential geologic hazards (SCE, 2008b). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering. For new substation construction, specific requirements for seismic design would be per the requirements of the California Building Code (CBC) and the Institute of Electrical and Electronic Engineers (IEEE) 693 *Recommended Practices for Seismic Design of Substation*. Other project elements would be designed and constructed in accordance with the appropriate industry standards, including established engineering and construction practices and methods (PDF GEO-1).

The construction of the N/S Telecommunication Lines would result in no change to the existing ground conditions, including potential for ground failure or liquefaction, would occur during construction of the telecommunication lines.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

While the County of Riverside has designated the Proposed Project study area (with the exception of the N/S Telecommunication Lines) as having a moderate liquefaction potential, SCE completed a geotechnical study to identify site-specific geologic conditions and

potential geologic hazards (SCE, 2008a). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

Operation of the Proposed Project would not alter the seismic design and engineering incorporated into the Proposed Project during construction. No change to the existing ground conditions, including potential for ground failure or liquefaction, would occur during operation of the telecommunication lines.

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Construction Impacts

While the County of Riverside General Plan shows that the Proposed Project (with the exception of the N/S Telecommunication Lines) area has a low to locally moderate susceptibility to seismically induced landslides and rockfalls, SCE completed a geotechnical study to identify site-specific geologic conditions and potential geologic hazards (SCE, 2008b). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards (e.g. landslides) or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

The construction of the N/S Telecommunication Lines would result in no change in existing soil stability conditions. No change to the existing soil stability conditions, including potential for landslides, due to implementation of the Proposed Project would occur during construction of the telecommunication lines.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

While the County of Riverside General Plan shows that the Proposed Project (with the exception of the N/S Telecommunication Lines) area has a low to locally moderate susceptibility to seismically induced landslides and rockfalls, SCE completed a geotechnical study to identify site-specific geologic conditions and potential geologic hazards (SCE, 2008b). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards (e.g. landslides) or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

Operation of the Proposed Project would not alter the seismic design and engineering incorporated into the Proposed Project during construction. No change to the existing soil stability conditions, including potential for landslides, due to implementation of the Proposed Project would occur during operation of the telecommunication lines.

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project result in substantial soil erosion or the loss of topsoil?

Construction Impacts

While construction of the Proposed Project (the N/S Telecommunication Lines is discussed below) could cause slight to moderate soil erosion, these potential impacts would be managed and monitored through the design and implementation of a construction SWPPP (PDF HYDRO-1) that would address erosion and sediment control.

No ground-disturbing activities would occur during construction of the N/S Telecommunication Lines and soil erosion or loss of top soil due to vehicle travel over unpaved areas would be minimal.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

No ground-disturbing activities would occur during operation of the Proposed Project, including the N/S Telecommunication Lines, and minimal soil erosion or loss of top soil due to maintenance vehicles traveling over unpaved areas would occur.

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

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

Construction Impacts

Construction of the Proposed Project (with the exception of the N/S Telecommunication Lines) would occur on the substation property and within existing franchise with low relief and slope gradients. SCE completed a geotechnical study to identify site-specific geologic conditions and potential geologic hazards (SCE, 2008b). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

The construction of the N/S Telecommunication Lines would result in no change in existing soil stability conditions. No change to the existing soil stability conditions, including potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse,

due to implementation of the Proposed Project would occur during construction of the telecommunication lines.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

The operation of the N/S Telecommunication Lines would result in no change in existing soil stability conditions. No change to the existing soil stability conditions, including potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, due to implementation of the Proposed Project would occur during operation of the telecommunication lines.

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

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

Construction Impacts

SCE completed a geotechnical study to identify site-specific geologic conditions and potential geologic hazards (SCE, 2008b). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

The construction of the N/S Telecommunication Lines would result in no change in existing soil stability conditions. No change to the existing soil stability conditions, including expansive soil, due to implementation of the Proposed Project would occur during construction of the telecommunication lines.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

SCE completed a geotechnical study to identify site-specific geologic conditions and potential geologic hazards (SCE, 2008b). The geotechnical study was performed by professional civil and geotechnical engineers and engineering geologists licensed in the State of California. The report provided design and construction recommendations to reduce potential impacts from geologic hazards or soil conditions. The results of the geotechnical study (provided in Appendix F6) would be incorporated into the Proposed Project's final design and engineering.

The operation of the N/S Telecommunication Lines would result in no change in the existing conditions. No change to the existing soil stability conditions, including expansive

soil, due to implementation of the Proposed Project would occur during operation of the telecommunication lines.

Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?

Construction Impacts
The Proposed Project does not involve the construction of septic tanks, and the use of existing septic tanks during construction would not occur. Construction personnel would use portable toilets. Waste and wastewater would be pumped by qualified contractors and disposed in accordance with applicable regulations and codes related to portable toilets. Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts
The Proposed Project would be unattended and does not involve the operation of septic tanks. The sanitary facilities to be operated as part of the Proposed Project would not be available for use until the facilities could be connected to the sewer system. Therefore, operation of the Proposed Project would result in no impact under this criterion.

4. . .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4. . .2 Site Alternative B

4. . .2.1 Environmental Setting

Physiographic Setting
The physiographic setting of Site Alternative B is the same as the Proposed Project, except that Site Alternative B has elevations ranging from 1,150 feet msl to 1,200 feet msl.

eologic Setting
The Santa Gertrudis Valley area represents a structural depositional depression, which has undergone erosion and the filling in of sediments from the surrounding granitic bedrock outcrops and the San Jacinto Mountains. The site is underlain by younger valley floor alluvium and Pleistocene age bedrock of the Pauba Formation (SCE, 2008a). The regional geology is presented in Figure 4.6-1a.

- **Geologic Units.** The geologic units encountered on Site Alternative B are the same as the geological units encountered on the Proposed Project based on the Bachelor Mountain 7.5 minute geologic map (1:24,000 scale) (Morton and Kennedy, 2003) (see Table 4.6-1).
- **Soils.** The soils at Site Alternative B reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of modification by humans. Soils data for Site Alternative B were obtained from the Web Soil Survey database for the County of Riverside (USDA, 2008). Characteristics of the major soil units underlying Site

Alternative B are, including the description, erosion hazard, and shrink-swell potential, are presented in Table 4.6-2. Characteristics of the major soils units underlying the existing Valley-Auld-Moraga 115 kV subtransmission line are not included because the N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to existing soils, including ground-disturbing activities, would occur.

- **Faulting and Seismicity.** The geologic setting for faulting and seismicity associated with Site Alternative B is the same as the Proposed Project.

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- **Fault Rupture/Fault Displacement.** The geologic setting for fault rupture and fault displacement associated with Site Alternative B is the same as the Proposed Project.
- **Ground Motions.** Probabilistic Seismic Hazard Assessment (PSHA) models developed by USGS depict ground motions associated with a 10 percent probability of exceedance in a 50-year period. For Site Alternative B, the ground motion estimate is approximately 0.36 of the gravitational acceleration (g) (USGS, 2008).
- **Liquefaction.** The geologic setting for liquefaction associated with Site Alternative B is the same as the Proposed Project.
- **Landslides.** The geologic setting for landslides associated with Site Alternative B is the same as the Proposed Project.
- **Subsidence.** The geologic setting for subsidence associated with Site Alternative B is the same as the Proposed Project.
- **Expansive Soils.** Expansive soils can be widely dispersed and can be found in hillside areas as well as low-lying alluvial basins (COR, 2003). Site Alternative B is not on a hillside; however, the northern portion of the substation site is mapped as located within the Santa Gertrudis floodplain.
- **Collapsible Soils.** The geologic setting for collapsible soils associated with Site Alternative B is the same as the Proposed Project.

4. . .2.2 Impact Analysis

Site Alternative B would be located in a seismically very active area given the proximity and number of potential seismic sources. The closest mapped fault, the Murrieta Springs fault, is not considered an active fault and, therefore, is not delineated on the most-recent Alquist-Priolo Fault Zoning Map (CGS, 2007); however, the fault is considered potentially active and was considered during this environmental analysis. The Murrieta Springs fault does not cross Site Alternative B (except for the N/S Telecommunication Lines). Prior to final design of substation facilities and pole foundations, a geotechnical study would be performed to identify site-specific geologic conditions and potential geologic hazards. The geotechnical study would be performed by professional civil or geotechnical engineers and engineering geologists licensed in the State of California and would provide design and construction recommendations, as appropriate, to reduce potential impacts from geologic hazards or soil conditions (PDF GEO-2). The results of the geotechnical study (PDF GEO-2) and seismic

design (PDF GEO-1) would be incorporated in the Site Alternative B final design and engineering The N/S Telecommunication Lines would cross the Murrieta Springs fault and no change to the existing conditions would occur during construction under Site Alternative B. Operation of Site Alternative B would not alter the seismic design and engineering incorporated into Site Alternative B during construction. Additionally, Site Alternative B would not be located in an area delineated by CGS (CGS, 2007) as a fault rupture hazard zone. Therefore, implementation of Site Alternative B would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault and would result in a less than significant impact under this criterion.

Site Alternative B would be located in a seismically very active area given the proximity and number of potential seismic sources. While there is a potential for an earthquake to occur during construction and operation of Site Alternative B, including the N/S Telecommunication Lines, implementation of Site Alternative B would not be the cause of the earthquake. The results of the geotechnical study (PDF GEO-2) would be incorporated in the Site Alternative B final design and engineering. Seismic design (PDF GEO-1) would minimize the potential for substation, subtransmission line, and telecommunication line failure in the event of an earthquake. The N/S Telecommunication Lines would cross the Murrieta Springs fault; however, no change to the existing conditions would occur during construction under Site Alternative B. Operation of Site Alternative B would not alter the seismic design and engineering incorporated into Site Alternative B during construction that would minimize the potential for substation, subtransmission line, and telecommunication line failure in the event of an earthquake. Therefore, implementation of Site Alternative B would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and would result in a less than significant impact under this criterion.

The County of Riverside has designated the Site Alternative B study area (with the exception of the N/S Telecommunication Lines) as having a moderate liquefaction potential. However, the results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative B final design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing ground conditions would occur during implementation of the telecommunication lines, including potential for ground failure or liquefaction. Therefore, implementation of Site Alternative B would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, and would result in a less than significant impact under this criterion.

The County of Riverside General Plan shows that Site Alternative B (with the exception of the N/S Telecommunication Lines) area has a low to locally moderate susceptibility to seismically induced landslides and rockfalls. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative B final design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing soil stability conditions,

including potential for landslides. Therefore, implementation of Site Alternative B would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides and would result in a less than significant impact under this criterion.

While construction of Site Alternative B (the N/S Telecommunication Lines is discussed below) could cause slight to moderate soil erosion, these potential impacts would be managed and monitored through the design and implementation of a construction SWPPP (PDF HYDRO-1). No ground-disturbing activities would occur during construction of the N/S Telecommunication Lines and soil erosion or loss of top soil due to vehicle travel over unpaved areas would be minimal. No ground-disturbing activities would occur during operation of Site Alternative B, including the N/S Telecommunication Lines, and soil erosion or loss of top soil due to maintenance vehicles traveling over unpaved areas would be minimal. Therefore, implementation of Site Alternative B would not result in substantial soil erosion or the loss of soil and would result in a less than significant impact under this criterion.

Construction of Site Alternative B (with the exception of the N/S Telecommunication Lines) would occur on the substation property and within existing franchise with low relief and slope gradients. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative B design and engineering. The construction and operation of the N/S Telecommunication would result in no change to the existing soil stability conditions. Site Alternative B would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Site Alternative B, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse and would result in a less than significant impact under this criterion.

Construction of Site Alternative B (with the exception of the N/S Telecommunication Lines) could be located on expansive soil. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative B final design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing soil stability conditions, including expansive soil, would occur. Therefore, Site Alternative B would not be located on expansive soils, and implementation of Site Alternative B would result in a less than significant impact under this criterion.

Site Alternative B does not involve the construction of septic tanks, and the use of existing septic tanks during construction would not occur. Construction personnel would use portable toilets. Waste and wastewater would be pumped by qualified contractors and disposed in accordance with applicable regulations and codes related to portable toilets. During operation, the substation would be unattended, and would not involve the operation of septic tanks. The sanitary facilities to be operated as part of Site Alternative B would not be available for use until the facilities could be connected to the sewer system. Therefore, Site Alternative B would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal or wastewater and implementation of Site Alternative B would result in no impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts from geology and soils.

4. . .3 Site Alternative

Physiographic Setting

The physiographic setting of Site Alternative C is the same as the Proposed Project, except that Site Alternative C has elevations ranging 1,180 feet msl to 1,220 feet msl.

eologic Setting

The Santa Gertrudis Valley area represents a structural depositional depression, which has undergone erosion and the filling in of sediments from the surrounding granitic bedrock outcrops and the San Jacinto Mountains. The site is underlain by younger valley floor alluvium and Pleistocene age bedrock of the Pauba Formation (SCE, 2008a). Figure 4.6-1a presents the regional geologic map for the Electrical Needs Area.

- **Geologic Units.** Geologic units encountered in the area of Site Alternative C and Site Alternative C Line 1 and Line 2 are presented in Table 4.6-4 and are based on the Murrieta 7.5 minute geologic map (1:24,000 scale) (Kennedy and Morton, 2003).

Table 4. -4 eologic onditions Site Alternative
Triton 115/12 kV Substation Project PEA

Geologic Unit/Structure	Formation Name	Description/Comments
Qya	Young alluvial channel deposits (Holocene and latest Pleistocene)	Fluvial deposits along canyon floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium
Qpfs	Pauba Formation Sandstone member	Brown, moderately well-indurated, cross-bedded sandstone containing sparse cobble- to boulder-conglomerate beds
Kgb	Gabbro (Cretaceous)	Mainly hornblende gabbro. Typically brown weathering, medium-to very coarse-grained hornblende gabbro; very large poikilitic hornblende crystals are common, and very locally gabbro is pegmatitic. Much is quite heterogeneous in composition and texture.

Source: Murrieta 7.5 min Geology Map (Kennedy and Morton, 2003 (1:24,000 scale)).

- **Soils.** The soils at Site Alternative C reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of modification by humans. Soil data for Site Alternative C were obtained from the Web Soil Survey database for the County of Riverside (USGS, 2008). Characteristics, including the description, erosion hazard, and shrink-swell potential, of the major soil units underlying Site Alternative C, including 12 kV duct banks, and Line 1 and Line 2 loop-in are presented In Table 4.6-2. Characteristics of the major soils units underlying the existing Valley-Auld-Moraga 115 kV subtransmission line are not included because the N/S Telecommunication Lines would be underbuilt on existing structures or within existing underground banks and no change to existing, soils, including ground-disturbing activities, would occur.

- **Faulting and Seismicity.** The geologic setting for faulting and seismicity associated with Site Alternative C is the same as the Proposed Project.

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- **Fault Rupture/Fault Displacement.** Primary ground damage due to earthquake fault rupture typically results in a relatively small percentage of the total damage in an earthquake, but proximity to a rupturing fault can cause profound damage. Site Alternative C substation site, subtransmission Line 1 route, and telecommunication line route are crossed by the Murrieta Springs Fault, which is an east-west-trending fault segment of the Elsinore Fault Zone. Although the Murrieta Springs fault is not considered an Alquist-Priolo Earthquake Fault Zone, it is considered a potentially active fault.

- **Ground Motions.** Probabilistic Seismic Hazard Assessment (PSHA) models developed by USGS depict ground motions associated with a 10 percent probability of exceedance in a 50-year period. For Site Alternative C, the ground motion estimate is approximately 0.36 of the gravitational acceleration (g) (USGS, 2008).

- **Liquefaction.** Liquefaction occurs primarily in saturated, loose, fine to medium grained soils in areas where the groundwater table is within approximately 50 feet of the ground surface. Shaking causes the soils to lose strength and behave as a liquid. Site Alternative C has a low to moderate liquefaction potential as designated by the County of Riverside (COR, 2003).

- **Landslides.** The geologic setting for landslides associated with Site Alternative C is the same as the Proposed Project.

- **Subsidence.** The geologic setting for subsidence associated with Site Alternative C is the same as the Proposed Project.

- **Expansive Soils.** The geologic setting for expansive soils associated with Site Alternative C is the same as the Proposed Project.

- **Collapsible Soils.** The geologic setting for collapsible soils associated with Site Alternative C is the same as the Proposed Project.

4. . .3.2 Impact Analysis

Site Alternative C would be located in a seismically very active area given the proximity and number of potential seismic sources. The closest mapped fault, the Murrieta Springs fault, is not considered an active fault and, therefore, is not delineated on the most-recent Alquist-Priolo Fault Zoning Map (CGS, 2007); however, the fault is considered potentially active and was considered during this environmental analysis. The Murrieta Springs fault crosses Site Alternative C (including the N/S Telecommunication Lines), and both the substation site and Subtransmission Line 2. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative C final design and engineering. The N/S Telecommunication Lines would cross the Murrieta Springs fault and no change to the existing conditions would occur during construction under Site Alternative C. Operation of Site Alternative C would not alter the seismic design and engineering

incorporated into Site Alternative C during construction. Additionally, Site Alternative C would not be located in an area delineated by CGS (CGS, 2007) as a fault rupture hazard zone. Therefore, implementation of Site Alternative C would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault and would result in a less than significant impact under this criterion.

Site Alternative C would be located in a seismically very active area given the proximity and number of potential seismic sources. While there is a potential for an earthquake to occur during construction and operation of Site Alternative C, including the N/S Telecommunication Lines, implementation of Site Alternative C would not be the cause of the earthquake. The results of the geotechnical study (PDF GEO-2) would be incorporated in the Site Alternative C final design and engineering. Seismic design (PDF GEO-1) would minimize the potential for substation, subtransmission line, and telecommunication line failure in the event of an earthquake. The N/S Telecommunication Lines would cross the Murrieta Springs fault and no change to the existing conditions would occur during construction under Site Alternative C. Operation of Site Alternative C would not alter the seismic design and engineering incorporated into Site Alternative C during construction that would minimize the potential for substation, subtransmission line, and telecommunication line failure in the event of an earthquake. Therefore, implementation of Site Alternative C would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and would result in a less than significant impact under this criterion.

The County of Riverside has designated the Site Alternative C study area (with the exception of the N/S Telecommunication Lines) as having a moderate liquefaction potential. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative C final design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing ground conditions would occur during implementation of the telecommunication lines, including potential for ground failure or liquefaction. Therefore, implementation of Site Alternative C would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, and would result in a less than significant impact under this criterion.

The County of Riverside General Plan shows that Site Alternative C (with the exception of the N/S Telecommunication Lines) area has a low to locally moderate susceptibility to seismically induced landslides and rockfalls. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative C final design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing soil stability conditions, including potential for landslides. Therefore, implementation of Site Alternative C would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides and would result in a less than significant impact under this criterion.

While construction of Site Alternative C (the N/S Telecommunication Lines is discussed below) could cause slight to moderate soil erosion, these potential impacts would be managed and monitored through the design and implementation of a construction SWPPP (PDF HYDRO-1). No ground-disturbing activities would occur during construction of the N/S Telecommunication Lines and soil erosion or loss of top soil due to vehicle travel over unpaved areas would be minimal. No ground-disturbing activities would occur during operation of Site Alternative C, including the N/S Telecommunication Lines, and soil erosion or loss of top soil due to maintenance vehicles traveling over unpaved areas would be minimal. Therefore, implementation of Site Alternative C would not result in substantial soil erosion or the loss of soil and would result in a less than significant impact under this criterion.

Construction of Site Alternative C (with the exception of the N/S Telecommunication Lines) would occur on the substation property and within existing franchise with low relief and slope gradients. The results of the geotechnical study PDF GEO-2) and seismic design (PDF GEO-1 would be incorporated in the Site Alternative C design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing soil stability conditions. Site Alternative C would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of construction and operation of Site Alternative C, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse and would result in a less than significant impact under this criterion.

Construction of Site Alternative C (with the exception of the N/S Telecommunication Lines) could be located on expansive soil. The results of the geotechnical study (PDF GEO-2) and seismic design (PDF GEO-1) would be incorporated in the Site Alternative C final design and engineering. The construction and operation of the N/S Telecommunication Lines would result in no change to the existing soil stability conditions, including expansive soil, would occur. Therefore, Site Alternative C would not be located on expansive soils creating substantial risk to life or property and implementation of Site Alternative C would result in a less than significant impact under this criterion.

Site Alternative C does not involve the construction of septic tanks, and the use of existing septic tanks during construction would not occur. Construction personnel would use portable toilets. Waste and wastewater would be pumped by qualified contractors and disposed in accordance with applicable regulations and codes related to portable toilets. During operation, the substation would be unattended and would not involve the operation of septic tanks. The sanitary facilities to be operated as part of Site Alternative C would not be available for use until the facilities could be connected to the sewer system. Therefore, Site Alternative C would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal or wastewater and implementation of Site Alternative C would result in no impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts from geology and soils.

4. . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation from geology and soils.

4. . eferences

American Society of Civil Engineers (ASCE). 2005. ASCE 7-05 - Minimum Design Loads for Buildings and Other Structures.

California Geologic Survey. (CGS). 2007. Fault-Rupture Hazard Zones in California. Special Publication 42. Interim Revision.

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. June 21

City of Temecula (COT). 2005. *Temecula General Plan*. 1993; Updated 2005.

County of Riverside (COR). 2003a. *County of Riverside General Plan*. October.

Jennings, C.W. 1994. Fault Activity Map of California and Adjacent Areas. California Department of Mines and Geology, California Geologic Data Map Series. Map No. 6.

Kennedy, M. P. and Morton, D. M. 2003. Geologic Map of the Murrieta 7.5" Quadrangle, Riverside, County, California. USGS Open-File Report 03-189.

Morton, D.M. 2003. Preliminary Digital Geologic Map of the Santa Ana 30' X 60' Quadrangle, Southern California.

Morton, D. M. and Kennedy, M. P. 2003. Geologic Map of the Bachelor Mountain 7.5" Quadrangle, Riverside, County, California. USGS Open-File Report 03-103.

Southern California Earthquake Center (SCEC). 2008. http://www.scec.org. Various pages accessed in August 2008.

Southern California Edison (SCE) TDBU Civil Engineering Group (SCE). 2008a. *Draft Southern California Edison Preliminary Geotechnical Evaluation Triton 115/12kV Substation - City of Temecula, Riverside County, California*. July.

Southern California Edison (SCE) TDBU Civil Engineering Group (SCE). 2008b. *Southern California Edison Geotechnical Evaluation Triton 115/12kV Substation - City of Temecula, Riverside County, California*. September 26.

United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS). 2008. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/app/. Accessed in August 2008.

United States Geological Survey (USGS). 2008. United States National Seismic Hazard Maps .http://gldims.cr.usgs.gov/nshmp2008/viewer.htm

United States Geological Survey (USGS). 2007. Ground Motion Parameters, Computer Program, Version 5.0.8. November 20.

United States Geological Survey (USGS) And California Geological Survey (CGS). 2003. The Revised 2002 California Probabilistic Seismic Hazard Maps. June.

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Table 4. -2. Soil Types and haracteristics
Triton 115/12 kV Substation Project PEA

Soil Series or Association[a]	Description	Hazard of Erosion[b]	Shrink-Swell Potential
Proposed Project – Substation and 12 kV Duct Banks			
Ramona (RaA)	Sandy Loam, 0 to 2 percent slopes	Moderate	Low
Hanford (HgA)	Fine Sandy Loam, 0 to 2 percent slopes	Slight	Low
Riverwash (Rsc)	Sandy, cobbly, or gravel riverwash material	Slight	Low
Greenfield (GyC_2)	Sandy Loam, 2 to 8 percent slopes, eroded	Moderate	Low
Arlington and Greenfield (AtD_2)	Fine Sandy Loam, 8 to 15 percent slopes, eroded	Moderate	Low
Rough Broken Land (RuF)	Dissected by drainages so that no recognizable soils are identified	NR	Low
Proposed Project Subtransmission Line Loop-in			
Ramona (RaA)	Sandy Loam, 0 to 2 percent slopes	Moderate	Low
Riverwash (Rsc)	Sandy, cobbly, or gravel riverwash material	Slight	Low
Ramona (ReC_2)	Very Fine Sandy Loam, 0 to 8 percent slopes, eroded	High	NR
Site Alternative B – Substation and 12 kV Duct Banks			
Riverwash (Rsc)	Sandy, cobbly, or gravel riverwash material	Slight	Low
Ramona (ReC_2)	Very Fine Sandy Loam, 0 to 8 percent slopes, eroded	High	NR
Arlington and Greenfield (AtC_2)	Fine Sandy Loam, 2 to 8 percent slopes, eroded	Moderate	Moderate
Arlington and Greenfield (AtD_2)	Fine Sandy Loam, 8 to 15 percent slopes, eroded	Moderate	Moderate
Ramona (RaA)	Sandy Loam, 0 to 2 percent slopes	Moderate	Low
Greenfield (GyC_2)	Sandy Loam, 2 to 8 percent slopes, eroded	Moderate	Low
Site Alternative C – Substation and 12 kV Duct Banks			
Cajalco (CbF_2)	Rocky Fine Sandy Loam, 15 to 50 percent slopes	High	Low to Moderate
Los Posas (LaE_3)	Loam, 8 to 25 percent slopes, severely eroded	High	Moderate
Hanford (HcD_2)	Coarse Sandy Loam, 8 to 15 percent slopes	Moderate	Low
Honcut (HnD_2)	Sandy Loam, 8 to 15 percent slopes, eroded	Slight to Moderate	Low

Table 4. -2. Soil Types and haracteristics
Triton 115/12 kV Substation Project PEA

Soil Series or Association[a]	Description	Hazard of Erosion[b]	Shrink-Swell Potential
	Site Alternative C Subtransmission Line 1 Loop-in		
Arlington and Greenfield (AtD_2)	Fine Sandy Loam, 8 to 15 percent slopes, eroded	Moderate	Moderate
Rough Broken Land (RuF)	Dissected by drainages so that no recognizable soils are identified	NR	Low
Greenfield (GyC_2)	Sandy Loam, 2 to 8 percent slopes, eroded	Moderate	Low
Auld (AuC)	Clay, 2 to 8 percent slopes, eroded	Slight to Moderate	High
Ramona (RaB_2)	Sandy Loam, 2 to 5 percent slopes, eroded	Moderate	Moderate
Ramona and Buren (RmE_3)	Sandy Loam, 15 to 25 percent slopes, severely eroded	High	
Wyman (WyC_2)	Loam, 2 to 8 percent eroded	Moderate	Moderate
	Site Alternative C Subtransmission Line 2 Loop-in		
Cajalco (CbF_2)	Rocky Fine Sandy Loam, 15 to 50 percent slopes	High	Low to Moderate
Los Posas (LaE_3)	Loam, 8 to 25 percent slopes, severely eroded	High	Moderate
Los Posas (LaC)	Loam, 2 to 8 percent slopes	Slight to Moderate	Moderate
Auld (AuC)	Clay, 2 to 8 percent slopes, eroded	Slight to Moderate	High

[a] Source for soils mapping and characteristics: http://websoilsurvey.nrcs.usda.gov/app/

[b] Qualitative descriptors of erosion hazard: Slight = little or no erosion is anticipated, Moderate = some erosion anticipated, Severe = significant erosion potential exists, NR = Not Rated

Table 4. -3. Seismic Source haracteristics Electrical Needs Area
Triton 115/12 kV Substation Project PEA

Fault Name	Nearest Distance to Center of Electrical Needs Area (kilometers (miles))[a]	Type of Faulting[b]	Fault Length (kilometers (miles))[b]	Slip Rate[b] (mm/year)	Maximum Magnitude Earthquake[b] (Mmax)
Elsinore, Temecula	6.8 (4.2)	Right lateral, strike-slip	43 (26.7)	5.0	6.8
Elsinore, Glen Ivy	19.3 (12.0)	Right lateral, strike-slip	36 (22.4)	5.0	6.8
Elsinore, Julian	20.7 (12.9)	Right lateral, strike-slip	76 (47.2)	5.0	7.1
San Jacinto, San Jacinto Valley (Casa Loma)	28.9 (18.0)	Right lateral, strike-slip	43 (26.7)	12.0	6.9
San Jacinto, Anza	44.3 (27.5)	Right lateral, strike-slip	91 (56.5)	12.0	7.2
San Gorgonio Pass Fault Zone	48.3 (30.0)	Thrust	35 (21.7)	NA	7.0
Newport-Inglewood	50.1 (31.1)	Right lateral, strike-slip	66 (41.0)	1.5	7.1

[a]Fault distances based on Jennings, 1994.

[b]Data based on USGS and CGS, 2003; Southern California Earthquake Center (SCEC)(www.scec.org).

mm/year = millimeter per year; Mmax = maximum magnitude

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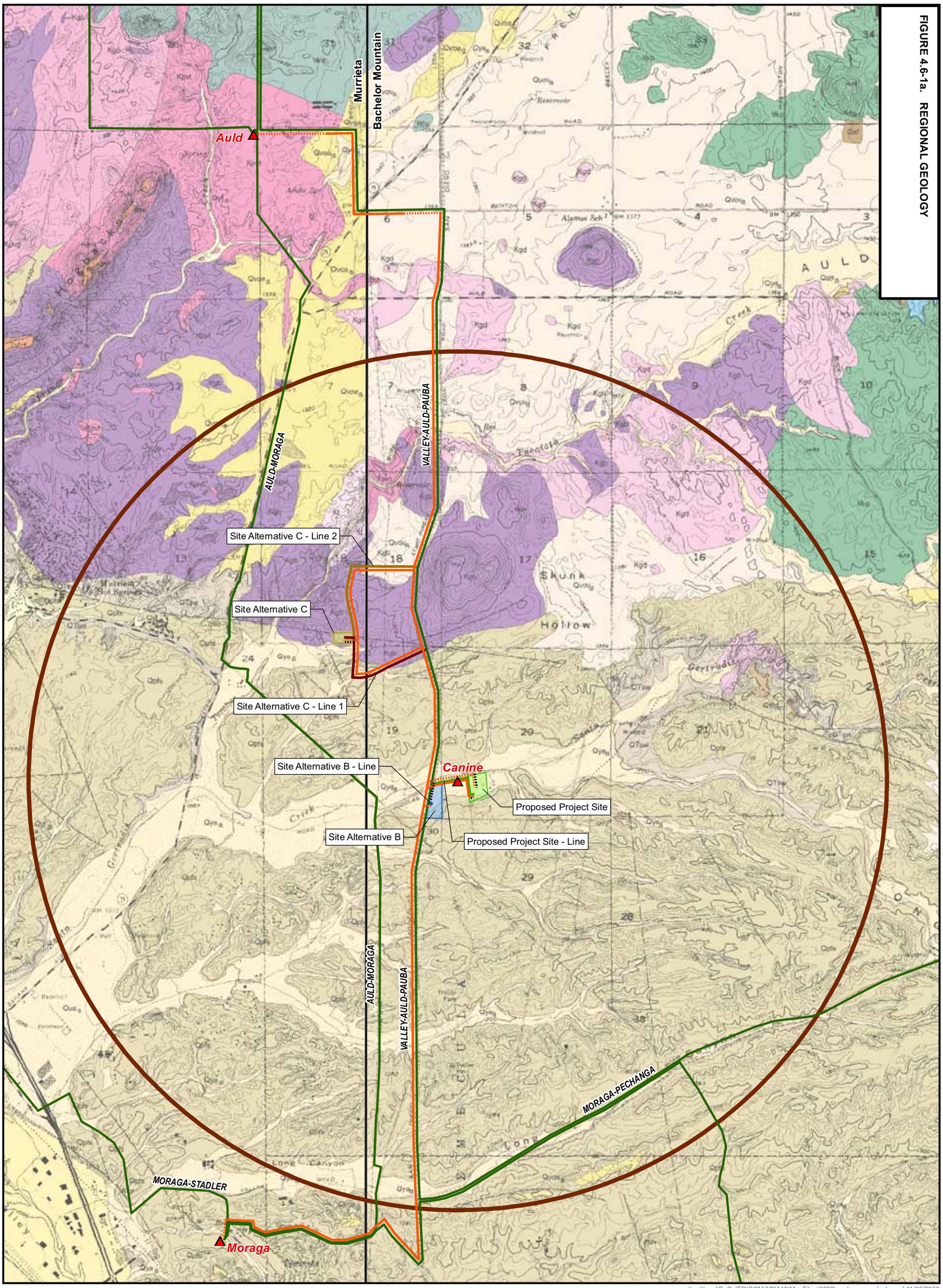
FIGURE 4.6-1a. REGIONAL GEOLOGY



\\galt\proj\SoCalEDISON\373140\MapFiles\2008\geology_quads_b.mxd 11/06/2008

LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- Quadrangle Boundary
- Electrical Needs Area

Geologic Units/Features
Legend on Figures 4.6-1b and 4.6-1c

Proposed Project Site and Site Alternatives B and C

Substations
- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]
- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]
- Aboveground
- Belowground

12 kV Duct Banks[1]
- Belowground

Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000
Feet
0 1
Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Geologic Maps - Murrieta and Bachelor Mountain

2008

TRITON SUBSTATION PEA

FIGURE 4.6-1a. REGIONAL GEOLOGY

SOUTHERN CALIFORNIA EDISON

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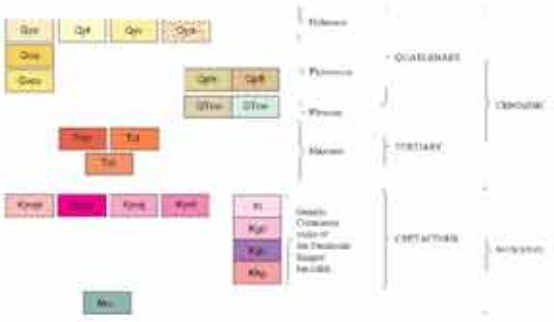
FIGURE 4.6-1b. UNITED STATES GEOLOGICAL SURVEY LEGEND FOR MURRIETA 1:24,000 GEOLOGIC QUADRANGLE

CORRELATION OF MAP UNITS



On some SCAMP geologic map plots, including the Murrieta 7.5' quadrangle, characteristic grain size information is displayed using subscripted alpha characters (e.g. Qal_g, Qoa_s), where the characters conform to the following definitions:

c - cemented (very coarse sand through very fine sand)
b - boulder gravel (>25cm)
g - gravel (coarse through granule gravel)
s - silty
z - clayey

In the Description of Map Units, the Ma following U/Pb age has an overbar subscript, Ma_{cg} for isotope dilution analyses, and Ma_{sp} for ion probe analyses.

Contact—Generally located within ±15 meters

Fault—Hash mark(s) indicate dip direction on all faults in right-lateral, dip-slip component is unknown, but probably reflects oblique-lateral movement. Solid where located within ±15 meters, dashed where located within ±50 meters, dotted where concealed. Arrow and number indicate measured dip of fault plane

Kpeg—Peninsular dikes of Paloma Valley Complex. Arrow and number indicate measured dip of dike

Strike and dip of beds

Inclined

Strike and dip of igneous foliation

Inclined

Vertical

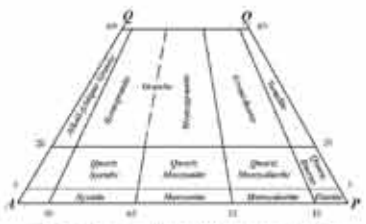
Strike and dip of metamorphic foliation

Inclined

Strike and dip of joints in sedimentary rocks

Vertical

SURROUNDING 7.5' QUADRANGLES



Classification of plutonic rock types (from IUGS, 1973, and Streckeisen, 1976)
A - alkali feldspar; P - plagioclase feldspar; Q - quartz

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, firm, or product names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government.

This map was plotted on an electronic plotter directly from digital files. Dimensional calibration may vary between electronic plotters and between X and Y directions on the same plotter, and paper may change size due to atmospheric conditions; therefore, scale and proportions may not be true on plots of this map.

Digital files available on World Wide Web at http://geopubs.wr.usgs.gov

DESCRIPTION OF MAP UNITS

YOUNG SURFICIAL DEPOSITS—Sedimentary units that are slightly consolidated to unconsolidated and slightly to moderately dissected. Alluvial fan deposits (Qyf series) typically have high convex/flat clast ratios. Younger surficial units have upper surfaces that are capped by slight to moderately developed pedogenic-soil profiles (A/C to A/AC/B_{cambic}/C or C_{ox} profiles). Includes:

Qyf **Young alluvial fan deposits (Holocene and latest Pleistocene)**—Unconsolidated deposits of alluvial fans and localized drainages of fans. Consists predominately of gravel, sand, and silt

Qya **Young alluvial channel deposits (Holocene and latest Pleistocene)**—Fluvial deposits along canyon floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

Qyv **Young alluvial valley deposits (Holocene and late Pleistocene)**—Fluvial deposits along valley floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

Qyls **Young landslide (Holocene and latest Pleistocene)**—Highly fragmented to largely coherent landslide deposits. Unconsolidated to consolidated. Most mapped landslides contain scarp area as well as slide deposit. Many landslides in part reactivated during late Holocene

OLD SURFICIAL DEPOSITS—Sedimentary units that are moderately consolidated and slightly to moderately dissected. Older surficial deposits have upper surfaces that are capped by moderately to well-developed pedogenic soils (A/AB/B_{cambic}/C_{ox} profiles and Bt horizons as much as 1 to 2 m thick and maximum hues in the range of 10YR 5/4 and 6/4 through 7.5YR 6/4 to 4/4 and darker Bt horizons reaching 5YR 5/6). Includes:

Qoa **Old alluvial channel deposits (late to middle Pleistocene)**—Fluvial sediments deposited on canyon floors. Consists of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age

Qvoa **Very old alluvial channel deposits (middle to early Pleistocene)**—Fluvial sediments deposited on canyon floors. Consists of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age

Tpa **Pauba Formation (Pleistocene)**—Arkosic, sesquitose, and conglomeratic. Named by Mann (1955) for exposures of in Rancho Pauba area about 3.2 km southeast of Temecula. Vertebrate fossil from Pauba Formation are of late Irvingtonian and early Rancholabrean ages (Reynolds and Reynolds, 1990a; 1990b). Includes two informal members:

Qpfs **Sandstone member**—Brown, moderately well-indurated, cross-bedded sandstone containing sparse cobble- to boulder-conglomerate beds

Qpcf **Conglomerate member**—Grayish-brown, well indurated, poorly sorted conglomerate and sandstone; occurs along the east flank of the Santa Ana Mountains

Sandstone and conglomerate of Wildomar area (Pleistocene and late Pliocene)—Dissected sandstone and conglomerate unit unconformably overlain by the Pauba Formation (Kennedy, 1977). Lower part yields vertebrate fauna of late Hemphillian age, 3 to 5 Ma, upper part yields fauna of Irvingtonian age, less than 0.63 Ma (Reynolds and Reynolds, 1990a, 1990b; Reynolds and others, 1990). At Cherry Hill in Murrieta area, unit contains 0.7 Ma Bishop ash (Morton and Bischoff, 1973). Estimated maximum thickness is 75 m. Subdivided into sandstone unit and conglomerate unit

QTsw **Sandstone unit**—Primarily friable, pale yellowish-green, medium grained, cobble-rich sandstone

QTcw **Conglomerate unit**—Primarily cobble-and-boulder conglomerate. Conglomerate clasts are locally derived

Tsrs **Santa Rosa basalt of Mann (1955) (Miocene)**—Remnants of basalt flows having relatively unmodified flow surfaces. See Hawkins (1970) for detailed petrologic description of basalt. Originally described by Fairbanks (1893) and informally named by Mann (1955) for basalt flows in vicinity of Rancho Santa Rosa, west of Temecula. Name also has been applied to basalts in general area of Temecula and Santa Ana Mountains, but here is restricted to rocks in area west of Temecula. Southwestern part of Santa Rosa basalt of Mann (1955) extruded on deeply weathered surface of low relief similar to Paleocene age surfaces found elsewhere in southern California. Morton and Morton (1979) report whole-rock conventional potassium-argon age for Santa Rosa basalt of Mann (1955) 6.3 and 7.4 Ma. Slightly older age of 8.7 Ma was obtained by Hawkins (1970)

Tsr **Basalt of Temecula area (Miocene)**—Basalt, restricted to single exposure 5 km northwest of Murrieta in quadrangle. Outside quadrangle, includes scattered exposures of basalt north and east of Temecula, and a small exposure of vesicular basalt within valley area of Hunters Fault zone near Wildomar (Mann, 1955; Kennedy, 1977; Hall, 1990). East of Temecula, rocks assigned to this unit include exposures of vesicular basalt and what appears to be a dissected cinder cone and scattered volcanic bombs (Mann, 1955)

Tsh **Basalt of Highacks (Miocene)**—Basalt capping Highacks 5 km northeast of Murrieta. Remnant of channel-filling basalt flow. Thin deposit of unconsolidated gray stream gravel underlies axial part of channel-filling basalt. Basalt is less vesicular than most of Santa Rosa basalt of Mann (1955) flows and tends to break into chalky fragments. Whole-rock conventional potassium-argon ages are 10.4 and 10.8 Ma (Morton and Morton, 1979)

Rocks of the Peninsular Ranges batholith

Paloma Valley Ring Complex (Cretaceous)—Composite ring dike intrusion. Named and described by Morton and Bird (1976) for exposures south of Paloma Valley area. Included within Woodson Mountain granodiorite and San Marcos gabbro by Larsen (1948). Ring complex consists of older, elliptical to plug, single ring dike and two subsidiary short-axial dikes. Younger ringset of thin dikes is largely within older ring dike. Older dike consists of granodiorite and monzogranite with vertical walls emplaced into gabbro by ring fracturing and magmatic doming of gabbro. Younger ring-dike consists of hundreds of granitic pegmatite dikes. Most pegmatite dikes range from 30 cm to over 1 m in thickness, and define a domed ring-dike geometry in which outer dikes are moderately to steeply outward dipping and inner progressively inward to near horizontal dikes in center. Spatially associated with younger dikes in center of complex are bodies of granophyre that contain stringers of granitic pegmatite. Younger dikes are interpreted as products of volatile-rich magma that filled a domal set of fractures resulting from cauldron subsidence. Granophyre is interpreted as product of pressure quenching of pegmatitic magma and attendant loss of volatiles. Zircon ages of rock from atypical hornblende-bearing granodiorite host western part of older dike is 121 Ma_{cg} and 116.5 Ma_{sp}. $^{40}Ar/^{39}Ar$ age of hornblende 115.3 Ma and biotite 110.8 Ma, Includes:

Kpgp **Granophyre** Pale gray, very fine grained, porphyritic, granophyric. Forms numerous, small, irregular shaped flat-floored bodies intruding gabbro (Kgb) in central part of complex. Phenocrysts of altered plagioclase are in groundmass of granophyric intergrowths of quartz, potassium feldspar, and sodic plagioclase. Pyrite is ubiquitous accessory mineral, and where oxidized, dissolves outcrops reddish-brown. Network of pegmatitic textural stringers averaging 2.5 cm thick cuts much of granophyre. Stringers are compositionally and texturally zoned, with fine-grained margins and coarse-grained interiors

Kpeg **Pegmatite dikes of Paloma Valley Ring Complex** Linear to arcuate, leucocratic pegmatite dikes typically 30 cm to 1 m thick. Very concentrated in central part of complex. Most are texturally and compositionally zoned. Outer zones are coarse-grained granite composed of quartz, perthitic, and sodic plagioclase, and may or may not contain biotite and minor magnetite. Inner zones consist of pegmatitic-textured perthitic, sodic plagioclase; quartz; biotite; and (or) muscovite, and accessory magnetite, schorl, garnet, and epidote. Quartz crystals lined vugs found locally. Graphic intergrowths of quartz and perthite are common in rock transitional between coarse-grained granite and pegmatite-textured granite. Dikes that lack pegmatitic zones consist entirely of coarse- to extremely coarse grained granitoid textured rock, with or without graphic intergrowths

Kpmg **Monzogranite to granodiorite** Pale gray, massive, medium-grained equigranular to porphyritic-granular biotite monzogranite and less abundant hornblende-biotite granodiorite forming older ring dike. Plagioclase is An_{30} to An_{35}, subhedral, tabular crystals. Contains included small to large rafted blocks of gabbro

Kgb **Tonalite**—Foliated biotite-hornblende tonalite. In eastern part of complex grades into tonalite

Generic Cretaceous granitic rocks of the Peninsular Ranges batholith

Kgd **Granodiorite, undifferentiated (Cretaceous)**—Biotite and hornblende-biotite granodiorite, undifferentiated. Most is massive and medium-grained. Restricted to small exposures along east edge of quadrangle

Kt **Tonalite, undifferentiated (Cretaceous)**—Gray, medium-grained biotite-hornblende tonalite, typically foliated. Restricted to single area flanking Temecula Creek along east edge of quadrangle

Kgb **Gabbro (Cretaceous)**—Mainly hornblende gabbros. Includes Virginia quartz norite and gabbro of Dudley (1935), and San Marcos gabbro of Larsen (1948). Typically brown-weathering, medium-to very coarse-grained hornblende gabbro; very large poikilitic hornblende crystals are common, and very locally gabbro is pegmatitic. Much is quite heterogeneous in composition and texture. Includes norite and diorite composition rocks. Abundant sloped blocks of gabbro are included in the Paloma ring complex

Kbg **Heterogeneous granitic rocks (Cretaceous)**—A wide variety of heterogeneous granitic rocks. Rocks to Santa Ana Mountains, 7 km northwest of Murrieta, include a mixture of monzogranite, granodiorite, tonalite, and gabbro. Tonalite composition rock is most abundant rock type

Jmv **Metasedimentary rocks, undifferentiated (Mesozoic)**—Wide variety of low-to medium-metamorphic grade metasedimentary rocks. Within the Santa Ana Mountains rocks are of low grade, greenschist to lower grade. Most of the extant occurrences include biotite schist.

GEOLOGIC SUMMARY

The Murrieta quadrangle is located in the northern part of the Peninsular Ranges Province and includes parts of two structural blocks, or structural subdivisions of the province. The quadrangle is diagonally crossed by the active Elsinore fault zone, a major fault zone of the San Andreas fault system, and separates the Santa Ana Mountains block to the west from the Perris Block to the east. Both blocks are relatively stable tectonically and within the quadrangle are characterized by the presence of widespread erosional surfaces of low relief.

The Santa Ana Mountains block in the Murrieta quadrangle, as underlain by undifferentiated, thick-layered, granular, impure quartzite and well-layered, fissile, phyllitic metamorphic rock of low metamorphic grade. Both quartzite and phyllitic rocks are Mesozoic. Unconformably overlying the metamorphic rocks are remnants of basalt flows having relatively unmodified flow surfaces. The age of the basalt is about 9 Ma. Large shallow depressions on the surface of the larger basalt remnants form vernal ponds that contain an endemic flora. Beneath the basalt the upper part of the metamorphic rocks is deeply weathered. The weathering appears to be the same as the regional Paleocene saprolite weathering in southern California. West of the quadrangle a variable thickness sedimentary rock, physically resembling Paleogene rocks, occurs between the basalt and metamorphic rock. Where not protected by the basalt, the weathered rock has been removed by erosion.

The dominant feature on the Perris block on the Murrieta quadrangle is the north half of the Paloma Valley ring complex, part of the composite Peninsular Ranges batholith. The complex is elliptical in plan and consists of an older ring-dike with two subsidiary short-axial dikes that were emplaced into gabbro by magmatic doming. Small to large rafted blocks of gabbro are common within the ring-dikes. A younger ringset of hundreds of thin pegmatite dikes occur largely within the central part of the complex. These pegmatite dikes were emplaced into a domal fracture system, apparently produced by cauldron subsidence, and include in the center of the complex, a number of fluid-layered granophyre bodies. The granophyre is interpreted to be the result of pressure quenching of pegmatitic magma. Along the eastern edge of the quadrangle is the western part of a large septum of medium metamorphic grade Mesozoic schist. A dissected basalt flow caps the Highacks northeast of Temecula, and represents remnants of a channel filling flow. Beneath the basalt is a thin deposit of stream gravel. Having an age of about 10Ma, this basalt is about 2-3Ma older than the basalt flows in the Santa Ana Mountains.

The Elsinore fault zone forms a complex of pull-apart basins. The west edge of the fault zone, the Willard Fault, is marked by the high, steep eastern face of the Santa Ana Mountains. The east side of the zone, the Wildomar Fault, forms a less pronounced physiographic step. In the center of the quadrangle a major splay of the fault zone, the Murrieta Hot Springs Fault, strikes east. Branching of the fault zone causes the development of a broad alluvial valley between the Willard Fault and the Murrieta Hot Springs Fault. All but the most part of the zone between the Willard and Wildomar faults consist of dissected Pleistocene sedimentary units. The most part of the zone is underlain by Holocene and latest Pleistocene sedimentary units.

REFERENCES

Dudley, P.H., 1935, Geology of a portion of the Perris block, southern California: California Journal Mines and Geology, v. 31, p. 405-506.

Fairbanks, H.W., 1892, Geology of San Diego County; also of portions of Orange and San Bernardino Counties, in, Yale, G.V., ed., Eleventh report of the State Mineralogist: California State Mining Bureau Eleventh Report, p. 76-130.

Hawkins, J.W., 1970, Petrology and possible tectonic significance of Late Cretaceous volcanic rocks, southern California and Baja California: Geological Society of America Bull., v. 81, no. 11, p. 3323-3338.

Hall, A.G., 1990, Seismotectonics of the Elsinore/Temecula trough, Elsinore fault zone, southern California: Ph.D. dissertation, Santa Barbara, California, University of California, 253p.

Kennedy, M.P., 1977, Recency and character of faulting along the Elsinore fault zone in southern Riverside County, California: Div. Mines and Geology, Special Report 131, 12 p.

Larsen, E.S., 1948, Batholith and associated rocks of Corona, Elsinore, and San Luis Rey quadrangles, southern California: Geol. Society America Mem. 29, 182 p.

Mann, J.F., 1955, Geology of a portion of the Elsinore fault zone, California: California Div. Mines Special Report 43, 22 p.

Morton, Richard, and Bischoff, J.L., 1973, Bishop Ash: A widespread volcanic ash extended to southern California: Jour. Sedimentary Petrology, v. 45, p. 205-211.

Morton, D.M. and Bird, A.K., 1976, Petrology of the Paloma Valley ring complex, southern California batholith: U.S. Geol. Survey Jour. Research, v. 4, n. 1, p. 45-61.

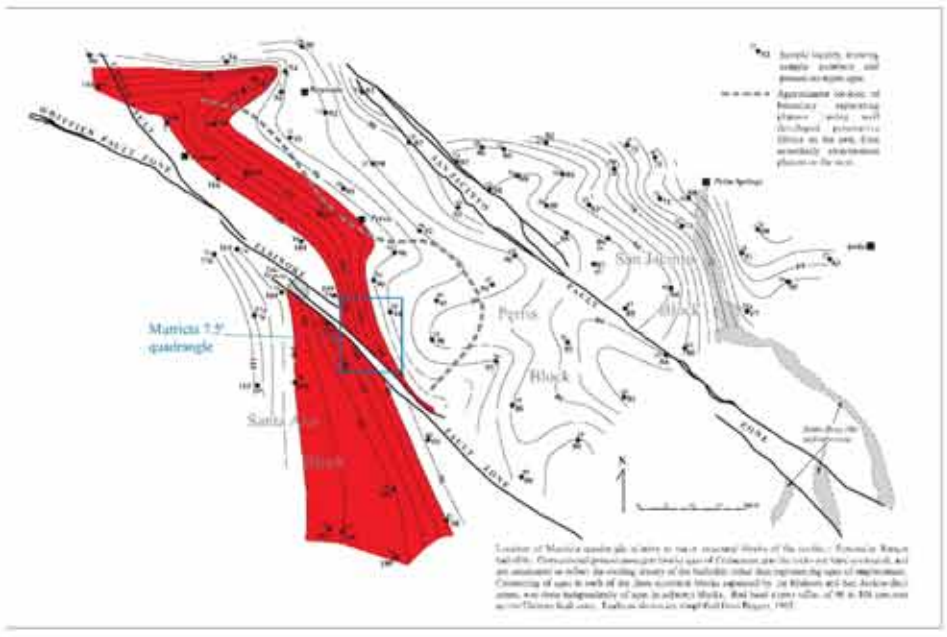
Morton, J.L. and Morton, D.M., 1979, K-Ar ages of Cretaceous volcanic rocks along the Elsinore Fault zone, southwestern Riverside California: Geol. Soc. America Abstracts with programs, v. 11, p. 119.

Reynolds, R.L., Fay, L.P., and Reynolds, R.L., 1990, An early-Late Irvingtonian land mammal age fauna from Murrieta, Riverside County, California: San Bernardino County Museum Association Quarterly, v. XXXVII, p. 35-36.

Reynolds, R.E., and Reynolds, R.L., 1990b, A new late Blancan faunal assemblage from Murrieta, Riverside County, California: San Bernardino County Museum Association Quarterly, v. XXXVI, p. 14 - , 1990b, Irvingtonian? Fauna from the Pauba Formation, Temecula, Riverside County, California: San Bernardino County Museum Association Quarterly, v. XXXVII, p. 37.

Rogers, T.H., 1965, Santa Ana sheet: California Division of Mines and Geology Geologic Map of California, scale, 1:250,000.

Streckeisen, A.L., 1973, Plutonic rocks—Classification and nomenclature recommended by the IUGS Subcommission on Systematics of Igneous Rocks: Geotimes, vol. 18, p. 26-30.



Location of Murrieta quadrangle in relation to major structural blocks of the northern Peninsular Ranges batholith. Outlines of principal pre-batholithic rocks of Cretaceous age (inclusive of Jmv) are emphasized as either pre-existing country of the batholith (shaded areas that represent the roots of supracrustal). Connecting of ages in each of the three accessible blocks separated by the Elsinore and San Jacinto fault zones, was done independently of ages in adjacent blocks. Best based upon value of 90 to 105 mm.m.y. Elsinore fault zone. Faulting shown as simplified from Rogers, 1965.

FIGURE 4.6-1b. UNITED STATES GEOLOGICAL SURVEY LEGEND FOR MURRIETA 1:24,000 GEOLOGIC QUADRANGLE	TRITON SUBSTATION PEA	2008	Southern California Edison (SCE) has no indication or reason to believe that there are any inaccuracies or defects with information incorporated in this work and make no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied, with respect to the information or data, furnished herein. No part of this map may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording system, except as expressly permitted in writing by SCE.	SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

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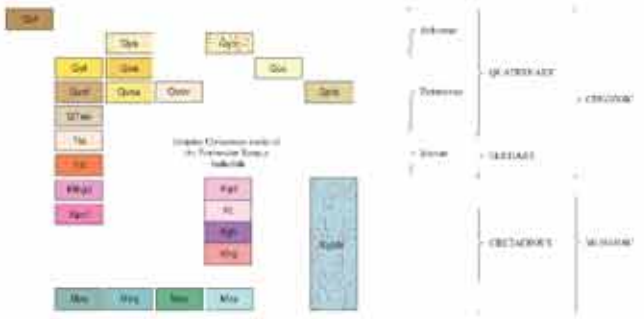
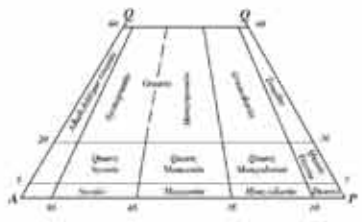


SURROUNDING 7.5' QUADRANGLES



LOCATION MAP

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

This map was printed on an electronic plotter directly from digital files. Dimensional calibration may vary between electronic plotters and between X and Y directions on the same plotter, and paper may change size due to environmental conditions. Therefore, scale and projections may not be true on plots of this map.

Digital files available on World Wide Web at http://geopubs.wr.usgs.gov/open-file/of03-103/

DESCRIPTION OF MAP UNITS

VERY YOUNG SURFICIAL DEPOSITS—Sediment recently transported and deposited in channels and washes, on surfaces of alluvial fans and alluvial plains, and on hillslopes. Soil profile development is non-existent. Includes:

Artificial fill (late Holocene)—Deposits of fill resulting from human construction activities; includes compacted engineered and noncompacted nonengineered fill. Most large deposits are mapped but in some areas, as deposits are shown. Chiefly related to dam at Skinner Reservoir.

YOUNG SURFICIAL DEPOSITS—Sedimentary units that are slightly consolidated to cemented and slightly to moderately dissected. Younger surficial units have upper surfaces that are capped by slight to moderately developed pedogenic-soil profiles (A/C to A/Ck/B_{cambic}/C_{ca} profiles). Include:

Young alluvial channel deposits (Holocene and latest Pleistocene)—Alluvial deposits along current flows. Consist of unconsolidated sand, silt, and clay-bearing alluvium.

Young landslide deposits (Holocene and latest Pleistocene)—Restricted to coherent, probably kinematic on southwest side of Bachelor Mountain. Unit is nonstratiform, composed of anomalously broken gabbro. Has poorly developed slide morphology.

OLD SURFICIAL DEPOSITS—Sedimentary units that are moderately consolidated and slightly to moderately dissected. Older surficial deposits have upper surfaces that are capped by moderately to well-developed pedogenic soils (A/AB/B^t_{cambic} profiles and Bt horizons as much as 1 to 2 m thick and sometimes have in the range of 10YR 5/4 and 6/4 through 7.5YR 6/4 to 6/6 and rarer, Bt horizons reaching 5YR 5/6). Include:

Old alluvial fan deposits (late to middle Pleistocene)—Reddish-brown, gravel and sand alluvial fan deposits; indurated, commonly slightly dissected; in places, includes thin alluvial fan deposits of Holocene age.

Old alluvial channel deposits (late to middle Pleistocene)—Fluvial sediments deposited on canyon floors. Consist of moderately indurated, generally slightly dissected gravel, sand, silt, and clay-bearing alluvium. Usually capped by thin, discontinuous alluvial deposits of Holocene age.

Old colluvial deposits (late to middle Pleistocene)—Colluvial deposits on hillsides and at the bases of slopes. Ranges from rubble to sand, mostly cobble-sized clasts. Unconsolidated to slightly indurated. Restricted largely to Bachelor Mountain area.

VERY OLD SURFICIAL DEPOSITS—Sediments that are slightly to well consolidated to indurated, and moderately to well dissected. Upper surfaces are capped by moderate to well developed pedogenic soils (A/AB/Bt^t_{cambic} profiles having Bt horizons as much as 2 to 3 m thick and reach more than in the range 7.5YR 6/4 and 4/4 to 2.5YR 5/6).

Very old alluvial fan deposits (middle to early Pleistocene)—Mostly well-dissected, well-indurated, reddish-brown alluvial fan deposits. Grain size chiefly sand and gravel. Extensively developed in upper part of Auld Valley.

Very old alluvial channel deposits (middle to early Pleistocene)—Fluvial sediments deposited on broad canyon floors. Consists of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt, and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age.

Very old alluvial valley deposits (middle to early Pleistocene)—Fluvial sediments deposited on broad canyon floors. Consists of moderately to well-indurated reddish-brown, mostly very dissected gravel, sand, silt, and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age.

Pauba Formation (Pleistocene)—Siltstone, sandstone, and conglomerate. Named by Mann (1955) for exposures in Temecula area about 5.2 km southeast of Temecula. Vertebrate fauna from Pauba Formation are of late Irvingtonian and early Rancholabrean ages (Reynolds and Reynolds, 1990a; 1990b). Includes two informal members: a sandstone member and a conglomerate member; only the sandstone member occurs in quadrangle.

Sandstone member—Brown, moderately well-indurated, cross-bedded sandstone containing sparse cobble to boulder conglomeratic beds.

Sandstone and conglomerate of Wilshmar area (Pleistocene and Pliocene)—Sandstone and conglomerate unit unconformably overlain by Pauba Formation (Kennedy, 1977). Informally designated Sandstone and conglomerate of Wilshmar area by Morton (1999). Lower part yields vertebrate fauna of late Blancan age, 2 to 3 Ma; upper part yields fauna of Irvingtonian age, less than 0.45 Ma (Reynolds and Reynolds, 1990a; 1990b; Reynolds and others, 1991). At Cleavy Hill in Murrieta area, unit contains 0.7 Ma Bishop ash (Morton and Hoshaff, 1973). Estimated maximum thickness is 75 m. Includes informal subdivisions, only upper unit, sandstone unit occurs in quadrangle.

Sandstone unit—Restricted here to small area along Santa Gertrudis Creek. Friable, pale yellowish-green, medium-grained, cellular-rich sandstone. Correlation with unit in Murrieta area is probable but not proven.

Temecula Arkose (Pliocene)—Mainly pale yellowish-yellow, medium- to coarse-grained, indurated sandstone. Includes thin discontinuous beds of bufferious sandstone, siltstone, and claystone, and some pebble and cobble conglomeratic beds having locally derived clasts. Named by Mann (1955) for exposures of nonmarine fluvial sandstone exposed southeast of Temecula. Kennedy (1977) assigned unit late Pliocene Blancan (V-V mammal age (2.2 to 2.8 My) based on vertebrate assemblages collected in the Vail Lake quadrangle. Assemblages include *Nannippus*, *Dipodomys*, *Texasomys*, *Equus*, and *Odocoileus* (Gehr, and others, 1977). Later work establishes first occurrence of Irvingtonian I rather than late Blancan (Woodburne, 1987), placing Temecula Arkose not unlike 1.9 Ma (late Pliocene) then 2.5 Ma. Microtine fauna from unit in Rancho area, about five miles east of Santa Ana quadrangle, is considered to have age of 4.0 Ma (Blancan 3) (Repenning, 1987). Thickness of the Temecula Arkose ranges from 90 to over 550 m (Kennedy, 1977). In Bachelor Mountain quadrangle, restricted to north side of Pauba Valley.

Basalt of Temecula area (Miocene)—Vesicular basalt underlies small area in southeast corner of quadrangle on both sides of Temecula Creek. Extends to scattered exposures of basalt northeast of Temecula, and a small exposure of vesicular basalt within valley area of Domenigoni Basin some near to the Murrieta quadrangle (Mann, 1955; Kennedy, 1977; Hall, 1993). Base of Temecula contains exposures of vesicular basalt include apparent dissected shield cone and scattered volcanic bombs (Mann, 1955).

Rocks of the Peninsular Ranges batholith

Granodiorite of Tucalota Hills (Cretaceous)—Elongate pluton composed of massive, light-colored biotite granodiorite. Informally named here for Tucalota Hills in eastern part of quadrangle. Erosionally resistant compared to nearby plutons; forms prominent ridges. Included within Woodson Mountain granodiorite by Larsen (1948).

Palomar Valley Ring Complex (Cretaceous)—Composite ring dike intrusion. Named and described by Morton and Hoshaff (1978) for exposures in Palomar Valley area. Here found only in western ridge of quadrangle. Main part of composite body lies to west and northwest, included within Woodson Mountain granodiorite and San Marcos gabbro by Larsen (1948). Zircon ages of rock from central hornblende-bearing granodiorite from western part of ridge side is 121 $Ma_{(c)}$ and 118.5 $Ma_{(p)}$ (ages courtesy W. Premo). $^{40}Ar/^{39}Ar$ age of hornblende 117.7 Ma and biotite 116.6 Ma (ages courtesy L. Snee). In Bachelor Mountain quadrangle, includes:

Tonalite—Foliated biotite-hornblende tonalite. Small area underlain by foliated tonalite of the easternmost part of the ring complex is located in the southwestern corner of the quadrangle.

Generic Cretaceous granitic rocks of the Peninsular Ranges batholith

Granodiorite, undifferentiated (Cretaceous)—Biotite- and hornblende-bearing granodiorite, undifferentiated. Most is massive and medium grained.

Tonalite, undifferentiated (Cretaceous)—Gray, medium-grained biotite-hornblende tonalite, typically foliated. Western edge of large body is exposed along the eastern margin of the quadrangle and small area along Tucalota Creek at west margin of quadrangle is underlain by tonalite.

Gabbro (Cretaceous)—Mainly hornblende gabbro. Includes San Marcos gabbro of Larsen (1948). Typically brown-weathering, medium- to very coarse-grained hornblende gabbro; very large poikilitic hornblende crystals are common and very locally gabbro is pegmatitic. Much is quite heterogeneous in composition and texture. Includes norite and olivine composition rocks.

Heterogeneous granitic rocks (Cretaceous)—Includes a wide variety of heterogeneous granitic rocks. Mostly of granodiorite and tonalite composition. Limited in quadrangle to southeast of Skinner Reservoir.

End of rocks of the Peninsular Ranges batholith

Metamorphic sedimentary rocks, undifferentiated (Mesozoic)—Wide variety of low- to high-metamorphic grade metasedimentary rocks. Most occurrences include biotite schist.

Quartz-rich rocks (Mesozoic)—Quartzite and quartz-rich metasandstone. Most is massive, but where present, layering represents extreme segregations.

Phyllite (Mesozoic)—Dusky black phyllite. Commonly has sheen produced by very fine-grained white mica on surfaces; locally contains small elongate grains of fine-grained white mica, which may be pseudomorphs after chiastolite.

Schist (Mesozoic)—Biotite schist in part gradational with phyllite. Lower metamorphic grade rocks consist of andalusite-biotite schist. Higher metamorphic grade rocks include cordierite-biotite schist, and highest metamorphic grade rocks are sillimanite schist and less commonly garnet-bearing schist.

Interlayered Mesozoic schist and Cretaceous granitic rocks (Mesozoic)—Wide variety of Mesozoic schist and related metamorphic rocks mixed with granitic rocks ranging in composition from monzogranite to quartz diorite. Most granitic rocks are tonalite composition.

GEOLOGIC SUMMARY

The Bachelor Mountain quadrangle is located in the southern Perris Block area of the Peninsular Ranges Province (see location maps). Regionally, the Perris Block is a relatively stable area located between the Elsinore and San Jacinto fault zones.

In contrast to the rest of the quadrangle, the southern half is underlain almost entirely by young sedimentary units, chiefly the Pauba Formation of Pleistocene age. The Pauba Formation largely consists of well-indurated sandstone containing sparse cobble to boulder conglomerate beds. It is eroded into a gentle badlands topography in most of its extent. Remnants of scattered, discontinuous alluvial deposits suggest that Pauba formation was covered by relatively thin younger Pleistocene sediments. The most extensive remnant of these younger deposits forms a surface of low relief at Hack Mesa, just north of Long Valley.

The northern half of the quadrangle is underlain by Mesozoic metasedimentary rocks that are intruded by plutonic rocks of the Cretaceous Peninsular Ranges batholith. The western part of these metamorphic rocks are mainly phyllitic, grading eastward into quartzitic and schistose rocks. Metamorphic grade increases eastward also, to biotite, cordierite-biotite, and sillimanite schist.

The oldest batholithic rocks in the quadrangle are massive hornblende gabbro including the large body underlying Bachelor Mountain. Large masses of gabbro are included in granodiorite and tonalite plutons east of Bachelor Mountain. In the northwestern part of the quadrangle is the southeastern part of the Palomar Valley Ring complex. This complex makes up much of the northern part of the Murrieta quadrangle and the southern part of the Romoland quadrangle. In the Bachelor Mountain quadrangle, rocks of the complex are limited to foliated tonalite which is the most outer part of the complex. One of Skinner Reservoir dike intrusive underlying the Tucalota Hills, is a series of north-trending intrusive-textured porphyritic plutons informally named the granodiorite of Tucalota Hills (Morton, 1999).

REFERENCES

Gehr, D.J., Jefferson, G.T., and Kennedy, M.P., 1977, Late Pliocene vertebrate fossils from the Elsinore fault zone, California: Jour. Vertebrate Paleontology, v. 51, p. 864-866.

Hall, A.D., 1993, Sedimentology of the Elsinore Temecula trough, Elsinore fault zone, Southern California: Ph.D. dissertation, Santa Barbara, California, University of California, , 253p.

Kennedy, M.P., 1977, Recency and character of faulting along the Elsinore fault zone in southern Riverside County, California: California Div. Mines and Geology, Special Report 131, 12 p.

Larsen, E.S., 1948, Batholith and associated rocks of Corona, Elsinore, and San Luis Rey quadrangles, southern California: Geol. Society America Mem. 29, 182 p.

Mann, J.F., 1955, Geology of a portion of the Elsinore fault zone, California: California Div. Mines Special Report 43, 22 p.

Morton, R., and Hoshaff, R.L., 1975, Bishop Ash: A widespread volcanic ash recorded in southern California: Jour. Sedimentary Petrology, v. 45, p. 207-211.

Morton, D.M., 1999, Preliminary digital geologic map of the Santa Ana 30' X 60' quadrangle, southern California: U.S. Geological Survey Open-File Report 99-172, 6(p., scale, 1:100,000.

Morton, D.M. and Baird, A.K. 1976, Petrology of the Palomar Valley ring complex, southern California batholith: U.S. Geol. Survey Jour. Research, v. 4, n. 1, p 83-99.

Repenning, C.A. 1987, Biochronology of the microtine rodents of the United States, in, Woodburne, M.O. ed., Cenozoic mammals of North America: Geochronology and biostratigraphy: Berkeley and Los Angeles, Univ. California Press, p. 236-268.

Reynolds, R.E., Jay, L.P., and Reynolds, R.L., 1990, An early-late Irvingtonian land mammal age fauna from Murrieta, Riverside County, California: San Bernardino County Museum Association Quarterly, v. XXXVII, p. 35-36.

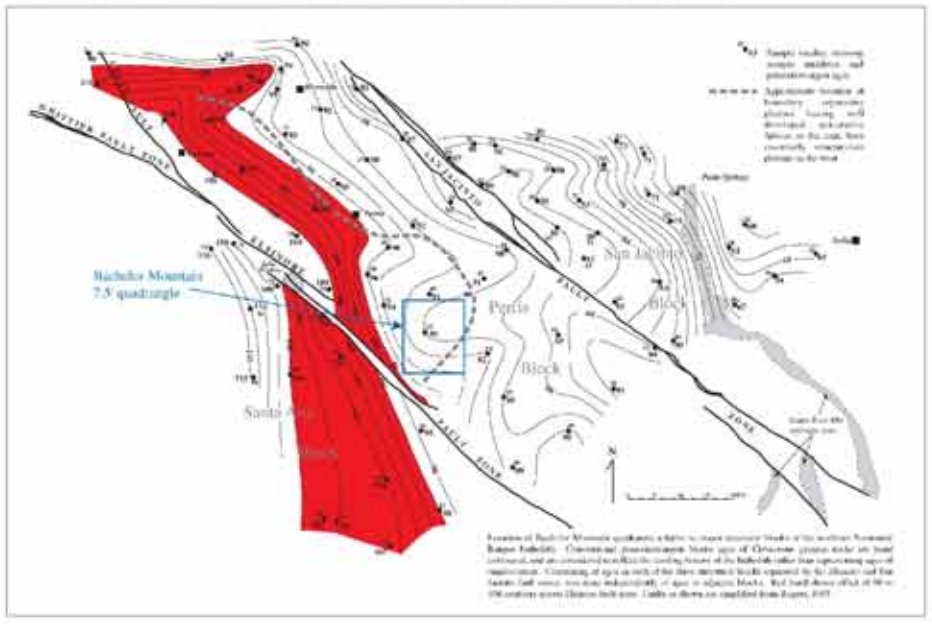
Reynolds, R.E., and Reynolds, R.L., 1990a, A new late Blancan faunal assemblage from Murrieta, Riverside County, California: San Bernardino County Museum Association Quarterly, v. XXXVII, p. 34.

_____, 1990b, Irvingtonian? Fauna from the Pauba Formation, Temecula, Riverside County, California: San Bernardino County Museum Association Quarterly, v. XXXVII, p. 37.

Rogers, T.H., 1965, Santa Ana sheet: California Division of Mines and Geology geologic map of California, scale, 1:250,000.

Streckeisen, A.L., 1976, Plutonic rocks—Classification and nomenclature recommended by the IUGS Subcommission on Systematics of Igneous Rocks: Geotimes, v. 18, p. 26-30.

Woodburne, M.O., 1987, ed., Cenozoic mammals of North America: Geochronology and biostratigraphy: Berkeley and Los Angeles, Univ. California Press, 336 p.



Location of Bachelor Mountain quadrangle relative to major structural blocks of the northern Peninsular Ranges batholith. Concentration of granodiorite bodies west of Cretaceous plutons marks the batholithic rather than representing ages of emplacement. Consisting of ages in each of the three structural blocks separated by the Elsinore and San Jacinto fault zones, two main subparallel belts of ages in adjacent blocks. Red band shows offset of 90 to 100 kilometers across Elsinore fault zone. Faults as shown are simplified from Rogers, 1965.

FIGURE 4.6-1c. UNITED STATES GEOLOGICAL SURVEY LEGEND FOR BACHELOR MOUNTAIN 1:24,000 GEOLOGIC QUADRANGLE

TRITON SUBSTATION PEA	2008

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FIGURE 4.6-2. EARTHQUAKE EPICENTERS AND FAULT LINES NEAR THE ELECTRICAL NEEDS AREA

SAN ANDREAS FAULT ZONE

SAN BERNARDINO COUNTY

RIVERSIDE COUNTY

SAN JACINTO FAULT ZONE

ORANGE COUNTY

ELSINORE FAULT ZONE

Site Alternative C

Site Alternative B

Electrical Needs Area

Proposed Project

RIVERSIDE COUNTY

SAN DIEGO COUNTY

Pacific Ocean

10

60

91

215

15

5

Site Alternative C

Murrieta Hot Springs Fault

Site Alternative B

Proposed Project

Electrical Needs Area Detail

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LEGEND

- Fault Line
- Major Highway
- County Boundary
- Electrical Needs Area

Proposed Alternatives

Substations

- Proposed Project
- Site Alternative B
- Site Alternative C

Earthquake Epicenters

Magnitude - Richter Scale

- < 4.5
- 4.5 - 5.4
- 5.5 - 6.4
- > 6.5

1:411,840
NAD 83 UTM ZONE 11N

1 inch equals 34,320 ft

0 68,640 Feet

0 13 Miles

Sources: Southern California Edison; Riverside County; California Geological Survey; Environmental Systems Research Institute

2008

TRITON SUBSTATION PEA

FIGURE 4.6-2. EARTHQUAKE EPICENTERS AND FAULT LINES NEAR THE ELECTRICAL NEEDS AREA

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4. a ards and a ardous aterials

4. .1 Overview

This analysis describes the potential impacts from hazards and hazardous materials that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation from hazards and hazardous materials.

4. .2 ethodology

The study area for this resource is defined as approximately one mile from the alternatives substation sites and subtransmission and telecommunication line routes. California state government and education codes, and the County of Riverside, City of Temecula, and City of Murrieta plans, policies, and programs were reviewed to identify potential impacts related to hazards and hazardous materials as a result of the construction and operation of the Triton Substation Project. In addition, an environmental database search was conducted for the Triton Substation Project area for planning purposes only. The search included the appropriate databases and search radii to comply with industry standards for property transfers including American Society for Testing and Materials (ASTM) Designation E 1527-05 and 40 CFR Part 312. A Phase I and Phase II Environmental Site Assessment was conducted for the Proposed Project.

The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4. .3 egulations Plans and Standards

4. .3.1 ederal egulations

4. .3.1.1 lean ater Act A 33 .S. . Section 12 1 et se .

The Clean Water Act is the principal federal statute protecting navigable waters and adjoining shorelines from pollution. The law was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Since its enactment, the CWA has formed the foundation for regulations detailing specific requirements for pollution prevention and response measures. The United States Environmental Protection Act (USEPA) implements provisions of the Clean Water Act through a variety of regulations, including the National Contingency Plan and the Oil Pollution and Prevention Regulations. Implementation of the Clean Water Act is the responsibility of each state.

The goal of the oil pollution prevention regulation in 40 CFR Part 112 is to prevent oil discharges from reaching navigable waters of the United States or adjoining shorelines. The rule was also written to ensure effective responses to oil discharges. The rule further specifies that proactive, and not passive, measures be used to respond to oil discharges. The oil pollution regulation contains two major types of requirements: prevention requirements

(Spill Prevention, Countermeasure, and Control (SPCC) rule) and Facility Response Plan (FRP) requirements.

The SPCC rule requires facilities that could reasonably be expected to discharge oil in quantities that may be harmful into navigable waters to develop and implement SPCC plans. USEPA amended the SPCC Rule in 2006 to extend the SPCC compliance dates in §112.3(a), (b), and (c) for all facilities until October 31, 2007.

SPCC plans must be prepared, certified (by a professional engineer), and implemented by facilities that store, process, transfer, distribute, use, drill, produce, or refine oil or oil production.

4. .3.1.2 esource onservation and ecovery Act A 42 .S. . 1 et se .

The Resource Conservation and Recovery Act (RCRA) regulate hazardous waste from the time that waste is generated through its management, storage, transport, and treatment until its final disposal. The USEPA has authorized the California Department of Toxic Substances Control (DTSC) to administer the RCRA program in California.

4. .3.1.3 .S. Department of Transportation

The U.S. Department of Transportation has the regulatory responsibility for the safe transportation of hazardous materials.

- Title 49, Code of Federal Regulations (CFR), Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

4. .3.1.4 Occupational Safety and ealth Act

Federal occupational safety and health regulations contain provisions with respect to the management of hazardous materials. The applicable federal law is the Occupational Safety and Health Act (OSHA) of 1970 as amended (29 U.S.C., Sections 651-678; 29 CFR 1910). Federal OSHA requirements are designed to promote worker safety, worker training, and worker right-to-know. OSHA establishes regulatory requirements primarily by promulgating standards for occupational safety and health.

Employers are required to train a team of employees to applicable federal OSHA-defined (29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER) Standards) levels to respond to accidental releases of hazardous materials and, as appropriate, to retain on-call contractors to respond to accidental releases of hazardous materials.

4. .3.1. Emergency Planning and ommunity ight-to- now Act 42 .S. . 11 1 et se .

Also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), the Emergency Planning and Community Right-to-Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law was designed to help communities protect public health, safety, and the environment from chemical hazards. To implement EPCRA, Congress required each state to appoint a State Emergency Response Commission (SERC). Each SERC was required to divide the state into Emergency Planning

Districts and to name a Local Emergency Planning Committee (LEPC) for each district. EPCRA provides requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.

4. .3.1. ederal Aviation Administration

- Title 14 CFR 77.13(2)(i) requires an applicant to notify the Federal Aviation Administration (FAA) of the construction of structures within 20,000 feet of the nearest point of the nearest runway of an airport with at least one runway longer than 3,200 feet.
- Title 14 CFR 77.17 requires an applicant to submit a Notice of Proposed Construction or Alteration (FAA Form No. 7460-1) to the FAA for construction within 20,000 feet of the nearest runway of an airport with at least one runway longer than 3,200 feet.

4. .3.2 State egulations

4. .3.2.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts from hazards and hazardous materials.

4. .3.2.2 alifornia Office of Emergency Services

The California Office of Emergency Services coordinates the emergency response to an accidental release of acutely/extremely hazardous materials.

4. .3.2.3 Department of Toxic Substances ontrol

Under Government Code Section 65962.5(a), the DTSC is required to compile and update as appropriate, but at least annually, and submit to the Secretary for Environmental Protection, a list of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code
2. All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code

4. .3.2.4 alifornia overnment ode Title 1 Section 421 -421 . Protection of nderground Infrastructure

Utility operators working in the vicinity of utilities are required to contact Underground Service Alert (USA), the regional notification center, at least two days prior to excavation of any subsurface installation. USA would notify the utilities that may have buried lines within 1,000 feet of the project, and representatives of the utilities would then mark the specific location of their facilities within the work area as required by the code.

4. .3.2. alifornia Public tilities ode

The Compatibility Plan establishes policies for determining consistency between development projects within the Airport Influence Area, and the objectives set forth in the State

Aeronautics Act (Pub. Util. Code §§21670-21679.5). Those objectives call for the Commission to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses. (Pub. Util. Code §21670, subd. (a)(2)).

The Triton Substation Project would be subject to review under the Riverside County Airport Land Use Compatibility Plan (COR, 2004), as described below under County of Riverside.

4. .3.2. egional ater uality ontrol Board B

The RWQCB protects ground and surface water quality through the development and enforcement of water quality objectives and implementation of a basin plan. The RWQCB governs requirements, issues waste discharge permits, takes enforcement action against violators, and monitors water quality.

4. .3.3 ocal urisdictions

4. .3.3.1 ounty of iverside

General Plan Safety Policy 7.3 – Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to:

- Install automatic fire and hazardous materials detection, reporting and shut-off devices
- Install an alternative communication system in the event power is out or telephone service is saturated following an earthquake. (COR, 2003)

Riverside County irport Land se Compatibility Plan
1.5 Types of Actions Reviewed

1.5.3 *Major Land Use Actions*

(a) Actions affecting land uses within any compatibility zone

(9) Proposals for new development (including buildings, antennas, and other structures) having a height of more than:

- 35 feet within Compatibility Zone B1, B2, or a Height Review Overlay Zone;
- 70 feet with Compatibility Zone C; or
- 150 feet within Compatibility Zone D or E [Table 2A states airspace review required for objects greater than 70 feet tall in Zone D and 100 feet tall in Zone E] (COR, 2004)

General Plan Safety Policy 7.3 – Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to:

- Install automatic fire and hazardous materials detection, reporting and shut-off devices

- Install an alternative communication system in the event power is out or telephone service is saturated following an earthquake. (COR, 2003)

4. .3.2 ity of urrieta

General Plan Safety Policy 9.1b – Projects in the City shall comply with the most recent Land Use Compatibility Guidelines for French Valley Airport. (COM, 1994)

4. .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would result in a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, 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, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, 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.
- 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. . Proposed Project and Alternatives

The following environmental resource-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF HAZ-1 **Phase I and Phase II Environmental Site Assessments.** SCE would perform a Phase I and Phase II ESA, as well as a geotechnical study (PDF GEO-2), prior to acquisition of new property to identify potential impacts to soil or groundwater in the areas to be graded or excavated as part of the Triton

Substation Project. Potential hazardous materials site(s) would be remediated as required by jurisdictional agencies, and as applicable.

PDF HAZ-2 **Wood Pole Removal**. The wood poles removed during the 115 kV subtransmission line installation would be reused by SCE, returned to the manufacturer, recycled, or disposed of in a licensed Class I hazardous waste landfill.

PDF HAZ-3 **Health and Safety Plan**. SCE would prepare and implement a Health and Safety Plan to address site-specific health and safety issues related to site-specific hazard controls; personnel protection; communication; and training in the use of personal protective equipment and the implementation of required procedures.

PDF HAZ-4 **Traffic Control**. SCE would consult with local agencies, including California Department of Transportation (Caltrans), prior to initiation of construction activities that may affect traffic (i.e., equipment delivery necessitating lane closures, stringing of conductors), and would implement transportation and traffic project design features (see Section 4.15, Transportation and Traffic).

PDF HAZ-5 **Fire Prevention and Response Practices.** SCE would implement standard fire prevention and response practices that address construction activities for the Triton Substation Project. The Fire Prevention and Response Practices would establish standards and practices that would minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification. The Fire Prevention and Response Practices would address spark arresters, smoking and fire rules, storage and parking areas, use of gasoline-powered tools, road closures, use of a fire guard, and fire suppression equipment and training requirements. In addition, vehicle parking, storage areas, stationary engine site and welding areas would be cleared of vegetation and flammable materials. Areas used for dispensing or storage of gasoline, diesel fuel or other oil products would be cleared of vegetation and other flammable materials and no smoking would occur in these areas.

PDF HAZ-6 **Vegetation Clearance.** As applicable, SCE would maintain vegetation clearance during the life of the Triton Substation Project to reduce the fire hazard potential.

4. . .1 Proposed Project

4. . .1.1 Environmental Setting

A Phase I and Phase II ESA was conducted for the Proposed Project and no hazardous material sites were identified and no remediation is required (Appendix E).

The Proposed Project site would be located approximately 1.5 miles from the French Valley Airport and within Zone D and Zone E of the French Valley Airport Compatibility Plan, which requires review and approval of structures greater than 70 feet in Zone D and greater than 100 feet in Zone E.

The N/S Telecommunication Lines, located within Zone B1, C, D, and E, would be underbuilt on existing poles at a height of approximately 24 feet or within existing underground banks. The height for airspace review in Zone B1, C, D, and E, is any object greater than 35, 70, 70, and 100 feet tall, respectively.

No private airstrips are located within two miles of the Proposed Project (COR, 2008).

The closest school to the Proposed Project site is Nicolas Valley Elementary School, located greater than 0.4 mile west of the Proposed Project ground-disturbing activities. Schools within 0.25 mile of the N/S Telecommunication Lines are as follows:

- Vail Elementary School - 0.06 mile (approximately 316 feet) from the N/S Telecommunication Lines
- Temecula Valley High School - 0.07 mile (approximately 369 feet) from the N/S Telecommunication Lines
- Temecula Valley Independent High School - 0.07 mile (approximately 369 feet) from the N/S Telecommunication Lines
- Temecula Plan and Learn - 0.10 mile (approximately 528 feet) from the N/S Telecommunication Lines
- French Valley University, Inc. - 0.23 mile (approximately 1214 feet) from the N/S Telecommunication Lines

The State of California Department of Forestry and Fire Protection Fire Response and Assessment Program (FRAP) maps the Cities of Temecula and Murrieta as communities at risk from wildfire (FRAP, 2001).

The Proposed Project site is located on land mapped as "Developed" on the FRAP Wildland-Urban Interface at Risk and Fire Zone of Influence: Riverside County (2007a). The Proposed Project site also is located on land designated as Local Response Area (LRA) High and LRA Unzoned (FRAP, 2007b).

The N/S Telecommunication Lines cross land mapped as "Defense Zone" and "Threat Zone" on the FRAP Wildland-Urban Interface at Risk and Fire Zone of Influence: Riverside County (2007a). The N/S Telecommunication Lines also are located adjacent to fire hazard severity zones mapped as LRA High (FRAP, 2007b).

4. . .1.2 Impact Analysis

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction Impacts

Hazardous materials would be used during the construction of the Proposed Project. There is potential for incidents involving the release of gasoline, diesel fuel, motor oil, hydraulic fluids and lubricants, paints, solvents, adhesives, and cleaning chemicals. In addition, waste motor oils, waste hydraulic fluids, discarded batteries, and waste solvents and adhesives are anticipated to be generated during construction activities. Wood poles that would be

removed as part of the subtransmission line modification may be coated with creosote (a thick, oily wood preservative or water-proofing agent and distillation product of coal tar). Spills and leaks of hazardous materials during construction would potentially result in impacts to soil or groundwater.

The most-likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. SCE would prepare and implement an SWPPP (discussed in Section 4.8, Hydrology and Water Quality) to avoid potential impacts caused by spills and leaks. Additionally, the SWPPP discussed in Section 4.8 would include protective measures, notification, and cleanup requirements for accidental spills or other releases of hazardous materials.

The wood poles removed during the 115 kV subtransmission line installation would be reused by SCE, returned to the manufacturer, recycled, or disposed of in a licensed Class I hazardous waste landfill (PDF HAZ-2). Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Due to the low volume and low toxicity of the hazardous materials to be used during construction, and implementation of project design features, the potential for environmental impacts from construction-related hazardous materials incidents is less than significant. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Transformers at the substation would contain oil for cooling. The oil could leak or spill if the transformers were damaged from a seismic event, fire, or other unforeseen incident. The design of the substation would provide containment and/or diversionary structures for equipment to prevent the discharge of oil. SCE would prepare and implement an SPCC plan for the transformer oil. Relatively small quantities of hazardous materials, such as those identified for construction, would be used during operation and maintenance of the Triton Substation Project. Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction Impacts

Hazardous materials would be used during the construction of the Proposed Project. There is potential for incidents involving the release of gasoline, diesel fuel, motor oil, hydraulic fluids and lubricants, paints, solvents, adhesives, and cleaning chemicals. In addition, waste motor oils, waste hydraulic fluids, discarded batteries, and waste solvents and adhesives are anticipated to be generated during construction activities. Wood poles that would be removed as part of the subtransmission line modification may be coated with creosote (a thick, oily wood preservative or water-proofing agent and distillation product of coal tar). Spills and leaks of hazardous materials during construction would potentially result in impacts to soil or groundwater.

The most-likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. SCE would prepare and implement an SWPPP plan (discussed in Section 4.8, Hydrology and Water Quality) to avoid potential impacts caused by spills and leaks. Additionally, the SWPPP discussed in Section 4.8 would include protective measures, notification, and cleanup requirements for accidental spills or other releases of hazardous materials.

Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Additionally, due to the low volume and low toxicity of the hazardous materials to be used during construction, and implementation of project design features, the potential for environmental impacts from construction-related hazardous materials incidents is less than significant. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Relatively small quantities of hazardous materials, such as those identified for construction and transformer oil, would be used during operation and maintenance of the Triton Substation Project. Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction Impacts

Construction of the Proposed Project would include handling of hazardous materials within 0.25 mile of existing schools; however, hazardous materials would be used, stored, transported, and disposed of according to applicable regulations and an SWPPP would be prepared for and implemented during construction of the Proposed Project. Therefore, construction of the Proposed Project would result in a less than significant impact.

Operational Impacts

Relatively small quantities of hazardous materials, such as those identified for construction, will be used during operation and maintenance of the Triton Substation Project. Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Construction Impacts

A Phase I and Phase II ESA was conducted for the Proposed Project and no hazardous material sites were identified and no remediation is required (Appendix E). Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

The environmental database search results indicate that no hazardous materials sites are located within the search radius of the site (Environmental FirstSearch, 2008) (Appendix F5). Additionally, because the site would be remediated prior to construction as required by jurisdictional agencies, and as applicable, as described under the construction section of this criterion, operation of the Proposed Project would result in no impact under this criterion.

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?

Construction Impacts

The Proposed Project site is located approximately 1.5 miles from the French Valley Airport and is within Zones D and E of the French Valley Airport Compatibility Plan. The Plan requires an airspace height review for approval of objects over 70 feet tall and 100 feet tall in Zones D and E, respectively. SCE would consult with the French Valley Airport and the FAA for an airspace height review and approval of objects over 70 to 100 feet tall in order to ensure that the Triton Substation Project would not result in a safety hazard for people residing or working in the project area. Final design, engineering, and construction of the Proposed Project would be consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). Additionally, SCE would prepare and implement a Health and Safety Plan to address site-specific health and safety issues related to site-specific hazard controls; personnel protection; communication; and training in the use of personal protective equipment and the implementation of required procedures (PDF HAZ-3).

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

The substation would incorporate low-profile design features, which would limit the height of electrical equipment and structures to approximately 30 feet. The subtransmission line TSPs would be approximately 75 to 85 feet in height and located within Zone D and Zone E of the French Valley Airport Compatibility Plan. However, the new N/S Telecommunication Lines would be underbuilt on existing poles. Operation of the Proposed Project would be conducted as approved under the FAA review for height restrictions. Additionally, SCE would prepare and implement a Health and Safety Plan to address site-specific health and safety issues related to site-specific hazard controls; personnel protection; communication; and training in the use of personal protective equipment and the implementation of required procedures (PDF HAZ-3).

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Construction Impacts
The Proposed Project would not be located in the vicinity (i.e., within two miles) of a private airstrip. Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operational Impacts
The Proposed Project would not be located in the vicinity (i.e., within two miles) of a private airstrip. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction Impacts
Most construction activity would occur on the Proposed Project substation site and along existing roads and transmission line routes. SCE would consult with local agencies, including California Department of Transportation (Caltrans), prior to initiation of construction activities that may affect traffic (i.e., equipment delivery necessitating lane closures, stringing of conductors), and would implement transportation and traffic project design features (see Section 4.15, Transportation and Traffic) (PDF HAZ-4), as necessary. Therefore, construction of the Proposed Project would result in a less than significant impact this criterion.

Operation Impacts
Proposed Project elements, including substation, 12 kV duct banks, subtransmission lines, and telecommunication cables would be located adjacent to (i.e., at grade, underground and overhead), but not within routes used by emergency vehicles or for emergency evacuation routes and would not interfere with emergency response or evacuation plans. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Construction Impacts
Potential risks of fire danger from the Proposed Project include smoking, refueling, and operating vehicles and other equipment off roadways. Welding during construction of support structures could also potentially result in the combustion of native vegetation within proximity of the welding site. Subtransmission lines may pose a fire hazard if a conducting object comes in close proximity to a line or if a live-phase conductor falls to the ground.

SCE would implement standard fire prevention and response practices that address construction activities for the Triton Substation Project. The Fire Prevention and Response Practices would establish standards and practices that would minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification. The Fire Prevention and Response Practices would address spark arresters, smoking and fire rules, storage and parking areas, use of gasoline-powered tools, road closures, use of a fire guard, and fire suppression equipment and training requirements. In addition, vehicle parking,

storage areas, stationary engine site and welding areas would be cleared of vegetation and flammable materials. Areas used for dispensing or storage of gasoline, diesel fuel or other oil products would be cleared of vegetation and other flammable materials and no smoking would occur in these areas (PDF HAZ-5). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Subtransmission lines may pose a fire hazard if a conducting object comes within proximity to a line or if a live-phase conductor falls to the ground. In addition, maintenance activities may pose a fire danger from operating vehicles and other equipment off roadways. As applicable, SCE would maintain vegetation clearance during the life of the Triton Substation Project to reduce the fire hazard potential (PDF HAZ-6).

As discussed above, SCE would implement standard fire prevention and response practices (PDF HAZ-5) to address operation and maintenance, establish standards and practices that will minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

4. . .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4. . .2 Site Alternative B

4. . .2.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.7.5.1.1)

Based on the results of the environmental database search, the Site Alternative B area is not known to contain hazardous materials or hazardous wastes (Environmental FirstSearch, 2008).

Site Alternative B would be located approximately 1.5 miles from the French Valley Airport and within Zone D and Zone E of the French Valley Airport Compatibility Plan, which requires review and approval of structures greater than 70 feet in Zone D and greater than 100 feet in Zone E.

The N/S Telecommunication Lines, located within Zone B1, C, D, and E, would be underbuilt on existing poles at a height of approximately 24 feet or within existing underground banks. The height for airspace review in Zone B1, C, D, and E, is any object greater than 35, 70, 70, and 100 feet tall, respectively.

The closest school to the Site Alternative B would be Nicolas Valley Elementary School, located greater than 0.4 mile west of the Site Alternative B ground-disturbing activities. Schools within 0.25 mile of the N/S Telecommunication Lines were identified as follows:

- Vail Elementary School - 0.06 mile (approximately 316 feet) from the N/S Telecommunication Lines
- Temecula Valley High School - 0.07 mile (approximately 369 feet) from the N/S Telecommunication Lines
- Temecula Valley Independent High School - 0.07 mile (approximately 369 feet) from the N/S Telecommunication Lines
- Temecula Plan and Learn - 0.10 mile (approximately 528 feet) from the N/S Telecommunication Lines
- French Valley University, Inc. - 0.23 mile (approximately 1214 feet) from the N/S Telecommunication Lines

The State of California Department of Forestry and Fire Protection FRAP maps the Cities of Temecula and Murrieta as communities at risk from wildfire (FRAP, 2001).

The Site Alternative B is located on land mapped as "Developed" on the FRAP Wildland-Urban Interface at Risk and Fire Zone of Influence: Riverside County (2007a). Site Alternative B also is located on land mapped as fire hazard severity zones LRA Unzoned (FRAP, 2007b).

The N/S Telecommunication Lines cross land mapped as "Defense Zone" and "Threat Zone" on the FRAP Wildland-Urban Interface at Risk and Fire Zone of Influence: Riverside County (2007a). The N/S Telecommunication Lines also are located adjacent to fire hazard severity zones mapped as LRA High (FRAP, 2007b).

4. . .2.2 Impact Analysis

Construction and operation of Site Alternative B would involve the routine transport, use, or disposal of hazardous materials. Implementation of Site Alternative B would not 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. There would be potential for incidents involving the release of gasoline, diesel fuel, motor oil, mineral oil, hydraulic fluids and lubricants, paints, solvents, adhesives, and cleaning chemicals. In addition, waste motor oils, waste hydraulic fluids, discarded batteries, and waste solvents and adhesives are anticipated to be generated. The most-likely incidents would be associated with minor spills or drips. Spills and leaks of hazardous materials during implementation of this alternative would potentially result in impacts to soil or groundwater. To address these incidents during construction, an SWPPP would be prepared and implemented. The SWPPP would include protective measures, notification, and cleanup requirements. Additionally, to address similar incidents during operation, an SPCC plan would be prepared and implemented. The materials to be used would be of low toxicity and low volume. Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Therefore, implementation of Site Alternative B would result in less than significant impacts under these criteria.

Implementation of the Site Alternative B would occur within 0.25 mile of existing schools. Due to the low volume and low toxicity of the hazardous materials to be used during

construction and operation; use, storage, handling, transport, and disposal of hazardous materials in accordance with applicable regulations; design of the substation to provide containment and/or diversionary structure for equipment to prevent the discharge of oil; and implementation of an SWPPP during construction and an SPCC plan during operation, construction and operation of Site Alternative B would result in a less than significant impact under this criterion.

Site Alternative B would not be located on a site that is included on a list of hazardous materials sites. No hazardous materials sites are located within the search radius of the site (Environmental FirstSearch, 2008). SCE would perform a Phase I and Phase II ESA, as well as a geotechnical study (PDF GEO-2), prior to acquisition of new property to identify potential impacts to soil or groundwater in the areas to be graded or excavated as part of the Triton Substation Project. Potential hazardous materials site(s) would be remediated as required by jurisdictional agencies, and as applicable (PDF HAZ-1). Therefore, construction of Site Alternative B would result in less than significant impacts under these criteria. Additionally, because the site would be remediated prior to construction, operation of Site Alternative B would result in no impact under this criterion.

Site Alternative B also would be located within an airport land use plan and within two miles of a public airport. Final design, engineering, and construction of Site Alternative B would be consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). SCE would prepare and implement a Health and Safety Plan (PDF HAZ-3). Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Site Alternative B would not be located within two miles of a private airstrip. Therefore, implementation of Site Alternative B would result in no impact under this criterion.

Construction of Site Alternative B would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Most construction activity would occur on Site Alternative B substation site and along existing roads and subtransmission line routes. SCE would implement traffic control (PDF HAZ-4), as necessary. During operation, Site Alternative B elements, including substation, 12 kV duct banks, subtransmission lines, and telecommunication cables, would be located adjacent to (i.e., at grade, underground and overhead), but not within routes used by emergency vehicles or for emergency evacuation routes and would not interfere with emergency response or evacuation plans. Therefore, implementation of Site Alternative B would result in less than significant impacts during construction and no impact during operation under this criterion.

Finally, Site Alternative B could expose people or structures to a significant risk of loss, injury or death involving wildland fires. Potential risks of fire danger during construction and operation include smoking, refueling, offroad vehicle operation, welding, and transmission lines (if a conducting object comes within proximity of a line or if a live-phase falls to the ground. SCE would implement standard fire prevention and response practices (PDF HAZ-5). Additionally, as applicable, SCE would maintain vegetation clearance during the life of the Triton Substation Project to reduce the fire hazard potential (PDF HAZ-6).

Therefore, implementation of Site Alternative B would result in less than significant impacts under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts from hazards and hazardous materials.

4. . .3 Site Alternative

4. . .3.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.7.5.1.1.

Based on the results of the environmental database search, the Site Alternative C area is not known to contain hazardous materials or hazardous wastes (Environmental FirstSearch, 2008).

Site Alternative C would be located approximately 0.18 mile from the French Valley Airport and within Zones B1, C, and D of the French Valley Airport Compatibility Plan, which requires review and approval of structures greater than 35, 70, and 70 feet, respectively.

The N/S Telecommunication Lines, located within Zone B1, C, D, and E, would be underbuilt on existing poles at a height of approximately 24 feet or within existing underground banks. The height for airspace review in Zone B1, C, D, and E, is any object greater than 35, 70, 70, and 100 feet tall, respectively.

The closest school to the Site Alternative C would be Nicolas Valley Elementary School, located greater than 0.6 mile west of the Site Alternative C ground-disturbing activities, including substation site, 12kV duct banks, new subtransmission structures, and new underground telecommunication cable locations. Schools within 0.25 mile of the N/S Telecommunication Lines were identified as follows:

- Vail Elementary School - 0.06 mile (approximately 316 feet) from the N/S Telecommunication Lines
- Temecula Valley High School - 0.07 mile (approximately 369 feet) from the N/S Telecommunication Lines
- Temecula Valley Independent High School - 0.07 mile (approximately 369 feet) from the N/S Telecommunication Lines
- Temecula Plan and Learn - 0.10 mile (approximately 528 feet) from the N/S Telecommunication Lines
- French Valley University, Inc. - 0.23 mile (approximately 1214 feet) from the N/S Telecommunication Lines

The State of California Department of Forestry and Fire Protection Fire Response and Assessment Program (FRAP) maps the Cities of Temecula and Murrieta as a communities at risk from wildfire (FRAP, 2001).

Site Alternative C is located on land mapped as "Threat Zone" and "Defense Zone" on the FRAP Wildland-Urban Interface at Risk and Fire Zone of Influence: Riverside County (2007a). The Proposed Project site also is located on land designated as LRA High, LRA Medium, and LRA Unzoned (FRAP, 2007b).

The N/S Telecommunication Lines cross land mapped as fire hazard severity zones "Defense Zone" and "Threat Zone" on the FRAP Wildland-Urban Interface at Risk and Fire Zone of Influence: Riverside County (2007a). The N/S Telecommunication Lines also are located adjacent to fire hazard severity zones mapped as LRA High (FRAP, 2007b).

4. . .3.2 Impact Analysis

Construction and operation of Site Alternative C would involve the routine transport, use, or disposal of hazardous materials. Implementation of Site Alternative C would not 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. There would be potential for incidents involving the release of gasoline, diesel fuel, motor oil, mineral oil, hydraulic fluids and lubricants, paints, solvents, adhesives, and cleaning chemicals. In addition, waste motor oils, waste hydraulic fluids, discarded batteries, and waste solvents and adhesives are anticipated to be generated. The most-likely incidents would be associated with minor spills or drips. Spills and leaks of hazardous materials during implementation of this alternative would potentially result in impacts to soil or groundwater. To address these incidents during construction, an SWPPP would be prepared and implemented. The SWPPP would include protective measures, notification, and cleanup requirements. Additionally, to address similar incidents during operation, an SPCC Plan would be prepared and implemented. The materials to be used would be of low toxicity and low volume. Hazardous materials would be used, stored, transported, and disposed of according to applicable regulations. Therefore, implementation of Site Alternative C would result in less than significant impacts under these criteria.

Implementation of the Site Alternative C would occur within 0.25 mile of existing schools. Due to the low volume and low toxicity of the hazardous materials to be used during construction and operation; use, storage, handling, transport, and disposal of hazardous materials in accordance with applicable regulations; design of the substation to provide containment and/or diversionary structure for equipment to prevent the discharge of oil; and implementation of an SWPPP during construction and an SPCC Plan during operation, construction and operation of Site Alternative C would result in a less than significant impact under this criterion.

Site Alternative C would not be located on a site that is included on a list of hazardous materials sites. No hazardous materials sites are located within the search radius of the site (Environmental FirstSearch, 2008). SCE would perform a Phase I and Phase II ESA. Potential hazardous materials site(s) would be remediated as required by jurisdictional agencies, and as applicable (PDF HAZ-1). Therefore, construction of Site Alternative C would result in less than significant impacts under these criteria. Additionally, because the site would be remediated prior to construction, operation of Site Alternative C would result in no impact under this criterion.

Site Alternative C also would be located within an airport land use plan and within two miles of a public airport. Final design, engineering, and construction of Site Alternative C would be consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). SCE would prepare and implement a Health and Safety Plan (PDF HAZ-3). Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Site Alternative C would not be located within two miles of a private airstrip. Therefore, implementation of Site Alternative C would result in no impact under this criterion.

Construction of Site Alternative C would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Most construction activity would occur on Site Alternative C substation site and along existing roads and subtransmission line routes. SCE would consult with local agencies, including Caltrans (PDF HAZ-4), as necessary. During operation, Site Alternative C elements, including substation, 12 kV duct banks, subtransmission lines, and telecommunication cables, would be located adjacent to (i.e., at grade, underground and overhead), but not within routes used by emergency vehicles or for emergency evacuation routes and would not interfere with emergency response or evacuation plans. Therefore, implementation of Site Alternative C would result in less than significant impacts during construction and no impact during operation under this criterion.

Finally, Site Alternative C could expose people or structures to a significant risk of loss, injury or death involving wildland fires. Potential risks of fire danger during construction and operation include smoking, refueling, offroad vehicle operation, welding, and transmission lines (if a conducting object comes within proximity of a line or if a live-phase falls to the ground. SCE would implement standard fire prevention and response practices that address construction activities for the Triton Substation Project (PDF HAZ-5). Additionally, as applicable, SCE would maintain vegetation clearance during the life of the Triton Substation Project to reduce the fire hazard potential (PDF HAZ-6). Therefore, implementation of Site Alternative C would result in less than significant impacts under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts from hazards and hazardous materials.

4. . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation from hazards and hazardous materials.

4. . eferences

City of Murrieta (COM). 1994. General Plan. June 21.

City of Temecula (COT). 2005. General Plan.

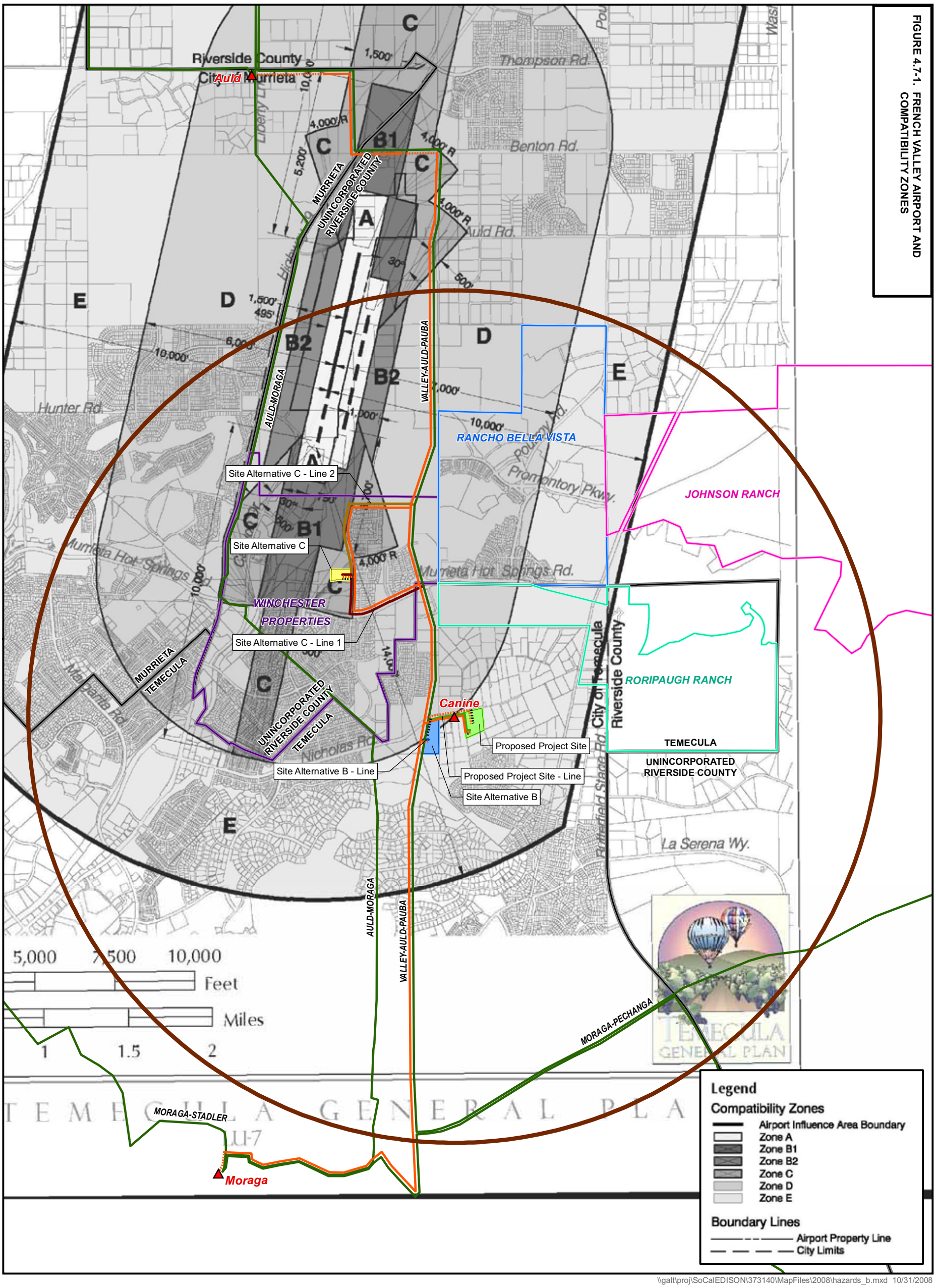
County of Riverside (COR). 2008. *County of Riverside GIS.* April 2.

———————, Airport Land Use Commission (COR). 2004. *Riverside County Airport Land Use Compatibility Plan*. http://www.rcaluc.org/filemanager/plan/new//01-%20Cover%20&%20Title%20Page%20Vol%201.pdf. Accessed October 24, 2008.

———————, (COR). 2003. General Plan.

Environmental FirstSearch. 2008. Environmental FirstSearch Report, Nicolas Road, Temecula, CA 92591. August 13.

FIGURE 4.7-1. FRENCH VALLEY AIRPORT AND COMPATIBILITY ZONES



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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- Jurisdictional Boundary
- Electrical Needs Area

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project Site and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000 Feet

0 1 Miles

Source: City of Temecula General Plan; Southern California Edison; Riverside County

2008

TRITON SUBSTATION PEA

FIGURE 4.7-1. FRENCH VALLEY AIRPORT AND COMPATIBILITY ZONES

SOUTHERN CALIFORNIA EDISON

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4. ydrology and ater uality

4. .1 Overview

This analysis describes the potential impacts to hydrology and water quality that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to hydrology and water quality.

4. .2 ethodology

Because watershed boundaries and waterways do not necessarily follow municipal boundaries, the study area for hydrology and water quality is defined as portions of the watersheds and waterbodies located in the Triton Substation Project area. This includes the San Diego Basin Watershed, the Santa Margarita Hydrologic Unit, the Temecula Valley Groundwater Basin, and identified flood plains (DWR, 2004; SDRWQCB, 1995).

The methodology for analyzing impacts consists of the following:

- Identify surface water and groundwater features (watersheds, basins, waterbodies, and floodplains) where the Proposed Project and alternatives would be located.
- Identify existing hydrologic or water quality restrictions or impairments to the surface water and groundwater features traversed by the Proposed Project and alternatives.
- Evaluate proposed construction and operation activities in relation to the CEQA hydrology and water quality significance criteria, and determine hydrology and water impacts.
- Describe measures to avoid or reduce potentially significant impacts.

The construction-phase impact assessment includes assessment of potential impacts to hydrology and water quality that may be caused by site preparation (e.g., excavation, cut-and-fill, compaction, and drainage pattern modification). The operation-phase assessment includes assessment of potential impacts to hydrology and water quality that may result from changes in absorption rates and the amount of surface runoff, including the adequacy of the stormwater runoff drainage system, as well as potential releases of chemicals into ground and surface water resources

4. .3 egulations Plans and Standards

4. .3.1 ederal egulations

4. .3.1.1 ederal Emergency anagement Agency E A Nation lood Insurance Program N IP

In 1968 the U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against

flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. County of Riverside became a participating community in 1979 (COR, 2008). Floodplain management criteria are contained in 44 Code of Federal Regulations (CRF) Part 60, Criteria for Land Management and Use (FEMA, 2002). These regulations are administered by the Riverside County Flood Control District for the project site and are discussed in Section 4.8.3.3.

4. .3.1.2 The lean ater Act 33 .S. . Section 12 1 et se .

The Clean Water Act (CWA) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and specific non-point pollution source discharges to surface water.

Section 401. Section 401 of the CWA requires that any activity, including the crossing of rivers or streams during road, pipeline, or transmission line construction, that may result in discharges of dredged or fill material into a state waterbody, be certified by the California Regional Water Quality Control Boards (RWQCBs). This certification ensures that the proposed activity does not violate state and/or federal water quality standards.

In addition, a Water Quality Certification (or waiver thereof) pursuant to Section 401 of the CWA would also be required from SDRWQCB, as required under Section 404.

Section 402. Under Section 402 of the CWA, the California State Water Resources Control Board (SWRCB) issued a General Construction Storm Water Permit (Water Quality Order 99-08-DWQ, referred to as the "General Construction Permit") and associated modifications (SWRCB, 2008). The General Permit requires all dischargers, where construction activity disturbs one or more acres, to:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which implements Best Management Practices (BMPs) that will control pollutants in stormwater discharges.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the U.S.
- Perform inspections of all BMPs.
- Reach final site stabilization.

In California, the National Pollutant Discharge Elimination System (NPDES) permitting authority is delegated to, and administered by nine RWQCBs. The Triton Substation Project would be permitted by the San Diego RWQCB (SDRWQCB).

Section 404. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers (USACE) to regulate the discharge of dredge or fill material to the waters of the U.S. and adjacent wetlands. The limits of non-tidal waters extend to the Ordinary High Water Mark (OHWM), defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as a natural line impressed on the bank, changes in the character of the soil, and presence of debris. The USACE may issue either individual, site-specific permits or general, or nationwide permits for discharge into waters of the U.S.

In addition, a Water Quality Certification (or waiver thereof) pursuant to Section 401 of the CWA would also be required from SDRWQCB, as required under Section 404.

4. .3.2 State egulations

4. .3.2.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on hydrology and water quality.

4. .3.2.2 The Porter ologne ater uality ontrol Act of 1 alifornia ater ode Section 13 et se .

The Porter Cologne Water Quality Control Act of 1967 requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect state waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures.

The Water Quality Control Plan for the San Diego Basin (SDRWQCB, 1995) (basin plan) establishes water quality standards for the San Diego Basin region. Water quality standards include designated beneficial uses for surface and ground waters, and narrative or numeric water quality objectives to protect those beneficial uses. The basin plan also includes implementation plans describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards (SDRWQCB, 1995).

4. .3.2.3 alifornia ater ode Section 132

The California Water Code requires that any entity discharging waste, or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCB.

4. .3.2.4 egional ater uality ontrol Board B

The RWQCB protects ground and surface water quality through the development and enforcement of water quality objectives and implementation of a basin plan. The RWQCB governs requirements, issues waste discharge permits, takes enforcement action against violators, and monitors water quality.

4. .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on hydrology and water quality 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 groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.[1]
- Place housing within a 100-year flood hazard area 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.
- Result in or be subject to inundation by seiche, tsunami, or mudflow.

4. . Proposed Project and Alternatives

The following hydrology and water quality resource-specific project design features would be incorporated into the Triton Substation Project, as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

[1] This criterion is evaluated and analyzed together with the first criterion "Violate any water quality standards or waste discharge requirements."

PDF HYDRO-1 **Storm Water General Construction Permit NPDES.** SCE would apply for a Storm Water General Construction Permit NPDES (order 99-08) and as a requirement of the Permit; a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented.

PDF HYDRO-2 **Hazardous Materials Near Drainages.** Hazardous materials would be used or stored greater than 50 feet from drainages.

PDF HYDRO-3 **Material Safety Data Sheets.** Material Safety Data Sheets would be made available to all site workers for cases of emergency.

PDF HYDRO-4 **SPCC Plan.** SCE would prepare and implement an SPCC Plan that includes the hazardous/non-hazardous materials used during the operation phase.

PDF HYDRO-5 **Dewatering Plan.** If groundwater is expected to be encountered during construction as indicated by geologic borings, SCE would prepare a dewatering plan and include it in the construction SWPPP, as appropriate.

PDF HYDRO-6 **Jurisdictional Areas of Streams and Drainage.** No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways.

PDF HYDRO-7 **Facilitate Existing Drainage.** The substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts to erosion and siltation.

PDF HYDRO-8 **Drainage Control Features.** Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP.

PDF HYDRO-9 **Substation Stormwater Drainage.** Stormwater drainage inside the substation wall would be designed to minimize erosion and sediment control. The internal runoff would be released from the substation by means of surface drainage structures. Drainage from the property would be collected and controlled by surface improvements. SCE would direct stormwater runoff to the subsurface drainage system and prepare a Water Quality Management Plan (WQMP) for the substation. Final design of the site drainage would be subject to the conditions of the grading permit.

PDF HYDRO-10 **Existing Stormwater Drainage Systems.** Site facilities would be engineered to use existing stormwater drainage systems, including, but not limited to Santa Gertrudis Creek or County of Riverside stormwater collection facilities, as applicable.

4. . .1 Proposed Project

4. . .1.1 Environmental Setting

4. . .1.1.1 egional Setting

Surface ater

Surface water hydrology in the study area includes watersheds and hydrologic areas; lakes, reservoirs, and aqueducts; and rivers and streams, as discussed below.

Watersheds and Hydrologic Areas. There are four watersheds within the County of Riverside. The Triton Substation Project would be located within the Santa Margarita River Watershed of the San Diego Basin and would be under the jurisdiction of the SDRWQCB. The San Diego Basin drains in to the Pacific Ocean in San Diego County (COR, 2003a). The Santa Margarita Watershed encompasses approximately 750 square miles in northern San Diego and southwestern Riverside counties. It consists of a single major drainage, the Santa Margarita River, which is comprised of several smaller tributaries. The watershed includes Santa Margarita River, Temecula Creek, Murrieta Creek, Santa Margarita Lagoon, Vail Lake, Skinner Reservoir, and Diamond Valley Lake Reservoir (SDRWQCB, 2007). The Triton Substation Project is within the Murrieta, Auld, and Pechanga hydrologic areas.

Lakes, Reservoirs, and Aqueducts. The San Diego Aqueduct is part of the San Diego Project and is considered the backbone of the San Diego County Water Authority system (BOR, 2008). The aqueduct is oriented north-south in the vicinity of the Triton Substation Project. In addition, several lakes and reservoirs are also located in the region, including Skinner Reservoir and Skunk Hollow to the northeast and unnamed reservoirs to the north and southwest.

Rivers and Streams. Within the City of Temecula, there are several rivers and streams, including the Santa Margarita River, Temecula Creek, Murrieta Creek, Pechanga Creek and Santa Gertrudis Creek, as well as several tributaries of Santa Gertrudis Creek (COT, 2005).

Surface ater uality and eneficial ses

Surface water sources are subject to pollutants such as metals, animal waste, and petroleum products, as well as sediment carried in stormwater runoff. Surface waters requiring conservation and management in the area of the Triton Substation project include the Santa Margarita River, Temecula Creek, Murrieta Creek, Pechanga Creek, and Santa Gertrudis Creek (COT, 2005).

The beneficial uses for the major creeks and streams in the vicinity of the Triton Substation Project include: municipal, agricultural, industrial, industrial process water, contact water recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat. From among these beneficial uses, waterways that provide wildlife habitat are the key areas of concern regarding surface water quality, particularly due to shrinking wetland habitat areas (SDRWQCB, 2007).

Analysis of water chemistry in the Santa Margarita River Watershed indicates widespread moderate impact to water quality from several constituents. Across the watershed, water chemistry has been moderately impacted, although it is considered to be in moderate to good health. However, several water chemistry constituents exceeded aquatic life and

human health thresholds and toxicity was observed at all sites studied. Bioassessment samples suggest that poor ecological conditions were widespread. Physical habitat was good throughout the watershed (SDRWQCB, 2007).

Several tributaries in the Santa Margarita watershed are listed as impaired on the 303(d) list of water quality limited segments, affecting a total of 102.8 stream miles. These streams include the main stem of the Santa Margarita River and the De Luz, Murrieta, Rainbow, Sandia, and Temecula Creeks. Known stressors include iron, manganese, nitrogen, phosphorus, sulfates, and total dissolved solids (SDRWQCB, 2007).

looding

FEMA maps areas that are prone to 100-year and 500-year storm events by estimating the level of inundation under various conditions and intensities. Floodplains identified in the Southwest Area Plan of the County of Riverside General Plan include the Santa Margarita River, as well as Murrieta, Temecula, Warm Springs, Santa Gertrudis, and Pechanga Creeks. Floodplains in the Triton Substation Project follow existing creeks and mostly affect lowland areas (COR, 2003c).

Three dams, including the Vail Lake, Lake Skinner and Diamond Valley Lake facilities could cause flooding in the Pauba and Murrieta Valleys, including areas adjacent to Interstate 15, Tucalota Creek, Warm Springs, and Murrieta Creek, as well as French Valley and Santa Margarita River (COR, 2003c).

roundwater

The Temecula Valley Groundwater Basin underlies several valleys in southwestern County of Riverside including Murrieta and Temecula. Natural recharge is from direct precipitation and percolation in the Warm Springs, Tucalota, Santa Gertrudis, Murrieta, and Pechanga Creeks and the Temecula River. Flow in the basin under Murrieta and Temecula Valleys is toward the southeast (DWR, 2004). This groundwater basin is the largest in the San Diego water region (COT, 2005).

roundwater uality and eneficial ses

In some areas within County of Riverside, contamination from natural or manufactured sources has reduced groundwater quality such that its use requires treatment (COR, 2003b). Groundwater in the Temecula Valley Groundwater Basin is characterized as largely sodium bicarbonate (DWR, 2004). Total dissolved solids (TDS) concentration ranged from 220 to 984 mg/L in 1956; however, water from 50 public supply wells ranges from 240 to 1500 mg/L, and averages 476 mg/L. Groundwater in the basin in largely suitable for domestic and irrigation uses (DWR, 2004). However, groundwater is inferior for domestic use locally near Murrieta and Murrieta Hot Springs because of high nitrate or fluoride content (DWR, 2004). Groundwater is marginal to inferior for irrigation use in Pauba and Wilson Creek Valley and near Murrieta Hot Springs because of chloride content and percent sodium (DWR, 2004). Sulfate, chloride, magnesium, and nitrate concentrations are locally high for domestic use; TDS content is locally high for domestic and irrigation use (DWR, 2004).

The beneficial uses of groundwater in the Santa Margarita Hydrologic Unit in the vicinity of the project are as follows (SDRWQCB, 2007):

- Murrieta hydrologic area: municipal, agricultural, industrial, and industrial process supply.
- Auld hydrologic area: municipal, agricultural, and industrial.
- Pechanga hydrologic area: municipal, agricultural, and industrial.

4. . .1.1.2 ocal Setting

The local hydrologic information related to the Proposed Project is as follows:

The Proposed Project would not be located within a dam hazard zone (COR, 2003c). The groundwater levels in the immediate area of the Proposed Project site fluctuate seasonally but are anticipated to be within 20 feet of the surface near Nicolas Road SCE, 2008b). Stormwater in the vicinity of Nicolas Road drains naturally to Santa Gertrudis Creek (RCFC, 2008).

The following summarizes the specific hydrologic features and data for the Proposed Project elements:

Substation Site and Underground 12 kV Distribution Duct Banks: No surface hydrologic features are located within the Proposed Project substation site and underground 12 kV distribution duct banks.

Subtransmission Line Loop-in: The subtransmission line between the substation site and the interconnect with the existing Valley-Auld-Pauba 115 kV subtransmission line would be located south of Nicolas Road and cross the 100-year flood plain of Santa Gertrudis Creek west of the interconnect. Additionally, the subtransmission line would interconnect in the vicinity of the San Diego Aqueduct (Environmental FirstSearch, 2008).

Proposed Project Telecommunication Lines: No surface hydrologic features would be crossed by the underground portion of the southern telecommunication line route. The above-ground portion of the southern telecommunication line route would be underbuilt on the Proposed Project subtransmission line poles and cross the 100-year flood plain of Santa Gertrudis Creek west of the interconnect. The underground portion of the northern telecommunication line route would be located north of Nicolas Road, south of Santa Gertrudis Creek. The underground northern telecommunication line route would cross the 100-year flood plain of Santa Gertrudis Creek and cross beneath Santa Gertrudis Creek before rising above-ground to be underbuilt on the existing Valley-Auld-Pauba 115 kV line poles.

N/S Telecommunications Lines: From the interconnect north to the Auld Substation and south to the Moraga Substation, the telecommunication line would be located above-ground on existing poles and below ground in existing underground banks; the existing poles are located outside of existing river and stream jurisdictional areas (i.e., channels and banks) and existing duct banks are located beneath rivers and stream jurisdictional areas.

4. . .1.2 Impact Analysis

Would the project violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality[2]?

Construction Impacts

Construction activities, such as removal of vegetation, blade grading, soil compaction, and excavation could result in soil erosion and sedimentation. SCE would apply for a Storm Water General Construction Permit NPDES (order 99-08) and, as a requirement of the Permit, a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented (PDF HYDRO-1). The SWPPP will identify potential pollutant sources that may affect the quality of discharges associated with construction activity and incorporate Best Management Practices to address erosion and sediment control, wind erosion control, source controls, and waste management to effectively prevent the offsite migration of contaminant-laden stormwater. When implemented the SWPPP, would reduce potential impacts to water quality to a less than significant level.

Surface water and groundwater quality could also be affected through the accidental release of hazardous materials during project-related construction activities. Such materials include: diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, and other fluids. The preparation and pouring of concrete and the use of motorized equipment are examples of construction activities that would specifically involve the use of potentially harmful materials. Hazardous materials would be used or stored greater than 50 feet from drainages (PDF HYDRO-2). Material Safety Data Sheets would be made available to all site workers for cases of emergency (PDF HYDRO-3). Implementation of the SWPPP would reduce potential impacts to water quality to a less than significant level.

Therefore, a less than significant impact would occur during construction due to the implementation of the Proposed Project under this criterion.

Operation Impacts

The release of potentially hazardous substances from vehicles, as well as transformer oil and other substances associated with transformers, could occur as a result of operation of the Proposed Project, however, hazardous materials would be used or stored greater than 50 feet from drainages (PDF HYDRO-2). Material Safety Data Sheets would be made available to all site workers for cases of emergency (PDF HYDRO-3). SCE would prepare and implement an SPCC Plan that includes the hazardous/non-hazardous materials used during the operation phase (PDF HYDRO-4). Implementation of the SPCC would reduce potential impacts to water quality to a less than significant level.

Therefore, implementation of the Proposed Project would result a less than significant impact during operation under this criterion.

Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

[2] As mentioned previously, criteria a and f are discussed together.

Construction Impacts

No wells will be constructed as part of the Proposed Project. During construction, SCE contractors will import water to the site. Excavation of TSPs would reach a depth of 30 feet and groundwater would not be encountered (SCE, 2008b). No other construction activities required for the Proposed Project have the potential to impact groundwater supplies.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

As the Proposed Project would be unattended and electrical equipment would be monitored and controlled remotely, water supply for the restroom facility, landscaping, and equipment would be minimal. This minimal supply of water would be provided by Rancho California Water District. Site facilities would be engineered to use existing stormwater drainage systems, including, but not limited to Santa Gertrudis Creek or County of Riverside stormwater collection facilities, as applicable (PDF HYDRO-10); no reduction in groundwater recharge would occur. Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8). Stormwater drainage inside the substation wall would be designed to minimize erosion and sediment control. The internal runoff would be released from the substation by means of surface drainage structures. Drainage from the property would be collected and controlled by surface improvements. SCE would direct stormwater runoff to the subsurface drainage system and prepare a Water Quality Management Plan (WQMP) for the substation. Final design of the site drainage would be subject to the conditions of the grading permit (PDF HYDRO-9).

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Construction Impacts

No streams or drainages are located on the Proposed Project substation site; additionally construction of 12 kV duct banks would not occur within existing streams and rivers jurisdictional areas (i.e., channels and banks). Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8). Stormwater drainage inside the substation wall would be designed to minimize erosion and sediment control. The internal runoff would be released from the substation by means of surface drainage structures. Drainage from the property would be collected and controlled by surface improvements. SCE would direct stormwater runoff to the subsurface drainage system and prepare a WQMP for the substation. Final design of the site drainage would be subject to the conditions of the grading permit (PDF HYDRO-9). Between the substation site and the interconnect with the existing Valley-Auld-Pauba 115 kV subtransmission line, the subtransmission structures would cross the 100-year flood plain of Santa Gertrudis Creek. Between the substation site and the existing Valley-Auld-Pauba 115 kV Line, the northern telecommunication line would be located below

ground south of the Santa Gertrudis Creek. The construction of the subtransmission line loop-in and telecommunication lines would not occur within the jurisdictional areas of Santa Gertrudis Creek. Once the telecommunication lines reaches the existing Valley-Auld-Pauba 115 kV subtransmission line, the N/S Telecommunications Lines would span drainages or be located within existing underground 115 kV banks; and no ground-disturbing activities would occur within drainages. Stormwater in the vicinity of Nicolas Road naturally drains into Santa Gertrudis Creek, located north of the Proposed Project. While minor modification of drainage patterns may occur due to grading in the Proposed Project area, the substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts to erosion and siltation (PDF HYDRO-7). Additionally, SCE will prepare and implement an SWPPP as discussed previously.

Therefore construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As described above for construction, stormwater in the vicinity of Nicolas Road naturally drains into Santa Gertrudis Creek located north of the Proposed Project and the substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts to erosion and siltation (PDF HYDRO-7). Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8).

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Construction Impacts

No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). However, stormwater in the vicinity of Nicolas Road naturally drains into Santa Gertrudis Creek, located north of the Proposed Project. Grading and excavation for the Proposed Project may result in minor modifications to drainage patterns in the project area, and would create impervious surfaces, thereby increasing surface runoff. However, the substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts to erosion and siltation (PDF HYDRO-7). These design measures would include, but may not be limited to, placement of poles to facilitate existing drainage patterns, inclusion of drainage features, as well as collection and control of surface runoff through various surface improvements (e.g., landscaping and gravel placement). In addition, the implementation of the SWPPP during construction would minimize temporary impacts of construction on stormwater runoff and

alleviate the potential for flooding on- or offsite. Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8).

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As discussed above for construction, the substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts to erosion and siltation (PDF HYDRO-7). Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8).

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Construction Impacts

As discussed for the criterion above, construction of the Proposed Project would increase surface runoff through the introduction of permanent impervious surfaces in the project area. SCE will prepare and implement an SWPPP and design the Proposed Project to reduce potential impacts and handle hazardous materials in accordance with rules and regulations. Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8).

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As discussed for the criterion above, implementation of the Proposed Project would increase surface runoff through the introduction of permanent impervious surfaces in the project area. SCE will prepare and implement an SWPPP and design the Proposed Project to reduce potential impacts and handle hazardous materials in accordance with rules and regulations. Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8).

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Construction Impacts

No construction of housing would occur as part of the Proposed Project. Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not include housing. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project place structures within a 100-year flood hazard area, which would impede or redirect flood flows?

Construction Impacts

While the subtransmission line route for the Proposed Project would cross a FEMA-designated Flood Hazard Area associated with Santa Gertrudis Creek, no infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8). Furthermore, the Proposed Project would comply with local floodplain management practices. None of the infrastructure associated with the Proposed Project would be situated within a watercourse.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

While the subtransmission line route for the Proposed Project would cross a FEMA-designated Flood Hazard Area associated with Santa Gertrudis Creek, no infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8).

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Construction Impacts

While the subtransmission line route for the Proposed Project would cross a FEMA-designated Flood Hazard Area associated with Santa Gertrudis Creek, placement of TSPs in the Flood Hazard Areas and TSP design would be engineered so as to not cause increased flood risk to adjacent properties. No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as

part of the SWPPP (PDF HYDRO-8). Furthermore, construction activities would not have the potential to cause the failure of a levee or dam and the poles are not located within a dam hazard zone.

Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Portions of the Proposed Project would be located within a dam hazard zone. However, the Proposed Project would be unattended during operation. As discussed above, the TSPs and associated subtransmission line and telecommunication line would be located within a Flood Hazard Area associated with Santa Gertrudis Creek. The poles would be engineered to reduce exposure of the structures to significant risk of loss involving flooding. SCE would not inspect the TSPs during flooding events. Furthermore, operation activities would not have the potential to cause the failure of a levee or dam and the poles are not located within a dam hazard zone.

Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project expose people or structures to inundation by seiche, tsunami, or mudflow?

Construction Impacts

No large water bodies are located close to the Proposed Project and a seiche or tsunami would not occur in the project area. In addition, the Proposed Project would be located on relatively flat ground and, therefore, slope stability concerns, such as the potential for a mudflow, are not considered a potential hazard. Results and recommendations from the geotechnical study discussed in Section 4.6 would be incorporated into the final design.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

No large water bodies are located close to the Proposed Project and a seiche or tsunami would not occur in the project area. In addition, the Proposed Project would be located on relatively flat ground and, therefore, slope stability concerns, such as the potential for a mudflow, are not considered a potential hazard. Results and recommendations from the geotechnical study discussed in Section 4.6 would be incorporated into the final design.

Therefore, operation of the Proposed Project would result in no impact under this criterion.

4. . .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant during construction and operation; therefore, no mitigation is required.

4. . .2 Site Alternative B

4. . .2.1 Environmental Setting

4. . .2.1.1 egional Setting

The regional environmental setting for Site Alternative B is the same as provided previously for the Proposed Project.

4. . .2.1.2 ocal Setting

The general hydrologic information related to Site Alternative B is as follows:

Site Alternative B would not be located within a dam hazard zone (COR, 2003c). The depth to groundwater in a well located approximately 0.25 mile south of the Proposed Project site (Rancho California Water District Well) was 209 feet below ground surface (SCE, 2008b). Stormwater in the vicinity of Nicolas Road drains naturally to Santa Gertrudis Creek (RCFC, 2008).

The following summarizes the specific hydrologic features and data for Site Alternative B elements:

Substation Site and Underground 12 kV Distribution Duct Banks: The northern portion of the substation site would be located within the 100-year flood plain of Santa Gertrudis Creek.

Subtransmission Line Loop-in: The subtransmission line between the substation site and the interconnect with the existing Valley-Auld-Pauba 115 kV Line may cross the 100-year flood plain of Santa Gertrudis Creek west of the interconnect. Additionally, the subtransmission line would interconnect in the vicinity of the San Diego Aqueduct (Environmental FirstSearch, 2008).

Site Alternative B Telecommunication Lines: The underground telecommunication line route may cross the 100-year flood plain of Santa Gertrudis Creek before rising to above-ground to be underbuilt on the existing Valley-Auld-Pauba 115 kV subtransmission line poles.

N/S Telecommunication Lines: From the interconnect north to the Auld Substation and south to the Moraga Substation, the telecommunication line would be located above-ground on existing structures and below ground in existing underground banks; the existing structures are located outside of existing river and stream jurisdictional areas (i.e., channels and banks) and existing underground banks are located beneath rivers and stream jurisdictional areas.

4. . .2.2 Impact Analysis

Removal of vegetation, blade grading, soil compaction, and excavation and other disturbance of soil during construction could result in soil erosion and sedimentation that would potentially exceed water quality standards. Additionally, surface water and groundwater quality could be affected through the accidental release of hazardous materials, including petroleum-based fluids and transformer oil, during project-related construction and operation activities. SCE would apply for an NPDES permit and an

SWPPP would be developed and implemented (PDF HYDRO-1). Hazardous materials would be used or stored greater than 50 feet from drainages (PDF HYDRO-2). Material Safety Data Sheets would be made available to all site workers for cases of emergency (PDF HYDRO-3). Additionally, SCE would prepare and implement an SPCC plan that includes the hazardous/non-hazardous materials used during the operation phase (PDF HYDRO-4). Implementation of the SWPPP and SPCC would reduce potential impacts to water quality to a less than significant level. Therefore, implementation of Site Alternative B, including the N/S Telecommunication Lines, would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality and would result in a less than significant impact under this criterion.

No wells will be constructed as part of Site Alternative B. Groundwater may be encountered during excavation of TSP footings because excavation for the footing would reach a depth of 30 feet below ground surface. As part of the SWPPP, SCE will obtain necessary permits from the Regional Water Quality Control Board or other applicable agencies. SCE would implement PDF HYDRO-5, Dewatering Plan. During operation the substation would be unattended and electrical equipment would be monitored and controlled remotely. Therefore, water supply for the sanitary facilities, landscaping, and equipment would be minimal. This minimal supply of water would be provided by Rancho California Water District. Stormwater runoff from the Site Alternative B area would continue to enter Santa Gertrudis Creek and no reduction in groundwater recharge would occur. SCE would implement PDF HYDRO-10, Existing Stormwater Drainage Systems and PDF HYDRO-9, Substation Stormwater Drainage. Additionally, the N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing groundwater recharge would occur during implementation. Therefore, implementation of Site Alternative B would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level and would result in a less than significant impact under this criterion.

No existing streams or drainages are located on the substation site; however, overland flow of stormwater does occur and stormwater in the vicinity of Nicolas Road naturally drains into Santa Gertrudis Creek, located north of the substation property. Additionally, implementation of Site Alternative B would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation may improve retention time of stormwater on the substation site. SCE would implement PDF HYDRO-6, Jurisdictional Areas of Streams and Drainage. Construction of a substation on Site Alternative B would interrupt existing drainage patterns and may create issues for adjacent properties; however, drainage control features would be installed where appropriate (PDF HYDRO-8, Drainage Control Features.). Site Alternative B would require extensive grading as a result of the topography of the site. Because it is located within a 100-year floodplain, an exterior retention basin would be required, which would be constructed and operated under Site Alternative B. Increased erosion could undermine Los Choras Ranch Road and excavation could destabilize the hillside and require a retaining wall. Implementation of a retaining wall would occur under Site Alternative B. In addition, SCE would implement the following: PDF HYDRO-1, Storm Water General Construction Permit NPDES; PDF HYDRO-9, Substation Stormwater Drainage, and PDF HYDRO-7,

Facilitate Existing Drainage. While modifications of existing drainage patterns may occur, the substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid potential impacts to erosion and siltation (PDF HYDRO-7). The N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing drainage conditions would occur during implementation. Therefore, implementation of Site Alternative B would not 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 and would result in a less than significant impact under this criterion

No existing streams or drainages are located on the substation site; however, overland flow of stormwater does occur and stormwater in the vicinity of Nicolas Road naturally drains into Santa Gertrudis Creek, located north of the substation property. Additionally, implementation of Site Alternative B would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation may improve retention time of stormwater on the substation site. Construction of Site Alternative B would require an exterior retention basin because it is located within a 100-year floodplain. Additionally, grading and excavation may result in minor modifications to drainage patterns in the project area, and would create impervious surfaces, thereby increasing surface runoff. However, SCE would implement the following: PDF HYDRO-6, Jurisdictional Areas of Streams and Drainage and PDF HYDRO-8, Drainage Control Features. In addition, the implementation of the SWPPP during construction would minimize temporary impacts of construction on stormwater runoff and alleviate the potential for flooding on- or offsite. The N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing drainage conditions would occur during implementation. Operation of Site Alternative B, including the N/S Telecommunication Lines, would not alter the final design and engineering incorporated into Site Alternative B during construction. Therefore, implementation of Site Alternative B would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site and would result in a less than significant impact under this criterion.

Stormwater in the vicinity of Nicolas Road naturally drains into Santa Gertrudis Creek, located north of the Site Alternative B substation property. Construction and operation of Site Alternative B would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation and the implementation of an onsite retention basin would improve stormwater retention time on the substation property. Additionally, SCE would implement the following: PDF HYDRO-1, Storm Water General Construction Permit NPDES; PDF HYDRO-2, Hazardous Materials Near Drainages; PDF HYDRO-4, SPCC Plan; PDF HYDRO-5, Dewatering Plan; PDF HYDRO-8, Drainage Control Features; PDF HYDRO-9, Substation Stormwater Drainage; and PDF HYDRO-10, Existing Stormwater Drainage Systems. The N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing stormwater drainage systems would occur during implementation.

Therefore, implementation of Site Alternative B would not create runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff and would result in a less than significant impact under this criterion.

No construction or operation of housing would occur as part of the Site Alternative B. Therefore, implementation of Site Alternative B would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map and would result in no impact under this criterion.

Site Alternative B would cross or be located within a designated Flood Hazard Area associated with Santa Gertrudis Creek. Additionally, the N/S Telecommunication Lines would be located within a designated Flood Hazard Area associated with Santa Gertrudis Creek. However, SCE would implement the following: PDF HYDRO-6, Jurisdictional Areas of Streams and Drainage and PDF HYDRO-7, Facilitate Existing Drainage. Furthermore, implementation of Site Alternative B will comply with local floodplain management ordinances. The N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing flood hazards conditions would occur during implementation. Site Alternative B would not place structures within a 100-year flood hazard area which would impede or redirect flood flows. Therefore, implementation of Site Alternative B would result in a less than significant impact under these criteria.

While portions of Site Alternative B may be located within or may cross flood hazard areas associated with Santa Gertrudis Creek, any new impervious areas associated with temporary construction would be returned to existing conditions (to the extent possible) after the completion of project construction (PDF HYDRO-8, Drainage Control Features). No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (PDF HYDRO-6). Additionally, the exterior retention basin required for construction of Site Alternative B will be designed to provide adequate storage capacity to avoid project-related flood impacts. Construction and operation activities would not have the potential to cause the failure of a levee or dam; however, portions of Site Alternative B would be located within a dam hazard zone. Site Alternative B would be constructed within approximately eight months, and would be unattended during operation. Therefore, implementation of Site Alternative B would not 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 and would result in a less than significant impact under this criterion.

Construction and operation of Site Alternative B would not expose people or structures to inundation by seiche, tsunami, or mudflow. No large water bodies are located close to Site Alternative B and a seiche or tsunami would not occur in the project area. In addition, results and recommendations from the geotechnical study discussed in Section 4.6 will be incorporated into the final design to reduce the potential for mudflow to a less than significant level. Therefore, implementation of Site Alternative B would not result in or be subject to inundation by seiche, tsunami, or mudflow and would result in less than significant impacts under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts to hydrology and water quality.

4. . .3 Site Alternative

4. . .3.1 Environmental Setting

4. . .3.1.1 egional Setting

The regional environmental setting for Site Alternative C is the same as provided previously for the Proposed Project.

4. . .3.1.2 ocal Setting

The general hydrologic information related to Site Alternative C is as follows:

The groundwater levels in the immediate area of the Site Alternative C fluctuate seasonally but are anticipated to be within 45 feet of the surface near (USGS 2008). Stormwater runoff in the vicinity of Site Alternative C drains to County of Riverside stormwater drains located at the intersection of Calistoga Drive and Murrieta Hot Springs Road. (RCFC, 2008).

The following summarizes the specific hydrologic features and data for the Site Alternative C elements:

Substation Site and Underground 12 kV Distribution Duct Banks: Site Alternative C would not be located within a dam hazard zone (COR, 2003c). No surface hydrologic features are located within the Site Alternative C substation site and 12 kV duct banks routes.

Subtransmission Line Loop-in: The subtransmission Line 1 and 2 routes between the substation site and the interconnect with the existing Valley-Auld-Pauba 115 kV Line would interconnect in the vicinity of the San Diego Aqueduct. Line 2 crosses no additional existing rivers and streams. The Line 1 route may cross a stream associated with Tucalota Creek. In addition, Site Alternative C subtransmission Line 2 would be located within a high dam hazard zone for Skinner Lake (COR, 2003c).

Site Alternative C Telecommunication Lines: The telecommunication line route may cross a stream associated with Tucalota Creek before the interconnect to the N/S Telecommunication Lines.

N/S Telecommunication Lines: From the interconnect north to the Auld Substation and south to the Moraga Substation, the telecommunication line would be located above-ground on existing structures and below ground in existing underground banks; the existing structures are located outside of existing river and stream jurisdictional areas (i.e., channels and banks) and existing underground banks are located beneath rivers and stream jurisdictional areas.

4. . .3.2 Impact Analysis

Removal of vegetation, blade grading, soil compaction, and excavation and other disturbance of soil during construction could result in soil erosion and sedimentation that would potentially exceed water quality standards. Additionally, surface water and

groundwater quality could be affected through the accidental release of hazardous materials, including petroleum-based fluids and transformer oil, during project-related construction and operation activities. SCE would apply for an NPDES permit and an SWPPP would be developed and implemented (PDF HYDRO-1). Hazardous materials would be used or stored greater than 50 feet from drainages (PDF HYDRO-2). Material Safety Data Sheets would be made available to all site workers for cases of emergency (PDF HYDRO-3). Additionally, SCE would prepare and implement an SPCC plan that includes the hazardous/non-hazardous materials used during the operation phase (PDF HYDRO-4). Implementation of the SWPPP and SPCC would reduce potential impacts to water quality to a less than significant level. Therefore, implementation of Site Alternative C, including N/S Telecommunication Lines, would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality and would result in a less than significant impact under this criterion.

No wells will be constructed as part of Site Alternative C. Groundwater may be encountered during excavation of TSP footings because excavation for the footing would reach a depth of 30 feet below ground surface. As part of the SWPPP, SCE will obtain necessary permits from the Regional Water Quality Control Board or other applicable agencies. SCE would implement PDF HYDRO-5, Dewatering Plan. During operation the substation would be unattended and electrical equipment would be monitored and controlled remotely. Therefore, water supply for the sanitary facilities, landscaping, and equipment would be minimal. This minimal supply of water would be provided by Eastern Municipal Water District. Stormwater runoff from the Site Alternative C area would be handled by the existing County of Riverside stormwater system facilities at the corner of Calistoga Drive and Murrieta Hot Springs Road and no reduction in groundwater recharge would occur. In addition, SCE would implement the following: PDF HYDRO-10, Existing Stormwater Drainage Systems, and PDF HYDRO-9, Substation Stormwater Drainage. Therefore, implementation of Site Alternative C, including N/S Telecommunication Lines, would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level and would result in a less than significant impact under this criterion.

No existing streams or drainages are located on the substation site; however, overland flow of stormwater does occur and stormwater in the vicinity is handled through the existing County of Riverside stormwater system facilities at the corner of Calistoga Drive and Murrieta Hot Springs Road. Additionally, implementation of Site Alternative C would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation may improve retention time of stormwater on the substation site. No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). Construction of a substation on Site Alternative C would interrupt existing drainage patterns and may create issues for adjacent properties; however, drainage control features would be installed where appropriate (PDF HYDRO-8). Site Alternative C would require minor grading as the site has been previously graded. SCE

would implement PDF HYDRO-1, Storm Water General Construction Permit NPDES, and PDF HYDRO-9, Substation Stormwater Drainage. While modifications of existing drainage patterns may occur, the substation and poles would be designed and engineered to facilitate existing drainage patterns to minimize or avoid potential impacts to erosion and siltation (PDF HYDRO-7). The N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing drainage conditions would occur during implementation. Therefore, implementation of Site Alternative C would not 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 and would result in a less than significant impact under this criterion

No existing streams or drainages are located on the substation site; however, overland flow of stormwater does occur and stormwater in the vicinity of Site Alternative C is handled by the County of Riverside stormwater system facilities at the corner of Calistoga Drive and Murrieta Hot Springs Road. Additionally, implementation of Site Alternative C would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation may improve retention time of stormwater on the substation site. No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). Additionally, grading and excavation may result in minor modifications to drainage patterns in the project area, and would create impervious surfaces, thereby increasing surface runoff. Drainage control features would be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP (PDF HYDRO-8). In addition, the implementation of the SWPPP during construction would minimize temporary impacts of construction on stormwater runoff and alleviate the potential for flooding on- or offsite. The N/S Telecommunication Lines would be underbuilt on existing poles or located in existing underground banks and no change to existing flood hazard conditions would occur during implementation. Operation of Site Alternative C, including the N/S Telecommunication Lines, would not alter the final design and engineering incorporated into Site Alternative C during construction. Therefore, implementation of Site Alternative C would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site and would result in a less than significant impact under this criterion.

Stormwater in the vicinity of Site Alternative C is handled by the County of Riverside stormwater system facilities at the corner of Calistoga Drive and Murrieta Hot Springs Road. Construction and operation of Site Alternative C would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation and the implementation of an onsite retention basin would improve stormwater retention time on the substation property. Additionally, SCE would implement the following: PDF HYDRO-1, Storm Water General Construction Permit NPDES; PDF HYDRO-2, Hazardous Materials Near Drainages; PDF HYDRO-4, SPCC Plan; PDF

HYDRO-5, Dewatering Plan; PDF HYDRO-8, Drainage Control Features; PDF HYDRO-9, Substation Stormwater Drainage; and PDF HYDRO-10, Existing Stormwater Drainage Systems. Therefore, implementation of Site Alternative C, including N/S Telecommunication Lines, would not create runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff and would result in a less than significant impact under this criterion.

No construction or operation of housing would occur as part of the Site Alternative C. Therefore, implementation of Site Alternative C would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map and would result in no impact under this criterion.

Site Alternative C would not cross or be located within a designated Flood Hazard Area associated with Santa Gertrudis Creek; however, the N/S Telecommunication Lines would be underbuilt on existing poles located within a designated Flood Hazard Area associated with Santa Gertrudis Creek. SCE would implement PDF HYDRO-6, Jurisdictional Areas of Streams and Drainage, and PDF HYDRO-7, Facilitate Existing Drainage. Furthermore, implementation of Site Alternative C will comply with local floodplain management ordinances. Therefore, implementation of Site Alternative C would not place structures within a 100-year flood hazard area, which would impede or redirect flood flows, and would result in a less than significant impact under these criteria.

Implementation of Site Alternative C would introduce a minor amount of impervious surface (e.g., substation driveway); however, the use of gravel within the walls of the substation may improve retention time of stormwater on the substation site. No infrastructure associated with the Triton Substation Project would be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed route does span waterways, poles would be located on nearby land areas, and be engineered to withstand stresses associated with their proximity to the waterways (PDF HYDRO-6). Construction and operation activities would not have the potential to cause the failure of a levee or dam; however, portions of Site Alternative C would be located within a dam hazard zone. Site Alternative C would be constructed within approximately eight months, and would be unattended during operation. Therefore, implementation of Site Alternative C would not 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 and would result in a less than significant impact under this criterion.

Construction and operation of Site Alternative C would not expose people or structures to inundation by seiche, tsunami, or mudflow. No large water bodies are located close to Site Alternative C and a seiche or tsunami would not occur in the project area. In addition, results and recommendations from the geotechnical study discussed in Section 4.6 will be incorporated into the final design to reduce the potential for mudflow to a less than significant level. Therefore, implementation of Site Alternative C would not result in or be subject to inundation by seiche, tsunami, or mudflow and would result in less than significant impacts under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts to hydrology and water quality.

4. . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to hydrology and water quality.

4. . eferences

California Department of Water Recourses (DWR). 2004. California's Groundwater Bulletin 118-Hydrologic Region South Coast, Temecula Valley Groundwater Basin. http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/9-5.pdf. Accessed August 2008.

California State Water Resources Control Board (SWRCB). 2008. Stormwater Program. http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml. Accessed August 2008.

City of Temecula (COT). 2005. *Temecula General Plan*. 1993; Updated 2005. <http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/general plan.htm> Accessed July 17, 2008.

County of Riverside (COR). 2003a. *County of Riverside General Plan*, Area Plans Volume I. October. <http://www.rctlma.org/genplan/default.aspx> Accessed July 21, 2008.

County of Riverside (COR). 2003b. *County of Riverside General Plan* –Environmental Impact Report-Volume 1. http://www.rctlma.org/genplan/content/eir/volume1.html#4.15> Accessed July 29, 2008.

County of Riverside (COR). 2003c. *County of Riverside General Plan* –Southwest Area Plan. http://www.rctlma.org/genplan > Accessed August 2008.

County of Riverside (COR). 2008. Ordinance No. 458 (As Amended through 458.13), Ordinance of the County of Riverside Amending Ordinance No. 458 Regulating Flood Hazard Areas and Implementing the National Flood Insurance Program. Amended July 29, 2008.

Environmental FirstSearch. 2008. Environmental FirstSearch Report, Nicolas Road, Temecula, CA 92591. August 13.

Federal Emergency Management Agency (FEMA). 2002. National Flood Insurance Program. Project Description. August 1

Federal Emergency Management Agency (FEMA). 2007. http://www.fema.gov/plan/prevent/floodplain/index.shtm. Accessed August 2008.

Gayle, Jennifer/Riverside County Flood Control and Water Conservation District (RCFCWCD) Planner. 2008. Personal communication with Lyna Black/CH2M HILL. August 22.

San Diego Regional Water Quality Control Board (SDRWQCB) 1995 (amended 2007). *Water Quality Control Plan for the San Diego River Basin*. http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml. Accessed August 2008.

San Diego Regional Water Quality Control Board (SDRWQCB) 2007. *Surface Water Ambient Monitoring Program (SWAMP) Report on the Santa Margarita Hydrologic Unit*. http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/swamp/docs/902santamargaritarpt.pdf. Accessed August 2008.

Southern California Edison (SCE) TDBU Civil Engineering Group (SCE). 2008a. *Draft Southern California Edison Preliminary Geotechnical Evaluation Triton 115/12kV Substation - City of Temecula, Riverside County, California*. July.

Southern California Edison (SCE) TDBU Civil Engineering Group (SCE). 2008b. *Southern California Edison Geotechnical Evaluation Triton 115/12kV Substation - City of Temecula, Riverside County, California*. September 26.

United States Department of the Interior, Bureau of Reclamation (BOR). 2008. San Diego Project. http://www.usbr.gov/dataweb/html/sandiego.html. Accessed 2008.

United States Environmental Protection Agency (USEPA). 2004 National Assessment Database Fact sheet. http://www.epa.gov/waters/305b/index.html. Accessed August 2008.

United States Geological Survey (USGS). 2008. National Water Information System: Web Interface. http://nwis.waterdata.usgs.gov/nwis/gwlevels. Accessed September 30.

4. and se and Planning

4. .1 Overview

This analysis describes the potential impacts to land use that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than signficant impacts during construction and operation to land use.

4. .2 ethodology

The study area for this section was the footprint or property boundary of the project features for each alternative. The County of Riverside, the City of Temecula, and the City of Murrieta's land use and zoning designations, as provided in their General Plans, were reviewed and the data overlain with the locations of Triton Substation Project components to determine potential impacts of project construction and operation on land use. Additionally, the Western Riverside County Multiple Species Habitat Conservation Plan was considered as part of the analysis. The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4. .3 egulations Plans and Standards

4. .3.1 ederal egulations

4. .3.1.1 ederal Aviation Administration

- Title 14 CFR 77.13(2)(i) requires an applicant to notify the Federal Aviation Administration (FAA) of the construction of structures within 20,000 feet of the nearest point of the nearest runway of an airport with at least one runway longer than 3,200 feet.
- Title 14 CFR 77.17 requires an applicant to submit a Notice of Proposed Construction or Alteration (FAA Form No. 7460-1) to the FAA for construction within 20,000 feet of the nearest runway of an airport with at least one runway longer than 3,200 feet.

4. .3.2 State egulations

4. .3.2.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criterion that must be considered when analyzing a project's potential to result in temporary and permanent impacts to land use.

4. .3.3 ocal urisdictions

4. .3.3.1 ounty of iverside

County of Riverside eneral Plan

Land Use Compatibility

Policy LU 6.2. Direct public, educational, religious, and utility uses established to serve the surrounding community toward those areas designated for Community Development and Rural Community uses on the applicable Area Plan land use maps. These uses may be found consistent with any of the Community Development, Rural Community, or Rural foundation designations, including the Rural Village Overlay, as well as the Open Space – Rural and Agriculture designations, under the following conditions:

a. The facility is compatible in scale and design with surrounding land uses, and does not generate excessive noise, traffic, light, fumes, or odors that might have a negative impact on adjacent neighborhoods.

b. The location of the proposed use will not jeopardize public health, safety, and welfare, or the facility is necessary to ensure the continual public safety and welfare

Riverside County irport Land se Compatibility Plan
1.5 Types of Actions Reviewed

1.5.3 *Major Land Use Actions*

(a) Actions affecting land uses within any compatibility zone

(9) Proposals for new development (including buildings, antennas, and other structures) having a height of more than:

- 35 feet within Compatibility Zone B1, B2, or a Height Review Overlay Zone;
- 70 feet with Compatibility Zone C; or
- 150 feet within Compatibility Zone D or E [Table 2A states airspace review required for objects greater than 70 feet tall in Zone D and 100 feet tall in Zone E] (COR, 2004)

4. .3.3.2 abitat onservation Plans

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) applies to portions of the County of Riverside and includes the study area (COR, 2003a and COR, 2008d). The MSHCP is further divided into 1,996 Criteria Area Cells; a portion of the Triton Substation Project would be within Criteria Area Cells 5671, 5672, 5677, 5778, 5879, 5976, 6074, and 6180.

estern Riverside County Multiple Species abitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County. This Plan is one of several large, multi-jurisdictional habitat-planning efforts in Southern

> *California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region.* (COR, 2008d)

The Western Riverside County MSHCP was approved on June 22, 2004, by the California Department of Fish and Game and U.S. Fish and Wildlife Service. The plan simultaneously integrated the creation of a Natural Community Conservation Plan (NCCP) with an updated County of Riverside's General Plan and a transportation corridor plan (CDFG, 2008).

> *The MSHCP project area is 1.2 million acres and the proposed conservation area, including public lands, is approximately 500,000 acres. The core area reserves include habitats such as riparian, oak woodland, and 15,000 acres of coastal sage scrub.* (CDFG, 2008)

Section 4.4, Biological Resources, contains a detailed discussion of the Western Riverside County MSHCP.

4. .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on land use resources if it would:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community conservation plan

4. . Proposed Project and Alternatives

4. . .1 Proposed Project

4. . .1.1 Environmental Setting

Proposed Project

The Proposed Project N/S Telecommunication Lines would be located on, and run in the same Right of Way (ROW) as, the existing Valley-Auld-Pauba 115 kV subtransmission line. No County of Riverside General Plan land use designations or zoning would be crossed by the Proposed Project site (COR, 2003a, 2008a, and 2008c) (Figure 4.9-1).

According to the City of Temecula General Plan (COT, 2005), the following land use designations would be crossed by the substation property boundary and the subtransmission line loop-in, and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (Figure 4.9-2):

- Residential Uses – Very Low Residential
- Residential Uses – Low Medium Residential

According to the City of Temecula (COT, 2008a, b, and c), the following zoning designations would be crossed by the substation property boundary and the subtransmission line loop-in, and telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula:

- Residential Zoning District - Very Low Density Residential
- Residential Zoning District – Low Medium Density Residential

N S elecommunication Lines

According to the County of Riverside General Plan (COR, 2003a and b), the following land use designations would be crossed by the N/S Telecommunication Lines in unincorporated County of Riverside (Figure 4.9-1):

- Open Space – Conservation
- Community Development – Business Park
- Community Development - Light Industrial
- Community Development - Public Facility
- Community Development - Commercial Retail

According to the County of Riverside (COR, 2003a, 2008a, and 2008c), the following zoning designations would be crossed by the N/S Telecommunication Lines in the City of Temecula):

- Specific Plan #213 - Winchester Properties (SilverHawk)
- Manufacturing-Service Commercial
- Scenic Highway Commercial
- Light Agriculture

According to the County of Riverside General Plan (COR, 2003a and b), the following Western Riverside County MSHCP Criteria Area Cells would be crossed by the N/S Telecommunication Lines in unincorporated County of Riverside:

- 5671, 5672, 5677, 5778, 5879, 5976, 6074, and 6180

The MSHCP is discussed in detail within the Section 4.4, Biological Resources.

According to the City of Temecula General Plan (COT, 2005), the following land use designations would be crossed by the N/S Telecommunication Lines in the City of Temecula (Figure 4.9-2):

- Residential Uses - Very Low Residential
- Residential Uses - Low Medium Residential
- Residential Uses - High Residential
- Public Uses and Open Space – Open Space
- Public Uses and Open Space - Public/Institutional

According to the City of Temecula (COT, 2008a, b, and c), the following zoning designations would be crossed by the N/S Telecommunication Lines in the City of Temecula:

- Residential Zoning District - Very Low Density Residential
- Residential Zoning District - Low Medium Density Residential
- Residential Zoning District - High Density Residential
- Open Space/Recreation/Conservation - Parks and Recreation District
- Public Institutional District - Public Institutional

According to the City of Murrieta General Plan (COM, 1994), the following land use designations would be crossed by the N/S Telecommunication Lines in the City of Murrieta (Figure 4.9-3):

- Industrial - Business Park
- Residential - Rural Residential

According to the City of Murrieta (COM, 1994 and 2008), the following zoning designations would be crossed by the N/S Telecommunication Lines in the City of Murrieta:

- Industrial District – Business Park

The City of Temecula General Plan also identifies land use within the City of Temecula's Sphere of Influence, in unincorporated County of Riverside. However, the County of Riverside maintains jurisdiction over land use in the City of Temecula Sphere of Influence. According to the City of Temecula General Plan (COT, 2005), the following land use designations would be crossed by the N/S Telecommunication Lines in the City of Temecula Sphere of Influence (Figure 4.9-2):

- Residential Uses – Low Medium Residential
- Commercial and Office Uses – Community Commercial
- Commercial and Office Uses - Highway Tourist Commercial
- Industrial Uses - Industrial Park
- Public Uses and Open Space - Open Space
- Public Uses and Open Space - Public/Institutional

According to the City of Temecula (COT, 2008a, b, and c), the following zoning designations would be crossed by the N/S Telecommunication Lines in the City of Temecula Sphere of Influence:

- Planning Overlay District - Planned Development Overlay District

4. . .1.2 Impact Analysis

Would the project physically divide an established community?

Construction Impacts

Construction of the Proposed Project would not physically divide an established community because it would not restrict the movement of people and goods within the established community. Therefore, no impact would occur due to the construction of the Proposed Project under this criterion.

Operation Impacts

Operation of the Proposed Project would not physically divide an established community because it would not restrict the movement of people and goods within the established community. Therefore, no impact would occur due to the operation of the Proposed Project under this criterion.

Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Construction Impacts

Construction of the Proposed Project would not comply with the goals and policies established under the City of Temecula's General Plan (COT, 2005) because siting of the project is not consistent with the land use and zoning designations. However, the Proposed Project is exempt from discretionary permits issued by local jurisdictions under CPUC GO No. 131-D. The Proposed Project would be designed, engineered, and constructed consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). Therefore, no impact would occur due to the construction of the Proposed Project under this criterion.

Operation Impacts

Operation of the Proposed Project would not comply with the goals and policies established under the City of Temecula's General Plan (COT, 2005) because siting of the project is not consistent with the land use and zoning designations. However, the Proposed Project is exempt from discretionary permits issued by local jurisdictions under CPUC GO No. 131-D. The Proposed Project would be operated consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). Therefore, no impact would occur due to the operation of the Proposed Project under this criterion.

Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Construction Impacts

Construction of the Proposed Project would not conflict with habitat conservation plans, as discussed in detail in Section 4.4 Biological Resources. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not conflict with habitat conservation plans, as discussed in detail in Section 4.4 Biological Resources. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

4. . .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation would be required.

4. . .2 Site Alternative B

4. . .2.1 Environmental Setting

Site Iternative

No County of Riverside General Plan land use designations or zoning would be crossed by Site Alternative B (COR, 2003a, 2008a, and 2008c).

According to the City of Temecula General Plan (COT, 2005), the following land use designations would be crossed by the substation property boundary and the subtransmission line loop-in, and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (Figure 4.9-2):

- Residential Uses – Very Low Residential

According to the City of Temecula (COT, 2008a, b, and c), the following zoning designations would be crossed by the substation property boundary and the subtransmission line loop-in, and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula:

- Residential Zoning District - Very Low Density Residential

N S elecommunication Lines

The N/S Telecommunication Lines cross approximately the same County of Riverside, City of Temecula, and City of Murrieta land use and zoning designations, as discussed under the Proposed Project

4. . .2.2 Impact Analysis

Construction and operation of Site Alternative B would not physically divide an established community as it would be consistent with the existing infrastructure in the study area and would not restrict the movement of people and goods within the established community. Implementation of Site Alternative B would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over Site Alternative B adopted for the purpose of avoiding or mitigating an environmental effect. Site Alternative B would comply with the goals and policies established under the City of Temecula's General Plan (COT, 2005), with the approval of a conditional use permit; however, Site Alternative B is exempt from discretionary permits issued by local jurisdictions under CPUC GO No. 131-D. Additionally, implementation of Site Alternative B would be consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). Finally, construction and operation of Site Alternative B would not conflict with habitat conservation plans, as discussed in detail in Section 4.4 Biological Resources. Therefore, construction and operation of Site Alternative B would result in less than significant impacts under these criteria.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less significant impacts to land use.

4. . .3 Site Alternative

4. . .3.1 Environmental Setting

Site Iternative C

According to the County of Riverside General Plan (COR, 2003a and b), the following land use designations would be crossed by the substation property boundary and the subtransmission line loop-in, and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in unincorporated County of Riverside (Figure 4.9-1):

- Community Development - Mixed Use Planning Area
- Open Space – Conservation
- Community Development - Business Park
- Community Development - Medium Density Residential

According to the County of Riverside (COR, 2003a and b), the following zoning designations would be crossed by the substation property boundary and the subtransmission line loop-in, and telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in unincorporated County of Riverside:

- Specific Plan #213 - Winchester Properties (SilverHawk)

According to the City of Temecula General Plan (COT, 2005), the following land use designations would be crossed by the subtransmission Line 1 loop-in and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (Figure 4.9-2):

- Public Uses and Open Space – Open Space

According to the City of Temecula (COT, 2008a, b, and c), the following zoning designations would be crossed by subtransmission Line 1 loop-in, and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula:

- Open Space/Recreation/Conservation - Parks and Recreation District

According to the County of Riverside General Plan (COR, 2003a and b), the following Western Riverside County MSHCP Criteria Area Cells would be crossed by the substation property boundary and the subtransmission line loop-in, and the telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in unincorporated County of Riverside (Figure 4.9-1):

- 6180 (Discussed in detail within the Section 4.4, Biological Resources)

N S elecommunication Lines

The N/S Telecommunication Lines cross approximately the same County of Riverside, City of Temecula, and City of Murrieta land use and zoning designations as discussed under the Proposed Project, with the exception of an area between the interconnect with subtransmission Line 1 loop-in and subtransmission Line 2 loop-in. The N/S Telecommunication Lines would not be underbuilt between these two interconnect points (Figure 2.4-1).

4. . .3.2 Impact Analysis

Construction and operation of Site Alternative C would not physically divide an established community as it would be consistent with the existing infrastructure in the study area and would not restrict the movement of people and goods within the established community. Implementation of Site Alternative C would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over Site Alternative C adopted for the purpose of avoiding or mitigating an environmental effect. Site Alternative C would comply with the goals and policies established under the City of Temecula's General Plan (COT, 2005), with the approval of a conditional use permit; however, Site Alternative C is exempt from discretionary permits issued by local jurisdictions under CPUC GO No. 131-D. Additionally, implementation of Site Alternative C would be consistent with the compatibility zone height restrictions listed in the Riverside County Airport Land Use Compatibility Plan (COR, 2004). Finally, construction and operation of Site Alternative C would not conflict with habitat conservation plans, as discussed in detail in Section 4.4 Biological Resources. Therefore, construction and operation of Site Alternative C would result in less than significant impacts under these criteria.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts to land use.

4. . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than signficant impacts during construction and operation to land use.

4. . eferences

California Department of Fish and Game (CDFG). 2008. *Natural Community Conservation Plan (NCCP) Plan Status*. http://www.dfg.ca.gov/habcon/nccp/status/RiversideCounty.html. Accessed August 5, 2008.

California Resource Agency (CRA). 2007. *State CEQA Guidelines.* 2007. Amended July 25, 2007. http://ceres.ca.gov/ceqa/. Accessed July 17, 2008.

City of Murrieta (COM). 2008. *Title 16 Development Code, Article II – Zoning Districts and Allowable Land Uses* http://www.amlegal.com/nxt/gateway.dll/California/murrieta_ca/murrietacaliforniamunicipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:murrieta_ca. Accessed August 19, 2008.

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. July 21.

City of Temecula (COT). 2008a. *City of Temecula GIS Viewer*. http://chtemp.cityoftemecula.org/GIS_ArcIMS/Viewer/Top/Viewer.asp?app=parcels. Accessed July 22, 2008.

———. 2008b. *City of Temecula Zoning Classifications/Uses*. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/zoningclassifications.htm. Accessed July 22, 2008.

———. 2008c. *City of Temecula Municipal Codes*. http://www.qcode.us/codes/temecula/view.php?topic=17&frames=off. Accessed August 5, 2008.

———. 2005. *Temecula General Plan*. 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

County of Riverside (COR). 2003a. *County of Riverside General Plan*. October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

———. 2003b. *County of Riverside General Plan, Southwest Area Plan*. October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

———, Airport Land Use Commission (COR). 2004. *Riverside County Airport Land Use Compatibility Plan*. http://www.rcaluc.org/filemanager/plan/new//01-%20Cover%20&%20Title%20Page%20Vol%201.pdf. Accessed October 24, 2008.

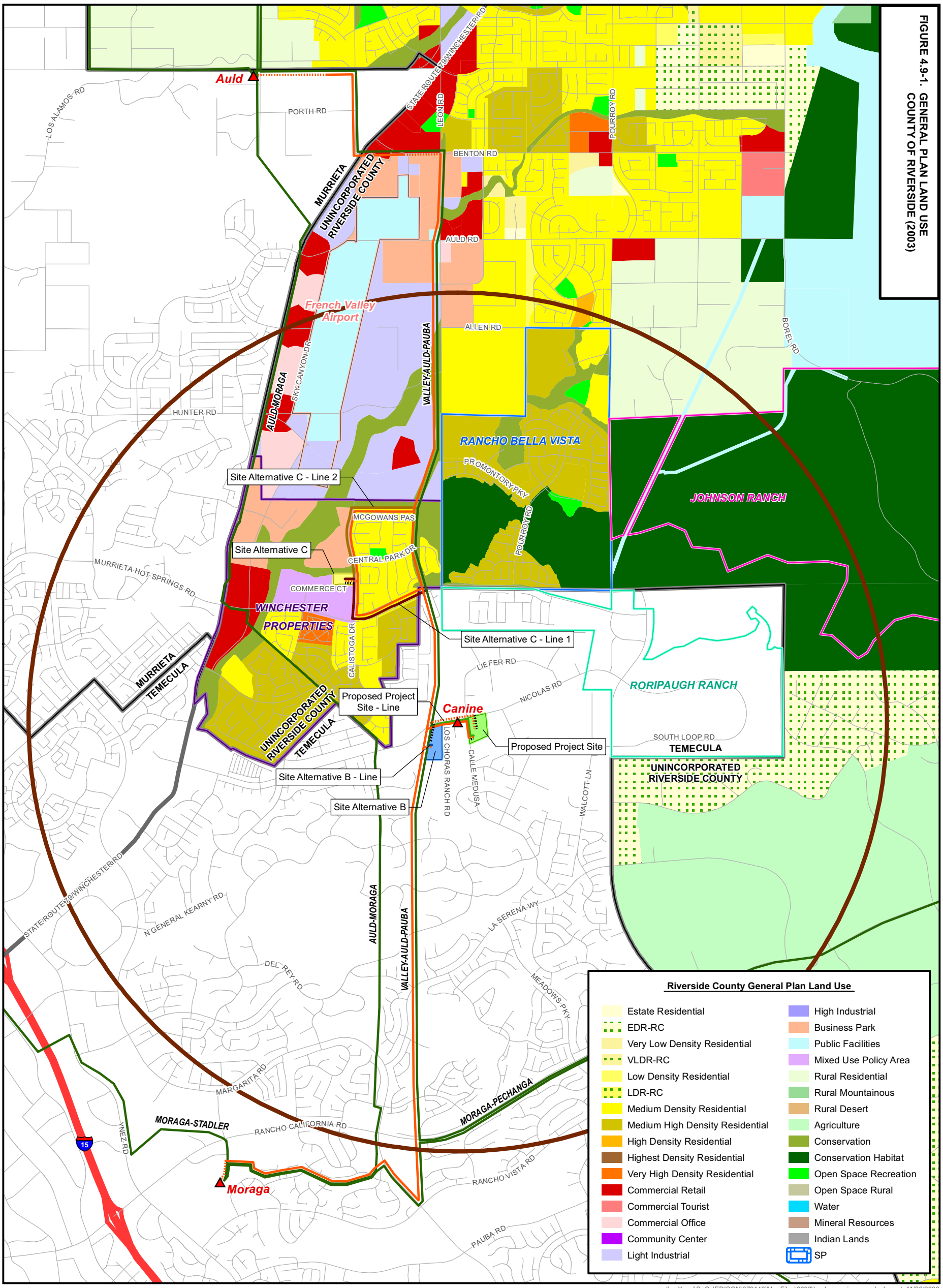
———, Planning Department (COR). 2008c. *County of Riverside Zone Descriptions & Requirements*. http://www.rctlma.org/planning/content/zoning/ordnance/ord348_zones.html. Accessed August 4 and August 18, 2008

———, Planning Department (COR). 2008a. *Specific Plans – Approved Documents & Land Use Maps*.http://www.rctlma.org/planning/content/splans/ sp_docs.html. Accessed July 17, 2008.

———, Transportation and Land Management Agency (COR). 2008d. *Western Riverside County Multiple Species Habitat Conservation Plan*. http://www.rctlma.org/mshcp/volume1/index.html. Accessed August 5, 2008.

United States Fish and Wildlife Service (USFWS). 2008. *Habitat Conservation Plans*. http://www.fws.gov/midwest/endangered/permits/hcp/index.html. Accessed August 5, 2008.

FIGURE 4.9-1. GENERAL PLAN LAND USE
COUNTY OF RIVERSIDE (2003)



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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- French Valley Airport
- Jurisdictional Boundary
- Electrical Needs Area

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project Site and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000

0 Feet 1

Miles

Source: Southern California Edison; Riverside County
Image Source: United States Geological Survey 1:24,000 Topographic Maps - Murrieta, Bachelor Mountain, Temecula, Pechanga

2008

TRITON SUBSTATION PEA

FIGURE 4.9-1. GENERAL PLAN LAND USE
COUNTY OF RIVERSIDE (2003)

SOUTHERN CALIFORNIA EDISON

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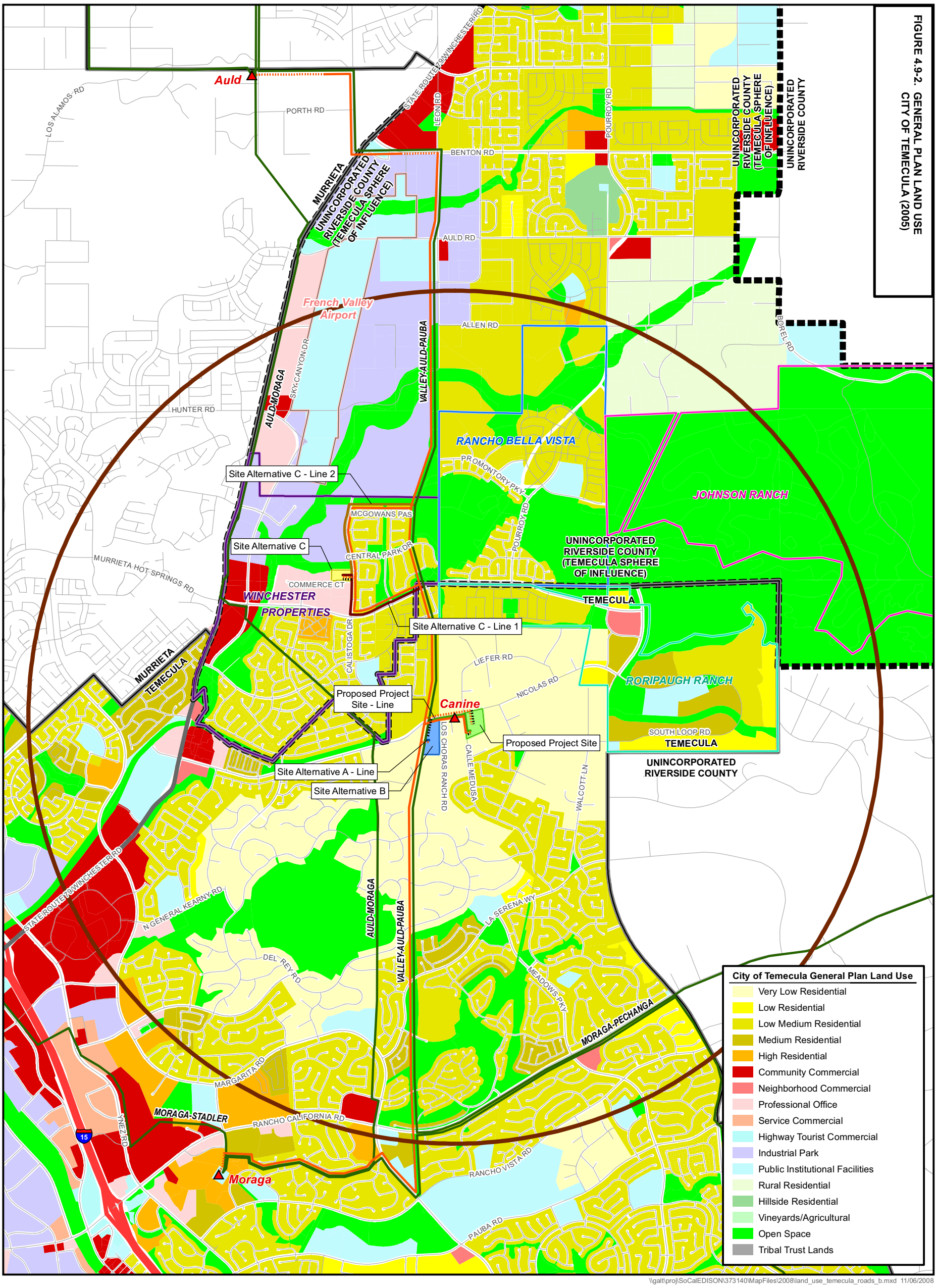
FIGURE 4.9-2. GENERAL PLAN LAND USE CITY OF TEMECULA (2005)



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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- Temecula Sphere of Influence
- French Valley Airport
- Jurisdictional Boundary
- Electrical Needs Area

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000 Feet

0 1 Miles

Source: City of Temecula General Plan; Southern California Edison; Riverside County

2008

TRITON SUBSTATION PEA

FIGURE 4.9-2. GENERAL PLAN LAND USE CITY OF TEMECULA (2005)

SOUTHERN CALIFORNIA EDISON

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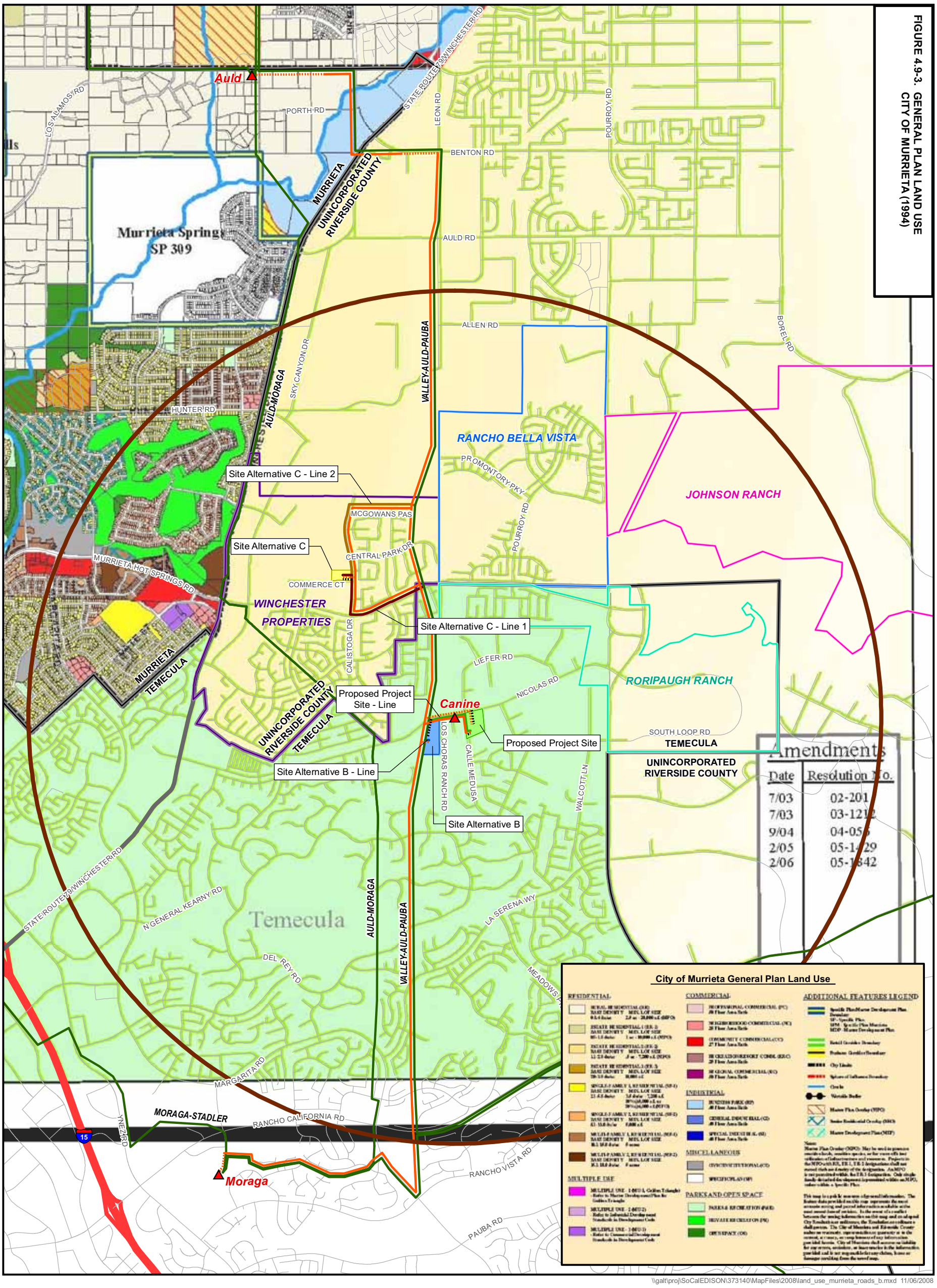
FIGURE 4.9-3. GENERAL PLAN LAND USE
CITY OF MURRIETA (1994)



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LEGEND

- Existing Substation
- Existing SCE 115 kV Subtransmission Line
- Jurisdictional Boundary
- Electrical Needs Area

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project Site and Site Alternatives B and C

Substations

- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins[1]

- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes[1]

- Aboveground
- Belowground

12 kV Duct Banks[1]

- Belowground

Note: 1 - Subtransmission line loop-ins, 12 kV duct banks, and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in existing underground banks near the Auld and Moraga substations.

1:36,000
NAD 83 UTM ZONE 11N

1 inch equals 3,000 ft

0 6,000
0 Feet 1
Miles

Source: City of Murrieta General Plan; Southern California Edison; Riverside County

2008

TRITON SUBSTATION PEA

FIGURE 4.9-3. GENERAL PLAN LAND USE
CITY OF MURRIETA (1994)

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

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4.1 ineral esources

4.1 .1 Overview

This analysis describes the potential impacts to mineral resources that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts during construction and operation to mineral resources.

4.1 .2 ethodology

The study area is defined as the alternative substation properties and the subtransmission line loop-in and telecommunication line routes. Mineral resources consist of oil and gas and deposits of rock, sand, and gravel. Published and unpublished literature, maps, and online sources available for review from the California Department of Conservation (CDOC), the California Geological Survey (CGS), Division of Oil, Gas, and Geothermal Resources (DOGGR) and the U.S. Geological Survey (USGS), as well as data obtained from the *County of Riverside General Plan* (COR, 2003), the *City of Temecula General Plan* (COT, 2005), and the *City of Murrieta General Plan* (COM, 1994) were reviewed for the presence of mineral resources in relationship to the locations of the Triton Substation Project components to determine potential impacts.

The report entitled Mineral Land Classification of the Temescal Valley Area, Riverside County, California, Special Report 165 (CDMG, 1991) was also reviewed for potential sand and gravel resources in the Temecula Planning Area.

The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4.1 .3 egulations Plans and Standards

4.1 .3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on mineral resources.

4.1 .3.2 alifornia Surface ining and eclamation Act

The California Surface Mining and Reclamation Act (SMARA) of 1975 mandates mineral land classification (MRZ) in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allows the State Mining and Geology Board, after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

4.1 .3.3 alifornia Division of Oil as and eothermal esources

Public Resources Code Section 3106 mandates the supervision of drilling, operation, maintenance, and abandonment of oil wells for the purpose of preventing: damage to life,

health, property, and natural resources; damage to underground and surface waters suitable for irrigation or domestic use; loss of oil, gas, or reservoir energy; and damage to oil and gas deposits by infiltrating water and other causes.

4.1 .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a project would have a significant impact on mineral resources if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

4.1 . Proposed Project and Alternatives

4.1 . .1 Proposed Project

4.1 . .1.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described below.

The portions of the Proposed Project study area within unincorporated County of Riverside and the Cities of Temecula and Murrieta have a zoning classification of MRZ-3, applied by the state (COR, 2003). MRZ-3 areas contain sedimentary deposits that have the potential to supply sand and gravel for concrete and crushed stone for aggregate (CDMG, 1991). While potential sand and gravel resources are present in the Proposed Project area, no mining of MRZ-3 resources is currently occurring (Kohler, 2006).

No project components would be located on lands with Open Space-Mineral Resource (OS-MIN) land use designation in the County of Riverside General Plan (COR, 2003). The County of Riverside General Plan OS-MIN land use designation allows for mineral extraction and process facilities designated on the basis of the SMARA of 1975 classification. Areas held in reserve for future mining activities also fall under the OS-MIN designation (COR, 2003).

The Temecula Planning Area is designated MRZ-3a (COT, 2005). MRZ-3a is a subcategory of MRZ-3, and refers to areas where the available geologic information indicates that the mineral deposits are likely to exist; however, the significance of the deposit is undetermined. The MRZ-3a areas in the Temecula Planning Area are not considered to contain deposits of significant economic value, based on available data (COT, 2005).

The *City of Murrieta General Plan* (COM, 1994) does not list designated mineral resource zones and no designated mineral resources land uses are included in the plan. According to the *County of Riverside General Plan* (COR, 2003), the City of Murrieta is designated as MRZ-3.

No mining operations and no oil and gas resources are located in the vicinity of the Proposed Project.

4.1 . .1.2 Impact Analysis

Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Construction Impacts

The MRZ-3a areas in the Temecula Planning Area are not considered to contain deposits of significant economic value, based on available data (COT, 2005). Therefore, construction activities, including grading and excavation, and temporary access restrictions to the Proposed Project site during construction (approximately eight months) would result in no impact to known mineral resources that would be of value to the region and residents of the state.

The N/S Telecommunication Lines would be underbuilt on the existing poles and no ground-disturbing activity would occur. No existing mining operations are located along the existing Valley-Auld-Pauba 115 kV subtransmission line ROW and there would be no temporary access restrictions to the ROW during construction (approximately 40 days). Therefore, construction activities, including stringing of the N/S Telecommunication Lines, and temporary access restrictions to the Proposed Project site during construction (approximately 40 days) would result in no impact to known mineral resources that would be of value to the region and residents of the state.

Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

The MRZ-3a areas in the Temecula Planning Area are not considered to contain deposits of significant economic value, based on available data (COT, 2005). Therefore, operation activities associated with the Proposed Project, including minor access by SCE staff, would result in no impact to known mineral resources that would be of value to the region and residents of the state.

Operation of the N/S Telecommunication Lines would result in no ground-disturbing activities. No existing mining operations are located along the existing Valley-Auld-Pauba 115 kV subtransmission line ROW and no access restrictions would occur due to operation of the N/S Telecommunication Lines. Therefore, operation activities, including minor access by SCE staff to the existing Valley-Auld-Pauba 115 kV subtransmission line ROW, would result in no impact to known mineral resources that would be of value to the region and residents of the state.

Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Construction Impacts

No mineral resources of local importance have been identified in the Proposed Project study area and no loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan would result from the construction of the Proposed Project. Therefore, no impact would occur due to the construction of the Proposed Project under this criterion.

Operation Impacts

No mineral resources of local importance have been identified in the Proposed Project study area and no loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan would result from the operation of the Proposed Project. Therefore, no impact would occur due to the operation of the Proposed Project under this criterion.

4.1 . .1.3 itigation easures

Implementation of the Proposed Project would result in no impacts during construction and operation; therefore, no mitigation is required.

4.1 . .2 Site Alternative B

4.1 . .2.1 Environmental Setting

The environmental setting for Site Alternative B is the same as provided previously for the Proposed Project.

4.1 . .2.2 Impact Analysis

Construction and operation of Site Alternative B would not result in the loss of availability of a know mineral resource that would be of value to the region and residents of the state, because the MRA-3A zone in the Temecula Planning Area is not considered to contain deposits of significant economic value, based on available data (COT, 2005), and the N/S Telecommunication Lines would be underbuilt on existing structure and no change to existing conditions would occur. Additionally, no mineral resources of local importance have been identified in the Site Alternative B study area and no loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan would result from implementation of Site Alternative B. Therefore, construction and operation of Site Alternative B would result in no impacts under these criteria.

In conclusions, similar to the Proposed Project, construction and operation of Site Alternative B would result in no impacts to mineral resources.

4.1 . .3 Site Alternative

4.1 . .3.1 Environmental Setting

The environmental setting for Site Alternative C is the same as provided previously for the Proposed Project.

4.1 . .3.2 Impact Analysis

Construction and operation of Site Alternative C would not result in the loss of availability of a know mineral resource that would be of value to the region and residents of the state, because the MRA-3A zone in the Temecula Planning Area is not considered to contain deposits of significant economic value, based on available data (COT, 2005), and the N/S Telecommunication Lines would be underbuilt on existing structure and no change to existing conditions would occur. Additionally, no mineral resources of local importance have been identified in the Site Alternative C study area and no loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan would result from implementation of Site Alternative C. Therefore, construction and operation of Site Alternative C would result in no impacts under these criteria.

In conclusions, similar to the Proposed Project, construction and operation of Site Alternative C would result in no impacts to mineral resources.

4.1 . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts during construction and operation to mineral resources.

4.1 . eferences

California Division of Mines and Geology (CDMG, now known as the California Geological Survey). 1991. *Mineral Land Classification of Temescal Valley Area, Riverside County, California. Special Report No. 165*.

City of Murrieta (COM). 1994. *City of Murrieta General Plan.* June 21

City of Temecula (COT). 2005. *Temecula General Plan.* 1993; Updated 2005.

County of Riverside (COR). 2003. *County of Riverside General Plan*. October.

Division of Oil, Gas, and Geothermal Resources (DOGGR). 2001. Review of online oil and gas and geothermal maps, accessed July 2008. http://www.consrv.ca.gov/DOG/

Kohler, S. 2006. Map Sheet 52, Aggregate Availability in California. California Department of Conservation, California Geological Survey.

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4.11 Noise

4.11.1 Overview

This analysis describes the potential noise impacts that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation from noise.

4.11.2 ethodology

The noise study area was defined as the area approximately between the alternatives substation site boundary or the centerline of the project linear features (subtransmission line loop-in, 12 kV distribution duct banks, and telecommunication lines) and the nearest sensitive receptor (approximately 1,000 feet).

4.11.2.1 undamentals of Noise

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. There are several ways to measure noise, depending on the source of the noise, the receiver, and the reason for the noise measurement. Acoustical technical noise terms are summarized in Appendix G, Glossary and Acronyms.

The most common metric is the overall A-weighted sound level measurement that has been adopted by regulatory bodies worldwide. The A-weighting network measures sound in a similar fashion to how a person perceives or hears sound, thus, achieving very good correlation in terms of how to evaluate acceptable and unacceptable sound levels.

A-weighted sound levels are typically measured or presented as the equivalent sound pressure level (L_{eq}), which is defined as the average noise level, on an equal energy basis for a stated period of time, and is commonly used to measure steady state sound or noise that is usually dominant. Statistical methods are used to capture the dynamics of a changing acoustical environment. Statistical measurements are typically denoted by L_{xx}, where $_{xx}$ represents the percentile of time the sound level is exceeded. The L_{90} is a measurement that represents the noise level that is exceeded during 90 percent of the measurement period. Similarly, the L_{10} represents the noise level exceeded for 10 percent of the measurement period. The relative A-weighted noise levels of common sounds measured in the environment and industry for various qualitative sound levels are provided in Table 4.11-1.

Another metric used in determining the impact of environmental noise is the differences in response that people have to daytime and nighttime noise levels. During the evening and at night, exterior background noises are generally lower than daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are sensitive to intrusive noises. To account for human sensitivity to evening and nighttime noise levels, the DNL (also abbreviated as L_{dn}) and CNEL were developed. The DNL is a noise metric that accounts for the greater annoyance of noise during the nighttime hours (10:00 p.m. to 7:00 a.m.). The CNEL is a noise

index that accounts for the greater annoyance of noise during both the evening hours (7:00 p.m. to 10:00 p.m.) and nighttime hours.

Table 4.11-1. Typical Sound evels easured in the Environment and Industry
Triton 115/12 kV Substation Project PEA

Noise Source At a Given Distance	A-Weighted Sound Level in Decibels	Qualitative Description
Carrier deck jet operation	140	
	130	Pain threshold
Jet takeoff (200 feet)	120	
Auto horn (3 feet)	110	Maximum vocal effort
Jet takeoff (1000 feet) Shout (0.5 feet)	100	
N.Y. subway station Heavy truck (50 feet)	90	Very annoying Hearing damage (8-hr, continuous exposure)
Pneumatic drill (50 feet)	80	Annoying
Freight train (50 feet) Freeway traffic (50 feet)	70 to 80	
	70	Intrusive (Telephone use difficult)
Air conditioning unit (20 feet)	60	
Light auto traffic (50 feet)	50	Quiet
Living room Bedroom	40	
Library Soft whisper (5 feet)	30	Very quiet
Broadcasting/Recording studio	20	
	10	Just audible

Adapted from Table E, "Assessing and Mitigating Noise Impacts", NY DEC, February 2001.

DNL values are calculated by averaging hourly L_{eq} sound levels for a 24-hour period, and applying a weighting factor to the nighttime L_{eq} values. CNEL values are calculated similarly, except that a weighting factor is also added to evening L_{eq} values. The weighting factors, which reflect the increased sensitivity to noise during evening and nighttime hours, are added to each hourly L_{eq} sound level before the 24-hour DNL or CNEL is calculated. For the purposes of assessing noise, the 24-hour day is divided into three time periods, with the following weightings:

- Daytime hours: 7:00 a.m. to 7:00 p.m. (12 hours) - Weighting factor of 0 dBA
- Evening hours (for CNEL only): 7:00 p.m. to 10:00 p.m. (3 hours) – Weighting factor of 5 dBA
- Nighttime hours (for both CNEL and DNL): 10:00 p.m. to 7:00 a.m. (9 hours) – Weighting factor of 10 dBA

The adjusted time period noise levels are then averaged (on an energy basis) to compute the overall DNL or CNEL value. For a continuous noise source, the DNL value is easily computed by adding 6.4 dBA to the overall 24-hour noise level (L_{eq}). For example, if the expected continuous noise level from a noise source is 60.0 dBA, the resulting DNL from the source would be 66.4 dBA. Similarly, the CNEL for a continuous noise source is computed by adding 6.7 dBA to the overall 24-hour L_{eq}.

The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, learning
- Physiological effects such as startling and hearing loss

In most cases, environmental noise may produce effects in the first two categories only. No completely satisfactory way exists to measure the subjective effects of noise, or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard is primarily due to the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is by comparing it to the existing or "ambient" environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual.

The general human response to changes in noise levels that are similar in frequency content (for example, comparing increases in continuous (L_{eq}) traffic noise levels) are summarized as follows:

- A 3-dB change in sound level is considered a barely noticeable difference.
- A 5-dB change in sound level will typically be noticeable.
- A 10-dB change is considered to be a doubling in loudness.

4.11.2.2 Noise Sensitive eceptors ses

Noise-sensitive land uses generally are defined as locations where people reside or where the presence of unwanted sound could adversely affect the designated use of the land. Typically, noise-sensitive land uses include residential, hospitals, places of worship, libraries, and schools, as well as nature and wildlife preserves and parks. The location of the Triton Substation Project in relationship to sensitive receptors within a one-mile buffer is shown in Figure 4.11-1.

4.11.3 egulations Plans and Standards

While there are no federal regulations that limit overall environmental noise levels, there are federal guidance documents that address environmental noise and regulations for specific sources (for example, aircraft or federally funded highways).

The only energy facility specific requirements are those of the Federal Energy Regulatory Commission (FERC), which regulates interstate electrical transmission lines, natural gas, and petroleum pipelines. The FERC limits specifically address compressor facilities

associated with pipelines under its jurisdiction and limits the noise to 55 dBA DNL in noise sensitive areas (FERC, 2002).

There are also federal highway and aircraft guidelines/regulations established by the Federal Highway Administration (FHWA) (CFR Title 23 Part 772) and Federal Aviation Administration (FAA) (CFR Title 18 Part 150). A summary of federal guidelines/regulations is presented in Table 4.11-2.

Table 4.11-2. Summary of ederal uidelines egulations for Exterior Noise dBA
Triton 115/12 kV Substation Project PEA

Agency	L_{eq}	DNL
Federal Energy Regulatory Commission	[49]	55
Federal Highway Administration	67	[67]
Federal Aviation Administration	[59]	65
U.S. Department of Transportation—Federal Rail and Transit Authorities (FRA, 1998 and FTA, 1995) [a, b]	Sliding scale, refer to Figure 4.11-2	Sliding scale, refer to Figure 4.11-2
U.S. Environmental Protection Agency (EPA, 1974) [c]	[49]	55
U.S. Department of Housing and Urban Development [d]	[59]	65

Note: Brackets [59] indicate calculated equivalent standard. Because FHWA regulates peak noise level, the DNL is assumed equivalent to the peak noise hour.

Sources:
[a]FRA, 1998
[b]FTA, 1995
[c]EPA, 1974
[d]CFR Title 24 Part 51B

4.11.3.1 alifornia Environmental uality Act

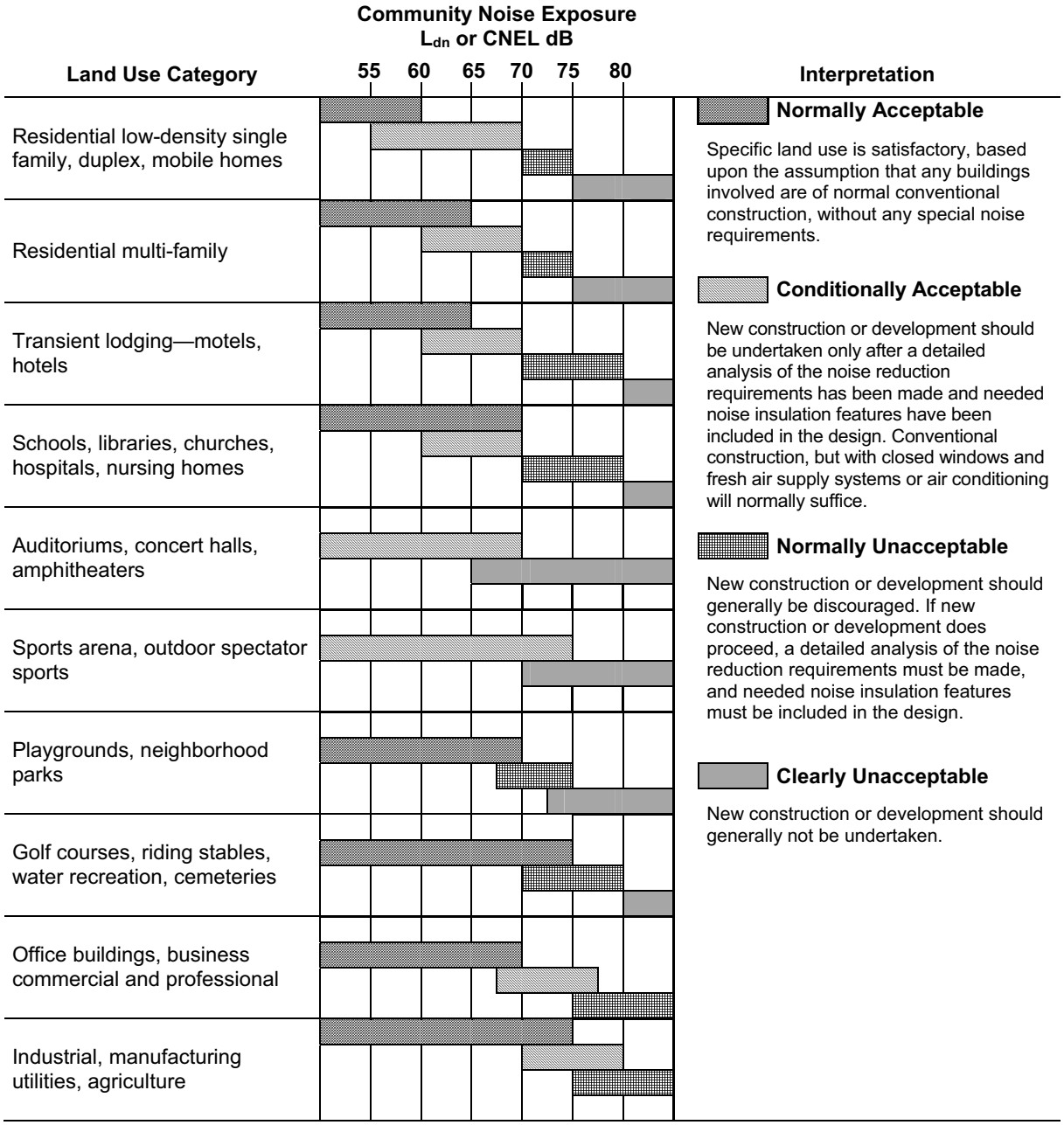
The California Environmental Quality Act (CEQA) Guidelines, Appendix G, identify the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on sensitive receptors as a result of noise.

4.11.3.2 ounty of iverside

The Noise Element of the County of Riverside General Plan establishes land use compatibility guidelines (COR, 2003). For low-density and multifamily residential land use, the maximum normally acceptable noise level is 60 dBA and 65 dBA, respectively (CNEL/Ldn) (Table 4.11-3).

In addition to the land use compatibility guidelines, the Noise Element establishes Policy N2.3, which states "Mitigate exterior and interior noises to the levels listed in Table 8.7-11 to the extent feasible, for stationary sources" (Table 4.11-4). The County guidance also states: "These are only preferred standards; final decision will be made by the Riverside County Planning Department of Office and Public Health" (COR, 2003).

Table 4.11-3. ounty of iverside ecommended and se ompatibility uidelines
Triton 115/12 kV Substation Project PEA



Source: COR, 2003.

Table 4.11-4. Preferred Stationary Noise imits
Triton 115/12 kV Substation Project PEA

Land Use	Interior Standards	Exterior Standards
Residential		
10:00 p.m. to 7 a.m.	40 dBA (10-minute Leq)	45 dBA (10-minute Leq)
7:00 a.m. to 10 p.m.	55 dBA (10-minute Leq)	65 dBA (10-minute Leq)

Source: COR, 2003.

Chapter 15.04, Buildings and Construction: General Provisions, Administration and Enforcement, of the Riverside County Code restricts the hours of construction as follows:

> *Whenever a construction site is within one-quarter of a mile of an occupied residence or residences, no construction activities shall be undertaken between the hours of six p.m. and six a.m. during the months of June through September and between the hours of six p.m. and six a.m. during the months of October through May. Exceptions to these standards shall be allowed only with the written consent of the building official.*

Title 9, Public Peace, Morals, and Welfare, Section 9.52.070, Exceptions, of the *Codified County of Riverside Ordinances* (COR, 2008b) provides for construction-related exceptions, as follows:

> *1. Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the director of building and safety on forms provided by the building and safety department and shall be accompanied by the appropriate filing fee. No public hearing is required.*

4.11.3.2.1 ity of Temecula

The City of Temecula's General Plan Noise Element and Noise Ordinance (Municipal Code Chapter 9.20) establish the noise criteria shown in Tables 4.11-5 and 4.11-6 (COT, 2005). Note that the code specifically states that it is not intended to establish thresholds of significance for CEQA analysis.

The code also provides for restricted construction hours as follows (Chapter 9.20.060(D) and Chapter 8.32.020):

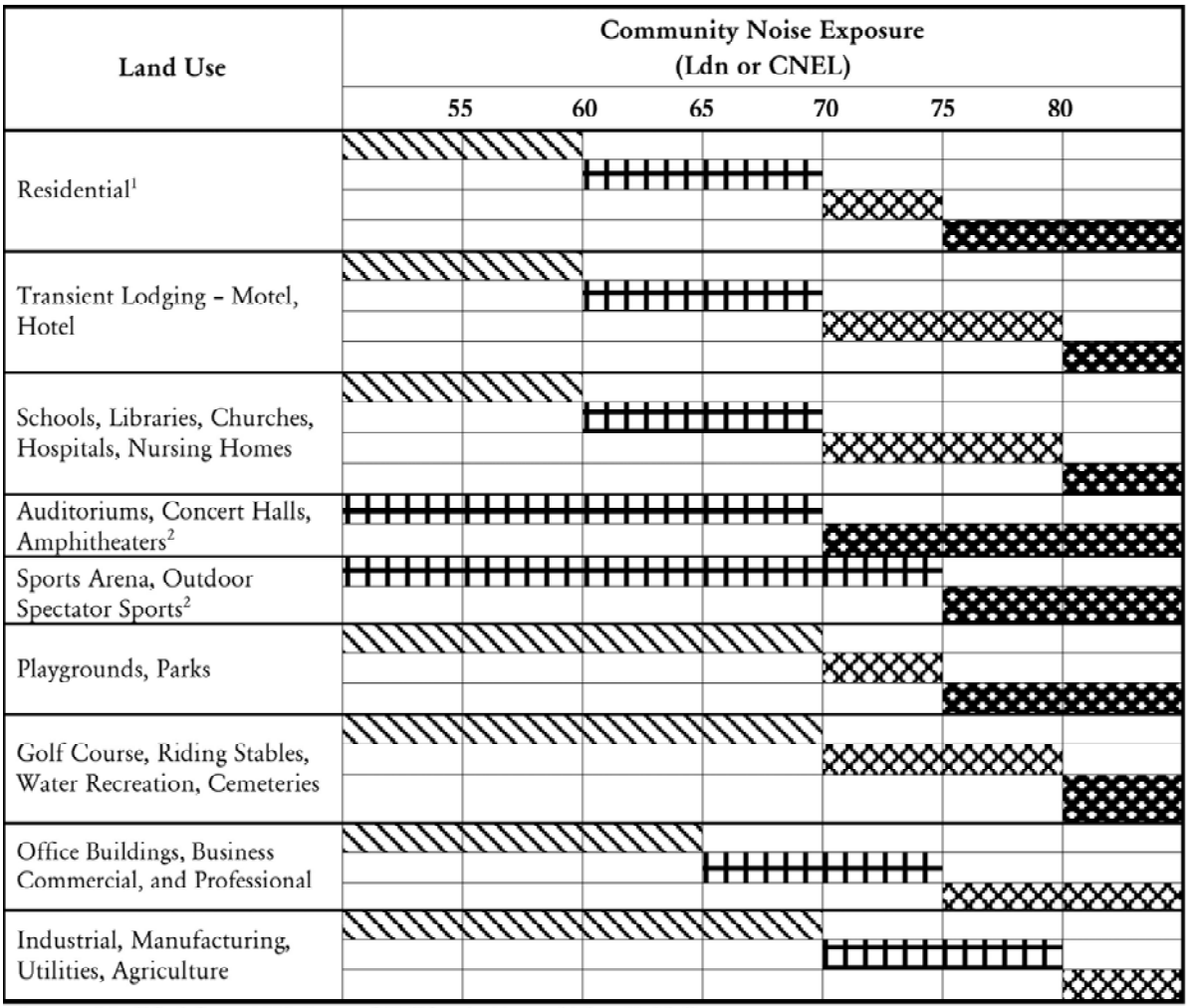
> *No person shall engage in or conduct construction activity, when the construction site is within one-quarter mile of an occupied residence, between the hours of six-thirty p.m. and six-thirty a.m., Monday through Friday, and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. on Saturday. Further, no construction activity shall be undertaken on Sunday and nationally recognized holidays. Public works projects of any federal, state or local entity or emergency work by public utilities are exempt from the provisions of this subsection. Residents working on their homes or property are exempt from the prohibition of construction activities on Sundays and holidays and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. when working on Sundays and holidays. The city council may, by formal action, exempt projects from the provisions of this chapter."*

Table 4.11- . Temecula and se Noise Standards
Triton 115/12 kV Substation Project PEA

Property Receiving Noise		**Maximum Noise Level (Ldn or CNEL, dBA)**	
Type of Use	**Land Use Designation**	**Interior**	**Exterior [c]**
Residential	Hillside, Rural, Very Low, Low, Low Medium	45	65
	Medium	45	65/70 [a]
	High	45	70[1]
Commercial and Office	Neighborhood Community Highway Tourist Service	--	70
	Professional Office	50	70
Light Industrial	Industrial Park	55	75
Public/Institutional	Schools	50	65
	All others	50	70
Open Space	Vineyards/Agriculture	--	70
	Open Space	--	70/65 [b]

[a] Maximum exterior noise levels up to 70 dB CNEL are allowed for Multiple-Family Housing.
[b] Where quiet is a basis required for the land use.
[c] Regarding aircraft-related noise, the maximum acceptable exposure for new residential development is 60 dB CNEL.

Table 4.11- . Noise and se ompatibility atrix
Triton 115/12 kV Substation Project PEA



Source: Modified from 1998 State of California General Plan Guidelines.

1. Regarding aircraft-related noise, the maximum acceptable exposure for new residential development is 60dB CNEL.
2. No normally acceptable condition is defined for these uses. Noise studies are required prior to approval.

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.

Conditionally Acceptable: New construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.

Normally Unacceptable: New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.

Clearly Unacceptable: New construction or development clearly should not be undertaken.

Source: City of Temecula, 2005.

4.11.3.2.2 ity of urrieta

The City of Murrieta's General Plan identifies policies such as limiting noise at the source and hours of construction. The City's Noise Ordinance (Chapter 16.30) quantifies these policies and identifies numeric noise standards summarized in Table 4.11-7.

Table 4.11- . Exterior Noise Standards
Triton 115/12 kV Substation Project PEA

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Allowed Exterior Level (dB)
I	Noise-sensitive area	Anytime	45
II	Residential properties	10:00 p.m. to 7:00 a.m. (nighttime)	45
	Residential properties within five hundred (500) feet of a kennel(s)	7:00 a.m. to 10:00 p.m. (daytime)	50
		7:00 a.m. to 10:00 p.m.	70
III	Commercial properties	10:00 p.m. to 7:00 a.m. (nighttime)	55
		7:00 a.m. to 10:00 p.m. (daytime)	60
IV	Industrial properties	Anytime	70

Source: COM, 1994

The above standards are identified the level not to be exceeded period of more than 30 minutes in any hour. The standard shall be increased by 5 dBA for periods of 15 minutes in any hour; 10 dBA for 5 minute in any hour; 15 dBA for 1 minute in any hour and 20 dBA for any period of time. If measurements are on the boundary of two different zoning districts, the standard is the arithmetic mean of the applicable standards.

Noisy construction activities that occur between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, so that the sound creates a noise disturbance across a residential or commercial property line, except for emergency work of public service utilities are deemed to be in violation of the noise ordinance. Outside of these hours, construction noise at residential uses shall be limited to the levels identified in Tables 4.11-8 and 4.11-9. For business or commercial receptors the limit is 85 dBA.

Table 4.11- . aximum Noise evels for Nonscheduled Intermittent Short-Term Operation ess than Ten Days of obile E uipment
Triton 115/12 kV Substation Project PEA

	Single-family Residential	Multi-family Residential	Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA

Table 4.11- . aximum Noise evel for epetitively Scheduled and elatively ong-Term Operation Periods Three Days or ore of Stationary E uipment
Triton 115/12 kV Substation Project PEA

	Single-family Residential	Multi-family Residential	Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

4.11.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant noise impact if it results in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of persons to or generation of excessive groundbourne vibration or groundbourne 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
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels

4.11.4.1.1 Significance Thresholds

For "permanent increases" associated with substation noise, the threshold for a potentially significant increase is 5 dBA resulting in a level that exceeds 40 dBA. Permanent increases of any magnitude that do not result in levels above 40 dBA are considered less than significant. In addition, increases that result in permanent noise levels greater than 50 dBA are considered potentially significant.

4.11. Proposed Project and Alternatives

As part of constructing the project, the following noise abatement measures would be implemented, and they are considered during evaluation of the potential noise impacts:

PDF NOI-1 **Construction Equipment Working Order.** Construction equipment would be in good working order.

PDF NOI-2 **Construction Equipment Maintenance.** Construction equipment would be maintained per manufacturer's recommendations.

PDF NOI-3 **Construction Equipment Muffled.** Construction equipment would be adequately muffled.

PDF NOI-4 **Construction Equipment Idling Minimized.** Idling of construction equipment and vehicles would be minimized during the construction.

PDF NOI-5 **Hearing Projection for Workers.** Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan.

PDF NOI-6 **Low-Level Noise Equipment.** During final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable.

4.11. .1 Proposed Project

4.11. .1.1 Environmental Setting

The Proposed Project substation site is bounded by Nicolas Road to the north, undeveloped land and a residence to the east, Calle Medusa road to the west, and residences to the south.

The Proposed Project site is located approximately 1.5 miles or greater from the French Valley Airport and is within Zones D and E of the French Valley Airport Compatibility Plan. No private airstrips are located within two miles of the Proposed Project (COR, 2008a).

Several sensitive noise receptors are located adjacent to the Proposed Project including two churches (Calvary Baptist Church of Temecula and Grace Presbyterian Church) located approximately 144 feet west of the eight-foot-high block wall that would surround the proposed substation. In addition, one residence is located approximately 186 feet east of the block wall that would surround the proposed substation. The two churches (Calvary Baptist Church of Temecula and Grace Presbyterian Church) are also sensitive receptors located adjacent to the subtransmission line route and telecommunication line route along Nicolas Road west of the substation site. Residences, which are also identified sensitive receptors, are also located immediately adjacent to the N/S Telecommunication Lines route.

The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport and is within Zones B1, C, D, and E of the French Valley Airport Land Use Compatibility Plan (COR, 2008a).

4.11. .1.2 Impact Analysis

The Triton Substation Project noise modeling results considered during the analysis of potential noise impacts associated with the Proposed Project are provided below.

Noise Modeling Results

Construction Noise

Equipment used in the construction of the Triton Substation Project would generate noise. Typical noise levels generated by construction equipment have been previously calculated and published in various reference documents. One of the most recent and complete

compilations of construction equipment noise is the Roadway Construction Noise Model prepared by the Federal Highway Administration. The expected equipment noise levels listed in the Roadway Construction Noise Model (RCNM) User's Guide (Final Report, January 2006, FHWA-HEP-05-054, DOT-VNTSC-FHWA-05-01) were used for this evaluation.

Review of the table of construction equipment noise levels indicates that the loudest equipment generally emits noise in the range of 80 to 90 dBA at 50 feet with usage factors of 40 percent to 50 percent. Noise at any specific receptor is dominated by the closest and loudest equipment. The types and numbers of construction equipment near any specific receptor location would vary over time. In order to make reasonably conservative estimates of construction noise, it was decided to model a scenario consisting of the following:

- One piece of equipment generating a reference noise level of 85 dBA (at 50 feet distance with a 40 percent usage factor) located on the subtransmission line route or the substation property line.
- Two pieces of equipment generating reference 85-dBA noise levels located 50 feet farther away on the subtransmission line route or the substation property line
- Two additional pieces of equipment generating reference 85-dBA noise levels located 100 feet farther away on the subtransmission line route or the substation property line

Construction equipment noise levels at various distances, based on this scenario, are presented in Table 4.11-10.

Table 4.11-1 . onstruction E uipment Noise evels versus Distance
Triton 115/12 kV Substation Project PEA

Distance from Route or Substation Property Line (feet)	L_{eq} Noise Level (dBA)
50	83
100	79
200	74
400	69
800	63
1,600	58
3,200	52
6,400	46

Operation Noise

There are two potential sources of operational noise associated with the Triton Substation Project: corona noise from the subtransmission lines and transformer noise from the substation.

Corona is the ionization of the air that occurs at the surface of the energized conductor and suspension hardware due to very high electric field strength at the surface of the metal during certain conditions. Corona may result in radio and television reception interference,

audible noise, light, and production of ozone. The amount of corona produced by a transmission line is a function of the voltage of the line, the diameter of the conductor (or bundle of conductors), the elevation of the line above sea level, the condition of the conductor and hardware, and the local weather conditions. Corona typically becomes a design concern for transmission lines at 345 kilovolts (kV) and above and is less noticeable on lines operated at lower voltages (EPRI, 2005).

The electric field gradient that causes corona is the rate at which the strength of the electric field changes with distance and is directly related to the line voltage. The electric field gradient is greatest at the surface of the conductor. Large-diameter conductors have lower electric field gradients at the conductor surface and, hence, lower corona than smaller conductors, everything else being equal. Irregularities (such as nicks and scrapes on the conductor surface) or sharp edges on suspension hardware concentrate the electric field at these locations and, thus, increase the electric field gradient and corona at these locations. Similarly, surface irregularities on the conductor surface, such as dust or insects, can cause corona. Corona also increases at higher elevations where the density of the atmosphere is less than at sea level.

Furthermore, raindrops, snow, fog, hoarfrost, and condensation accumulated on the conductor surface are also sources of surface irregularities that can increase corona. During fair weather, the number of these sources of surface irregularities is fewer and the corona effect is also low. However, during wet weather, the number of these sources of surface irregularities increases (for instance, due to rain drops standing on the conductor and energized hardware) and corona effects are greater. During wet conditions or foul weather conditions, the conductor will produce the greatest amount of corona noise. However, during heavy rain the ambient noise generated by the falling raindrops will typically be greater than the noise generated by corona.

Corona generates audible noise (AN) during operation of transmission lines. The noise is generally characterized as a crackling, hissing, or humming noise. The noise is most noticeable during wet conductor conditions such as rain or fog. Audible noise from transmission lines is often masked by the background noise at locations beyond the edge of the ROW particularly where the line runs near a source of background noise such as a freeway.

The calculated AN levels from the proposed 115 kV subtransmission lines is very low and is not expected to be distinctly audible over existing ambient noise levels under worst-case, foul weather conditions. The predicted levels are illustrated in Figure 4.11-3 and result in levels generally less than 15 dBA L_{50}[1] in rainy condition (or foul weather) (SCE, 2008).

As stated, the two primary sources of noise from a substation are corona noise and transformer noise. The AN produced by corona discharge activities during foul weather (such as rain) in a substation is significantly less compared to the AN from transmission lines; this is due to the presence of metallic equipment such as switch-racks, circuit breakers, switches, and metallic fences, which significantly reduce the voltage gradient on the energized conductive materials (such as conductors). Likewise, the proposed capacitor

[1] L_{50} means the A-weighted sound level exceeded 50% of the time over a specified time period.

bank(s) would be supported by metallic structures (or frames) and surrounded by metallic fences. These design practices significantly reduce the voltage gradient on the energized conductive materials. Therefore, AN produced by corona discharge activities by substation equipment (including capacitor bank) is not significant outside the substation property lines compared to the subtransmission lines coming in and out of the substation. (EPRI, 2005)

Transformer noise is the other potential source of noise associated with substations. Transformers emit a characteristic hum resulting from magnetostrictive forces that cause the core to vibrate. In addition, transformer cooling fans produce noise when they operate. Quieted transformers are available and may be up to 20 dBA quieter than standard equipment. Barrier walls can also provide additional reductions, typically ranging between 10 to 15 dBA. This project would consist of two 28 megavolt ampere (MVA) 115/12 kV transformers. Two standard 28 MVA transformers are estimated to result in 56 dBA at distance of 100 feet. Quieted transformers could result in levels as low as 36 dBA at 100 feet. As noted previously, barriers could provide additional reductions of 10 to 15 dBA. Therefore, the potential range in noise levels at 100 feet from the transformers varies from less than 30 dBA to 56 dBA.

Maintenance Noise

Maintenance activities associated with substations and subtransmission lines would typically result in noise levels below those associated with construction-related activities, and are anticipated to involve fewer pieces of heavy equipment, occur less frequently, and to be of shorter duration than construction activities. Maintenance activities are primarily inspection-related (for example, annual inspection of the subtransmission line from vehicles). Other maintenance activities include washing of insulators to ensure proper function and would be conducted on an as-needed basis, but are anticipated to occur less than once per year.

Noise associated with maintenance activities is anticipated to be less than construction noise levels. Because the noise level estimates presented for construction are greater than the range of noise levels likely to be associated with maintenance activities, the construction noise assessments provided in this section adequately address the noise levels and potential impacts that would be associated with maintenance activities.

Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Impacts

Construction activities would be short-term (approximately eight months), temporary, and limited to daytime hours consistent with the local requirements, as practical. In the event, construction would occur outside of designated daytime hours, SCE would obtain an exemption. SCE would use noise reduction measures to be compatible with local plans and zoning to the extent practicable. Construction equipment would be in good working order (PDF NOI-1). Construction equipment would be maintained per manufacturer's recommendations (PDF NOI-2). Construction equipment would be adequately muffled (PDF NOI-3). Idling of construction equipment and vehicles would be minimized during the

construction (PDF NOI-4). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible (SCE, 2008). Maintenance activities would typically occur over short timeframe up to two times per month and generate minimal noise. Additionally, during final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable (PDF NOI-6). Therefore, the impacts from operation would be less than significant under this criterion.

Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Construction Impacts

Construction activities (e.g., ground disturbing activities, including grading and foundation excavation, and movement of heavy construction equipment) may generate groundborne vibration and noise. Pile driving activities are typically the construction activity with the greatest potential to create groundborne vibration and noise, and pile driving is not currently anticipated as part of the Proposed Project. The groundborne vibration and noise associated with construction of this alternative are not anticipated to be excessive. Additionally, both groundborne vibration and noise would occur during daytime hours and be short-term and temporary. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

No groundborne vibration or noise would be generated by the activities associated with operation, including maintenance, of the Proposed Project. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction Impacts

Noise from construction of the Proposed Project would be short-term (approximately eight months) and temporary and would result in no permanent increase in ambient noise levels; therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible. In addition, during final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable (PDF NOI-6). Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction Impacts

Construction activities would be short-term (approximately eight months), temporary, and limited to daytime hours consistent with the local requirements. In the event, construction would occur outside of designated daytime hours, SCE would obtain an exemption. SCE would use noise reduction measures to be compatible with local plans and zoning to the extent practicable. Construction equipment would be in good working order (PDF NOI-1). Construction equipment would be maintained per manufacturer's recommendations (PDF NOI-2). Construction equipment would be adequately muffled (PDF NOI-3). Idling of construction equipment and vehicles would be minimized during the construction (PDF NOI-4). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Substation noise is generally constant and would not be expected to fluctuate during operation. During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible. Additionally, during final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable (PDF NOI-6). Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Construction Impacts

The Proposed Project site located approximately 1.5 miles from the French Valley Airport. The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport. Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

The Proposed Project site is located approximately 1.5 miles from the French Valley Airport. The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport. Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

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

Construction Impacts

No private airstrips are located within two miles of the Proposed Project (COR, 2008a). Workers would be provided appropriate hearing protection, if necessary, as described in the

Health and Safety Plan (PDF NOI-5). Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

No private airstrips are located within two miles of the Proposed Project (COR, 2008a). Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Therefore, operation of the Proposed Project would result in no impact under this criterion.

4.11. .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.11. .2 Site Alternative B

4.11. .2.1 Environmental Setting

Site Alternative B is bounded by Nicolas Road to the north, undeveloped land to the south, the unimproved portions of the Los Choras Road ROW to the east, and the existing 30-foot-wide SCE 115 kV subtransmission ROW to the west.

Site Alternative B is located approximately 1.5 miles or greater from the French Valley Airport. No private airstrips are located within two miles of the Proposed Project (COR, 2008a).

There are several sensitive noise receptors adjacent to Site Alternative B. To the east is one residence, approximately 85 feet from the substation block wall. To the southeast are two residences, located approximately 460 and 430 feet from the substation block wall. To the south is one residence, approximately 660 feet from the substation block wall.

The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport. Residences, which are also identified sensitive receptors, are also located immediately adjacent to the N/S Telecommunication Lines route.

4.11. .2.2 Impact Analysis

The Noise Modeling Results provided under the Proposed Project apply to Site Alternative B and were considered during the evaluation of this alternative.

Construction activities would be short-term (approximately eight months), temporary, and limited to daytime hours consistent with the local requirements, as practical. In the event, construction would occur outside of designated daytime hours, SCE would obtain an exemption. SCE would use noise reduction measures to be compatible with local plans and zoning to the extent practicable. During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible (SCE, 2008). Maintenance activities would typically occur over short timeframe, up to two times per month and generate minimal noise. Additionally, SCE would implement the following PDFs: Construction Equipment Working Order (PDF NOI-1), Construction Equipment Maintenance (PDF NOI-2), Construction Equipment Muffled (PDF NOI-3), Construction Equipment Idling Minimized (PDF NOI-4), and Low-Level Noise Equipment

(PDF NOI-6). Therefore, implementation of the Site Alternative B would not result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies and would result in a less than significant impact under this criterion.

Construction activities (e.g., ground disturbing activities, including grading and foundation excavation, and movement of heavy construction equipment) may generate groundborne vibration and noise. Pile driving, typically the construction activity with the greatest potential to create groundborne vibration and noise, is not currently anticipated as part of the Site Alternative B. The groundborne vibration and noise associated with construction of this alternative are not anticipated to be excessive. Additionally, both groundborne vibration and noise would occur during daytime hours and be short-term and temporary. No groundborne vibration or noise would be generated by the activities associated with the operation, including maintenance. Therefore, implementation of the Site Alternative B would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels and would result in a less than significant impact during construction and no impact during operation under this criterion.

Noise from construction of the Site Alternative B would be short-term (approximately eight months) and temporary and would result in no permanent increase in ambient noise levels. During operation, under the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible. In addition, during final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable (PDF NOI-6). Therefore, implementation of the Site Alternative B would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project and would result in no impact during construction and a less than significant impact during operation under this criterion.

Construction activities would be short-term (approximately eight months), temporary, and limited to daytime hours consistent with the local requirements. In the event, construction would occur outside of designated daytime hours, SCE would obtain an exemption. SCE would use noise reduction measures to be compatible with local plans and zoning to the extent practicable. Substation noise is generally constant and would not be expected to fluctuate during operation. During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible. Additionally, SCE would implement the following PDFs: Construction Equipment Working Order (PDF NOI-1), Construction Equipment Maintenance (PDF NOI-2), Construction Equipment Muffled (PDF NOI-3), Construction Equipment Idling Minimized (PDF NOI-4), and Low-Level Noise Equipment (PDF NOI-6). Therefore, implementation of the Site Alternative B would result in a less than significant impact under this criterion.

Site Alternative B is located approximately 1.5 miles from the French Valley Airport. The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport. Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Site Alternative B would be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, but would not expose people residing or

working in the project area to excessive noise levels. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

No private airstrips are located within two miles of Site Alternative B (COR, 2008a). Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Site Alternative B would not be located within the vicinity of a private airstrip and would not expose people residing or working in the project area to excessive noise levels. Therefore, implementation of the Site Alternative B would result in no impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts from noise.

4.11. .3 Site Alternative

4.11. .3.1 Environmental Setting

Site Alternative C substation site is bounded by vacant land to the north and west, Commerce Court to the south, and Calistoga Drive to the east.

Site Alternative C is located approximately 0.18 miles from the French Valley Airport. No private airstrips are located within two miles of the Proposed Project (COR, 2008a).

The closest sensitive noise receptor to the substation site is a residential development, located approximately 107 feet east from the edge of the substation site and approximately 400 feet from the center of the Site Alternative C substation site. Residential development also is located immediately adjacent to the proposed subtransmission Line 1 and Line 2 routes.

The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport. Residences are also located immediately adjacent to the N/S Telecommunication Lines route.

4.11. .3.2 Impact Analysis

The Noise Modeling Results provided under the Proposed Project apply to Site Alternative C and were considered during the evaluation of this alternative.

Construction activities would be short-term (approximately eight months), temporary, and limited to daytime hours consistent with the local requirements, as practical. In the event, construction would occur outside of designated daytime hours, SCE would obtain an exemption. SCE would use noise reduction measures to be compatible with local plans and zoning to the extent practicable. During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible (SCE, 2008). Maintenance activities would typically occur over short timeframe up to two times per month and generate minimal noise. Additionally, SCE would implement the following PDFs: Construction Equipment Working Order (PDF NOI-1), Construction Equipment Maintenance (PDF NOI-2), Construction Equipment Muffled (PDF NOI-3), Construction Equipment Idling Minimized (PDF NOI-4), and Low-Level Noise Equipment (PDF NOI-6). Therefore, implementation of the Site Alternative C would not result in exposure of persons to or generation of noise levels in excess of standards established in the

local general plan or noise ordinance, or applicable standards of other agencies and would result in a less than significant impact under this criterion.

Construction activities (e.g., ground disturbing activities, including grading and foundation excavation, and movement of heavy construction equipment) may generate groundborne vibration and noise. Pile driving activities are typically the construction activity with the greatest potential to create groundborne vibration and noise, and pile driving is not currently anticipated as part of the Site Alternative C. The groundborne vibration and noise associated with construction of this alternative are not anticipated to be excessive. Additionally, both groundborne vibration and noise would occur during daytime hours and be short-term and temporary. No groundborne vibration or noise would be generated by the activities associated with the operation, including maintenance. Therefore, implementation of the Site Alternative C would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels and would result in a less than significant impact during construction and no impact during operation under this criterion.

Noise from construction of the Site Alternative C would be short-term (approximately eight months) and temporary and would result in no permanent increase in ambient noise levels. During operation, under the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible. In addition, during final engineering, equipment would be selected and/or barriers would be installed to achieve a level of 40 dBA at the closest sensitive receptor, as available and practicable (PDF NOI-6). Therefore, implementation of the Site Alternative C would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project and would result in no impact during construction and a less than significant impact during operation under this criterion.

Construction activities would be short-term (approximately eight months), temporary, and limited to daytime hours consistent with the local requirements. In the event, construction would occur outside of designated daytime hours, SCE would obtain an exemption. SCE would use noise reduction measures to be compatible with local plans and zoning to the extent practicable. Substation noise is generally constant and would not be expected to fluctuate during operation. During the worst-case foul weather conditions, the corona noise associated with operation of the 115 kV subtransmission line is not anticipated to be audible. Additionally, SCE would implement the following PDFs: Construction Equipment Working Order (PDF NOI-1), Construction Equipment Maintenance (PDF NOI-2), Construction Equipment Muffled (PDF NOI-3), Construction Equipment Idling Minimized (PDF NOI-4), and Low-Level Noise Equipment (PDF NOI-6). Therefore, implementation of the Site Alternative C would result in a less than significant impact under this criterion.

The Site Alternative C site located approximately 0.18 miles from the French Valley Airport. The N/S Telecommunication Lines route is located approximately 0.1 mile from the French Valley Airport. Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Site Alternative C would be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, but would not expose people residing or

working in the project area to excessive noise levels. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

No private airstrips are located within two miles of the Site Alternative C (COR, 2008a). Workers would be provided appropriate hearing protection, if necessary, as described in the Health and Safety Plan (PDF NOI-5). Site Alternative C would not be located within the vicinity of a private airstrip and would not expose people residing or working in the project area to excessive noise levels. Therefore, implementation of the Site Alternative C would result in no impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts from noise.

4.11. onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation from noise.

4.11. eferences

City of Murrieta (COM). No Date. Construction Working Hours, http://www.murrieta.org/uploads/forms/building/Construction%20Working%20Hours.pdf. Accessed September 5, 2008.

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. June 21.

City of Temecula (COT). 2005. *Temecula General Plan.* 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

County of Riverside (COR). 2008a. *County of Riverside GIS.* April 2.

———, 2008b. Codified County of Riverside Ordinances. http://ordlink.com/codes/riversideco/index.htm. Accessed November 1, 2008.

———, Airport Land Use Commission (COR). 2004. *Riverside County Airport Land Use Compatibility Plan*. http://www.rcaluc.org/filemanager/plan/new//01-%20Cover%20&%20Title%20Page%20Vol%201.pdf. Accessed October 24, 2008.

———, (COR). 2003. *County of Riverside General Plan.* October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

Electric Power Research Institute (EPRI). 2005. EPRI AC Transmission Line Reference Book – 200 kV and Above, Third Edition. Final Report. December.

Federal Energy Regulatory Commission (FERC). 2002. Guidance Manual for Environmental Report Preparation. August. Viewed online at http://www.ferc.gov/ industries/ gas/enviro/erpman.pdf. Site accessed October 2007.

Southern California Edison (SCE). 2008. *Corona Audible Noise Study for Triton Substation Project*. August 4.

U.S. Department of Transportation, Federal Railroad Administration (FRA). 1998. High-Speed Ground Transportation Noise and Vibration Impact Assessment. December. Available online at http://www.fra.dot.gov/downloads/RRDev/nvman1_75.pdf. Site accessed October 2007.

U.S. Department of Transportation, Federal Highway Administration (FHWA). http://www.catseyeservices.com/Handbooks/cd/index.html. Site accessed December 2007.

U.S. Department of Transportation, Federal Transit Administration. 1995. *Transit Noise and Vibration Impact Assessment*. April.

U.S. Environmental Protection Agency (EPA). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, EPA-550/9-74-004. March.

FIGURE 4.11-1. NOISE SENSITIVE RECEPTORS PROPOSED PROJECT SITE, SITE ALTERNATIVE B, AND SITE ALTERNATIVE C

Sensitive Receptors
- Church
- Library
- School
- Park
- Residential Land Use
- 1/2 Mile Buffer of Proposed Alternatives, Excluding Telecommunication Lines

MURRIETA
UNINCORPORATED RIVERSIDE COUNTY
RANCHO BELLA VISTA
JOHNSON RANCH
Site Alternative C - Line 2
McGowans Pass
WINCHESTER PROPERTIES
Site Alternative C
Central Park Dr
Commerce Ct
Murrieta Hot Springs Rd
Sky Canyon Dr
UNINCORPORATED RIVERSIDE COUNTY
TEMECULA
Site Alternative C - Line 1
Town View Ave
Calistoga Dr
MURRIETA
TEMECULA
Willows St
Seraphina Rd
Liefer Rd
Nicolas Rd
RORIPAUGH RANCH
Canine
Proposed Project Site - Line
Calle Girasol
N General Kearny Rd
Josephine Rd
Los Choras Ranch Rd
Calle Medusa
Site Alternative B - Line
Proposed Project Site
Site Alternative B
Nicolas Rd
TEMECULA
UNINCORPORATED RIVERSIDE COUNTY
Walcott Ln
Via Norte
AULD-MORAGA
VALLEY-AULD-PAUBA
Interstate 15
State Route 79/Winchester Rd

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LEGEND

- Existing Substation
- State Highway
- Existing SCE 115 kV Subtransmission Line
- Jurisdictional Boundary

Existing and Planned Developments
- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project Site and Site Alternatives B and C

Substations
- Proposed Project Site
- Site Alternative B
- Site Alternative C

Subtransmission Line Loop-ins
- Proposed Project Site - Line
- Site Alternative B - Line
- Site Alternative C - Line 1
- Site Alternative C - Line 2

Telecommunication Routes**
- Aboveground
- Belowground

12 kV Duct Banks**
- Belowground

1:24,000
NAD 83 UTM ZONE 11N

1 inch equals 2,000 ft

0 4,000

0 Feet 0.5 Miles

Source: Southern California Edison; Riverside County; Thomas Brothers; Murrieta Valley Unified School District; Temecula Valley Unified School District; Environmental Systems Research Institute
Image Source: USDA-FSA Aerial Photography Field Office

**Telecommunication routes and 12 kV distribution line duct banks offset for graphical purposes only. Aboveground telecommunication cables would be located on new and existing subtransmission structures. Belowground telecommunication cables would be located in new underground banks.

2008

TRITON SUBSTATION PEA

FIGURE 4.11-1. NOISE SENSITIVE RECEPTORS PROPOSED PROJECT SITE, SITE ALTERNATIVE B, AND SITE ALTERNATIVE C

SOUTHERN CALIFORNIA EDISON

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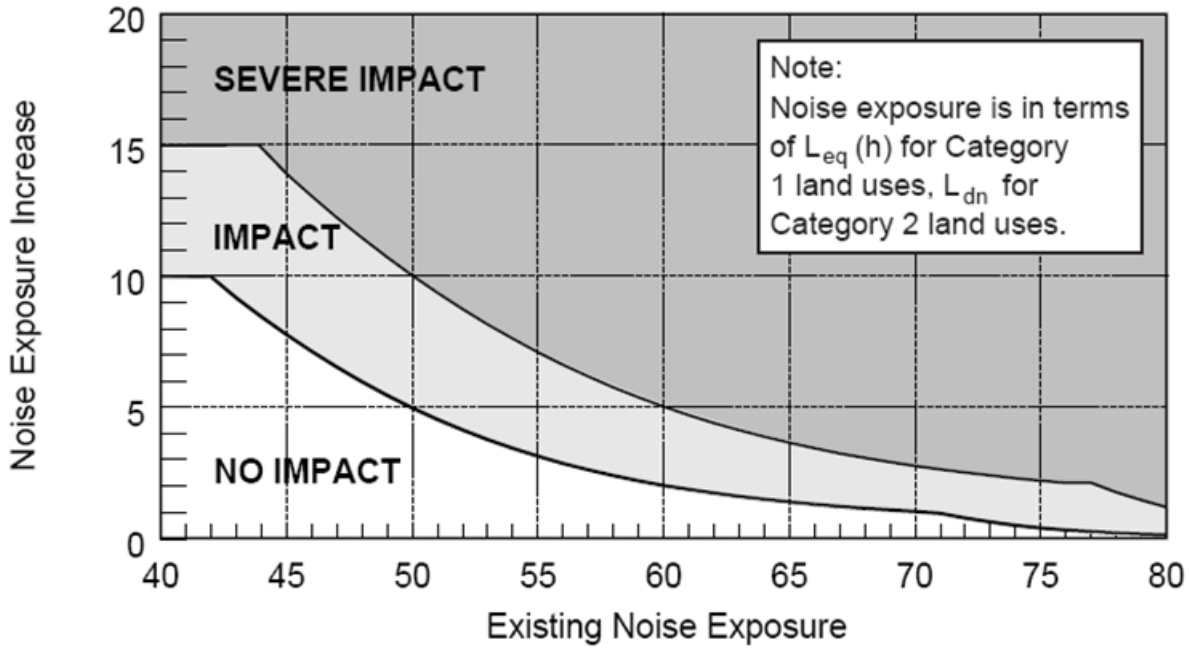

Figure 4-11-2. FRA and FTA Allowable Increase in Cumulative Noise Level
(Note: Residential uses are included in Category 2)

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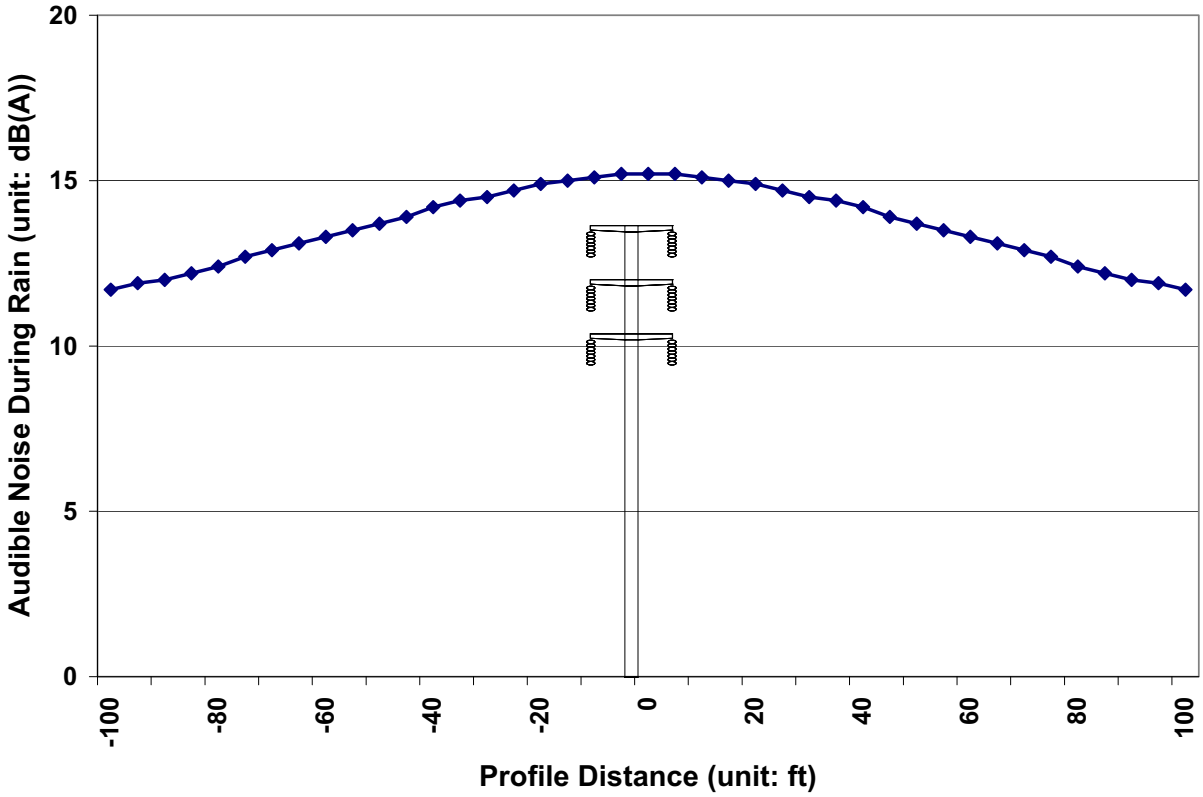
Figure 4.11-3. Calculated Audible Noise Levels From Proposed Double-Circuit 115 kV Design



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4.12 Population and ousing

4.12.1 Overview

This analysis describes the potential impacts to population and housing that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project and Site Alternatives B and C would result in no impacts during construction and operation to population and housing.

4.12.2 ethodology

The study area for this resource is defined as the County of Riverside, City of Temecula, and City of Murrieta. It is within this context that potential short-term and long-term impacts on population and housing resulting from the construction and operation of the Triton Substation Project are assessed.

Data utilized in the analysis was comprised of current and forecasted demographic data, including baseline population, housing, and employment conditions obtained from the California Labor Market Information Division of the Employment Development Department (EDD), Southern California Association of Governments (SCAG), and the Riverside County, Transportation and Land Management Agency.

The significance of potential impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4.12.3 egulations Plans and Standards

4.12.3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on population and housing.

4.12.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on population and housing if it would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

4.12. Proposed Project and Alternatives

4.12. .1 Proposed Project

4.12. .1.1 Environmental Setting

Table 4.12-1 presents current and forecasted population from 2000 through 2030 for the local jurisdictions within the study area that includes the Proposed Project site. The County of Riverside is the fourth-largest county in California and, in 2007, had a population increase of more than three percent over the previous year (EDD, 2008a). As indicated in Table 4.12-1, the County of Riverside had a population of 1,545,387 in 2000 and the Riverside County Center, Transportation and Land Management Agency forecasts a 116.4 percent population increase to 3,343,778 by 2030 (Riverside County Center, Transportation and Land Management Agency, 2006).

Table 4.12-1. Total Population
Triton 115/12 kV Substation Project PEA

Jurisdiction	2000	2010	2020	2030	2000-2030 Change (%)
Southern California [a]	16,629,209	19,208,661	21,137,519	22,890,797	37.6
County of Riverside	1,545,387	2,242,744	2,809,006	3,343,778	116.4
Unincorporated Riverside County	389,233	617,241	854,662	1,104,571	183.8
City of Murrieta	50,866	103,726	114,370	123,549	142.9
City of Temecula	66,650	99,387	112,551	121,495	82.3

Source: Riverside County Center, Transportation and Land Management Agency, 2006

[a]Combined SCAG counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura), 2004

Housing data for the Proposed Project study area are presented in Table 4.12-2. The forecasted increase in housing needs for the County of Riverside corresponds to the projected increase in population.

Table 4.12-2. ousing haracteristics
Triton 115/12 kV Substation Project PEA

Jurisdiction	Housing Units, 2000	Vacancy Rate, 2000 (%)	Forecasted Housing Units, 2010	Forecasted Housing Units, 2020	Forecasted Housing Units, 2030	2000-2030 Change (%)
Southern California [a]	5,339,859	Not Available	6,072,578	6,865,355	7,660,107	43.5
County of Riverside	584,674	13.4[b]	831,040	1,047,563	1,245,676	113.1
Unincorporated Riverside County	150,232	13.8[c]	226,752	310,236	398,106	159.0

Table 4.12-2. ousing haracteristics
Triton 115/12 kV Substation Project PEA

Jurisdiction	Housing Units, 2000	Vacancy Rate, 2000 (%)	Forecasted Housing Units, 2010	Forecasted Housing Units, 2020	Forecasted Housing Units, 2030	2000-2030 Change (%)
City of Murrieta	17,574	4.0[d]	36,203	39,705	42,499	141.8
City of Temecula	21,748	4.2[e]	32,970	36,364	38,939	79.0

Source: Riverside County Center, Transportation and Land Management Agency, 2006

[a]Combined SCAG counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura), 2004

[b]Riverside County Center, Transportation and Land Management Agency, 2007a

[c]Riverside County Center, Transportation and Land Management Agency, 2007b

[d]Riverside County Center, Transportation and Land Management Agency, 2007c

[e]Riverside County Center, Transportation and Land Management Agency, 2007d

Table 4.12-3 provides June 2008 employment data for County of Riverside and for the Cities of Temecula and Murrieta, which include the Proposed Project and Site Alternatives B and C (EDD, 2008a). The County of Riverside has approximately 924,100 workers, and overall unemployment rates range from approximately 8.3 percent for the County of Riverside to approximately 5.5 percent for the Cities of Temecula and Murrieta.

Table 4.12-3. abor orce haracteristics une 2
Triton 115/12 kV Substation Project PEA

Jurisdiction	Labor Force	Employment	Unemployment (Rate, %)
County of Riverside	924,100	847,700	76,400 (8.3%)
City of Murrieta	28,100	26,600	1,500 (5.4%)
City of Temecula	37,700	35,600	2,100 (5.6%)

Source: EDD, 2008a

The Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) encompasses Riverside and San Bernardino counties and includes the Proposed Project study area (County of Riverside and the Cities of Temecula and Murrieta). Information regarding employment breakdown by major industry sector for the MSA is presented in Table 4.12-4. These data sources indicate that substantial employment growth is anticipated through 2014.

Table 4.12-4. Employment by ajor Industry Sector iverside-San Bernardino-Ontario etropolitan Statistical Area Including ounty of iverside ity of Temecula and ity of urrieta Study Area
Triton 115/12 kV Substation Project PEA

Sector	Annual Employment, 2004 (% of Total Employment)	Forecasted Annual Employment, 2014 (% of Total Employment)	2004-2014 Change (%)
Construction	111,800 (8.7%)	145,300 (9.1%)	33,500 (30.0%)
Education and Health Service	118,400 (9.2%)	147,100 (9.2%)	28,700 (24.2%)
Financial Activities	45,700 (3.6%)	54,800 (3.4%)	9,100 (19.9%)
Government	212,500 (16.6%)	256,600 (16.1%)	44,100 (20.8%)
Information	14,000 (1.1%)	16,400 (1.0%)	2,400 (17.1%)
Leisure and Hospitality	116,700 (9.1%)	149,600 (9.4%)	32,900 (28.2%)
Manufacturing	120,100 (3.4%)	129,900 (8.2%)	8,900 (7.4%)
Natural Resources and Mining	1,200 (0.1%)	1,600 (0.1%)	400 (33.3%)
Professional and Business Services	125,500 (9.8%)	172,500 (10.8%)	47,000 (37.5%)
Trade, Transportation, and Utilities	245,900 (19.2%)	334,200 (21.0%)	79,300 (31.1%)
Other Services	39,300 (3.1%)	47,600 (3.0%)	8,300 (21.1%)
Total Number of Positions	1,281,800	1,590,900	309,100 (24.1%)

Source: EDD, 2008b

4.12. .1.2 Impact Analysis

Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Construction Impacts

Relative to the large construction workforce available within the study area, as indicated in Table 4.12-4, the personnel required for construction of the Proposed Project (approximately 114 personnel) represent a small proportion (one tenth of one percent) and would be drawn from the locally available workforce. Most, if not all, construction workers are expected to originate from the local labor pool and would not relocate from areas outside the Proposed Project study area. Additionally, due to the temporary nature of construction activities (approximately eight months), non-regional workers would be expected to remain in the region for the duration of project construction. Therefore, construction of the Proposed Project would not directly induce substantial population growth in the study area. Furthermore, construction of the Proposed Project would not involve the construction of new homes and businesses or require the construction of roads or other infrastructure. No impact would occur due to the construction of the Proposed Project under this criterion.

Operation Impacts

Furthermore, operation of the Proposed Project would not involve the construction of new homes and businesses or require the construction of roads or other infrastructure. As discussed previously, population and housing growth within the study area is forecasted to increase substantially by 2030. However, as discussed in Chapter 6, Other CEQA Considerations, the Proposed Project would not indirectly induce growth, but rather would accommodate existing and forecasted demand. Therefore, no impact would occur due to operation of the Proposed Project under this criterion.

Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Construction Impacts

The Proposed Project site is an approximately 10-acre vacant parcel of land that does not contain habitable housing structures. Construction of the Proposed Project, thus, would not displace a substantial amount of existing housing, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur due to construction of the Proposed Project under this criterion.

Operation Impacts

The Proposed Project would be unattended, and electrical equipment would be remotely monitored and controlled by an automated system. Operation of the Proposed Project would not result in the displacement of existing housing, and construction of replacement housing would not be required. Therefore, no impact would occur due to the operation of the Proposed Project under this criterion.

Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Construction Impacts

The Proposed Project site does not contain permanent, habitable housing structures and, therefore, construction of the Proposed Project would not involve the displacement of existing housing. Furthermore, construction of the Proposed Project would utilize workers drawn from the local workforce and would not require the relocation of workers from outside the Proposed Project study area. Thus, the Proposed Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere and no impact would occur due to construction of the Proposed Project under this criterion.

Operation Impacts

Employees necessary to operate the Proposed Project would be drawn from the SCE existing workforce. Thus, operation of the Proposed Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur due to operation of the Proposed Project under this criterion.

4.12. .1.3 itigation easures

Implementation of the Proposed Project would result no impacts during construction and operation; therefore, no mitigation is required.

4.12. .2 Site Alternative B

4.12. .2.1 Environmental Setting

The environmental setting for Site Alternative B is the same as provided previously for the Proposed Project.

4.12. .2.2 Impact Analysis

Construction and operation of Site Alternative B would not directly induce substantial population growth in the area, because the personnel required to implement Site Alternative B are available from the local workforce and proposed new homes or businesses are not part of the Triton Substation Project. Additionally, implementation of Site Alternative B would not indirectly induce substantial population growth in the area as discussed in detail in Section 6.6, Growth Inducing Impacts. No existing housing would be displaced during implementation of Site Alternative B and no persons would be displaced during construction or operation of Site Alternative B and no construction of replacement housing would be required. Implementation of Site Alternative B would result in no impacts under these criteria.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in no impacts to population and housing.

4.12. .3 Site Alternative

4.12. .3.1 Environmental Setting

The environmental setting for Site Alternative C is the same as provided previously for the Proposed Project.

4.12. .3.2 Impact Analysis

Construction and operation of Site Alternative C would not directly induce substantial population growth in the area, because the personnel required to implement Site Alternative C are available from the local workforce and proposed new homes or businesses are not part of the Triton Substation Project. Additionally, implementation of Site Alternative C would not indirectly induce substantial population growth in the area as discussed in detail in Section 6.6, Growth Inducing Impacts. No existing housing would be displaced during implementation of Site Alternative C and no persons would be displaced during construction or operation of Site Alternative C and no construction of replacement housing would be required. Implementation of Site Alternative C would result in no impacts under these criteria.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in no impacts to population and housing.

4.12. onclusion

As discussed, implementation of the Proposed Project and Site Alternatives B and C would result in no impacts during construction and operation to population and housing.

4.12. eferences

California Labor Market Information Division of Employment Development Department (EDD). 2008a. *Labor Force Data for Sub-County Areas.* http://www.calmis.ca.gov/file/lfmonth/rivesub.xls. Accessed August 4.

———. 2008b. *Industry Employment Projections 2004-2012, Riverside-San Bernardino-Ontario Metropolitan Statistical Area.* http://www.calmis.ca.gov/file/indproj/rive$indproj.xls. Accessed August 4.

City of Murrieta (COM). 1994. *City of Murrieta General Plan.*

City of Temecula (COT). 2005. *City of Temecula General Plan.*

County of Riverside (COR). 2003. *County of Riverside General Plan.*

Riverside County Center, Transportation and Land Management Agency. 2006. *Riverside County Projections – 2006 (RCP06) by COG and Jurisdictions.* http://www.rctlma.org/rcd/content/projections/RCP06_Cities.pdf. Accessed August 4.

———. 2007a. *Riverside County Center for Demographic Research.* http://www.rctlma.org/rcd/content/progress_reports/pr_2007/4-CountyofRiverside.pdf.

———. 2007b. *Riverside County Center for Demographic Research.* http://www.rctlma.org/rcd/content/progress_reports/pr_2007/29-Unincorporated Area_Overall.pdf.

———. 2007c. *Riverside County Center for Demographic Research.* http://www.rctlma.org/rcd/content/progress_reports/pr_2007/20-Murrieta.pdf. Accessed August 4.

———. 2007d. *Riverside County Center for Demographic Research.* http://www.rctlma.org/rcd/content/progress_reports/pr_2007/28-Temecula.pdf.

Southern California Association of Governments (SCAG). 2004. Regional Transportation Plan/Growth Vision: Socio-Economic Forecast Report. http://www.scag.ca.gov/forecast/downloads/2004GF.xls?bsci_scan_14332DADE953FA8E=0&bsci_scan_filename=2004GF.xls. Accessed August 4.

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4.13 Public Services

4.13.1 Overview

This analysis describes the potential impacts to public services that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts during construction and operation to public services.

4.13.2 ethodology

The study area for this resource is defined as the public service area (that is, school district or city police jurisdiction) where the alternative substation sites and subtransmission and telecommunication line rights-of-way (ROWs) would be located. Public services include fire protection, police protection, schools, and other public facilities, such as hospitals, which are generally provided by the applicable county or municipality. California State government and education codes, and the County of Riverside and the Cities of Temecula and Murrieta plans, policies, and programs were reviewed to identify potential impacts to public services as a result of the construction and operation of the Triton Substation Project.

The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4.13.3 egulations Plans and Standards

4.13.3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on public services.

4.13.3.2 alifornia overnment ode Sections -

California Government Code Sections 65996-65997 establish that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities.

4.13.3.3 alifornia Education ode Section 1 2

California Education Code Section 17620 allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities.

4.13.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on public services 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
- Other public facilities

4.13. Proposed Project and Alternatives

The following public services resource-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF PUB-1 **Fire Prevention Practices.** SCE would follow fire prevention practices as described in Section 4.7, Hazards and Hazardous Materials.

PDF PUB-2 **Traffic Control Services.** Traffic control services would be used for equipment, supply delivery, and conductor stringing, as applicable.

PDF PUB-3 **Construction Traffic Off Peak Hours.** Construction traffic would be scheduled for off-peak hours to the extent possible and would not block emergency equipment routes.

PDF PUB-4 **Substation Grounding.** The substation would be grounded to prevent electric shock and surges that could ignite fires.

PDF PUB-5 **O&M Vegetation Clearing.** SCE's operation and maintenance (O&M) procedures would include vegetation clearing, to minimize potential fire risks.

4.13. .1 Proposed Project

4.13. .1.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described below.

County of Riverside

Fire Protection: The Riverside County Fire Department (RCFD) and the California Department of Forestry and Fire Protection (CDF) operate a total of 96 fire stations in County of Riverside (Herrera, 2008). The RCFD provides fire protection services to unincorporated County of Riverside and 16 cities, including the City of Temecula. According to RCFD, current staffing provides adequate levels of service to the County of Riverside (Herrera, 2008). The RCFD service goals are to respond to all emergencies in the County of Riverside within approximately five minutes 90 percent of the time. The response time is generally under five minutes; however, actual response times vary because the County of Riverside is large (Herrera, 2008). Station 73, located approximately 3.5 miles

southwest of the Proposed Project site at 27415 Enterprise Circle West in the City of Temecula, is the closest fire station to Proposed Project substation site.

Police Protection: The Riverside County Sheriff's Department provides law enforcement services to the City of Temecula. There are nine sheriff substations throughout the County of Riverside. Officers are employed at a rate of approximately one officer per 882 residents (Yakel, 2008). This level of service standard is currently being achieved within the County of Riverside (Yakel, 2008). The Southwest Station, located approximately three miles north of the Proposed Project site at 30755 Auld Road in the City of Murrieta, is the closest police station to Proposed Project substation site.

Schools: There are 26 school districts within the County of Riverside. The County of Riverside reported 421,804 students in kindergarten through twelfth grade (K-12) for the 2007/08 school year (CDE, 2008). According to the County of Riverside General Plan Environmental Impact Report (EIR) (COR, 2003b), most of the school districts serving County of Riverside that provide K-12 educational services do not have the ability to meet the needs of future growth. The County of Riverside school districts generally lack revenue to expand existing school facilities due to local and state fiscal constraints.

Parks: The County of Riverside maintains parks and recreation facilities for public use as described in detail in Section 4.14, Recreation.

Hospitals: The County of Riverside is served by 17 hospitals (COR, 2008). The county operates one hospital facility in Moreno Valley. The hospital is licensed for 364 beds and is estimated to have adequate services for 200,000 annual patient visits in specialty outpatient clinics.

City of emecula

Fire Protection: Fire protection services are provided to the City of Temecula under contract with the RCFD operating in conjunction with the CDF. The contract provides funding for 55 firefighters, seven engine companies, two paramedic squads, and one truck company (COT, 2005). Five fire stations, staffed by paid and volunteer personnel, serve the Temecula area. According to RCFD, this provides adequate levels of service to COT (Patterson, 2008). A sixth fire station, Roripaugh Ranch Station, is currently under construction. The new fire station would be located within 0.5 mile of the Proposed Project site (Press Enterprise, 2008).

Police Protection: The Riverside County Sheriff's Department provides law enforcement services to the City of Temecula. The current contract provides for the assignment of approximately 76 sworn officers and 12 non-sworn officers (COT, 2005). The Riverside County Sheriff's Department employs officers at a rate of approximately one officer per 882 residents (COT, 2008a). This level of service standard is currently being achieved within the COT. The City of Temecula has two storefront police locations, a traffic team, an investigations bureau, and special teams to deal with drugs and gang-related issues. The Southwest Station, located approximately three miles north of the Proposed Project site at 30755 Auld Road in the City of Murrieta, is the closest police station to Proposed Project substation site.

Schools: Schools within the City of Temecula Planning Area are served by the Temecula Valley Unified School District (TVUSD). According to the City of Temecula General Plan, as

of 2005 TVUSD was meeting the education needs of the student population through permanent and interim facilities (COT, 2005). TVUSD reported 29,439 students in K-12 for the 2007/08 school year (CDE, 2008). In addition to public schools, Temecula has eight private schools. A middle school and an elementary school are planned for the Roripaugh Ranch Planned Community (RCSD, 2006-07).

Parks: The City of Temecula maintains parks and recreation facilities for public use as described in detail in Section 4.14, Recreation.

Hospitals: Residents in the Temecula Valley have access to several medical facilities, including major hospitals. Rancho Springs Medical Center in the City of Murrieta is a 96-bed hospital. Inland Valley Regional Medial Center in Wildomar is an 80-bed acute care facility that serves as the trauma center for the region (COT, 2008b).

City of Murrieta

Fire Protection: The City of Murrieta Fire Department (MFD) has four fire stations, employs 45 full-time personnel, and has 17 volunteer firefighters. All full-time suppression personnel are trained to the level of Emergency Medical Technician Defibrillator or Paramedic. Minimum emergency staffing consists of 12 personnel and a supervising Battalion Chief. The MFD has a mutual aid agreement with the County of Riverside and is a part of the standard countywide and statewide mutual aid systems (MFD, 2005). The MFD response time is generally less than approximately five minutes. A new fire station has been approved and will serve the northern portion of the City of Murrieta to assist in maintaining current and future levels of service and response goals. The MFD anticipates that it will maintain future level of service (Riscol, 2008). Station 3 is located at the corner of Whitewood Avenue and Murrieta Hot Springs Road.

Police Protection: The City of Murrieta Police Department serves as the primary law enforcement agency. There are approximately 96 sworn officers who serve the City of Murrieta and one station (Wilson, 2008). The Murrieta Police Department employs officers at a rate of approximately one officer per 1,000 residents. The average response time for emergency calls is approximately five minutes, 34 seconds. The level of service standard is currently being achieved within the City of Murrieta (Payne, 2008). The station is located approximately 5.50 miles northwest of the Proposed Project site at 24701 Jefferson Avenue in the City of Murrieta.

Schools: Schools within the City of Murrieta are served by the Murrieta Valley Unified School District (MVUSD). MVUSD reported 21,266 students in K-12 for the 2007/08 school year (CDE, 2008). MVUSD has a total of 11 schools for kindergarten through eighth grade, two comprehensive high schools, one continuation high school, and one independent study school.

Parks: The City of Murrieta maintains parks and recreation facilities for public use as described in detail in Section 4.14, Recreation.

Hospitals: Rancho Springs Medical Center is a 96-bed hospital located in the City of Murrieta. Residents in the Temecula Valley also have access to several other medical facilities, including major hospitals such as Inland Valley Regional Medial Center. Located

in Wildomar, Inland Valley Regional Medial Center is an 80-bed acute care facility that serves as the trauma center for the region (COT, 2008b).

4.13. .1.2 Impact Analysis

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services?

Construction Impacts

Fire Protection: According to RCFD, current staffing provides adequate levels of service to the County of Riverside (Herrera, 2008; Patterson, 2008). Fire Department response time within the County of Riverside is generally under approximately five minutes; however, actual response times vary because the County of Riverside is large (Herrera, 2008). Station 73, located approximately 3.5 miles southwest of the Proposed Project substation site at 27415 Enterprise Circle West in the City of Temecula, is the nearest fire station. While construction activities of the Proposed Project may result in fire emergencies due to accidents, existing local fire protection support services are adequate and available to respond to a fire emergency. SCE would follow fire prevention practices as described in Section 4.7, Hazards and Hazardous Materials (PDF PUB-1). No new or physically altered fire protection facility would be required to maintain acceptable service ratios, response times, or other performance objectives of fire protection facilities due to implementation of the Proposed Project. Traffic control services would be used for equipment, supply delivery, and conductor stringing, as applicable (PDF PUB-2). Construction traffic would be scheduled for off-peak hours to the extent possible and would not block emergency equipment routes (PDF PUB-3). Therefore, no impacts would occur due to construction of the Proposed Project under this criterion.

Police Protection: Level of service standards and response times are currently being achieved for the area (Section 4.13.5.1.1). The nearest police station would be located within approximately five miles of the substation site. Existing local police protection is available to respond to a police emergency during construction of the Proposed Project, and no new or physically altered police protection facility would be required to maintain acceptable service ratios, response times, or other performance objectives of police protection facilities due to implementation of the Proposed Project. Traffic control services would be used for equipment, supply delivery, and conductor stringing, as applicable (PDF PUB-2). Construction traffic would be scheduled for off-peak hours to the extent possible and would not block emergency equipment routes (PDF PUB-3). Therefore, no impacts would occur due to construction of the Proposed Project under this criterion.

Schools: Construction of the Proposed Project would not result in population increases due to the temporary nature of construction, availability of construction workers in the regional workforce, and use of existing SCE employees for construction of the Triton Substation Project (see Section 4.12, Population and Housing). Therefore, no impacts would occur due to construction of the Proposed Project under this criterion.

Parks: Construction of the Proposed Project would not result in population increases due to the temporary nature of construction, availability of construction workers in the regional workforce, and use of existing SCE employees for construction of the Triton Substation Project (see Section 4.12, Population and Housing). No new or physically altered park facilities would be required. Therefore, no impacts would occur due to construction of the Proposed Project under this criterion.

Other Public Facilities: Construction of the Proposed Project would not result in population increases due to the temporary nature of construction, availability of construction workers in the regional workforce, and use of existing SCE employees for construction of the Triton Substation Project (see Section 4.12, Population and Housing). Therefore, no impacts would occur due to construction of the Proposed Project under this criterion.

Operation Impacts

Fire Protection: According to RCFD, current staffing provides adequate levels of service to the County of Riverside (Herrera, 2008; Patterson, 2008). Fire Department response time within the County of Riverside is generally under approximately five minutes; however, actual response times vary because the County of Riverside is large (Herrera, 2008). Station 73, located approximately 3.5 miles southwest of the Proposed Project substation site at 27415 Enterprise Circle West in the City of Temecula, is the nearest fire station. While operation activities of the Proposed Project may result in fire emergencies due to accidents, existing local fire protection support services are adequate and available to respond to a fire emergency. The substation would be grounded to prevent electric shock and surges that could ignite fires (PDF PUB-4). SCE's operation and maintenance (O&M) procedures would include vegetation clearing, to minimize potential fire risks (PDF PUB-5). No new or physically altered fire protection facility would be required to maintain acceptable service ratios, response times, or other performance objectives of fire protection facilities due to implementation of the Proposed Project. Construction traffic would be scheduled for off-peak hours to the extent possible and would not block emergency equipment routes (PDF PUB-3). Therefore, no impact would occur due to operation of the Proposed Project under this criterion.

Police Protection: Level of service standards and response times are currently being achieved for the area (Section 4.13.5.1.1). The nearest police station would be located within approximately five miles of the substation site. Existing local police protection is available to respond to a police emergency during operation of the Proposed Project. SCE would follow fire prevention practices as described in Section 4.7, Hazards and Hazardous Materials (PDF PUB-1).No new or physically altered police protection facility would be required to maintain acceptable service ratios, response times, or other performance objectives of police protection facilities due to implementation of the Proposed Project. Construction traffic would be scheduled for off-peak hours to the extent possible and would not block emergency equipment routes (PDF PUB-3). Therefore, no impacts would occur due to operation of the Proposed Project under this criterion.

Schools: Additionally, the Proposed Project substation would be an unattended facility and operation of the facility would not result in population growth (see Section 4.12, Population and Housing) such that new or physically altered school facilities would be required to

maintain performance objectives of school facilities. Therefore, no impacts would occur due to operation of the Proposed Project under this criterion.

Parks: The Proposed Project substation would be an unattended facility, the operation of which would not result in an increase in local population (see Section 4.12, Population and Housing). No new or physically altered park facilities would be required to maintain objectives of park facilities due to implementation of the Proposed Project (see Section 4.14, Recreation). Therefore, no impacts would occur due to operation of the Proposed Project under this criterion.

Other Public Facilities: The Proposed Project substation would be an unattended facility, operation of which would not result in an increase in local population (see Section 4.12, Population and Housing). No other new or physically altered public facilities would be required to maintain performance objectives of other public facilities due to implementation of the Proposed Project. Therefore, no impacts would occur due to operation of the Proposed Project under this criterion.

4.13. .1.3 itigation easures

Implementation of the Proposed Project would result in no impacts during construction and operation; therefore, no mitigation would be required.

4.13. .2 Site Alternative B

4.13. .2.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.13.5.1.1).

4.13. .2.2 Impact Analysis

Construction and operation of Site Alternative B do not include the provision of or the need for new or physically alternative governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the following public services: fire protection, police protection, schools, parks, or other public facilities. While construction activities may result in fire emergencies due to accidents, SCE would follow fire prevention practices (PDF PUB-1). Traffic control services would be used (PDF PUB-2). Additionally, construction traffic would be scheduled for off-peak hours (PDF PUB-3). During operation, the substation would be grounded (PDF PUB-4). SCE's operation and maintenance (O&M) procedures would include vegetation clearing, to minimize potential fire risks (PDF PUB-5). Therefore, implementation of Site Alternative B would result in no impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in no impacts to public services.

4.13. .3 Site Alternative

4.13. .3.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.13.5.1.1.

4.13. .3.2 Impact Analysis

Construction and operation of Site Alternative C do not include the provision of or the need for new or physically alternative governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the following public services: fire protection, police protection, schools, parks, or other public facilities. While construction activities may result in fire emergencies due to accidents, SCE would follow fire prevention practices (PDF PUB-1). Traffic control services would be used (PDF PUB-2). Additionally, construction traffic would be scheduled for off-peak hours (PDF PUB-3). During operation, the substation would be grounded (PDF PUB-4). SCE's operation and maintenance (O&M) procedures would include vegetation clearing (PDF PUB-5). Therefore, implementation of Site Alternative C would result in no impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in no impacts to public services.

4.13. onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts during construction and operation to public services.

4.13. eferences

California Department of Education (CDE). 2008. California Public Schools County Report and District Report. July 7. http://dq.cde.ca.gov/dataquest. Accessed August 1, 2008.

California Resource Agency (CRA). 2007. State CEQA Guidelines. 2007. Amended July 25, 2007. http://ceres.ca.gov/ceqa. Accessed July 17, 2008.

City of Murrieta Fire Department (MFD), 2005. Murrieta Fire Department - Fire Protection Plan. February. http://www.murrieta.org/uploads/forms/fire/FireProtectionPlan.pdf. Accessed August 14, 2008.

City of Temecula (COT). 2005. Temecula General Plan. 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

City of Temecula (COT). 2008a. The City of Temecula Website. Temecula Police. http://www.cityoftemecula.org/Temecula/Government/Police. Accessed July 29, 2008.

City of Temecula (COT). 2008b. The City of Temecula Website. Hospitals and Medical Facilities. http://www.cityoftemecula.org/Temecula/Residents/Hospitals_and_Medical. Accessed July 29, 2008.

County of Riverside (COR). 2003a. County of Riverside General Plan, Area Plans Volume I. October. http://www.rctlma.org/genplan/default.aspx. Accessed July 21, 2008.

County of Riverside (COR). 2003b. General Plan –Environmental Impact Report-Volume 1. http://www.rctlma.org/genplan/content/eir/volume1.html#4.15. Accessed July 29, 2008.

County of Riverside (COR). 2008. Website. http://www.countyofriverside.us/portal/page?_pageid=133,160876&_dad=portal&_schema.

Herrera, Fernando/Riverside County Fire Department Captain. 2008. Personal communication with Lyna Black/CH2M HILL. July 30, 2008.

Patterson, Glen/Riverside County Fire Department City Fire Chief. 2008. Personal communication with Lyna Black/CH2M HILL. July 29, 2008.

Payne/City of Murrieta Police Department Captain. 2008. Personal communication with Lyna Black/CH2M HILL. September 29, 2008.

Press Enterprise. 2008. http://www.pe.com/localnews/rivcounty/stories/PE_News_Local_S_sroripaugh08.42f3478.html. March 3=PORTAL. Accessed July 30, 2008.

Riscol, Kay/City of Murrieta Fire Department. 2008. Personal communication with Lyna Black/CH2M HILL. September 29, 2008.

Riverside County School Districts (RCSD). 2006-07. http://maps.hollister-powell.com/rcoe/districtA.pdf. Accessed July 30, 2008.

Wilson, Judy/Murrieta Police Department Administrative Assistant to the Captain. 2008. Personal communication with Lyna Black/CH2M HILL. August 15, 2008.

Yakel/Riverside County Sheriff Department, Southwest Station Desk Officer. 2008. Personal communication with Lyna Black/CH2M HILL. July 30, 2008.

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4.14 ecreation

4.14.1 Overview

This analysis describes the potential impacts to recreation that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and no impacts during operation to recreation.

4.14.2 ethodology

The study area for the recreation analysis comprises a 0.5-mile buffer from the substation property boundary and to each side of centerline of the Triton Substation Project linear features (115 kV subtransmission line loop-in and telecommunication lines).

To assess potential impacts, the General Plan land use, zoning, recreation data, and other applicable publicly available recreation information for unincorporated County of Riverside and the Cities of Temecula and Murrieta were overlain with the recreation study area. The U.S. Department of the Interior, National Park Service and the California State Parks recreation information also were considered during the analysis. The potential for impacts to the physical environment that would result from the addition of recreation facilities or the expansion of existing recreation facilities, if applicable, were considered under the Triton Substation Project.

The significance of impacts to recreation that would result from construction and operation of the Triton Substation Project were then assessed in accordance with criteria presented in Appendix G of the CEQA Guidelines.

4.14.3 egulations Plans and Standards

4.14.3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts to recreation resources.

4.14.4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.), which indicate that a proposed project would have a significant impact on recreation resources 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
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

4.14. Proposed Project and Alternatives

The following recreation resource-specific project design feature would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below.

PDF REC-1 **Public Notification.** In the event short-term restrictions on recreation use of Veterans Park, existing bike lanes, bike paths, or trails are necessary during project construction, SCE will notify the public in coordination with the jurisdiction.

4.14. .1 Proposed Project

4.14. .1.1 Environmental Setting

Proposed Project

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described below.

According to the County of Riverside General Plan (2003), the following recreation facilities are located within 0.5 mile of the proposed substation property boundary and the subtransmission line loop-in, and telecommunication lines between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (facilities crossed by the project features are noted in parentheses):

Parks

- Nakayama Park (listed as City of Temecula Park)
- Riverton Park (listed as City of Temecula Park)

Bike Paths

No County of Riverside General Plan bike paths are identified within the recreation study area (COR, 2003).

Multi-Use Trails

- Nicolas Road (project features would be located under Nicolas Road) (also listed in City of Temecula General Plan (2005))
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW(within and adjacent to N/S Telecommunication Lines) (also listed in City of Temecula General Plan (2005))
- La Serena Way to Nicolas Road

According to the City of Temecula General Plan (2005), the following recreation facilities are located within 0.5 mile of the proposed substation property boundary and the subtransmission line loop-in, and telecommunication lines between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Nakayama Park
- Riverton Park

Bike Lanes
- Nicolas Road (project features would be located under Nicolas Road)
- Calle Girasol

Multi-Use Trails
- Nicolas Road (project features would be located under Nicolas Road) (also listed in County of Riverside General Plan (2003))
- Calle Medusa-Wellington Circle to the Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW (may be crossed by subtransmission line loop-in)

N/S Telecommunication Lines

According to the County of Riverside General Plan (2003), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the County of Riverside (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Bahia Vista Park (listed as City of Temecula Park)
- Calle Aragon Park (listed as City of Temecula Park)
- Margarita Community Park (listed as City of Temecula Park)
- Nakayama Park (listed as City of Temecula Park)
- Riverton Park (listed as City of Temecula Park)
- Ronald Reagan Sports Park (listed as City of Temecula Park)
- Spencer's Crossing (managed by Valley-wide Recreation Park District)
- Temecula Duck Pond (listed as City of Temecula Park)
- Temeku Hills Park (listed as City of Temecula Park)
- Veterans Park (listed as City of Temecula Park)(crossed by the N/S Telecommunication Lines)

Bike Paths
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW (North) – East and South along City of Temecula Boundary (within and adjacent to N/S Telecommunication Lines route)

Multi-Use Trails
- Auld Road-Briggs Road – Leon Road – Winchester Road
- Existing Auld-Moraga 115 kV Subtransmission Line ROW
- Existing Moraga-Pechanga 115 kV Subtransmission Line to Pauba Road

- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW(within and adjacent to N/S Telecommunication Lines)
- Pauba Road
- Margarita Road
- Margarita Road-Agena Street Circle (crossed by the N/S Telecommunication Lines)
- Nicolas Road (project features would be located under Nicolas Road) (also listed in City of Temecula General Plan (2005))
- Southern Cross Road
- Vardon Drive (crossed by the N/S Telecommunication Lines)

According to the City of Temecula General Plan (2005), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the City of Temecula (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Bahia Vista Park
- Calle Aragon Park
- Community Recreation Center
- Margarita Community Park
- Nakayama Park
- Rancho California Sports Park
- Riverton Park
- Temecula Duck Pond
- Temecula Skate Park
- Temeku Hills Park
- Veterans Park (crossed by the N/S Telecommunication Lines)

Bike Lanes
- Calle Girasol
- Honors Drive (crossed by the N/S Telecommunication Lines)
- La Serena Road (crossed by the N/S Telecommunication Lines)
- Margarita Road (crossed by the N/S Telecommunication Lines)
- Murrieta Hot Springs Road (crossed by the N/S Telecommunication Lines)
- Nicolas Road (crossed by the N/S Telecommunication Lines
- Pauba Road
- Rancho California Road (crossed by the N/S Telecommunication Lines)
- Rancho Vista Road (crossed by the N/S Telecommunication Lines)
- Temeku Drive
- Ynez Road

Multi-Use Trails
- Agena Street (adjacent or parallel to N/S Telecommunication Lines)

- Calle Medusa-Wellington Circle to the Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW east to Pauba Road
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW North (portions crossed by the N/S Telecommunication Lines)
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW South (portions crossed by the N/S Telecommunication Lines)
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW west to Pauba Road
- Long Valley Drive
- Murrieta Hot Springs Road (crossed by the N/S Telecommunication Lines)
- Nicolas Road (crossed by the N/S Telecommunication Lines)
- Pauba Road
- Pauba Road to Rancho California Road Pauba Road to Agena Street
- Rancho California (crossed by the N/S Telecommunication Lines)
- Ynez Road to Levande Place (crossed by the N/S Telecommunication Lines)

According to the City of Murrieta General Plan (1994), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the City of Murrieta (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
The City of Murrieta General Plan (1994) identifies two unnamed proposed parks, one community and one neighborhood, within the recreation study area (COM, 1994).

Bike Paths
- Briggs Road (crossed by the N/S Telecommunication Lines)
- Clinton Keith – Los Alamos Road (crossed by the N/S Telecommunication Lines)

Multi-Use Trails
No City of Murrieta multi-use trails are identified within the recreation study area (COM, 1994).

4.14. .1.2 Impact Analysis

Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Construction Impacts
Construction activities resulting from the Proposed Project site would result in the intermittent use of parks by construction workers for breaks; use would not be substantial

because the use would occur for short periods of time for an approximate eight-month period.

Construction of the N/S Telecommunication Lines would result in the crossing of Veterans Park, located in the City of Temecula. Construction activities resulting from the Proposed Project site would result in the intermittent use of parks by construction workers for breaks; use would not be substantial because the use would occur for short periods of time for up to 40 days.

In the event short-term restrictions on recreation use of Veterans Park, existing bike lanes, bike paths, or trails are necessary during project construction, SCE will notify the public in coordination with the jurisdiction (PDF REC-1). SCE would notify the public through postings or public notices in regards to the short-term restriction to recreation users. Use of local parks by construction staff during construction of the Proposed Project and the N/S Telecommunication Lines would be temporary (approximately eight months) and is not anticipated to result in or accelerate substantial physical deterioration of the facilities. Therefore, construction of the Proposed Project site and the N/S Telecommunication Lines would result in a less than significant impact under this criterion.

Operation Impacts

Operation activities resulting from the Proposed Project site would not increase or decrease the demand for and access to recreation resources; the substation would be an unattended facility and visited by SCE personnel on an intermittent basis.

Operation of the N/S Telecommunication Lines would result in the crossing of Veterans Park, located in the City of Temecula. Operation activities resulting from the Proposed Project site would not increase or decrease the demand for and access to recreation resources; the substation would be an unattended facility.

Operation of the Proposed Project site and the N/S Telecommunication Lines would not increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Construction Impacts

Construction of the Proposed Project site and the N/S Telecommunication Lines would not include recreation facilities and would not require the construction or expansion of existing recreation facilities, because existing facilities can accommodate the occasional use by construction workers. Therefore, construction of the Proposed Project site and N/S Telecommunication Lines would result in no impact under this criterion.

Operation Impacts

Operation of the Proposed Project site and the N/S Telecommunication Lines would not include recreation facilities and would not require the construction or expansion of existing recreation facilities; the Proposed Project substation would be an unattended facility and visited by SCE personnel on an intermittent basis. Therefore, operation of the Proposed

Project site and N/S Telecommunication Lines would result in no impact under this criterion.

4.14. .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and no impacts during operation; therefore, no mitigation is required.

4.14. .2 Site Alternative B

4.14. .2.1 Environmental Setting

Site Iternative

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.14.5.1.1.

According to the County of Riverside General Plan (2003), the following recreation facilities are located within 0.5 mile of the proposed substation property boundary and the subtransmission line loop-in, and telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (facilities crossed by the project features are noted in parentheses):

Parks
- Nakayama Park (listed as City of Temecula Park)
- Riverton Park (listed as City of Temecula Park)

Bike Paths

No County of Riverside General Plan bike paths are identified within the recreation study area (COR, 2003).

Multi-Use Trails
- Nicolas Road (project features would be located under Nicolas Road) (also listed in City of Temecula General Plan (2005))
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW (within and adjacent to N/S Telecommunication Lines) (also listed in City of Temecula General Plan (2005))

According to the City of Temecula General Plan (2005), the following recreation facilities are located within 0.5 mile of the proposed substation property boundary and the subtransmission line loop-in, and telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Nakayama Park
- Riverton Park

Bike Lanes
- Nicolas Road (project features would be located under Nicolas Road)
- Calle Girasol

Multi-Use Trails
- Nicolas Road (project features would be located under Nicolas Road) (also listed in County of Riverside General Plan (2003))
- Calle Medusa-Wellington Circle to the Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW (may be crossed by subtransmission line loop-in)

N S elecommunication Lines

The N/S Telecommunication Lines would be located in the existing Valley-Auld-Pauba 115 kV subtransmission line ROW in unincorporated County of Riverside and the Cities of Temecula and Murrieta.

According to the County of Riverside General Plan (2003), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the County of Riverside (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Bahia Vista Park (City of Temecula Park)
- Calle Aragon Park (City of Temecula Park)
- Margarita Community Park (City of Temecula Park)
- Nakayama Park (City of Temecula Park)
- Riverton Park (City of Temecula Park)
- Ronald Reagan Sports Park (City of Temecula Park)
- Spencer's Crossing (managed by Valley-wide Recreation Park District)
- Temecula Duck Pond (City of Temecula Park)
- Temeku Hills Park (City of Temecula Park)
- Veterans Park (City of Temecula Park)(crossed by the N/S Telecommunication Lines)

Bike Paths
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW (North) – East and South along City of Temecula Boundary (within and adjacent to N/S Telecommunication Lines)

Multi-Use Trails
- Auld Road-Briggs Road – Leon Road – Winchester Road
- Existing Auld-Moraga 115 kV Subtransmission Line ROW
- Existing Moraga-Pechanga 115 kV Subtransmission Line to Pauba Road
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW(within and adjacent to N/S Telecommunication Lines)

- Pauba Road
- Margarita Road
- Margarita Road-Agena Street Circle (crossed by the N/S Telecommunication Lines)
- Nicolas Road (project features would be located under Nicolas Road) (also listed in City of Temecula General Plan (2005))
- Southern Cross Road
- Vardon Drive (crossed by the N/S Telecommunication Lines)

According to the City of Temecula General Plan (2005), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the City of Temecula (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Bahia Vista Park
- Calle Aragon Park
- Community Recreation Center
- Margarita Community Park
- Nakayama Park
- Rancho California Sports Park
- Riverton Park
- Temecula Duck Pond
- Temecula Skate Park
- Temeku Hills Park
- Veterans Park (crossed by the N/S Telecommunication Lines)

Bike Lanes
- Calle Girasol
- Honors Drive (crossed by the N/S Telecommunication Lines)
- La Serena Road (crossed by the N/S Telecommunication Lines)
- Margarita Road (crossed by the N/S Telecommunication Lines)
- Murrieta Hot Springs Road (crossed by the N/S Telecommunication Lines)
- Nicolas Road (crossed by the N/S Telecommunication Lines)
- Pauba Road
- Rancho California Road (crossed by the N/S Telecommunication Lines)
- Rancho Vista Road (crossed by the N/S Telecommunication Lines)
- Temeku Drive
- Ynez Road

Multi-Use Trails
- Agena Street (adjacent or parallel to N/S Telecommunication Lines)
- Calle Medusa-Wellington Circle to the Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW

- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW east to Pauba Road
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW North (portions crossed by the N/S Telecommunication Lines)
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW South (portions crossed by the N/S Telecommunication Lines)
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW west to Pauba Road
- Long Valley Drive
- Murrieta Hot Springs Road (crossed by the N/S Telecommunication Lines)
- Nicolas Road (crossed by the N/S Telecommunication Lines)
- Pauba Road
- Pauba Road to Rancho California Road Pauba Road to Agena Street
- Rancho California (crossed by the N/S Telecommunication Lines)
- Ynez Road to Levande Place (crossed by the N/S Telecommunication Lines)

According to the City of Murrieta General Plan (1994), the following recreation facilities are located within 0.5 mile of N/S Telecommunication Lines in the City of Murrieta (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
The City of Murrieta General Plan (1994) identifies two unnamed proposed parks, one community and one neighborhood, within the recreation study area (COM, 1994).

Bike Paths
- Briggs Road (crossed by the N/S Telecommunication Lines)
- Clinton Keith – Los Alamos Road (crossed by the N/S Telecommunication Lines)

Multi-Use Trails
No City of Murrieta multi-use trails are identified within the recreation study area (COM, 1994).

4.14. .2.2 Impact Analysis

Implementation of Site Alternative B would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. During construction, personnel would occasionally use the facilities during breaks or lunch for an up to eight-month period. No use during operations is anticipated because the facility would be unattended and SCE personnel would visit Alternative Site B intermittently for maintenance activities. In the event short-term restrictions on recreation use of Veterans Park, existing bike lanes, bike paths, or trails are necessary during project construction, SCE will notify the public in coordination with the jurisdiction (PDF REC-1). Therefore, construction and operation of

Site Alternative B would result in a less than significant impact during construction and no impact during operation under this criterion.

Site Alternative B would not include recreational facilities and the existing facilities are adequate for occasional use during construction by personnel during breaks or lunch for an up to eight-month period. Additionally, during operation, no use of recreational facilities is anticipated to occur because Site Alternative B would be unattended and SCE personnel would visit intermittently for maintenance activities. Therefore, implementation of Site Alternative B would result in no impacts under this criterion.

In conclusion, similar to the Proposed Project, construction of the Site Alternative B would result in less than significant impacts and operation would result in no impacts to recreation.

4.14. .3 Site Alternative

4.14. .3.1 Environmental Setting

Site Iternative C

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.14.5.1.1.

According to the County of Riverside General Plan (2003), the following recreation facilities are located within 0.5 mile of the proposed substation property boundary and the subtransmission line loop-in, and telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (facilities crossed by the project features are noted in parentheses):

Parks

No County of Riverside General Plan parks are identified within the recreation study area (COR, 2003).

Bike Paths

- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW(within and adjacent to N/S Telecommunication Lines located north of Murrieta Hot Springs Road)

Multi-Use Trails

- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW (within and adjacent to N/S Telecommunication Lines located south of Murrieta Hot Springs Road)

According to the City of Temecula General Plan (2005), the following recreation facilities are located within 0.5 mile of the proposed substation property boundary and the subtransmission line loop-in, and telecommunication line between the substation and the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the City of Temecula (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
No City of Temecula General Plan parks are identified within the recreation study area (COT, 2005).

Bike Lanes
- Murrieta Hot Springs Road (project features would be located along Murrieta Hot Springs Road)

Multi-Use Trails
- Murrieta Hot Springs Road (project features would be located along Murrieta Hot Springs Road east of the Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW)
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW(project features would be located along Murrieta Hot Springs Road and McGowans Pass west of the Existing Valley-Auld Pauba 115 kV Substation Line ROW)
- Willows Avenue to Borel Road

N S elecommunication Lines
The N/S Telecommunication Lines would be located in the existing Valley-Auld-Pauba 115 kV subtransmission line ROW in unincorporated County of Riverside and the Cities of Temecula and Murrieta.

According to the County of Riverside General Plan (2003), the following recreation facilities are located within 0.5 mile of the proposed telecommunication line north and south of the interconnect location of the new 115 kV subtransmission line with the existing Valley-Auld-Pauba 115 kV subtransmission line in the County of Riverside (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks
- Bahia Vista Park (City of Temecula Park)
- Calle Aragon Park (City of Temecula Park)
- Margarita Community Park (City of Temecula Park)
- Nakayama Park (City of Temecula Park)
- Riverton Park (City of Temecula Park)
- Ronald Reagan Sports Park (City of Temecula Park)
- Spencer's Crossing (managed by Valley-wide Recreation Park District)
- Temecula Duck Pond (City of Temecula Park)
- Temeku Hills Park (City of Temecula Park)
- Veterans Park (City of Temecula Park)(crossed by the N/S Telecommunication Lines)

Bike Paths
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW (North) – East and South along City of Temecula Boundary (within and adjacent to N/S Telecommunication Lines)

Multi-Use Trails

- Auld Road-Briggs Road – Leon Road – Winchester Road
- Existing Auld-Moraga 115 kV Subtransmission Line ROW
- Existing Moraga-Pechanga 115 kV Subtransmission Line to Pauba Road
- Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW(within and adjacent to N/S Telecommunication Lines)
- Pauba Road
- Margarita Road
- Margarita Road-Agena Street Circle (crossed by the N/S Telecommunication Lines)
- Nicolas Road (project features would be located under Nicolas Road) (also listed in City of Temecula General Plan (2005))
- Southern Cross Road
- Vardon Drive (crossed by the N/S Telecommunication Lines)

According to the City of Temecula General Plan (2005), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the City of Temecula (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks

- Bahia Vista Park
- Calle Aragon Park
- Community Recreation Center
- Margarita Community Park
- Nakayama Park
- Rancho California Sports Park
- Riverton Park
- Temecula Duck Pond
- Temecula Skate Park
- Temeku Hills Park
- Veterans Park (crossed by the N/S Telecommunication Lines)

Bike Lanes

- Calle Girasol
- Honors Drive (crossed by the N/S Telecommunication Lines)
- La Serena Road (crossed by the N/S Telecommunication Lines)
- Margarita Road (crossed by the N/S Telecommunication Lines)
- Murrieta Hot Springs Road (crossed by the N/S Telecommunication Lines)
- Nicolas Road (crossed by the N/S Telecommunication Lines)
- Pauba Road
- Rancho California Road (crossed by the N/S Telecommunication Lines)

- Rancho Vista Road (crossed by the N/S Telecommunication Lines)
- Temeku Drive
- Ynez Road

Multi-Use Trails

- Agena Street (adjacent or parallel to proposed N/S Telecommunication Lines)
- Calle Medusa-Wellington Circle to the Existing Valley-Auld Pauba 115 kV Subtransmission Line ROW
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW east to Pauba Road
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW North (portions crossed by the N/S Telecommunication Lines)
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW South (portions crossed by the N/S Telecommunication Lines)
- Existing Valley-Auld-Pauba 115 kV Subtransmission Line ROW west to Pauba Road
- Long Valley Drive
- Murrieta Hot Springs Road (crossed by the N/S Telecommunication Lines)
- Nicolas Road (crossed by the N/S Telecommunication Lines)
- Pauba Road
- Pauba Road to Rancho California Road Pauba Road to Agena Street
- Rancho California (crossed by the N/S Telecommunication Lines)
- Ynez Road to Levande Place (crossed by the N/S Telecommunication Lines)

According to the City of Murrieta General Plan (1994), the following recreation facilities are located within 0.5 mile of the N/S Telecommunication Lines in the City of Murrieta (geographic references used for trails when names not shown on General Plan maps) (facilities crossed by the project features are noted in parentheses):

Parks

The City of Murrieta General Plan (1994) identifies two unnamed proposed parks, one community and one neighborhood, within the recreation study area (COM, 1994).

Bike Paths

- Briggs Road (crossed by the N/S Telecommunication Lines)
- Clinton Keith – Los Alamos Road (crossed by the N/S Telecommunication Lines)

Multi-Use Trails

No City of Murrieta multi-use trails are identified within the recreation study area (COM, 1994).

4.14. .3.2 Impact Analysis

Implementation of Site Alternative C would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. During construction, personnel would occasionally use the facilities during breaks or lunch for an up to eight-month period. No use during operations is anticipated because the facility would be unattended and SCE personnel would visit Alternative Site B intermittently for maintenance activities. In the event short-term restrictions on recreation use of Veterans Park, existing bike lanes, bike paths, or trails are necessary during project construction, SCE will notify the public in coordination with the jurisdiction (PDF REC-1). Therefore, construction and operation of Site Alternative C would result in a less than significant impact during construction and no impact during operation under this criterion.

Site Alternative C would not include recreational facilities and the existing facilities are adequate for occasional use during construction by personnel during breaks or lunch for an up to eight-month period. Additionally, during operation, no use of recreational facilities is anticipated to occur because Site Alternative C would be unattended and SCE personnel would visit intermittently for maintenance activities. Therefore, implementation of Site Alternative C would result in no impacts under this criterion.

In conclusion, similar to the Proposed Project, construction of the Site Alternative C would result in less than significant impacts and operation would result in no impacts to recreation.

4.14. onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and no impacts during operation to recreation.

4.14. eferences

California Resource Agency (CRA). 2007. *State CEQA Guidelines.* 2007. Amended July 25, 2007. http://ceres.ca.gov/ceqa. Accessed July 17.

California State Parks (CSP). 2008. *California State Parks, Inland Empire Region.* http://www.parks.ca.gov/parkindex/region_info.asp?printer=1&id=12&lngstartrow=&pages=1&pa. Accessed August 7.

City of Murrieta (COM). 1994. *City of Murrieta General Plan.* July 20.

———. 2008. *City of Murrieta GIS Data Search*. http://www3.murrieta.org/CitySearch/default.aspx. Accessed August 21.

City of Temecula (COT). 2008a. *City of Temecula GIS Viewer*. http://chtemp.cityoftemecula.org/GIS_ArcIMS/Viewer/Top/Viewer.asp?app=parcels. Accessed July 22.

———————. 2008b. *City of Temecula Zoning Classifications/Uses*. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/zoningclassifications.htm. Accessed July 22.

———————. 2005. *Temecula General Plan.* 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

County of Riverside (COR). Planning Department. 2008a. *Specific Plans – Approved Documents & Land Use Maps.* http://www.rctlma.org/planning/content/splans/sp_docs.html. Accessed July 17.

———————. 2003a. *County of Riverside General Plan.* October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

———————. 2003b. *County of Riverside General Plan, Area Plans Volume I.* October. http://www.rctlma.org/genplan/default.aspx. Accessed July 17, 2008.

Mountain Travel Guide (MTG). 2008a. *Riverside County California ATV Trails*. http://www.mountaintravelguide.com/California/Riverside/ATV/RiversideATVTrails.htm. Accessed August 8.

Riverside County Regional Park & Open-Space District (RCRPO). 2008. *Park Directory.* http://www.riversidecountyparks.org/park-directory/. Accessed August 8.

U.S. Department of the Interior, National Park Service (NPS). 2008. *National Parks in California.* http://www.nps.gov/state/ca/. Accessed August 7.

4.1 Transportation and Traffic

4.1 .1 Overview

This analysis describes the potential impacts to transportation and traffic that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to transportation and traffic.

4.1 .2 ethodology

The study area for this resource is defined as the vicinity of the alternative substation sites and the routes for the subtransmission and telecommunication lines. Potential project effects are assessed on the area transportation facilities within the vicinity of the proposed linear (12 kV distribution line, subtransmission lines loop-in and telecommunication cables) and substation facilities for both the construction and operational phases of the Triton Substation Project. An estimate of the peak trip generation for the Triton Substation Project was determined using construction and operation data developed by SCE. Potential traffic impacts of the proposed construction activities were assessed by analyzing the estimated construction traffic added to the surrounding transportation circulation system. During operations, the facility would be unattended, except for limited presence of up to two staff during routine maintenance.

The transportation and traffic construction evaluation is based on peak (worst case) projected traffic conditions associated with construction of the Triton Substation Project and the estimated construction schedule (during the eight months of construction). The construction impacts are presented in context to existing or baseline traffic conditions. Potential operation impacts are evaluated based on projected traffic conditions during construction of the project, using the estimated trip distribution of traffic on local access roads.

4.1 .3 egulations Plans and Standards

4.1 .3.1 State egulations

4.1 .3.1.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on transportation and traffic.

4.1 .3.1.2 Additional State egulations

Additional State laws and regulations that apply to the Triton Substation Project include the following sections of this California Vehicle Code (CVC), unless specified otherwise:

- California Street and Highways Code (S&HC), Sections 660, 670, 1450, 1460 et seq. 1470, and 1480, regulate right-of-way encroachment and granting of permits for encroachments on state and county roads.
- All construction in the public right-of-way will need to comply with the *Manual on Uniform Traffic Control Devices* (Caltrans and FHWA, 2003).

4.1 .3.2 ocal urisdictions

4.1 .3.2.1 ounty of iverside

According to the 2007 Riverside County Congestion Management Program (CMP), the minimum Level of Service (LOS) threshold in the County of Riverside is LOS "E." Therefore, when a CMP street or highway falls to LOS "F," a deficiency plan must be required. Preparation of a deficiency plan will be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including consideration of Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule for mitigating the deficiency (RCTC, 2007). Table 4.15-1 summarizes the County of Riverside LOS thresholds for the various roadway types in the study area.

Table 4.1 -1. ink olume apacity evel of Service Thresholds for iverside ounty oadways
Triton 115/12 kV Substation Project PEA

		Maximum Two-Way Traffic Volume (ADT)		
Roadway Classification	**Number of Lanes**	**LOS C Threshold**	**LOS D Threshold**	**LOS E Threshold**
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Urban	6	43,100	48,500	53,900
Freeway	4	61,200	68,900	76,500
Freeway	8	128,400	144,500	160,500

Source: County of Riverside General Plan

The following general plan goals, ordinances, and codes pertaining to traffic and transportation and applicable to the Triton Substation Project were identified within the study area. No other traffic or transportation policies applicable to the Triton Substation Project were identified for the study area.

4.1 .3.2.2 ity of Temecula

The following goals/policies relating to transportation from the City of Temecula General Plan, Circulation Element were considered in this analysis (COT, 2005):

Goal 1 Strive to maintain LOS "D" or better at intersections within the City during peak hours and LOS "C" or better during non-peak hours.

4.1 .3.2.3 ity of urrieta

The following goals/policies relating to transportation from the City of Murrieta General Plan, Circulation Element were considered in this analysis (COM, 1994):

Objective C-1.1 Maintain no worse than a Level of Service "D" at all intersections during peak hours. Maintain no worse than a Level of Service "E" at freeway interchanges during peak hours.

4.1 .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations 15000 et seq.), which indicate that a proposed project would have a significant impact on transportation and traffic 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 a 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 emergency access
- Result in inadequate parking capacity
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

4.1 . Proposed Project and Alternatives

The following environmental resource-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C below:

PDF TT-1 **Minimize Street Use.** Construction activities would be designed to minimize work on, or use of, local streets.

PDF TT-2 **Incorporate Protective Measures.** Any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity.

PDF TT-3 **Prepare Traffic Management Plans.** Traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling roadway work during periods of minimum traffic flow.

PDF TT-4 **Repair Damaged Streets.** Any damage to local streets would be repaired, and streets would be restored to their pre-project condition.

4.1 . .1 Proposed Project

4.1 . .1.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described below.

Regional access to the Proposed Project would be provided from the north and south via Interstate 15 (I-15) and Interstate 215 (I-215). The Proposed Project would be connected to major roadways in the area via Nicolas Road, Calle Medusa, Winchester Road, and Murrieta Hot Springs Road. Table 4.15-2 provides a roadway description, traffic volume data, and existing LOS for the local and regional roadways in the study area of the Proposed Project.

Table 4.1 -2. haracteristics of oadways in Project Study Area Proposed Project
Triton 115/12 kV Substation Project PEA

Highway/Roadway	Description	Jurisdiction	Average Daily Traffic Volume (vehicles/day) [a, b, c]	Existing LOS
Nicolas Road (Winchester Road to Joseph Road)	4-lane secondary	City of Temecula	18,000	Better than C
Nicolas Road (Joseph Road to Calle Girasol)	2-lane collector	City of Temecula	5,000	Better than C
Calle Medusa	2-lane collector	City of Temecula	3,800	Better than C
SR-79/Winchester Road	6-lane urban arterial	City of Temecula	56,000	F
Murrieta Hot Springs Road	6-lane urban arterial	City of Murrieta	56,000	F
I-15	8-lane freeway	Caltrans, District 8	169,000[d]	F
I-215	4-lane freeway	Caltrans, District 8	92,000[e]	F

[a]Source: State of California, Department of Transportation (Caltrans), 2007
[b]Source: City of Temecula, Traffic Counts 2007
[c]Source: City of Murrieta, Traffic Counts 2005 (factored up to 2008 using 3% annual growth rate)
[d]Measured at SR-79 interchange
[e]Measured at SR-79 Murrieta Hot Springs Road interchange

As shown in Table 4.15-2, Winchester Road, Murrieta Hot Springs Road, I-15, and I-215 currently operate at LOS F based on County of Riverside Average Daily Traffic (ADT) analysis.

The location of the Proposed Project is shown in Figure 2.5-1. The characteristics of the roadways in Table 4.15-2 are described below in greater detail. It should be noted that no local residential streets would be used to access the Proposed Project substation site.

Nicolas Road

Nicolas Road is an east-west four-lane collector from Winchester Road to Joseph Road (approximately 1.3 miles) and a two-lane collector from Joseph Road to Calle Girasol. Nicolas Road connects the Proposed Project site to State Route 79/Winchester Road, located approximately 1.8 miles west of the Proposed Project substation site. Nicolas Road traverses through residential areas. Nicolas Road would serve as a local access route for construction traffic (workers and trucks) traveling to the Proposed Project substation site from State Route 79/Winchester Road.

Calle Medusa

Calle Medusa is a north-south two-lane collector, immediately west of the Proposed Project site. Calle Medusa connects the Proposed Project site to Nicolas Road. Calle Medusa traverses through residential areas south of the Proposed Project substation site.

State Route inchester Road

State Route 79 (SR-79), also known as Winchester Road, is a north-south six-lane divided arterial in the vicinity of the Proposed Project site. SR-79 provides local access to Nicolas road and the Proposed Project substation site from I-15. SR-79 would serve as a local access route for construction traffic (workers and trucks) traveling to the Proposed Project substation site from I-15.

Murrieta ot Springs Road

Murrieta Hot Springs Road is an east-west four-lane divided arterial in the vicinity of the Proposed Project site Murrieta Hot Springs Road would serve as a local access route for construction traffic (workers and trucks) traveling to the Proposed Project telecommunication site from I-215.

Interstate 15

I-15 is the fourth-longest north-south transcontinental interstate highway in the United States. Local portions were built to connect the Inland Empire with San Diego, California. I-15 is an eight-lane facility in the area of the Proposed Project. I-15 would serve as a regional access route for construction traffic (workers and trucks) traveling from the south to the Proposed Project site.

Interstate 215

I-215 is an alternate route to I-15 between Temecula and San Bernardino. It is a generally north-south freeway facility. It merges with I-15 in Temecula, south of the Proposed Project, and in San Bernardino to the north. I-215 is a four-lane facility in the area of the Proposed Project. I-215 would serve as a regional access route for construction traffic (workers and trucks) traveling from the north to the Proposed Project telecommunication site.

Public ransportation

The Riverside Transit Agency (RTA) provides bus service to the Cities of Temecula and Murrieta within the vicinity of the Proposed Project. Key transit service routes serving the area are RTA Routes 23 and 79. RTA Route 23 travels from Temecula to Murrieta and uses SR-79 and Murrieta Hot Springs Road in the vicinity of the Proposed Project. RTA Route 79 travels through Hemet, Winchester, and Temecula. In the vicinity of the Proposed Project, RTA Route 79 uses SR-79.

ir ransportation

The closest airport is the French Valley Airport. The Proposed Project substation site is located approximately 1.8 miles from the French Valley Airport. For a 12-month period ending March 31, 2006, there was an average of 269 aircraft operations per day.

4.1 . .1.2 Impact Analysis

eneral nalysis

The estimated construction workers, duration of work activity, and forecast trips per day are presented in Chapter 3 (Project Description). The construction schedules of all components would overlap to some degree, and the overall Triton Substation workforce (all components combined) would average approximately 114 workers per day between October 2009 and June 2010. The 114 workers would be comprised of 101 workers who will construct the substation and distribution line duct bank, and 13 workers who will construct the N/S Telecommunication Lines. It is assumed that workers will arrive from a variety of locations within the region. Once arriving to the project area, the 101 workers constructing the substation and distribution line duct bank will travel to the Proposed Project site. The 13 workers constructing the N/S Telecommunication Lines will travel to areas along the existing subtransmission alignment (away from the substation location).

Based on the construction schedule and air quality calculation provided in Appendix A, it is estimated that an additional 40 round trips would also be made by other construction-related traffic (i.e., trucks, deliveries, equipment, etc). The remaining construction equipment presented in Appendix A will not produce daily trips on the surrounding transportation facility because the equipment will remain on the project site. The substation construction activities would produce 10 of the 40 truck/equipment round trips. The lateral facility construction activities would produce 30 of the 40 truck/equipment round trips.

For analysis purposes, it was assumed that 40 percent of the construction traffic (workers and trucks/equipment) will arrive at the site from the north via I-215 (exiting at Murrieta Hot Springs Road) and the remaining 60 percent would arrive from the south and northwest via I-15 (exiting at SR-79). Winchester Road and Murrieta Hot Springs Road are both designated as truck routes and can therefore accommodate the limited amount of truck traffic associated with the Proposed Project. The estimated increase in construction traffic on roadways/ highways in the vicinity of the Proposed Project site is presented in Table 4.15-3. As with most construction projects, construction work hours will begin and end prior to peak traffic hours (typically 6:00 AM to 3:00 PM). Occasional work outside of these hours may occur.

Table 4.1 -3. Distribution of onstruction orker enerated Traffic On State outes And ocal oadways Proposed Project
Triton 115/12 kV Substation Project PEA

		Peak Construction Period		
Highway/Roadway	**Average Daily Traffic Volume (vehicles/day)** [a, b, c]	**Projected Total Vehicle Trips/Day**[f]	**Percent Increase in Vehicle Trips/Day**	**Projected LOS**
Nicolas Road	18,000	222	1%	Better than C
Calle Medusa	3,800	222	5%	Better than C
SR-79/Winchester Road	56,000	185	< 1%	F
Murrieta Hot Springs Road	56,000	123	< 1%	F
I-15	169,000[d]	185	< 1%	F
I-215	92,000[e]	123	< 1%	F

[a]Source: State of California, Department of Transportation (Caltrans), 2007

[b]Source: City of Temecula, Traffic Counts 2007

[c] Source: City of Murrieta, Traffic Counts 2005 (factored up to 2008 using 3 percent annual growth rate)

[d]Measured at SR-79 interchange

[e]Measured at SR-79 Murrieta Hot Springs Road interchange

[f]Assumes 101 workers and 10 trucks will arrive/depart in immediate proximity to the substation, 13 workers and 30 trucks will arrive/depart along the linear facilities away from the substation (telecommunication system construction).

As shown in Table 4.15-3, Winchester Road, Murrieta Hot Springs Road, I-15, and I-215 would continue to operate at LOS F based on County of Riverside ADT analysis. There are no significance criteria once a roadway is over LOS F. Therefore, the construction of the project is not considered to have an impact on the surrounding roadways.

During the peak construction period, traffic would increase on roadways in the vicinity of the Proposed Project (excluding the N/S Telecommunication Lines) by no more than one percent, except for the short section of Calle Medusa along the Proposed Project frontage where a five percent increase is estimated. However, the increase in traffic on Calle Medusa would not cause the LOS to exceed LOS C and is not anticipated to have a significant impact on traffic along Calle Medusa.

Additionally, for the N/S Telecommunication Lines, the majority of construction activities would occur within the existing Valley-Auld-Pauba 115 kV subtransmission line ROW. The construction of the N/S Telecommunication Lines would be temporary and of short duration involving no more than 4 vehicles, including pulling equipment, at each pulling location within the ROW. Use of existing roadways adjacent to the ROW would be limited to construction workers accessing the work location and equipment crossing within the existing ROW. The maintenance of the N/S Telecommunication Lines would be included in the existing operation activities conducted for the existing Valley-Auld-Pauba 115 kV subtransmission line and no additional vehicle traffic would be generated during operation. Construction activities would be designed to minimize work on, or use of, local streets

(PDF TT-1). Any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity (PDF TT-2). Traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling roadway work during periods of minimum traffic flow (PDF TT-3). Any damage to local streets would be repaired, and streets would be restored to their pre-project condition (PDF TT-4). These project design features would further avoid and minimize impacts of construction of the N/S Telecommunication Lines.

Would the project 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)?

Construction Impacts

During the eight-month construction period, traffic on roadways in the vicinity of the Proposed Project (primarily a limited section of Calle Medusa) would increase by no more than five percent. This increase in traffic is not anticipated to have a significant impact on transportation and traffic in the area of the Proposed Project. Implementation of project design features would reduce these transportation and traffic-related impacts to a less than significant level. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As the electrical equipment within the substation would be remotely monitored and controlled, SCE personnel would only need to visit the substation up to two times per month for maintenance purposes. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Construction Impacts

Construction of the Proposed Project would not exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for the designated roads and highways which operate at acceptable levels without the project. However, several of the roadways and highways currently operate at LOS F without the project. Construction traffic would add to these LOS F conditions. There are no significance criteria once a roadway is over LOS F (based on the County of Riverside ADT methodology). Due to the amount of construction traffic (114 workers and 40 truck/equipment trips per day), the short-term and linear nature of project construction activities, and SCE's commitment to implement appropriate project design features, established LOS standards (Table 4.15-1) would not be exceeded on roads that currently

operate at an acceptable LOS. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As electrical equipment within the substation would be remotely monitored and controlled, SCE personnel would only need to visit the substation up to two times per month and this would be a less than significant amount of additional traffic. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Construction Impacts

The proposed linear facilities would be constructed adjacent to and alongside existing subtransmission lines and, thus, would not constitute a new obstruction to navigable air space. Additionally, the Proposed Project would be designed, engineered, and constructed to comply with the *Riverside County Land Use Compatibility Plan* (COR, 2004). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The proposed linear facilities would be adjacent to and alongside existing subtransmission lines and, thus, would not constitute a new obstruction to navigable air space. Additionally, the Proposed Project would be operated to comply with the *Riverside County Land Use Compatibility Plan* (COR, 2004). Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction Impacts

The construction of the linear facilities would take place adjacent to and alongside existing subtransmission lines (crossing roadways in some areas). The hazards associated with the linear facility construction would be minimized because construction activities would be designed to minimize work on, or use of, local streets (PDF TT-1); any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity (PDF TT-2); and traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling roadway work during periods of minimum traffic flow (PDF TT-3). Any damage to local streets would be repaired, and streets would be restored to their pre-project condition (PDF TT-4) during and at the completion of construction of the Proposed Project, as applicable. For example, PDF TT-2 requires the use of guard poles, netting, or similar means at subtransmission line roadway crossings to protect moving traffic, and PDF TT-3 requires use of traffic control and other traffic

management techniques, where necessary, to minimize project impacts on traffic flow and access. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not substantially increase hazards due to a design feature or incompatible uses because operation of the Proposed Project would not involve, create, or increase hazards at applicable transportation-related facilities. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project result in inadequate emergency access?

Construction Impacts

As part of the Proposed Project, construction activities would be designed to minimize work on, or use of, local streets (PDF TT-1); any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity (PDF TT-2); traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling roadway work during periods of minimum traffic flow (PDF TT-3); and any damage to local streets would be repaired, and streets would be restored to their pre-project condition (PDF TT-4), which would reduce potential impacts to emergency response along roadways in the project area. For example, PDF TT-2 requires the use of guard poles, netting, or similar means at subtransmission line roadway crossings to protect moving traffic, and PDF TT-3 requires use of traffic control and other traffic management techniques, where necessary, to minimize project impacts on traffic flow and access. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not result in inadequate emergency access because the unattended facilities would be visited up to two times per month, which is not anticipated to result in inadequate emergency access to roadways. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project result in inadequate parking capacity?

Construction Impacts

Construction of the Proposed Project would not result in inadequate parking capacity as it would not create a demand for offsite parking facilities. Construction workers would park in designated areas located within the Proposed Project substation site. Therefore, construction of the Proposed Project would result in no impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not result in inadequate parking capacity as it would not create a demand for offsite parking facilities. The Triton Substation would be

unattended, and electrical equipment within the substation would be remotely monitored and controlled. SCE personnel would visit the substation up to two times per month and would park in designated areas located within the Proposed Project property. Therefore, operation of the Proposed Project would result in no impact under this criterion.

Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Construction Impacts

Bike lanes on adjacent roadways may be temporary out of service during construction activities; however, construction activities would be designed to minimize work on, or use of, local streets (PDF TT-1); any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity (PDF TT-2); and traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling roadway work during periods of minimum traffic flow (PDF TT-3) would minimize the temporary impact to less than significant. For example, PDF TT-3 requires use of traffic control and other traffic management techniques, where necessary, to minimize project impacts on traffic flow (including all affected modes of transportation) and access. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would not conflict with adopted policies, plans, or programs because the operation of the facilities would not affect existing programs (e.g., bike lanes or bus transportation routes). Therefore, operation of the Proposed Project would result in no impact under this criterion.

4.1 . .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.1 . .2 Site Alternative B

4.1 . .2.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.15.5.1.1.

Similar to the Proposed Project, Site Alternative B would be located off Nicolas Road (approximately 1,000 feet west of the Proposed Project). Therefore, the general environmental setting for Site Alternative B is the same as for the Proposed Project including the characteristics of the roadways in the area of Site Alternative B. Unlike the Proposed Project, the Site Alternative B substation site would be accessed by Los Choras Ranch Road.

Site Alternative B would be located approximately 1.5 miles from the French Valley Airport. For a 12-month period ending March 31, 2006, there was an average of 269 aircraft operations per day.

4.1 . .2.2 Impact Analysis

eneral nalysis

As for the Proposed Project, it is assumed that workers will arrive from a variety of locations within the region to construction and operate Site Alternative B. For analysis purposes, it was assumed that 40 percent of the construction traffic will arrive to the site from the north via I-215 (exiting at Murrieta Hot Springs Road) and the remaining 60 percent would arrive from the south and northwest via I-215 (exiting at SR-79). Table 4.15-4 presents the estimated increase in construction traffic on roadways/highways in the vicinity of Alternative Site B. As with most construction projects, construction work hours will begin and end prior to peak traffic hours (typically 6:00 AM to 3:00 PM). Occasional work outside of these hours may occur.

Table 4.1 -4. Distribution of onstruction orker enerated Traffic on State outes and ocal oadways Alternative Site B
Triton 115/12 kV Substation Project PEA

		Peak Construction Period		
Highway/Roadway	**Average Daily Traffic Volume (vehicles/day)** [a, b, c]	**Projected Total Vehicle Trips/Day**[f]	**Percent Increase in Vehicle Trips/Day**	**Projected LOS**
Nicolas Road	18,000	222	1%	Better than C
SR-79/Winchester Road	56,000	185	< 1%	F
Murrieta Hot Springs Road	56,000	123	< 1%	F
I-15	169,000[d]	185	< 1%	F
I-215	92,000[e]	123	< 1%	F

[a]Source: State of California, Department of Transportation (Caltrans), 2007
[b]Source: City of Temecula, Traffic Counts 2007
[c] Source: City of Murrieta, Traffic Counts 2005 (factored up to 2008 using 3 percent annual growth rate)
[d]Measured at SR-79 interchange
[e]Measured at SR-79 Murrieta Hot Springs Road interchange
[f]Assumes 101 workers and 10 trucks will arrive/depart in immediate proximity to the substation, 13 workers and 30 trucks will arrive/depart along the linear facilities away from the substation (telecommunication system construction).

During the peak construction period, traffic would increase on roadways in the vicinity of Alternative Site B by no more than one percent. As shown in Table 4.15-4, Winchester Road, Murrieta Hot Springs Road, I-15, and I-215 would continue to operate at LOS F based on County of Riverside ADT analysis. There are no significance criteria once a roadway is over LOS F. Therefore, the construction of the project at Alternative Site B is not considered to have an impact on the surrounding roadways.

Site Alternative Analysis

Construction of Site Alternative B would not increase traffic substantially in relation to the existing traffic load and capacity of the street system because traffic on roadways would increase in the vicinity of the Site Alternative B by no more than one percent and would be temporary (for approximately eight months). The substation would be unattended and operation of Site Alternative B would not substantially increase traffic because SCE personnel would likely only visit the substation up to two times per month. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Implementation of Site Alternative B would not result in traffic exceeding, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways that operate at acceptable levels. Several of the roadways and highways currently operate at LOS F without the project. Construction traffic would add to these LOS F conditions. However, there are no significance criteria once a roadway is over LOS F (based on the County of Riverside ADT methodology). Due to the amount of construction traffic (114 workers and 40 truck/equipment trips per day), the short-term and linear nature of project construction activities, and SCE's commitment to implement project design features (PDF TT-1, Minimize Street Use; PDF TT-2, Incorporate Protective Measures; PDF TT-3, Prepare Traffic Management Plans), established LOS standards (Table 4.15-1) would not be exceeded on roads that currently operate at an acceptable LOS. SCE personnel would visit the substation up to two times per month and this would be a less than significant amount of additional traffic during operation. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Construction and operation of Site Alternative B would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The proposed linear facilities would be adjacent to and alongside existing subtransmission lines and, thus, would not constitute a new obstruction to navigable air space. Additionally, Site Alternative B would be designed, engineered, constructed, and operated to comply with the *Riverside County Land Use Compatibility Plan* (COR, 2004). Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Construction of Site Alternative B substation would not substantially increase hazards due to a design feature or incompatible uses since construction of Site Alternative B would primarily take place outside traveled roadways. The construction of the subtransmission line loop-in and the telecommunication lines would take place adjacent to and alongside existing subtransmission lines (crossing roadways in some areas). To minimize hazards associated with construction, SCE would implement the following: PDF TT-1, Minimize Street Use; PDF TT-2, Incorporate Protective Measures; PDF TT-3, Prepare Traffic Management Plans; and PDF TT-4, Repair Damaged Streets. Operation of Site Alternative B would not substantially increase hazards due to a design feature or incompatible uses because operation of Site Alternative B would not involve, create, or increase hazards at applicable transportation-related facilities. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Construction of Site Alternative B would not result in inadequate emergency access. As part of Site Alternative B, construction activities would be designed to minimize street use, (PDF TT-1); incorporate protective measures (PDF TT-2); prepare and implement a traffic management plan (PDF TT-3) and repair damaged streets (PDF TT-4). Therefore, implementation of Site Alternative B would result in less than significant impact under this criterion.

Construction of Site Alternative B would not result in inadequate parking capacity as it would not create a demand for offsite parking facilities. Construction and operations staff would park in designated areas located within Site Alternative B substation site. Therefore, implementation of Site Alternative B would result in no impact under this criterion.

Bike lanes on adjacent roadways may be temporarily out of service during construction activities; however, construction activities would be designed to minimize street use (PDF TT-1); incorporate protective measures (PDF TT-2); and prepare and implement a traffic management plan (PDF TT-3). Operation of Site Alternative B would not conflict with adopted policies, plans, or programs because the operation of the facilities would not affect existing programs (e.g., bike lanes or bus transportation routes). Therefore, implementation of Site Alternative B would result in a less than significant impact during construction and no impact during operation under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts to transportation and traffic.

4.1 . .3 Site Alternative

4.1 . .3.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.15.5.1.1.

Site Alternative C is bounded by vacant land to the north and west, Commerce Court to the south, and Calistoga Drive to the east. Site Alternative C is approximately 0.1 mile from the French Valley Airport.

Regional access to Site Alternative C would be provided from the north and south via I-15 and I-215. Site Alternative C would be connected to major roadways in the area via Calistoga Drive, Winchester Road, and Murrieta Hot Springs Road. With the exception of Calistoga Drive, these roadways/highways are described in Section 4.15.5. Calistoga Drive would provide access to the Site Alternative C location from Murrieta Hot Springs Road and is described below in greater detail:

Calistoga Drive

Calistoga Drive is a north-south collector in the County of Riverside. South of Murrieta Hot Springs Road, Calistoga Drive is a two-lane road providing access to residential areas. North of Murrieta Hot Springs Road, Calistoga Drive is a four-lane road that also provides access to residential areas. The Site Alternative C site is located on the northwest corner of Calistoga Drive and Commerce Court. Calistoga Drive would serve as a local access route for construction traffic (workers and trucks) traveling to Site Alternative C project site.

Above-ground subtransmission lines would be constructed along Calistoga Drive from Murrieta Hot Springs Road to the end of the road (north of Gate Lane) as part of Site Alternative C.

ir ransportation

Site Alternative C is located approximately 0.65 mile from the French Valley Airport.

For a 12-month period ending March 31, 2006, there was an average of 269 aircraft operations per day at the French Valley Airport.

4.1 . .3.2 Impact Analysis

eneral nalysis

As for the Proposed Project, it is assumed that workers will arrive from a variety of locations within the region. For analysis purposes, it was assumed that 40 percent of the construction traffic will arrive to the site from the north via I-215 (exiting at Murrieta Hot Springs Road) and the remaining 60 percent would arrive from the south and northwest via I-215 (exiting at SR-79). Table 4.15-5 presents the estimated increase in construction traffic on roadways/highways in the vicinity of Alternative Site C. As with most construction projects, construction work hours will begin and end prior to peak traffic hours

Table 4.1 - . Distribution of onstruction orker enerated Traffic on State outes and ocal oadways Alternative Site
Triton 115/12 kV Substation Project PEA

		Peak Construction Period		
Highway/Roadway	**Average Daily Traffic Volume (vehicles/day)** [a, b, c]	**Projected Total Vehicle Trips/Day**[f]	**Percent Increase in Vehicle Trips/Day**	**Projected LOS**
Calistoga Drive	No data available	222	Nominal	Better than C
SR-79/Winchester Road	56,000	185	< 1%	F
Murrieta Hot Springs Road	56,000	123	< 1%	F
I-15	169,000[d]	185	< 1%	F
I-215	92,000[e]	123	< 1%	F

[a]Source: State of California, Department of Transportation (Caltrans), 2007

[b]Source: City of Temecula, Traffic Counts 2007

[c] Source: City of Murrieta, Traffic Counts 2005 (factored up to 2008 using 3 percent annual growth rate)

[d]Measured at SR-79 interchange

[e]Measured at SR-79 Murrieta Hot Springs Road interchange

[f]Assumes 101 workers and 10 trucks will arrive/depart in immediate proximity to the substation, 13 workers and 30 trucks will arrive/depart along the linear facilities away from the substation (telecommunication system construction).

During the peak construction period, traffic would increase on roadways in the vicinity of Alternative Site C by no more than 1 percent. As shown in Table 4.15-5, Winchester Road, Murrieta Hot Springs Road, I-15, and I-215 would continue to operate at LOS F based on County of Riverside ADT analysis. There are no significance criteria once a roadway is over

LOS F. Therefore, the construction of the project at Alternative Site C is not considered to have an impact on the surrounding roadways.

Site Alternative C Analysis

Construction of Site Alternative C would not increase traffic substantially in relation to the existing traffic load and capacity of the street system because traffic on roadways would increase in the vicinity of the Site Alternative C by no more than one percent and would be temporary (for approximately eight months). The substation would be unattended and operation of Site Alternative C would not substantially increase traffic because SCE personnel would likely only visit the substation up to two times per month. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Implementation of Site Alternative C would not result in traffic exceeding, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways that operate at acceptable levels. Several of the roadways and highways currently operate at LOS F without the project. Construction traffic would add to these LOS F conditions. However, there are no significance criteria once a roadway is over LOS F (based on the County of Riverside ADT methodology). Due to the amount of construction traffic (114 workers and 40 truck/equipment trips per day), the short-term and linear nature of project construction activities, and SCE's commitment to implement project design features (PDF TT-1, Minimize Street Use; PDF TT-2, Incorporate Protective Measures; PDF TT-3, Prepare Traffic Management Plans), established LOS standards (Table 4.15-1) would not be exceeded on roads that currently operate at an acceptable LOS. SCE personnel would visit the substation up to two times per month and this would be a less than significant amount of additional traffic during operation. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Construction and operation of Site Alternative C would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The proposed linear facilities would be adjacent to and alongside existing subtransmission lines and, thus, would not constitute a new obstruction to navigable air space. Additionally, Site Alternative C would be designed, engineered, constructed, and operated to comply with the *Riverside County Land Use Compatibility Plan* (COR, 2004). Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Construction of Site Alternative C substation would not substantially increase hazards due to a design feature or incompatible uses since construction of Site Alternative C would primarily take place outside traveled roadways. The construction of the subtransmission line loop-in and the telecommunication lines would take place adjacent to and alongside existing subtransmission lines (crossing roadways in some areas). To minimize hazards associated with construction, SCE would implement the following: PDF TT-1, Minimize Street Use; PDF TT-2, Incorporate Protective Measures; PDF TT-3, Prepare Traffic Management Plans; and PDF TT-4, Repair Damaged Streets. Operation of Site Alternative C would not substantially increase hazards due to a design feature or incompatible uses because operation of Site Alternative C would not involve, create, or increase hazards at

applicable transportation-related facilities. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Construction of Site Alternative C would not result in inadequate emergency access. As part of Site Alternative C, construction activities would be designed to minimize street use, (PDF TT-1); incorporate protective measures (PDF TT-2); prepare and implement a traffic management plan (PDF TT-3) and repair damaged streets (PDF TT-4). Therefore, implementation of Site Alternative C would result in less than significant impact under this criterion.

Construction of Site Alternative C would not result in inadequate parking capacity as it would not create a demand for offsite parking facilities. Construction and operations staff would park in designated areas located within Site Alternative C substation site. Therefore, implementation of Site Alternative C would result in no impact under this criterion.

Bike lanes on adjacent roadways may be temporarily out of service during construction activities; however, construction activities would be designed to minimize street use (PDF TT-1); incorporate protective measures (PDF TT-2); and prepare and implement a traffic management plan (PDF TT-3). Operation of Site Alternative C would not conflict with adopted policies, plans, or programs because the operation of the facilities would not affect existing programs (e.g., bike lanes or bus transportation routes). Therefore, implementation of Site Alternative C would result in a less than significant impact during construction and no impact during operation under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts to transportation and traffic.

4.1 . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to transportation and traffic.

4.1 . eferences

California Department of Motor Vehicles. 2005. *California Vehicle Code*.

California Department of Transportation (Caltrans) and Federal Highway Administration. 2003. *Manual on Uniform Traffic Control Devices.*

City of Murrieta (COM). 1994. *City of Murrieta General Plan*, Circulation Element.

City of Murrieta, 2005 Traffic Counts, http://www.murrieta.org/uploads/forms/publicworks/2005_volumes.pdf (accessed on 7/25/08)

City of Temecula (COT). 2005. *Temecula General Plan*, Circulation Element.

City of Temecula, 2007 Traffic Counts, http://www.cityoftemecula.org/Temecula/Government/PublicWorks/Traffic/TrafficCounts.htm (accessed on 7/25/08)

County of Riverside (COR). 2003. *County of Riverside General Plan,* Circulation Element. October.

_____, Airport Land Use Commission (COR). 2004. *Riverside County Airport Land Use Compatibility Plan*. http://www.rcaluc.org/filemanager/plan/new//01-%20Cover%20&%20Title%20Page%20Vol%201.pdf. Accessed October 24, 2008.

National Archives and Records Administration. 2004. *Code of Federal Regulations.*

Riverside County Transportation Commission (RCTC). 2007. *Congestion Management Program.*

Transportation Research Board. 2000. *Highway Capacity Manual*.

4.1 tilities and Service Systems

4.1 .1 Overview

This analysis describes the potential impacts to utilities and service systems that may result from the construction and operation of the Proposed Project and alternatives. As discussed below, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to utilities and service systems.

4.1 .2 ethodology

The study area for this resource is defined as the utilities and service system areas (i.e., localized stormwater drainage area) which include the alternative substation sites and subtransmission and telecommunication line routes. Utilities and service systems pertain to uses of natural gas, electricity, water, wastewater, and disposal facilities. This analysis first examines the study area regulatory setting based on the existing federal, state, and local regulatory framework, which consists of regulations, plans, and standards applicable to the Proposed Project and alternatives. Next, this analysis addresses the environmental setting for the study area. The setting includes a description of the existing utility and service systems (natural gas, electricity, portable water, wastewater, and disposal facilities). Following this, the analysis evaluates and characterizes the potential impacts from the construction and operation of the Proposed Project and alternatives.

The significance of the impacts was assessed in accordance with criteria presented in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

4.1 .3 egulations Plans and Standards

4.1 .3.1 alifornia Environmental uality Act

The CEQA Guidelines, Appendix G, identifies the criteria that must be considered when analyzing a project's potential to result in temporary and permanent impacts on utilities and service systems.

4.1 .4 Significance riteria

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations (CCR) 15000 et seq.), which indicate that a proposed project would have a significant impact on utilities and service systems if it would:

- Exceed[1] wastewater treatment requirements of the applicable Regional Water Quality Control Board

[1]To clarify the intent of this significance criterion, "exceed" is interpreted as "violate," such that the criterion would be evaluated as, "*Project-related impacts to utilities and service systems would be considered significant if the Project would violate 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 would cause significant environmental effects
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate[2] capacity to serve the project's projected demand in addition to the provider's existing commitments
- Be served by a landfill with sufficient[3] permitted capacity to accommodate the project's solid waste disposal needs
- Comply[4] with federal, state, and local statutes and regulations related to solid waste

4.1 . Proposed Project and Alternatives

The following utilities and service systems resource-specific project design features would be incorporated into the Triton Substation Project as discussed under the Proposed Project, Site Alternative B, and Site Alternative C:

PDF UTIL-1 **Substation Landscaping.** Landscaping would be planted in accordance with a landscaping and irrigation plan approved by the local jurisdiction. The plan would incorporate the use of drought tolerant, native plants to conserve water.

PDF UTIL-2 **Storm Water General Construction Permit NPDES.** SCE would apply for a Storm Water General Construction Permit NPDES (order 99-08) and as a requirement of the Permit; a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented.

PDF UTIL-3 **Notice of Termination.** SCE would submit the Notice of Termination (NOT) upon reaching stabilization of the project area per the Stormwater General Construction Permit Order #99-08.

[2]To clarify the intent of this significance criterion, "adequate" is interpreted as "inadequate," such that the criterion would be evaluated as, "Project-related impacts to utilities and service systems would be considered significant if the Project would result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments."

[3]To clarify the intent of this significance criterion, "sufficient" is interpreted as "insufficient," such that the criterion would be evaluated as, "*Project-related impacts to utilities and service systems would be considered significant if the Project would be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs.*"

[4]To clarify the intent of this significance criterion, "comply" is interpreted as "be in non-compliance", such that the criterion is evaluated as "*Project-related impacts to utilities and service systems would be considered significant if the Project would be in non-compliance with federal, state, and local statutes and regulations related solid waste.*"

PDF UTIL-4 **Recycle Waste Materials.** Materials generated by removal of the existing lines and poles would be processed into roll-off boxes and sent to a commercial metal-recycling facility in Los Angeles where recyclable or salvageable items (e.g., conductor, steel, hardware) would be received, sorted, and baled, then sold on the open market. Waste materials that cannot be recycled would be categorized by SCE in order to assist with proper final disposal. Soil from drilling, site grading, or excavation for new pole foundations would be screened and separated for use as backfill material at the site of origin to the maximum extent possible.

4.1 . .1 Proposed Project

4.1 . .1.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described below.

Utility providers in the Proposed Project study area include SCE (electricity), Southern California Gas Company (natural gas), and Verizon and Southern California Telephone (telecommunications).

Water is provided by Rancho California Water District and wastewater services are provided by Eastern Municipal Water District. Wastewater in the vicinity of the proposed substation located is handled through an existing sewer system. Stormwater in the vicinity of Nicolas Road drains naturally to Santa Gertrudis Creek (Gale, 2008).

Solid waste is collected within the City of Temecula and the County of Riverside by CR&R. Within the City of Murrieta, solid waste is collected by Waste Management, Inc. Collected waste is hauled to one of the following County of Riverside landfills (LSA, 2006):

Landfill	Maximum Permitted Capacity [a]	Remaining Capacity (date) [a]
Badlands Sanitary Landfill	30,386,332 Cubic Yards	21,866,092 Cubic Yards (May 21, 2005)
Colton Sanitary Landfill	13,297,000 Cu Yards/day	610,000 Cu Yards/day (November 01, 2005)
El Sobrante Landfill	184,930,000 Tons	118,573,540 Tons (April 30, 2007)
Frank R. Bowerman Sanitary Landfill	127,000,000 Cubic Yards	59,411,872 Cubic Yards (December 01, 2006)
Lamb Canyon Sanitary Landfill	34,292,000 Cubic Yards	20,908,171 Cubic Yards (July 31, 2005)
Olinda Alpha Sanitary Landfill	74,900,000 Cubic Yards	38,578,383 Cubic Yards (October 01, 2005)
Puente Hills Landfill	106,400,000 Cubic Yards	49,348,500 Cubic Yards (October 14, 2006)

[a] Source: CIWMB, 2008

4.1 . .1.2 Impact Analysis

Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Construction Impacts

Construction personnel would use portable toilets. Wastewater would be generated during short-term (approximately eight months) and temporary construction activities, and would be pumped by qualified contractors and disposed in accordance with applicable regulations and codes related to portable toilets. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would include the occasional use by SCE personnel of the onsite sanitary facility at the unattended substation, which would be connected to the existing sewer system located adjacent to the substation property. The minor amount of wastewater generated during operations would be handled in accordance with the requirements of the applicable Regional Water Quality Control Board. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction Impacts

The substation would be unattended and would not result in the need for existing or expanded facilities. The sanitary facility to be constructed as part of the Proposed Project would connect to the existing sewer system located adjacent to the substation property. Short-term (approximately eight months) and temporary water usage during construction would be limited to the suppression of fugitive dust, drinking water, and that used in portable toilets, which would not exceed the capacity of existing water and wastewater treatment facilities.

As stated previously, construction of the Proposed Project would not exceed wastewater treatment requirements and, therefore, would not require or result in the construction of new or expansion of existing wastewater treatment facilities. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would include the use of water for sanitary purposes, as well as the supplemental watering of landscape plantings. The sanitary facility to be constructed as part of the Proposed Project would connect to the existing sewer system located adjacent to the substation property. These water uses would require minimal amounts of water, which would not exceed the capacity of the existing water treatment facilities. Landscaping would be planted in accordance with a landscaping and irrigation plan approved by the local jurisdiction. The plan would incorporate the use of drought tolerant, native plants to conserve water (PDF UTIL-1). The landscaping and irrigation plan would also be designed to capture stormwater run-off, thereby requiring minimal supplemental watering of the drought-tolerant native plants. SCE would apply for a Storm

Water General Construction Permit NPDES (order 99-08) and as a requirement of the Permit; a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented (PDF UTIL-2). SCE would submit the Notice of Termination (NOT) upon reaching stabilization of the project area per the Stormwater General Construction Permit Order #99-08 (PDF UTIL-3).

As stated previously, operation of the Proposed Project would not exceed wastewater treatment requirements and, therefore, would not require or result in the construction of new or expansion of existing wastewater treatment facilities. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction Impacts

Construction of the Proposed Project would not include new stormwater drainage. Additionally, minimal impervious surfaces would be constructed (e.g., substation driveway) under the Proposed Project; however, the use of gravel within the substation wall would increase stormwater retention on the substation property. SCE would apply for a Storm Water General Construction Permit NPDES (order 99-08) and as a requirement of the Permit; a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented (PDF UTIL-2). SCE would submit the Notice of Termination (NOT) upon reaching stabilization of the project area per the Stormwater General Construction Permit Order #99-08 (PDF UTIL-3). Therefore, the anticipated stormwater flow to Santa Gertrudis Creek would not exceed the capacity of the drainage and no new stormwater drainage facilities or expansion of existing facilities would be required; construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Minimal impervious surfaces would be operated (e.g., substation driveway) under the Proposed Project; however, the use of gravel within the substation wall would increase stormwater retention on the substation property. Additionally, the landscape plan would be designed to capture stormwater run-off from the substation site and stormwater flow to Santa Gertrudis Creek would not exceed the capacity of the drainage. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Construction Impacts

As previously discussed, water needs associated with the construction of the Proposed Project include water for fugitive dust suppression, drinking water, and water use for portable toilets. The Proposed Project area is served by the Rancho California Water District, and the Proposed Project water needs would not exceed the capacity of the Water District to deliver to their customers (Martin, personal communication, 2008). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

As previously discussed, water needs associated with the operation of the Proposed Project include water for sanitary purposes and the supplemental watering of landscape plantings. The Proposed Project area is served by the Rancho California Water District, and the Proposed Project water needs would not exceed the capacity of the Water District to deliver to their customers (Martin, personal communication, 2008). Landscaping would be planted in accordance with a landscaping and irrigation plan approved by the local jurisdiction. The plan would incorporate the use of drought tolerant, native plants to conserve water (PDF UTIL-1). Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction Impacts

Wastewater generated during the Proposed Project construction would be limited to quantities generated through the use of portable restrooms during construction. The use of portable toilets would be short-term (approximately eight months) and the temporary disposal of wastewater would not exceed the capacity of the existing wastewater treatment facilities. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Wastewater generated during the Proposed Project operation would be limited to minimal quantities generated through the use of the unattended substation sanitary facility by SCE personnel on an intermittent basis. The minimal amount of wastewater generated would be accommodated by existing Eastern Municipal Water District and would not likely exceed the capacity of the existing wastewater treatment facilities. Water District review and approval would be required for connection to the wastewater facilities. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction Impacts

Construction of the Proposed Project would be served by one of the area landfills with sufficient permitted capacity to accommodate the Proposed Project solid waste disposal needs. Solid waste generated during construction activities would consist of soil, vegetation, rock, scrap wood and metal, materials removed from the existing subtransmission lines and poles, and other construction debris. Construction and demolition waste materials would be recycled to the maximum extent practical. Materials generated by removal of the existing lines and poles would be processed into roll-off boxes and sent to a commercial metal-recycling facility in Los Angeles where recyclable or salvageable items (e.g., conductor, steel, hardware) would be received, sorted, and baled, then sold on the open market. Waste materials that cannot be recycled would be categorized in order to assist with proper final disposal. Soil from drilling, site grading, or excavation for new pole foundations would be screened and separated for use as backfill material at the site of origin

to the maximum extent possible (PDF UTIL-4). The amount of waste ultimately transported to a municipal landfill during construction would be minimal and would not exceed the landfill's permitted capacity. Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Operation of the Proposed Project would be served by one of the area landfills with sufficient permitted capacity to accommodate the Proposed Project solid waste disposal needs. Solid waste generated during the operation of the Proposed Project would be limited to vegetative material cleared during routine maintenance of the Proposed Project. Domestic trash would be removed by SCE personnel and taken to a staffed SCE location for offsite disposal. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Construction Impacts

Construction and demolition waste materials would be recycled to the maximum extent practical. Materials generated by removal of the existing lines and poles would be processed into roll-off boxes and sent to a commercial metal-recycling facility in Los Angeles where recyclable or salvageable items (e.g., conductor, steel, hardware) would be received, sorted, and baled, then sold on the open market. Waste materials that cannot be recycled would be categorized in order to assist with proper final disposal. Soil from drilling, site grading, or excavation for new pole foundations would be screened and separated for use as backfill material at the site of origin to the maximum extent possible (PDF UTIL-4). Additionally, the wood poles removed during the 115 kV subtransmission line installation would be reused by SCE, returned to the manufacturer, recycled, or disposed of in a licensed Class I hazardous waste landfill (PDF HAZ-2). Therefore, construction of the Proposed Project would result in a less than significant impact under this criterion.

Operation Impacts

Minimal solid waste is anticipated to be generated by the Proposed Project because the substation would be unattended and only visited up to two times per month. Therefore, operation of the Proposed Project would result in a less than significant impact under this criterion.

4.1 . .1.3 itigation easures

Implementation of the Proposed Project would result in less than significant impacts during construction and operation; therefore, no mitigation is required.

4.1 . .2 Site Alternative B

4.1 . .2.1 Environmental Setting

Utility providers in the Proposed Project study area include SCE (electricity), Southern California Gas Company (natural gas), and Verizon and Southern California Telephone (telecommunications).

Water is provided by Rancho California Water District and wastewater services are provided by Eastern Municipal Water District. Wastewater in the vicinity of the proposed substation located is handled through an existing sewer system. Stormwater in the vicinity of Nicolas Road drains naturally to Santa Gertrudis Creek (Gale, 2008).

Solid waste is collected within the City of Temecula and the County of Riverside by CR&R. Within the City of Murrieta, solid waste is collected by Waste Management, Inc. Collected waste is hauled to one of the County of Riverside landfills (LSA, 2006) described under the existing environment for the Proposed Project.

4.1 . .2.2 Impact Analysis

Construction and operation of Site Alternative B would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board because the wastewater would be generated during short-term (approximately eight months) and temporary construction activities, would be pumped by qualified contractors, and disposed in accordance with applicable regulations related to portable toilets. Additionally, the minor amount of wastewater that would be generated during operation would be handled through the sewer system located adjacent to the substation property. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

No new water or wastewater treatment facilities or expansion of existing facilities would be required because water used (e.g., dust suppressions, drinking water, and portable toilet use) and wastewater generated (e.g., portable toilet use) during construction would be temporary and generation of wastewater would be of short duration (approximately eight months). During operation, water use (e.g., sanitary facilities and supplemental water of landscaping) and wastewater generation (e.g., sanitary facilities) would be minimal, and would not exceed the capacity of the existing water or water treatment facilities. A landscaping plan would incorporate the use of drought tolerant, native plants to conserve water (PDF UTIL-1). The plan would also be designed to capture stormwater run-off, thereby, requiring minimal supplemental water of the drought-tolerant native plants. SCE would implement PDF UTIL-2, Storm Water General Construction Permit NPDES, and PDF UTIL-3, Notice of Termination. As discussed previously, implementation of Site Alternative B would not exceed wastewater treatment requirements and, therefore, would not require or result in the construction of new or expansion of existing wastewater treatment facilities. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

No construction of new stormwater drainage facilities or expansion of existing facilities would be required because the minimal stormwater flow during construction and operation from Site Alternative B to Santa Gertrudis Creek would not exceed the capacity of the drainage. Additionally, during operation, the landscape plan would be designed to capture stormwater run-off from the substation site. SCE would implement PDF UTIL-2, Storm Water General Construction Permit NPDES, and PDF UTIL-3, Notice of Termination. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Sufficient water supplies would be available to serve Site Alternative B from existing entitlements and resources and no new or expanded entitlements would be needed because Site Alternative B water needs, including fugitive dust suppression during construction and sanitary facilities and supplemental landscape watering during operation, would not exceed the capacity of the Rancho California Water District to deliver to their customers (Martin, personal communication, 2008). Additionally, the landscaping would be planted in accordance with a landscaping and irrigation plan approved by the local jurisdiction and would incorporate the use of drought tolerant, native plants to conserve water (PDF UTIL-1). Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Implementation of Site Alternative B would result in a determination by the wastewater treatment provider, which serves or may serve Site Alternative B, that it has adequate capacity to serve the projected demand of Site Alternative B in addition to the provider's existing commitments because wastewater generated would be temporary or minimal. During construction (for approximately eight months), wastewater would be generated through the use of portable toilets. Additionally, during operation wastewater would be limited to minimal quantities generated through the use of the unattended substation sanitary facilities on an intermittent basis. Site Alternative B would meet the requirements of the Eastern Municipal Water District prior to connection to the wastewater facility (sewer). The amount of wastewater generated would not likely exceed the capacity of the existing wastewater treatment facilities. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Implementation of Site Alternative B would be served by landfills with sufficient permitted capacity to accommodate the solid waste disposal needs of the alternative. In addition, SCE would recycle waste materials according to PDF UTIL-4. Solid waste generated during operation of Site Alternative B would be limited to vegetative cleared during routine maintenance and domestic trash intermittently generated at the unattended substation. Solid waste materials that cannot be recycled would be categorized in order to assist with proper final disposal. Existing County of Riverside landfills have sufficient existing capacity to accommodate the disposal the remaining construction and demolition materials (associated with construction) as well as waste generated during operation of Site Alternative B. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

Implementation of Site Alternative B would comply with federal, state, and locate statutes and regulations related to solid waste. During construction and operation of Site Alternative B, waste materials would be recycled to the maximum extent practical. Additionally, waste materials that cannot be recycled would be categorized in order to assist with proper final disposal. During operation, solid waste generation would be minimal because the substation would be unattended. Therefore, implementation of Site Alternative B would result in a less than significant impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative B would result in less than significant impacts to utilities and service systems.

4.1 . .3 Site Alternative

4.1 . .3.1 Environmental Setting

The regional and/or local or site-specific study area considered during the environmental analysis of this CEQA resource previously was defined in the methodology section and is described in the environmental section for the Proposed Project, Section 4.16.5.1.1.

Utility providers in the Site Alternative C area include SCE (electricity), Southern California Gas Company (natural gas), and Verizon and Southern California Telephone (telecommunications).

Water and wastewater services are provided by Eastern Municipal Water District. Wastewater in the vicinity of the proposed substation location is handled through an existing sewer system. The County of Riverside stormwater system facilities near the Site Alternative C substation are located at the corner of Calistoga Drive and Murrieta Hot Springs Road.

Solid waste is collected within the City of Temecula and the County of Riverside by CR&R. Within the City of Murrieta solid waste is collected by Waste Management, Inc. Collected waste is hauled to one of the County of Riverside landfills (LSA, 2006) described under the existing environment for the Proposed Project.

4.1 . .3.2 Impact Analysis

Construction and operation of Site Alternative C would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board because the wastewater would be generated during short-term (approximately eight months) and temporary construction activities, and would be pumped by qualified contractors and disposed in accordance with applicable regulations related to portable toilets. Additionally, the minor amount of wastewater that would be generated during operation would be handled through the sewer system located adjacent to the substation property. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

No new water or wastewater treatment facilities or expansion of existing facilities would be required because water used (e.g., dust suppressions, drinking water, and portable toilet use) and wastewater generated (e.g., portable toilet use) during construction would be temporary and generation of wastewater would be of short duration (for approximately eight months). During operation, water use (e.g., sanitary facilities and supplemental water of landscaping) and wastewater generation (e.g., sanitary facilities) would be minimal, and would not exceed the capacity of the existing water or water treatment facilities. A landscaping plan would incorporate the use of drought tolerant, native plants to conserve water (PDF UTIL-1). The plan would also be designed to capture stormwater run-off, thereby, requiring minimal supplemental water of the drought-tolerant native plants. SCE would implement PDF UTIL-2, Storm Water General Construction Permit NPDES, and PDF UTIL-3, Notice of Termination. As discussed previously, implementation of Site Alternative C would not exceed wastewater treatment requirements and, therefore, would not require or result in the construction of new or expansion of existing wastewater treatment facilities.

Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

No construction of new stormwater drainage facilities or expansion of existing facilities would be required because the minimal stormwater flow during construction and operation from Site Alternative C to Santa Gertrudis Creek would not exceed the capacity of the drainage. Additionally, during operation, the landscape plan would be designed to capture stormwater run-off from the substation site. SCE would implement PDF UTIL-2, Storm Water General Construction Permit NPDES, and PDF UTIL-3, Notice of Termination. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Sufficient water supplies would be available to serve Site Alternative C from existing entitlements and resources and no new or expanded entitlements would be needed because Site Alternative C water needs, including fugitive dust suppression during construction and sanitary facilities and supplemental landscape watering during operation, would not likely exceed the capacity of the Eastern Municipal Water District to deliver to their customers. Additionally, the landscaping would be planted in accordance with a landscaping irrigation plan approved by the local jurisdiction and would incorporate the use of drought tolerant, native plants to conserve water (PDF UTIL–1). Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Implementation of Site Alternative C would result in a determination by the wastewater treatment provider, which serves or may serve Site Alternative C, that it has adequate capacity to serve the projected demand of Site Alternative C in addition to the provider's existing commitments because wastewater generated would be temporary or minimal. During construction (for approximately eight months), wastewater would be generated through the use of portable toilets. Additionally, during operation wastewater would be limited to minimal quantities generated through the use of the unattended substation sanitary facilities on an intermittent basis. Site Alternative C would meet the requirements of the Eastern Municipal Water District prior to connection to the wastewater facility (sewer). The amount of wastewater generated would not likely exceed the capacity of the existing wastewater treatment facilities. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Implementation of Site Alternative C would be served by landfills with sufficient permitted capacity to accommodate the solid waste disposal needs of the alternative. SCE would recycle waste materials according to PDF UTIL-4. In addition, Construction and demolition waste materials would be recycled to the maximum extent practical. Solid waste generated during operation of Site Alternative C would be limited to vegetative cleared during routine maintenance and domestic trash intermittently generated at the unattended substation. Solid waste materials that cannot be recycled would be categorized in order to assist with proper final disposal. Existing County of Riverside landfills have sufficient existing capacity to accommodate the disposal the remaining construction and demolition materials (associated with construction) as well as waste generated during operation of Site Alternative C. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

Implementation of Site Alternative C would comply with federal, state, and locate statutes and regulations related to solid waste. During construction and operation of Site Alternative C, waste materials would be recycled to the maximum extent practical. Additionally, waste materials that cannot be recycled would be categorized in order to assist with proper final disposal. During operation, solid waste generation would be minimal because the substation would be unattended. Therefore, implementation of Site Alternative C would result in a less than significant impact under this criterion.

In conclusion, similar to the Proposed Project, construction and operation of Site Alternative C would result in less than significant impacts to utilities and service systems.

4.1 . onclusion

As discussed, implementation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts during construction and operation to utilities and service systems.

4.1 . eferences

California Integrated Waste Management Board (CIWMB). 2008. Solid Waste Information System (SWIS) – Facility/Site Listing. http://www.ciwmb.ca.gov/SWIS/. Accessed October 26, 2008.

City of Murrieta (COM). 1994. *City of Murrieta General Plan*. July 21.

City of Temecula (COT). 2005. *Temecula General Plan*. 1993; Updated 2005. http://www.cityoftemecula.org/Temecula/Government/CommDev/Zoning/generalplan.htm. Accessed July 17, 2008.

County of Riverside (COR). 2003a. *County of Riverside General Plan*. October.

Gayle, Jennifer/Riverside County Flood Control and Water Conservation District (RCFCWCD) Planner. 2008. Personal communication with Lyna Black/CH2M HILL. August 22.

LSA Associates, Inc. (LSA). 2006. *Draft Municipal Service Review for the Central Valleys, The Pass Area, and Southwestern Riverside County Areas*. September.

Martin, Jason/Rancho California Water District, Manager of Customer Service/IT. 2008. Personal communication with Lyna Black/CH2M HILL. August 29.

. omparison of Alternatives

.1 Introduction

This section provides a comparison of the environmental impacts of the Proposed Project Site Alternative B, and Site Alternative C. CEQA and the CEQA Guidelines Section 15126.6(a) require consideration of a reasonable range of alternatives to a proposed project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. CEQA Guidelines Section 15126.6(d) requires that sufficient information about each alternative be included to allow meaningful evaluation, analysis, and comparison with the proposed project. In addition, CEQA Guidelines Section 15126.6(e) requires the evaluation of a "no project" alternative to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. However, System Alternative 3, No Project Alternative, was from eliminated from further consideration as described in Chapter 2 and is not discussed further in this chapter.

Chapter 4 evaluated the Proposed Project, Site Alternative B, and Site Alternative C, and the evaluation resulted in less than significant impacts or no impacts for all resource categories evaluated. The potential for the alternatives to result in environmental impacts was analyzed using the significance criteria listed in each resource area subsection. In addition, within each resource area subsection, Project Design Features (PDFs) are incorporated into each of the alternatives, if identified, to avoid and minimize potential impacts to environmental resources and were considered during the analyses.

.2 omparison of Alternatives

The Proposed Project would result in less than significant impacts or no impacts for all environmental resource areas evaluated in Chapter 4. Compared to the Proposed Project, Site Alternative B and Site Alternative C would result in similar environmental impacts for construction and operation as shown in the Alternatives Impacts Summary Table (Table 5.2-1); nevertheless, there are differences in the degree of impact when construction and operation of the Proposed Project is compared with construction and operation of Site Alternative B and Site Alternative C for each resource area question in the CEQA Checklist, Appendix G. Differences in the degree of impact for the alternatives are discussed in the summary of impacts evaluation at the end of this section.

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Table .2-1. Alternatives Impacts Summary Table
Triton 115/12 kV Substation Project PEA

CEQA Resource Area	Proposed Project	Site Alternative B	Site Alternative C
Aesthetics	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Agriculture Resources	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Air Quality	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Biological Resources	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Cultural and Paleontological Resources	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact

Table .2-1. Alternatives Impacts Summary Table
Triton 115/12 kV Substation Project PEA

CEQA Resource Area	Proposed Project	Site Alternative B	Site Alternative C
Geology and Soils	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Hazards and Hazardous Material	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Hydrology and Water Quality	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Land Use	**Construction Impact:** Less than Significant **Operation Impact:** Less than Significant	**Construction Impact:** Less than Significant **Operation Impact:** Less than Significant	**Construction Impact:** Less than Significant **Operation Impact:** Less than Significant
Mineral Resources	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Noise	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact

Table .2-1. Alternatives Impacts Summary Table
Triton 115/12 kV Substation Project PEA

CEQA Resource Area	Proposed Project	Site Alternative B	Site Alternative C
Population and Housing	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Public Services	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact	**Construction Impact:** No Impact **Operation Impact:** No Impact
Recreation	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** No Impact
Transportation and Traffic	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact
Utilities and Service Systems	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact	**Construction Impact:** Less than Significant Impact **Operation Impact:** Less than Significant Impact

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.3 Summary of Impacts

The impact evaluation in Chapter 4 determined the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts or no impacts for all resource areas. There are no substantial differences in the degree of impact between the Proposed Project, Site Alternative B and Site Alternative C for the following resource areas: cultural and paleontological resources, land use and planning, mineral resources, noise, population and housing, public services, and transportation and traffic.

The summary of impacts evaluation concluded there are differences in the degree of impact for the following resource areas: aesthetics, agricultural resources, air quality, biological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, recreation, and utilities and service systems. The summary of impacts for each environmental resource area is provided below.

The impacts that would occur during construction and operation of the N/S Telecommunication Lines would be similar under the three alternatives; although, under Site Alternative C, the telecommunication lines would not be underbuilt between the point of interconnect to subtransmission Line 1 (on the south) and subtransmission Line 2 (on the north). Therefore, impacts associated with construction and operation of the N/S Telecommunication Lines are not discussed in the summary of impacts below.

.3.1 Aesthetics

The implementation of project design features, including substation setback, low-profile substation equipment, substation lighting control, non-reflective finishes, substation block wall, and substation landscaping would avoid or minimize potential impacts to aesthetics.

.3.1.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to aesthetics. The potential impacts include the laydown area at the substation site; grading necessary for site preparation; the presence of construction vehicles and parked vehicles of construction workers; use of heavy equipment during construction and installation of the Triton Substation Project elements, including the substation, underground 12 kV distribution duct banks, subtransmission line loop-ins, telecommunication lines, and the N/S Telecommunication Lines. The grading and preparation of the site would vary between the Proposed Project, Site Alternative B, and Site Alternative C. The Proposed Project would require grading of approximately five acres. Site Alternative B would require extensive grading to address site conditions (location within a flood plain and current topography). Site Alternative C, an approximately 4.4-acre property, was previously graded and would require minimal additional grading. Additionally, during construction of the Proposed Project, nine wood poles along Nicolas Road would be removed and would be replaced by seven TSPs; while, during construction of Site Alternative B and Site Alternative C, no wood poles would be removed. There are no substantial differences in degree of construction impacts due to the temporary presence of construction vehicles and heavy equipment, because the construction would occur over approximately eight months.

.3.1.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to aesthetics. Nevertheless, there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

Site Alternative B would require the installation of approximately five fewer 85-foot-high steel subtransmission poles, and subsequently, fewer conductors, 12 kV distribution lines, and telecommunication cables would be suspended from the subtransmission poles, than the Proposed Project. Additionally, the Site Alternative B poles and associated equipment would be set back from the street and located on the substation property, while the Proposed Project subtransmission poles and associated equipment would be located along Nicolas Road, immediately adjacent to the roadway.

Site Alternative C would require the installation of approximately 20 to 40 new subtransmission poles and associated equipment, which is greater than the seven new subtransmission poles and associated equipment that would be installed under the Proposed Project. The poles would be located within an existing utility franchise along city streets adjacent to established residential neighborhoods. The additional subtransmission poles and associated equipment would create an incremental alteration of the character of the views along the subtransmission routes, increasing the perceived intensity of development, and adding an increased amount of infrastructure element to the view. The presence of the towers and associated equipment is likely to lower the visual quality of the views to a degree beyond that considered in the Proposed Project and Site Alternative B analyses.

.3.2 Agricultural esources

.3.2.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to agricultural resources. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as designated by the California Department of Conservation (CDOC), is located in the Triton Substation Project agricultural resources study area. Additionally, no Farmland of Local Importance or Grazing Land, as designated by the CDOC, would be impacted by the Proposed Project or Site Alternative B. Portions of the proposed location of the Site Alternative C substation and the Site Alternative C subtransmission Line 1 and Line 2 routes are designated as Farmland of Local Importance and Grazing Land by the CDOC. Although none of these designated lands would be converted from farmland or grazing land as a result of implementation of Site Alternative C, the presence of these lands in the project area may be of interest or concern to the local community.

.3.2.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to agricultural resources. As discussed under construction impacts, the presence of Farmland of Local Importance and Grazing Land in the Site Alternative C area may be of local interest or concern to the local community.

.3.3 Air uality

.3.3.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to air quality. During project construction, onsite operation of heavy-duty construction equipment would generate emissions of vehicle exhaust containing pollutants such as carbon monoxide (CO), nitrogen oxide (NO_X), reactive organic gas (ROG), sulfur oxide (SO_X), particulate matter less than 10 micrometers in aerodynamic diameter (PM_{10}), and particulate matter less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5)}$. Earth-moving activities would generate emissions of PM_{10} and $PM_{2.5}$ as fugitive dust. Offsite vehicle trips made by employees and delivery trucks would generate additional vehicle exhaust emissions. Asphalt paving is a source of ROG emissions. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

The Site Alternative B construction area is about three acres larger than the Proposed Project Additionally, the Site Alterative B nearest sensitive receptor is approximately 25 meters (82 feet) from the construction site boundary, as compared with the nearest sensitive receptors to the Proposed Project and Site Alternative C boundaries, which are at a distance of approximately 59 meters (144 feet) and 43 meters (194 feet), respectively. Because of the larger construction site, the Local Significant Thresholds (LSTs) applicable to Site Alternative B would be slightly greater than the Proposed Project. Similarly, the Site Alternative C construction area is further away from the receptor, so the LSTs applicable to Site Alternative C would be less than those applied to the Proposed Project. Additionally, the Proposed Project would require foundation excavation for the installation of seven new subtransmission poles, while Site Alternative B and Site Alternative C would require foundation excavation for the installation of two and 20 to 40 new subtransmission poles, respectively.

.3.3.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to air quality. Potential air quality impacts during project operations would be associated with the vehicle emissions from routine maintenance activities, and are expected to be minimal. There are no significant differences in degree of impact between the Proposed Project, Site Alternative B, and Site Alternative C during operation.

.3.4 Biological esources

The implementation of project design features, including pre-construction surveys; worker environmental awareness program; biological monitors; avian protection; best management practices; nesting birds; burrowing owls; special-status plants; lighting; and noise, would avoid or minimize potential impacts to biological resources.

.3.4.1 onstruction Impacts

Construction of the Proposed Project and Site Alternative B and Site C would result in less than significant impacts to biological resources. Nevertheless, there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

The Proposed Project is not expected to support any special-status plant species due to lack of suitable habitat, so no impacts to special-status plant species are anticipated. Site Alternative B has the potential to support the following special-status plant species: Plummer's mariposa lily, intermediate mariposa lily, Parry's spineflower, and Robinson's peppergrass. Potential impacts to these plant species may be considered significant if they are present within the Proposed Project impact area, and if the size and status of the population warrant a finding of significance under the California Environmental Quality Act (CEQA), as determined in conjunction with the lead agency. Site Alternative C site has limited potential to support one special-status plant species, San Diego ambrosia, which is a federally listed Endangered species and a California Native Plant Society (CNPS) List 1B species. Potential impacts to this plant species would be considered significant if it occurs within the site and would be impacted by the proposed project. Pre-construction focused botanical surveys, as required by project design features would be necessary to determine if plant species are present on Site Alternatives B or C. Implementation of project design features would provide for avoidance or minimization of potential impacts and reduce them to less than significant. As a result of the potential to support special-status plant species, the potential impacts to biological resources at Site Alternatives B and C are greater than for the Proposed Project, and are greater for Site Alternative B than for Site Alternative C.

The only special-status wildlife species identified to have potential to occur on the Proposed Project site is the burrowing owl (*Athene cunicularia*). Although no burrowing owls were observed during the site visit, there is potentially suitable burrowing owl habitat present within this site. Potential impacts to this species would be considered less than significant due to the marginal quality and minimal quantity of the potentially suitable habitat that would be lost. Site Alternative B has limited potential to support a few California species of special concern, including: burrowing owl; San Diego black-tailed jackrabbit; and Dulzura pocket mouse. Due to the presence of potentially suitable habitat immediately adjacent to Site Alternative C, focused surveys for the federally threatened California gnatcatcher were conducted. Results of the survey were negative and no impact to this species is expected to occur from project implementation on Site Alternative C. Site Alternative C has a lesser degree of potential to support special-status wildlife species than the Proposed Project and Site Alternative B.

Although the loggerhead shrike and spotted bat may occur on the Proposed Project and Site Alternatives B and C, for foraging, due to the marginal quality and minimal quantity of the potentially suitable foraging habitat, the loss of this habitat would have a less than significant impact on regional populations of these species.

The Proposed Project site supports a number of ornamental trees that could provide suitable habitat for nesting birds. In addition, Site Alternatives B and C contain potentially suitable habitat for nesting birds. Construction-related impacts to nesting birds could occur. This would involve potential disruption of nesting activity, or destruction of active nests.

Construction disturbance during the breeding season (February 15 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment, is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513. The potential for this impact to occur during construction would be minimized or reduced by implementation of project design features to less than significant.

Construction of the Proposed Project has a potential to have an impact on riparian habitat, whereas, Site Alternatives B and C would not result in impacts to riparian habitat. However, for the Proposed Project, Site Alternative B, and Site Alternative C a less than significant impact along the N/S Telecommunication Lines may occur. The Proposed Project is not expected to cause impacts to the drainage located along the north side of Nicolas Road. The drainage is outside of the substation site and the subtransmission, distribution, and telecommunication line footprint; and would be completely avoided by direct grading and construction impacts. However, incidental or accidental impacts could occur and these impacts are potentially significant. The potential of this impact would be reduced to less than significant by providing construction personnel with training, illustrating the location and necessity to avoid this sensitive habitat, and by implementing best management practices.

.3.4.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to biological resources. Additionally, there would be no substantial differences in the degree of impact between the alternatives during operation.

.3. ultural esources

The implementation of project design features, including historical and archaeological resources stop work, paleontological resources stop work, and human remains stop work, would avoid or minimize potential impacts to cultural resources.

.3. .1 onstruction Impacts

Construction of the Proposed Project and Site Alternative B and Site C would result in less than significant impacts to cultural resources. There are no substantial differences in the degree of impact between the alternatives resulting from construction.

.3. .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to cultural resources. There are no substantial differences in the degree of impact between the alternatives.

.3. eology and Soils

The implementation of project design features, including seismic design and geotechnical study, would avoid or minimize potential impacts from geology and soils.

.3. .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts from geology and soils. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

Site Alternative B would require extensive grading compared to the Proposed Project and Site Alternative C, which could result in a greater amount of erosion and require a retaining wall to address hillside destabilization at the project site. Construction of an open retention basin at Site Alternative B would result in greater land disturbance that could result in both sedimentation and a greater amount of soil erosion than under the Proposed Project.

Construction of Site Alternative B could be located on expansive soil, creating substantial risks to life or property. SCE would complete a geotechnical study to identify site-specific geologic conditions and potential geologic hazards and the results would be incorporated into final design and engineering. Therefore, operation of Site Alternative B would result in less than significant impact under this criterion, but to a greater degree of impact than would occur under the Proposed Project.

.3. .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts from geology and soils. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

No known faults are located adjacent to the Proposed Project and Site Alternative B substation; whereas, Site Alternative C substation is located adjacent to the Murrieta Springs fault. No known faults cross the Proposed Project and Site Alternative B subtransmission line loop-ins; however, the Site Alternative C subtransmission Line 2 is crossed by the Murrieta Spring fault. Therefore, Site Alternative C would be operated in a location with potential for greater seismic impact than the Proposed Project and Site Alternative B.

.3. a ards and a ardous aterials

The implementation of project design features, including Phase I and Phase II environmental site assessments, wood pole removal, a health and safety plan, traffic control, fire prevention and response practices, and vegetation clearance, would avoid or minimize potential impacts from hazards and hazardous materials.

.3. .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts from hazards and hazardous materials. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

Potential impacts resulting from the construction of Site Alternative B would be the same as those described for the Proposed Project, except no existing wood distribution poles would be removed and disposed under this alternative. Therefore, construction of Site Alternative B would result in a lesser degree of impact as a result of hazards and hazardous

material than compared to the Proposed Project, though both are considered less than significant.

The Proposed Project, Site Alternative B, and Site Alternative C, would be located approximately 1.5 miles, 1.5 miles, and 0.1 mile, respectively, from the French Valley Airport. Height restrictions for the Proposed Project and Site Alternative B would be approximately the same; although, Site Alternative B has both the substation and subtransmission line located within Zone D, while the Proposed Project subtransmission line only would be located within Zone D. Site Alternative C would require a more restrictive height review: the substation would be subject to review for structures over 70 feet tall and the Site Alternative C subtransmission Line 2 would require height review for structures over 35 feet tall.

.3. .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts from hazards and hazardous materials. As noted above, a more restrictive airspace height review and approval would be required for Site Alternative C to ensure operation of Site Alternative C would not result in a safety hazard for people residing or working in the area of Site Alternative C.

.3. ydrology and ater uality

The implementation of project design features, including a stormwater general construction NPDES permit, hazardous materials near drainages, material safety data sheets, SPCC plan, dewatering plan; jurisdictional areas of streams and drainages, facilitate existing drainage, drainage control features, substation stormwater drainage, and existing stormwater drainage systems, would avoid or minimize potential impacts to hydrology and water quality construction.

.3. .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to hydrology and water quality. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

Site Alternative B would require extensive grading which could cause erosion and require a retaining wall to address hillside destabilization. Soil would likely need to be imported to the site to raise the pad elevation approximately one foot higher than the maximum 100-year flood hazard zone level to address potential ponding and to prevent standing surface water from entering the substation. Construction of an open retention basin under Site Alternative B would result in greater land disturbance that could result in greater soil erosion and sedimentation than under the Proposed Project.

Site Alternative C would be located on a smaller property than the Proposed Project and Site Alternative B and, thus, would have a smaller paved surface and potentially would contribute less sheet flow to storm drains.

.3. .2 Operation Impacts

Operation of the Proposed Project and Alternatives B and C would result in less than significant impacts to hydrology and water quality. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

The Proposed Project substation and Site Alternative C substation would not be located within a 100-year floodplain; however, the Site Alternative B substation would be located in a 100-year floodplain. Additionally, the Proposed Project and Site Alternative B subtransmission line loop-ins would be located in a 100-year floodplain near the interconnect point with the existing Valley-Auld-Pauba 115 kV subtransmission line.

.3. and se and Planning

.3. .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to land use. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3. .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to land use. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.1 ineral esources

.3.1 .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to mineral resources. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.1 .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to mineral resources. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.11 Noise

The implementation of project design features, including construction equipment working order, construction equipment maintenance, construction equipment muffled, construction equipment idling minimized, hearing protection for workers, and low-level equipment, would avoid or minimize potential impacts from noise.

.3.11.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts from noise. The nearest sensitive receptors to the Proposed Project and Site Alternative C boundaries are approximately 59 meters (144 feet) and

43 meters (194 feet), respectively; however, there are no significant differences in degree of impact between the alternatives.

.3.11.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts from noise. There are no substantial differences in the degree of impact between the alternatives.

.3.12 Population and ousing

.3.12.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to population and housing. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.12.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to population and housing. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.13 Public Services

The implementation of project design features, including fire prevention practices, traffic control services, construction traffic off peak hours, substation grounding, and O&M vegetation clearing, would avoid or minimize potential impacts to public services.

.3.13.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to public services. There are no substantial differences in the degree of impact between the alternatives.

.3.13.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to public services. There are no substantial differences in the degree of impact between the alternatives.

.3.14 ecreation

The implementation of project design features, including public notification, would avoid or minimize potential impacts to recreation.

.3.14.1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to recreation. The Proposed Project and Site Alternative B have local parks located within 0.5 mile of the substation site that may be used by construction workers during lunch or breaks. Site Alternative C has no parks located within 0.5 mile of the substation site.

.3.14.2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in no impacts to recreation. There are no substantial differences in the degree of impact between the alternatives.

.3.1 Transportation and Traffic

Implementation of project design features, including minimize street use, incorporate protective measures, prepare traffic management plan, and repair damaged streets, would avoid and minimize potential impacts to transportation and traffic.

.3.1 .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant to traffic and transportation. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.1 .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant to traffic and transportation. Additionally, there are no substantial differences in the degree of impact between the alternatives.

.3.1 tilities and Service Systems

Implementation of project design features, including substation landscaping, stormwater general construction NPDES permit, notice of termination, and recycle waste materials, would avoid and minimize potential impacts to utilities and service systems.

.3.1 .1 onstruction Impacts

Construction of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to utilities. Nevertheless there are differences in the degree of impact when the Proposed Project is compared with the alternatives.

The Site Alternative B substation site is located within a floodplain and would require more grading than the Proposed Project and Site Alternative B. Therefore, construction stormwater impacts may be greater for Site Alternative B than for the Proposed Project or Site Alternative C.

The Proposed Project would require removal and disposal of the existing 33 kV distribution lines, wood poles, and related materials. This would result in disposal of a greater volume of solid waste than would result from implementation of Site Alternative B or Site Alternative C.

.3.1 .2 Operation Impacts

Operation of the Proposed Project, Site Alternative B, and Site Alternative C would result in less than significant impacts to utilities. There are no significant differences in degree of impact between the alternatives.

.4 Environmentally Superior Alternative

All potential impacts from the Proposed Project, Site Alternative B, and Site Alternative C would be less than significant and further minimized and avoided with implementation of the PDFs (as described for each resource area in Chapter 4). As discussed above in the summary of impact evaluation, the Proposed Project would have a lesser degree of potential environmental impacts than Site Alternative B and C; therefore the Proposed Project is considered the environmentally superior alternative.

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. Other E A onsiderations

Other CEQA considerations included in this chapter include following topics and are discussed below:

- Indirect Effects
- Mandatory Findings of Significance
- Cumulative
- Greenhouse Gas
- Irreversible/Irretrievable Commitment of Resources: Short- and Long-Term Uses of the Environment
- Growth-Inducing Impacts

.1 Indirect Effects

Indirect or secondary effects must be analyzed under CEQA be related to a physical change. Section 15358(a)(2) of the CEQA Guidelines defines indirect or secondary effects as:

> *Indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.*

It is anticipated that there may be indirect impacts to biological resources resulting from the project which could occur from lighting, noise, and construction activities as discussed below.

Growth-inducing effects are discussed in Section 6.6, Growth-Inducing Impacts. No other indirect effects were identified.

.1.1 ighting

Night lighting of the Triton Substation Project would be temporary and of short duration during construction, if used. In addition during operation, lighting would be used only when required for emergency repairs. This lighting could inadvertently affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife adjacent to the selected site. Of greatest concern is the impact on small ground-dwelling animals that use the darkness to hide from predators, and on owls that are specialized night foragers. In addition, night lighting could deter wildlife movement and/or inhibit wildlife from using the habitat adjacent to lighted areas. Implementation of the Proposed Project would result in a less than significant impact due to lighting; however, because night lighting would be

directed away from open spaces adjacent to the selected site. Shielding would be incorporated in the final project design to ensure ambient lighting is not increased (PDF BIO-9), indirect lighting impacts would further reduced.

.1.2 Noise

Noise levels on the selected site are expected to increase over present levels during construction of the Triton Substation Project. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for wildlife species. Although noise impacts may also increase over present levels due to normal operation of the Triton Substation, the substation noise increase would be minor. Wildlife species stressed by noise may disperse from the habitat located in the vicinity of the selected site. Implementation of the Proposed Project would result in a less than significant impact due to noise; however, if the construction noise levels are expected to potentially cause substantial impacts to wildlife species, as determined by a qualified biologist, proposed noise-generating activities shall incorporate temporary features such as setbacks, berms, or walls to minimize the effects of noise on open spaces adjacent to the selected site (PDF BIO-10), and indirect impacts would further be reduced.

.1.3 onstruction Impacts

Construction of the Triton Substation Project may result in several indirect impacts on biological resources. These impacts could include increased runoff that may affect water quality, increased dust accumulation on surrounding vegetation, impacts on nesting birds, increased fire danger, and spread of exotic species. Implementation of the Proposed Project would result in a less than significant impact due to construction. Indirect impacts would further be reduced by conducting pre-construction biological surveys (PDF BIO-1), training all construction personnel on the biological sensitivities within the area (PDF BIO-2), providing biological monitors wherever special-status species have the potential to occur (PDF BIO-3), implementing best management practices (PDF BIO-5), and planning vegetation removal outside of the nesting season (PDF BIO-6).

.2 andatory indings of Significance

This section discusses the mandatory findings of significance listed in Appendix G of the CEQA Guidelines.

.2.1 Significance riteria

A project has a significant impact if the project would:

- Substantially degrade the quality of the environment
- Substantially reduce the habitat of fish or wildlife species
- Cause a fish or wildlife population to drop below self-sustaining levels
- Threaten to eliminate a plant or animal community
- Reduce or restrict the range of a rare or endangered plant or animal

- Eliminate important examples of the major periods of California history or prehistory
- Have impacts that are cumulatively considerable
- Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly

.2.2 Significance Analysis

The PEA evaluated the potential effects on resources from construction and operation of the project to determine any significant impacts that could not be mitigated to less than significant levels. No potentially significant impacts would occur to these resources as a result of implementation of the project; therefore no mitigation would be required.

Project design features have been incorporated into the project design to avoid potential effects to aesthetics, biological resources, cultural and paleontological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, traffic and transportation, and utilities and service systems. Additionally, SCE would protect sensitive and protected species and habitats in a manner that is consistent with the Western Riverside County MSHCP. Construction activities would incorporate environmentally sensitive construction practices. Additional surveys would identify any impacts to special-status species with potential to occur on the project site. With the implementation of project design features, the level of impacts to biological resources is considered less than significant.

Indirect impacts could occur to biological resources, as discussed in Section 6.1. Although indirect impacts are considered less than significant, implementing project design features such as pre-construction surveys (PDF BIO-1), worker environmental awareness program (PDF BIO-2), biological monitors (PDF BIO-3), avian protection (PDF BIO-4), best management practices (PDF BIO-5), nesting birds (PDF BIO-6), burrowing owls (PDF BIO-7), special-status plants (PDF BIO-8), lighting (PDF BIO-9), and noise (PDF BIO-10) should further minimize and avoid indirect effects.

No cumulatively considerable impacts were identified for the environmental resources considered during the CEQA analysis. Additionally, the Proposed Project would have no environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

.3 umulative Impacts

.3.1 Introduction

CEQA Guidelines, Section 15130, defines cumulative impacts as two or more individual effects that when considered together, are considerable or compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of one project when added to other impacts from closely related past, present, and reasonably anticipated future projects. Significant cumulative impacts can result from individually minor but collectively significant impacts taking place over a period of time. As such, the potential impacts

associated with the Proposed Project are analyzed in conjunction with the effects of other development proposals in the project area.

.3.2 Significance riteria and Technical ethodology

The significance of potential impacts was assessed in accordance with Appendix G of the CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.), which indicate that a proposed project would have a significant cumulative impact if it would:

- Have impacts that are individually limited but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.)

The cumulative analysis is based on a list of past, present, and reasonably foreseeable future projects that may be constructed or commence operation during the timeframe of activity associated with the Proposed Project. The cumulative projects were identified based on data obtained from the County of Riverside and the cities of Temecula and Murrieta. The analyses of cumulative effects for each issue area utilize this information to estimate the potential for combined effects of the Proposed Project and other projects in the vicinity (as provided by the County of Riverside and the Cities of Temecula and Murrieta).

CEQA Guidelines provide the following guidance regarding cumulative impact significance:

> *"Projects can cause significant impacts by direct changes to the environment or by triggering reasonably foreseeable indirect physical changes. Physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. You must determine whether the cumulative impact is significant, as well as whether an individual effect is "cumulatively considerable"…*
>
> *When considering the relationship between the cumulative condition and the incremental effect of an individual project, keep in mind "The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project's incremental effects are cumulatively considerable" (Guidelines Section 15064(h)(4)" (Note: emphasis added).*

.3.3 Projects Analy ed for umulative Impacts

Projects to be considered in the cumulative impact analysis were identified based on data obtained from the County of Riverside, the cities of Temecula and Murrieta, and Southern California Edison.

.3.3.1 ounty of iverside Projects

The County of Riverside has identified 66 wineries in the project vicinity that are existing, approved, or proposed that should be considered in the cumulative impact analysis. A table showing the full list of projects is included at the end of this chapter. These wineries comprise approximately 1,760 acres in the project vicinity, although their specific location relative to the Proposed Project is unknown. Most provide public access with facilities for

daily tasting; some include a deli or restaurant. Facilities provided for the 66 wineries total approximately 791,000 square foot.

.3.3.2 ity of Temecula Projects

The City of Temecula has identified current planning projects to be included in the cumulative impact analysis; a table showing the full list of projects is included at the end of this chapter. The specific location of these projects relative to the Proposed Project is unknown. Proposed projects in the City of Temecula include roughly 1,715 residential units, including single-family homes, multi-family complexes, condominiums, and apartments and more than 2.3 million square feet of commercial/industrial space.

.3.3.3 ity of urrieta Projects

The City of Murrieta provided SCE with a list of current planning projects to be included in the cumulative impact analysis. A table showing the full list of projects is included at the end of this chapter. The specific location of these projects relative to the Proposed Project is unknown. Projects include approximately 6,710 residential units, apartments or condominiums and more than 5.6 million square feet of commercial/industrial space.

.3.3.4 Southern alifornia Edison Projects

Southern California Edison has identified several transmission-related projects that would be developed in the same general timeframe as the Proposed Project within the project vicinity. In 2009, SCE plans to reconductor three transmission lines and construct a 115/12 kV substation. In 2010, SCE will construct a new 115 kV source line, reconductor a line, and construct two 115/12 kV substations. In 2011, SCE will construct a new 115 kV line; in 2012, SCE will construct a 115 kV substation and a 500/12 kV substation.

.3.4 umulative Impacts

As discussed in Chapter 4, the Proposed Project would not result in any significant impacts as a result of either construction or operation. The following sections, organized by resource area, discuss potential cumulative impacts as a result of implementation of the Proposed Project, Alternative Site B, or Alternative Site C and other identified existing and proposed development projects in the project vicinity.

.3.4.1 Aesthetics

The Proposed Project would result in less than significant impacts to aesthetics. As seen by the development projects identified above in Sections 5.3.1 through 5.3.4 for Riverside County, the City of Temecula, and the City of Murrieta, a large number of existing, approved, or proposed projects exist within the project vicinity that have the potential to change the visual character or quality of the area. However, the Proposed Project is not anticipated to contribute to cumulatively considerable impacts to aesthetic resources in the project vicinity.

.3.4.2 Agricultural esources

Development of the cumulative projects in Riverside County, City of Temecula, and City of Murrieta would potentially result in the conversion of agricultural land to non-agricultural

uses. However, the Proposed Project would not result in the conversion of Farmland. Therefore, the Proposed Project would not contribute to cumulatively considerable impacts to agricultural resources in conjunction with identified existing and proposed projects.

.3.4.3 Air uality

According to the SCAQMD white paper "Potential Control Strategies to Address Cumulative Impacts from Air Pollution", Appendix D Cumulative Impact Analysis Requirements Pursuant to CEQA (SCAQMD, 2003), projects that do not exceed the significance thresholds are generally not considered to be cumulatively significant. As shown in Table 4.3-4, the construction emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)), would be less than the SCAQMD significance thresholds for construction. Additionally, as shown in Table 4.3-5, the project operation emissions of the non-attainment pollutants (PM_{10}, $PM_{2.5}$, and ozone precursors (NO_X and VOCs)) are less than the SCAQMD significance thresholds for operation. Therefore, the cumulative impact from implementation of the Proposed Project would be less than significant and the Proposed Project would not contribute to cumulatively considerable impacts to air quality in conjunction with identified existing and proposed projects.

.3.4.4 Biological esources

Growth and development in the project within unincorporated Riverside County and the cities of Temecula and Murrieta and in the vicinity of the Proposed Project have the potential to result in the loss of sensitive biological resources. Individual jurisdictions have policies to provide guidance regarding the protection of biologically sensitive areas. Also, the Western Riverside MSHCP is a comprehensive, multi-jurisdictional plan that focuses on conservation of species and their associated habitats in western Riverside County. The Proposed Project would not result in significant impacts to common and special-status species and would not contribute to a significant loss of biologically-sensitive areas. As a result, impacts to biological resources would not be cumulatively considerable.

.3.4. ultural and Paleontological esources

Cultural and paleontological resource-related impacts tend are primarily site-specific and do not usually result in regional or cumulative impacts. Where such resources exist, or are found to exist during project construction, project-specific measures to reduce potential impacts are implemented, in conjunction with the environmental documentation prepared for each project. Less than significant impacts or no impacts to cultural or paleontological resources are anticipated as a result of the Proposed Project and, if appropriate mitigation is employed for cumulative projects, no significant impacts would be anticipated to result from implementation of identified existing and proposed projects in the project vicinity. As a result, no cumulatively considerable impacts to cultural and paleontologcial resources as a result of implementation of the Proposed Project in junction with other projects in the vicinity would be expected.

.3.4. eology and Soils

Geology and soils-related impacts, including fault rupture, strong seismic ground shaking, seismic-related ground failure, and unstable soils are primarily site-specific and do not usually result in regional or cumulative impacts. The Proposed Project would not result in significant impacts associated with geology and soils, although it is subject to site development and construction standards that are intended to minimize the effects of seismic and other geologic conditions, as are other development projects in the project vicinity. Therefore, the Proposed Project would not result in cumulatively considerable geology and soils impacts, when considered along with other development projects in the project vicinity.

.3.4. a ards and a ardous aterials

Construction and operation of the Proposed Project would not result in a significant hazard to the public or the environment. Potential hazards to public health and safety resulting from implementation of existing, proposed, and approved projects in the project vicinity would be evaluated through the local permitting process. The Proposed Project is not connected with any other project in the project vicinity that would result in hazards to public health and safety. Therefore, no cumulatively considerable impacts related to hazards and hazardous materials are anticipated.

.3.4. ydrology and ater uality

The Proposed Project would not result in significant impacts to hydrology and water quality, although the Project would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit and to prepare a Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention Control and Countermeasure (SPCC) Plan. It can be assumed that through local permitting requirements, development projects in the project vicinity would be required to implement similar measures to protect water quality. The Proposed Project, in conjunction with identified existing and proposed projects, would not result in cumulatively considerable impacts to hydrology and water quality.

.3.4. and se and Planning

The Proposed Project would result in less than significant impacts to land use, as discussed in Chapter 4. Therefore, the Proposed Project would not contribute to cumulatively considerable impacts on land use.

.3.4.1 ineral esources

The Proposed Project would result in no impacts to mineral resources, as discussed in Chapter 4. Therefore, the Proposed Project would not contribute to cumulatively considerable impacts on mineral resources.

.3.4.11 Noise

The construction of multiple projects within proximity to one another could potentially result in noise levels that exceed allowable levels and are cumulatively significant. The Proposed Project would result in less than significant impacts from noise. Additionally, construction and operation noise would be primarily limited to the project site and

immediate surroundings and is not expected to result in cumulatively considerable noise impacts.

.3.4.12 Population and ousing

The Proposed Project would result in no impacts to population and housing, as discussed in Chapter 4. Therefore, the Proposed Project would not contribute to cumulatively considerable impacts to population and housing.

.3.4.13 Public Services

The Proposed Project would result in no impacts to public services, as discussed in Chapter 4. Therefore, the Proposed Project would not contribute to cumulatively considerable impacts to public services.

.3.4.14 ecreation

Implementation of the Proposed Project would result in less than significant impacts during construction and no impact during operation to recreation resources. Increased residential development in the County of Riverside and the cities of Temecula and Murrieta may be expected to increase demands on existing recreational facilities or construction of new facilities. However, the Proposed Project would not contribute to cumulatively considerable impacts to recreation.

.3.4.1 Transportation Traffic

There are a number of existing, proposed, and/or approved residential, commercial, and industrial development projects in the County of Riverside and the cities of Temecula and Murrieta that would be reasonably assumed to increase traffic volumes in the project vicinity during construction and operation. During the peak construction period for the Proposed Project, traffic will increase on roadways in the vicinity of the project by no more than one percent, which is considered less than significant. The Proposed Project will have no impacts during operation. Given the small traffic volume increase during peak project construction and its temporary nature, cumulatively considerable impacts to transportation and traffic would not occur.

.3.4.1 tilities and Service Systems

Given the number of existing, proposed, and approved residential, commercial, and industrial development projects in the County of Riverside and the cities of Temecula and Murrieta, it is likely that these jurisdictions will experience increased demand for natural gas, electricity, potable water, wastewater, and disposal facilities. The Proposed Project would require small quantities of water during construction for dust control and would require disposal of waste from portable sanitary facilities and non-recyclable construction materials. During operation, the Proposed Project would require a small amount of water for drought-resistant landscaping and restroom facilities (which would be connected to water and sewer lines when available), which would be used intermittently at the unattended substation. The Proposed Project would result is less than significant to utilities and, therefore, would not contribute to cumulatively significant impacts to utilities.

.4 reenhouse as

Because of the enormous complexities related to global climate change, the Legislature has charged numerous state and local agencies with the task of developing regulations to address greenhouse gas emissions. For instance, the California Global Warming Solutions Act of 2006 (AB 32) charges the California Air Resources Board (CARB) with the responsibility to monitor and regulate sources of greenhouse gas emissions in order to reduce those emissions. CARB has also been tasked to establish a "scoping" plan by January 1, 2009, for achieving reductions in greenhouse gas emissions and regulations by January 1, 2011, for reducing greenhouse gas emissions by the year 2020. AB 32 also directs CARB to recommend a *de minimis* threshold of greenhouse gas emissions below which emission reduction requirements will not apply by January 1, 2009 (Cal. Health & Safety Code, § 38561 (e)). Furthermore, California Senate Bill (SB) 97, passed in August 2007 requires the Office of Planning and Research (OPR) to prepare and develop CEQA guidelines for the feasible mitigation of greenhouse gas emissions including, but not limited to, effects associated with energy consumption. Those guidelines are to be certified and adopted by January 1, 2010.

While these state-wide agencies are diligently working toward discharging their statutory duties, project-specific thresholds have yet to be developed by the South Coast Air Quality Management District. In the absence of these project-specific significance thresholds, the analysis of potential Project impacts in this Proponent's Environmental Assessment (PEA) focuses on compliance with State and local plans aimed at reducing greenhouse gas emissions. Because the Climate Action Team's guidelines serve as the primary State guidance to date, the Project is analyzed in light of whether it is consistent with the applicable greenhouse gas reduction measures recommended by the Climate Action Team.

Greenhouse gases that contribute to climate change are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). The global warming potentials of these pollutants are usually quantified by normalizing their rates to an equivalent CO_2 emission rate (CO_2 eq.). SF_6 gas is utilized in substation circuit breakers and can potentially leak from the equipment. Because this pollutant has a high global warming potential (one ton of SF6 is equivalent to approximately 23,900 tons of CO_2), the greenhouse gas analysis in this PEA focuses on SF_6.

SCE voluntarily reports SF_6 gas emissions and has developed measures to monitor and prevent leakage. SCE currently tracks SF_6 gas leakage on a system-wide basis. SCE SF_6 Gas Management Guidelines require proper documentation and control of SF_6 gas inventories, whether in equipment or in cylinders. Inventories are documented on both a quarterly and a yearly basis. SCE assumes that any SF_6 gas that is purchased and not used to fill new equipment is needed to replace SF_6 gas that has inadvertently leaked from equipment already in service. This allows SCE to track and manage SF_6 gas emissions. SCE currently voluntarily reports these emissions to the California Climate Action Registry, which was created by the California legislature to help companies track and reduce greenhouse gas emissions.

SCE has taken proactive steps in the effort to minimize greenhouse gas emissions since 1997. In 1997, SCE established an SF_6 Gas Resource Team to address issues pertaining to the

environmental impacts of SF_6. The team developed the Gas Management Guidelines (discussed above) that allow for rapid location and repair of equipment leaking SF_6 gas. In addition, in 2001, SCE's parent organization, Edison International, joined the U.S. Environmental Protection Agency's voluntary SF_6 gas management program, committing SCE to join the national effort to minimize emissions of this greenhouse gas. Importantly, SCE's SF_6 emissions in 2006 were 41 percent less than in 1999, while the inventory of equipment containing SF_6 gas actually increased by 27 percent during the same time period.

SCE has made a significant investment in not only improving its SF_6 gas management practices but also purchasing state-of-the-art gas handling equipment that minimizes SF_6 leakage. The new equipment has improved sealing designs that virtually eliminate possible sources of leakage. SCE has also addressed SF_6 leakage on older equipment by performing repairs and replacing antiquated equipment through its infrastructure replacement program. It is expected that the Triton Substation Project will have a minimal amount of SF_6 leakage as a result of the state-of-the-art equipment and SCE's SF_6 gas management practices. Pursuant to its existing practices, SCE would be reducing potential Triton Substation Project greenhouse gas impacts to the greatest practicable.

Because the Triton Substation Project will comply with existing Climate Action Team guidelines and incorporate state-of-the-art gas handling equipment, the Triton Substation Project impact on climate change will be less than significant.

. Irreversible Irretrievable ommitment of esources Short- and ong-Term ses of the Environment

Irreversible or irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use of these resources would have on future generations. Irreversible effects primarily result from use or destruction of a specific resource (e.g., energy from hydrocarbons and minerals) that cannot be replaced within a reasonable time frame. CEQA requires that an environmental document identify irreversible environmental changes that would be significant and caused by a proposed project. Changes could include uses of nonrenewable resources during construction and operation, or irreversible damages that might result from project-related accidents.

Construction and operation of the Proposed Project would use minor amounts of non-renewable resources; therefore, the Proposed Project would not require the irreversible and irretrievable commitment of resources. In addition, the Proposed Project would not represent commitment of resources that would be irreversible because the Proposed Project could be demolished in the future, and the site used for other purposes.

. rowth-Inducing Impacts

The California Environmental Quality Act (CEQA) requires the analysis of a proposed project's potential to induce growth. Specifically, Section 115126.2(d) requires that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or

indirectly, in the surrounding environment…" Growth-inducing impacts can occur if a project would induce growth either directly or indirectly in the surrounding environment. Section 15126.2 (d) also states that it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

A project could be considered to have growth-inducing effects if it: 1) either directly or indirectly fosters economic or population growth or the construction of additional housing in the surrounding area; 2) removes obstacles to population growth; 3) requires the construction of new community facilities that could cause significant environmental effects; or 4) encourages and facilitates other activities that could significantly affect the environment, either individually or cumulatively. Growth-related impacts are those that occur later in time or are farther removed in distance, but which are still reasonably foreseeable.

A project's potential to induce growth does not automatically mean that it will result in growth. This potential growth-inducing effect is regulated by local governments in California through the development, adoption, and implementation of land use plans and policies intended to avoid or minimize the growth inducing potential or pressure created by projects, both individually or cumulatively. Growth occurs through capital investment in new economic opportunities from both public and private entities. Development occurs as a result of economic investment in a particular region. New economic (i.e., employment) opportunities will naturally create the need for infrastructure to support an increased population.

. .1 Background

Growth typically is the result of numerous factors that affect the location, size, direction, timing, type, and rate of population increase and does not necessarily result from a single project or factor. Such factors include local government planning, availability of public services; natural resources, the economic climate, and political and environmental concerns. Local planning agencies adopt and administer general and specific plans, zoning maps and ordinances, and other planning documents that contain policies and maps to identify the intensity and type of development allowed in specific locations.

Although local governments play a major role in growth management, the location and timing of growth also depends on economic factors such as the availability and cost of developable land, regional and national economic cycles, and mortgage interest rates and the demand for new housing. Political factors that affect growth include state and local laws that mandate businesses to comply with certain rules and regulations, permitting requirements that address environmental and community concerns, and tax incentives designed to attract businesses.

Quality of life issues are also important factors influencing the timing and location of population growth. These include: the incidence of crime; air quality; traffic congestion; and the availability, cost, and quality of community services such as schools, transportation facilities, recreational facilities, and fire and law enforcement services.

. .2 Impacts

Development of a new transmission project is often in response to an increase in demand. Therefore, electric utility infrastructure does not induce growth, but rather follows it and is necessary to accommodate both existing and forecast load demand.

The Southern California Association of Governments (SCAG) forecasts that over a 20-year period from 2010 to 2030, the City of Temecula's population will increase by 17,618, resulting in approximately 8,291 new residential units. Over the same time period, the City of Murrieta is forecasted to have a population increase of 47,855, resulting in approximately 17,153 new residential units (SCAG, 2004). The Project would serve the increase in existing demand as well as the new developments of Roripaugh Ranch within the City of Temecula, and Rancho Bella Vista and Johnson Ranch in adjacent unincorporated Riverside County.

As discussed in Section 1.0 of this PEA, the purpose of the project is to ensure the availability of safe and reliable electric service to meet customer electrical demand. SCAG forecasts significant increases in population in the general project area; the project is an action to fill a utility need for planned growth and development in accordance with local and county policies and general plans approved by each jurisdiction.

Therefore, the proposed expansion and upgrade of SCE's transmission system associated with the proposed Project would result in no growth-inducing impacts.

TEMECULA WINE COUNTRY

MATRIX / UPDATED 06-01-08

MAP ID	NAME	APN	CODE	CASE	STATUS	SPECIAL EVENTS			MAX GUESTS	GROSS ACRES	SQ. FT.	HOURS OF OPERATION / COMMENTS	SOURCE	RECEIVED DATE
	EXISTING WINERIES					**YES**	**NO**	**UNK**						
1	Alex's Red Barn	943-210-013	No	PP20549	Approved BOS 8/23/05		*			25.1	2,000	Daily Tasting Summer 11am-6pm. Winter 10am-5pm	County of Riverside	8/5/2008
2	Baily Vineyard & Winery	943-100-009	No	PP15079	Approved BOS 5/19/98	*				5.29	7,480	Daily Tasting 11am-5pm; Sat 10am-5pm. Restaurant Wed-Fri 11:30am-2:30pm; Sat-Sun 11:30am-3:00pm	County of Riverside	8/5/2008
3	Bella Vista Winery	951-140-056	No	None	N/A	*				21.43	1,440	Daily Tasting Winter 10am-5pm. After April 2nd 10am-6pm	County of Riverside	8/5/2008
4	Callaway Vineyard & Winery	943-260-024	No	PP3029	Approved 8/02/77	*			855	2.28	10,500	Daily Tasting 10am-5pm	County of Riverside	8/5/2008
5	Churon Winery	951-060-013	No	PP15724	Approved DH 4/19/99	*			300	9.09	30,141	Daily Tasting 10am-4:30. Daily Special Events Until 10pm. **22 B & B Units	County of Riverside	8/5/2008
6	Falkner Winery	943-240-004	No	PP12339	Approved 8/19/91	*			300	23.45	9,445	Daily Tasting 10am5pm. Restaurant Mon-Thur 11:30am-4pm; Fri-Sun 11:30am-2:30pm	County of Riverside	8/5/2008
7	Filsinger Vineyards & Winery	941-290-002	No	PP5531	Approved PC 10/27/80	*				31.84	1,152	Mon-Thur By Appointment Only; Fri 11am-4pm; Sat-Sun 10am-5pm	County of Riverside	8/5/2008
8	Hart Winery	943-090-027	No	PP14756	Approved 11/18/96			*		8.82	3,584	Daily Tasting 9am-4:30pm	County of Riverside	8/5/2008
9	Keyways Vineyard & Winery	927-630-012	No	PP14761	Approved 10/28/96	*				12.84	3,200	Daily Tasting 10am-5pm; Summer 10am-6pm. Daily Special Events Until 10pm	County of Riverside	8/5/2008
10	La Cereza Vineyard & Winery	951-140-041	No	PP12661	Approved DH 10/19/92	*			1000	21.61	6,900	Daily Tasting 10am-5pm	County of Riverside	8/5/2008
11	Leonesse Cellars	927-620-004	No	PP18776	Approved BOS 8/4/04	*			200	17.84	7,105	Daily Tasting 10am-5pm. Restaurant Wed-Sun 11:30am-3:30pm (Lunch); Fri 5:30-9:30 (Dinner)	County of Riverside	8/5/2008
12	Maurice Car'rie Vineyard & Winery	951-140-042	No	PP09238R1	Approved DH 10/03/88	*			240	45.68	16,080	Daily Tasting 10am-5pm. **Additional 19,200sqft Air Conditioned Warehouse (PP09238R2)	County of Riverside	8/5/2008
13	Mount Palomar Winery	943-120-023	No	PP03243	Approved 10/04/77	*				154.33	2,501	Tasting & Deli Mon-Thur 10am-6pm; Fri-Sat 10am-7pm	County of Riverside	8/5/2008
14	Ponte Winery I	942-230-006	No	PP16891	Approved DH 8/20/01	*			540	9.58	5,458	Daily Tasting & Restaurant 10am-5pm	County of Riverside	8/5/2008
15	Southcoast Winery Resort & Spa	942-230-004	No	PP17269	Approved DH 5/13/02	*			300	37.84	71,220	Daily Tasting 10am-6pm. Restaurant Mon-Thur 7am-9pm; Fri-Sat 7am-10pm **76 Villas	County of Riverside	8/5/2008
16	Thornton Winery	951-020-007	No	PP09727	Approved PC 7/10/87	*			400	19.93	5,928	Daily Tasting 10am-5pm (Until 6pm Nov 2 - Dec 23. Restaurant Daily 11am-3:30 (Lunch); 5pm-9pm (Dinner)	County of Riverside	8/5/2008
17	Wiens Family Cellars	942-230-008	No	PP18824	Approved DH 4/5/04	*			200	8.94	9,958	Daily Tasting 10am-5pm. Daily Special Events until 10pm	County of Riverside	8/5/2008
18	Wilson Creek Winery	942-170-006	No	PP16017	Approved DH 12/6/99	*			350	2.26	5,387	Daily Tasting 10am-5pm. Daily Special Events 5:30pm-10:30pm	County of Riverside	8/5/2008
19	Oak Mountain Winery	927-660-002	No #	PP21447	Approved DH 10/22/07	*			100	10	6,296	Daily Tasting 10am-6pm. Special Events 5pm-10pm 7days/week (most taking events Fri-Sun)	County of Riverside	8/5/2008
20	Briar Rose Winery	951-080-013	No	PP17944	Approved PC 9/20/06	*				15	2,170	Tasting Fri-Sun 10am-6pm. Special Events until 10pm on designated weekends.	County of Riverside	8/5/2008
21	Cougar Vineyards & Winery	941-170-007	No #	PP22372	Approved 1/28/08	*			50	10	10,780	Daily Tasting 11am-6pm. Special events on weekends only from 5pm-10pm.	County of Riverside	8/5/2008
22	Palumbo Family Vineyards & Winery	942-200-011	No	PP21591	Approved DH 11/19/07	*				13.28	2,596	Mon-Fri 11am-5pm; Sat-Sun 10am-5pm. (3) Annual Special Events req'd by Temecula Winegrowers Assoc.	County of Riverside	8/5/2008
	APPROVED WINERIES													
23	Wheeler Ridge Winery & Vineyards	943-210-012	No	PP22575	PC 12/12/07		*			20	6,651	Daily Tasting 10am-6pm	County of Riverside	8/5/2008
24	Lavendar Farm %	943-110-008	No	PP22698	Approved DH 3/10/08		*			4.45	8,665	8am-6pm	County of Riverside	8/5/2008
25	Las Estrellas Winery	943-240-005	No	PP20268	Approved DH 9/18/06	*			350	45.9	27,702	Daily Tasting 10am-5pm Special Events Only 2/week Restaurant 11am-9:30pm	County of Riverside	8/5/2008
26	Monte De Oro Winery	942-170-005	No	PP22515	Approved DH 9/24/07	*			250	17.11	23,094	Daily Tasting 10am-5pm. Special Events Max. 106	County of Riverside	8/5/2008
27	Robert Renzoni Vineyards	927-640-003	No	PP22263	Approved DH 4/7/08	*			90	11.73	4,890	Daily Tasting 10am-6pm. Special Events 6pm-10pm 30 with 90 guests and 30 with 30 guests	County of Riverside	8/5/2008
28	Three by Three/Tesoro Winery	942-090-016	No	PP22194	Approved DH 12/17/07		*			11.8	4,605	Production 8am-6pm. Tasting 10am-5pm	County of Riverside	8/5/2008
	PROPOSED/LEGALIZING													
29	Andulusia Winery	943-250-019	No	PP22521	CPR 3/22/07			*		20.04	8,600	Pending	County of Riverside	8/5/2008
30	**California Dreamin**	943-130-009	Yes	PP22569	CPR 3/29/07	*				10.1	3,844	Sat-Sun 10am-10pm	County of Riverside	8/5/2008
31	Carter Estates Winery	943-230-001	No	PP23017	CPR 9/20/07	*				119	206,038	Pending **180 Room Hotel; 39 B & B Cottages; Restaurant; Retail Shop	County of Riverside	8/5/2008
32	Destiny Vineyards	951-140-059	No	PP23385	CPR	*				11.03	41,099	Winery including wine tasting room, restaurant, barrel room, retail space, & admin. offices	County of Riverside	8/5/2008
33	**Doffo Wines**	915-690-015	Yes	PP22089	Denied PC 9/19/07	*				4.31	1,518	Daily Tasting 10am-5pm. (3) annual special events req'd by the Temecula Winegrowers Assoc.	County of Riverside	8/5/2008
34	**Foote Print Winery**	924-340-002	Yes	PP22217	CPR 10/18/07		*			18.81	1,600	Fri 12pm-5pm; Sat-Sun & Holidays 10am-5pm; All other days by appointment only	County of Riverside	8/5/2008
35	**Frangipani Estate Winery**	941-170-006	Yes	PP21893	CPR 9/20/07	*				10.71	3,095	Daily Tasting 10am-5pm	County of Riverside	8/5/2008
36	Gershon Bachus Vintners	927-280-036	No	PP22271	CPR 7/26/07	*			300	20	3,744	Tasting Fri-Sun 11am-6pm by appointment only	County of Riverside	8/5/2008
37	**Long Shadow Ranch Winery**	943-120-019	Yes	PP19998	Denied DH 5/05/08	*			100	16	7,891	Mon-Fri 12pm-5pm; Sat 10am-4pm; Sun10am-5pm	County of Riverside	8/5/2008
38	Peltzer Winery	943-120-021	No	PP21375	CPR 12/06/07					11.5	6,500	Winery/Restaurant and Deli; Existing house to remain	County of Riverside	8/5/2008
39	**Providence Family Winery**	942-250-050	Yes	PP21570	CPR 10/5/06	*				22.35	5,600	Pending **APN 942-250-052	County of Riverside	8/5/2008
40	**Stuart Cellars**	951-100-001	Yes	PP23215	CPR 1/31/08	*				40.57	47,286	Daily Tasting 10am-5pm	County of Riverside	8/5/2008
41	**The Castle Bed & Breakfast %**	942-090-018	Yes	PP23411	CPR		*					Bed & Breakfast	County of Riverside	8/5/2008
42	Tocana Bed & Breakfast %	951-230-001	No	PP23165	CPR		*						County of Riverside	8/5/2008
43	**Villa De Amore Special Events Facilities %**	943-210-009	Yes	PP21996	Denied BOS 9/18/07	*				4.5	5,816	Special Events Only 12pm-10pm	County of Riverside	8/5/2008
	MAP W/ MULTIPLE WINERY SITES													
44	Dry Creek I (Winery Only)	694-160-001	No	TR34466	Approved BOS 4/3/07		*			171.1	Unk	Pending / Up to Five Wineries with Cluster Development **APN 964-160-002, 004 962-190-001, 008	County of Riverside	8/5/2008
45	Dry Creek II (Winery Only)	964-160-001											County of Riverside	8/5/2008

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City of Temecula - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
PA08-0171	8/5/2008	Applied	A Minor Temporary Use Permit to allow for a temporary location to hold music education instruction for The Musician's Workshop Cultural Arts Center located at 27455 Tierra Alta Way Suite F while tenant improvements are under construction in the remaining suite E. The temporary use is allowed per Debbie Ubnoske for eight weeks from August 11, 2008 through October 10, 2008		ADRIA MCCLANAHAN	GARRETT GROUP	City of Temecula	8/5/2008
PA08-0172	8/5/2008	Applied	A Sign Program for the Moraga Plaza consisting of four one story buildings located at 29760 Rancho California Road.	ERIC JONES	ADRIA MCCLANAHAN	MORAGA PLAZA	City of Temecula	8/5/2008
PA08-0166	8/1/2008	Applied	A Minor Modification application (Planning Review Only) to Planning Application No. PA06-0193, Morning Ridge Condo Conversion, to change the expiration date to be consistent with the Tentative Tract Map and to allow for a reduction in the required private storage space per unit to accommodate washer/dryer units on private patios.	CHERYL KITZEROW/ MATT PETERS		MORNING RIDGE	City of Temecula	8/5/2008
PA08-0167	8/1/2008	Applied		KNUTE NOLAND	ADRIA MCCLANAHAN	TEMECULA LEGACY PROP	City of Temecula	8/5/2008
PA08-0168	8/1/2008	Applied	A Major Temporary Use Permit for the Temecula OnStage event, a fundraiser for Wishes For Children that entails live music and wine tasting located at 42081 Main Street between the Murrieta Creek and Front Stree within Old Town Temeucla on August 30th between 5:00pm to 11:00pm.	CHRISTINE DAMKO		REDEVELOPMENT AGENCY CITY OF TEMECULA	City of Temecula	8/5/2008
PA08-0170	8/1/2008	Applied	An Extension of Time request for a 3 year extension to PA06-0118, a Development Plan/Home Product Review to construct 10 single family residences located on Rancho California Road east of Riesling Court.	CHERYL KITZEROW/MATT PETERS		ALLISON RANDY	City of Temecula	8/5/2008
PA08-0165	7/31/2008	Applied	A Conditional Use Permit/Antenna Facility Application for ATT Wireless to install two slimline poles and an equipment structure on Rancho California Water District property located at 41520 Margarita Road.	DANA SCHUMA		RANCHO CALIF WATER DIST	City of Temecula	8/5/2008
PA08-0164	7/30/2008	Applied				VONS CO INC	City of Temecula	8/5/2008
PA08-0163	7/29/2008	Applied	A Major Temporary Use Permit for the 2008 Temecula Valley International Film and Music Festival located within the Tower Plaza shopping center and parking lot, 27531 Ynez Road from September 17th to the 21st from 9:00am to 11:00pm.	CHRISTINE DAMKO	SUSIE ROSSINI		City of Temecula	8/5/2008
PA08-0162	7/28/2008	Applied	A major modification to reconstruct the facade of an approved development plan PA99-0476 (existing restaurant -Five and Ten Diner) to a bank (Arrowhead Credit Union), generally located on the east side of Ynez approximately 500 feet south of Winchester at 26460 Ynez Road [APN 910-320-037].	BETSY LOWREY		LEVI SOHEIL P	City of Temecula	8/5/2008
PA08-0161	7/23/2008	Applied	A Minor Modification to an approved Development Plan (PA00-0213, Bel Villagio) to construct a fountain and reconfigure landscaping and trash service areas within an existing drive aisle between Buildings L and M (existing). Also included is a request to construct an outdoor dining patio for Building L. The project is located in the Bel Villagio shopping center on the west side of Margarita Road, north of Overland Road.	CHERYL KITZEROW/MATT PETERS		WGA BEL VILLAGGIO	City of Temecula	8/5/2008

City of Murrieta - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
	7/1/2008	Existing	175 Units in Zone MU-3, located on the S.E. corner of Date and Winchester Creek.			Hilltop at Winchester Creek Apartments	City of Murietta	6/28/1905
	7/1/2008	Existing	492 Units in Zone MU-1, located S.E. of Los Alamos and Vista Murrieta.			Silverado Apartments	City of Murietta	6/29/1905
	7/1/2008	Existing	144 Units in Zone MF-2, located at Walsh Center Drive, W. of Hancock.			Vista Pointe Apartments	City of Murietta	6/29/1905
	7/1/2008	Existing	453 Units in Zone MU-3, located on the S.E. corner of Jefferson and Lemon.			Grand Isle at Village Walk Senior Apartments	City of Murietta	6/30/1905
31324	7/1/2008	Existing	92 Units in Zone MU-3, located on the S.W. corner of jefferson and Ivy.			Amberwalk at Ivy Condos	City of Murietta	6/28/1905
31049	7/1/2008	Existing	248 Units in Zone MU-3, located on the S.W. corner of Madison and Juniper.			The Reserves at Madison park Condos	City of Murietta	6/28/1905
30953	3/1/2008	Approved	134 Units in Zone MU-3, located at the N.E. corner of Washington and Fullerton.			Washington Murrieta Condos	City of Murietta	3/1/2008
31467	3/1/2008	Approved	64 Units in Zone MU-3, located at the S.E. corner of Washington and Fullerton.			AC Washington Condo	City of Murietta	3/1/2008
31497	3/1/2008	Approved	60 Units in Zone MU-3, located at the S.E. corner of Washington and Lemon.			AC Lemon Condos	City of Murietta	3/1/2008
28379	3/1/2008	Approved	390 Units in Zone SPM 15, located in the Creekside Village Specific Plan.			Creekside Condos	City of Murietta	3/1/2008
26097	3/1/2008	Approved	122 Units in Zone MF-2, located on the E. side of Monro, S. of Jackson.			The Ridge at Cal Oaks COndos	City of Murietta	3/1/2008
33893	3/1/2008	Approved	42 Units in Zone MU-3, located on the W. side of Adams Avenue.			Richard Zuniga Condos	City of Murietta	3/1/2008
	3/1/2008	Approved	47 Units in Zone MU-1, located at Vista Murrieta-Skypark at Los Alamos Road.			Cameo Homes	City of Murietta	3/1/2008
31059	3/1/2008	Approved	210 Units in Zone MF-2, located on the W. side of Jackson, S. of Monroe.			Jackson Avenue Superior Apartments	City of Murietta	3/1/2008
30394	3/1/2008	Approved	210 Units in Zone MF-1, located in the N.E. corner of Washington and Nutmeg.			Nutmeg-Washington Apartments	City of Murietta	3/1/2008
	3/1/2008	Approved	180 Units in Zone MF-2, located at Murrieta Hot Springs, E. of Via Princess E.			Murrieta 180 Apartments	City of Murietta	3/1/2008
29757	3/1/2008	Approved	324 Units in Zone MU-3, located E. of Jefferson and N. of Murrieta Hot Springs.			Jefferson I Apartments	City of Murietta	3/1/2008
31078	3/1/2008	Approved	170 Units in Zone MF-2, located on the E. side of Jefferson, S. of Los Alamos.			Jefferson II Appartments	City of Murietta	3/1/2008
28532	7/1/2008	Approved	501 Units in Grid 8.		Mike Cole	Cole Realty	City of Murietta	7/1/2008
28903	7/1/2008	Approved	1021 Units in Grid 40.		Bill Kennedy	Veinyards-Sontewood Development	City of Murietta	7/1/2008
28903-1	7/1/2008	Approved	109 Units in Grid 40.		Tom Huska	Pulte Homes	City of Murietta	7/1/2008
29429	7/1/2008	Approved	7 Units in Grid 55.		Danny Powers	Adkan Engineers	City of Murietta	7/1/2008
29717	7/1/2008	Approved	24 Units in Grid 16.		Jim Bolton	Pacific Century	City of Murietta	7/1/2008

City of Murrieta - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
29981	7/1/2008	Approved	38 Units in Grid 48.		Markham & Associates	Pasha Inv. LLC	City of Murietta	7/1/2008
30172	7/1/2008	Approved	25 Units in Grid 61.		Steve Blanchard	Ranco Development	City of Murietta	7/1/2008
30348	7/1/2008	Approved	24 Units in Grid 47.		Markham & Associates	Fred Sauer	City of Murietta	7/1/2008
30435	7/1/2008	Approved	6 Units in Grid 33.		Tony Piscolli	Philip Molitor	City of Murietta	7/1/2008
30802	7/1/2008	Approved	137 Units in Grid 51.		Don Lohr	Hall & Foreman	City of Murietta	7/1/2008
31121	7/1/2008	Approved	24 Units in Grid 10.		Steve Lloyd	Greer/Lennar	City of Murietta	7/1/2008
31251	7/1/2008	Approved	8 Units in Grid 52.		Art Bananal	Michael Delaney	City of Murietta	7/1/2008
31510	7/1/2008	Approved	119 Units in Grid 10.		Bob Diehl	Lennar Homes	City of Murietta	7/1/2008
31581	7/1/2008	Approved	111 Units in Grid 51.		RBF Consulting	Fieldstone Communities	City of Murietta	7/1/2008
31878	7/1/2008	Approved	165 Units in Grid 36.		Ted Weggeland	Opportunity Properties	City of Murietta	7/1/2008
31956	7/1/2008	Approved	7 Units in Grid 32.		Steve Carol	Woodbridge Development	City of Murietta	7/1/2008
31997	7/1/2008	Approved	9 Units in Grid 41.		Eric W. Smith	AVI Properties, LLC	City of Murietta	7/1/2008
31998	7/1/2008	Approved	16 Units in Grid 11.		Bruce Davis	Webb and Associates	City of Murietta	7/1/2008
31999	7/1/2008	Approved	14 Units in Grid 7.		Bruce Davis	Webb and Associates	City of Murietta	7/1/2008
32043	7/1/2008	Approved	24 Units in Grid 56.		Glen Daigle	Murrieta Pacific Co.	City of Murietta	7/1/2008
32050	7/1/2008	Approved	14 Units in Grid 40.		Aseet patel	VP Group, LLC	City of Murietta	7/1/2008
32266	7/1/2008	Approved	99 Units in Grid 3.		Robert Schmitt	HNB, Inc.	City of Murietta	7/1/2008
32316	7/1/2008	Applied	64 Units in Grid 7.		Curtis Gullett	Cap Prop	City of Murietta	7/1/2008
32543	7/1/2008	Applied	200 Units in Grid 27		Sam Alhadeff	Winchester 700	City of Murietta	7/1/2008
32718	7/1/2008	Approved	10 Units in Grid 4.		Hall & Foreman	Hall & Foreman	City of Murietta	7/1/2008
33231	7/1/2008	Approved	35 Units in Grid 11.		Pinnacle Communities	Pinnacle Comm, LLC	City of Murietta	7/1/2008
33286	7/1/2008	Applied	15 Units in Grid 26.		Merle Schulze	DFC Family LTD Partnership	City of Murietta	7/1/2008
33439	7/1/2008	Applied	64 Units in Grid 48.		April Tornellow	Taylor Woodrow Homes	City of Murietta	7/1/2008
33871	7/1/2008	Applied	38 Units in Grid 34.		Samir Adabir	Samir Adabir	City of Murietta	7/1/2008

City of Murrieta - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
33377	7/1/2008	Applied	57 Units in Grid 51.		Temecula Valley, LLC	Lennar Homes	City of Murietta	7/1/2008
33904	7/1/2008	Applied	38 Units in Grid 3.		Hunsaker & Associate	Hunsaker Associates	City of Murietta	7/1/2008
34051	7/1/2008	Applied	89 Units in Grid 10.		Hunsaker & Associate	Granite Homes	City of Murietta	7/1/2008
34250	7/1/2008	Applied	13 Units in Grid 41.		Chris Sheppard	Summer Creek Homes	City of Murietta	7/1/2008
34394	7/1/2008	Applied	8 Units in Grid 3.			Way BM	City of Murietta	7/1/2008
34445	7/1/2008	Applied	14 Units in Grid 3.		Nancy Capos	SCC Murrieta Valley	City of Murietta	7/1/2008
34530	7/1/2008	Applied	6 Units in Grid 22.		Scott Reis	Scott Reis	City of Murietta	7/1/2008
			Jefferson Gateway consists of 15 buildings totaling 115,157 square feet for sale or lease. Phase I of this projects includes six industrial buildings for sale from 6,700 to 16,044 square feet with an optional fenceable yard. Located at Jefferson Avenue between Elm and Fig Streets.		Mike Strode	Lee & Associates	City of Murietta	
			Murrieta Creek Business Center consists of three buildings totaling 73,197 square feet for industrial, office, and retail use. Located adjacent to Jefferson Avenue, south of Guava Street.		Dan Walsh	NAI Capital	City of Murietta	
			Crossroads Corporate Center, Phase II is complete. A four-story, 78,000 square foot building and a 40,000 square foot two-story building are proposed to complete the project. This Premier Class "A" office campus is located at 25220 and 25420 Hancock Avenue, between Murrieta Hot Spings and Los Alamos Roads.		Mary Piper	Lee & Associates	City of Murietta	
			The Courtyard is a 36,000 square foot Courtyard located on Kalmia Street, one mile west of Interstate 15. There are two 18,000 square foot single-story bjildings, with courtyard setting.		Mary Pieper	Lee & Associates	City of Murietta	
			Murrieta Corporate Office is located north of Murrieta Hot Springs Road, on Hancock Avenue. This three-story, class A office project offers built-to-suit opportunities. Total square footage is 46,000 square feet.		Kevin Nellis	Colliers International	City of Murietta	
			Sparkman Professional Building, a 27,600 square foot office project, is prominently located on Medical Center Drive.		Kevin Nellis	Colliers International	City of Murietta	
			Murrieta Point Medical Offices is in phase two. It is an upscale commercial center with high-end dinging, consisting of two 18,000 square foot buildlings. It is located north of Murrieta Hot Springs Road, between Interstates 15 and 215.		Kevin Nellis	Colliers International	City of Murietta	
			Rancho Springs Medical Plaza II is a new 53,000 square foot medical building located at 25495 Medical Center Drive.		Rob Crisell	Lee & Associates	City of Murietta	

City of Murrieta - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
			The Triangle Lifestyle Center is a 1.3 million square-feet, mixed use lifestyle center with opportunities for major retail tenants, entertainment venues, high-end restaurants, a four star hotel and 450,000 square feet of class A office. It is located south of Murrieta Hot Springs Road at the confluence of Interstates 15 and 215.		Bruce Coleman	City of Murrieta	City of Murietta	
			The Terraces at Murrieta Springs is a 384,000 square foot mixed-use lifestyle center on 36 acres located at the NEQ of I-15 and Murrieta Hot Springs Road. The proposed uses include 3 anchor locations, 145,000 square feet of shopts, 5 free-standing restaurants, an 18,000 square foot office building and 150 room hotel.		Jason Blum	Interra Development Partners, LLC	City of Murietta	
			Olivewood is a center featuring retail shops from 1,325 to 7,000 square feet and a 1,600 square foot suite with drive-thru access. It is located at the southeast corner of Jefferson Avenue and Kalmia Street. The project is schedule to be completed in the second quarter of 2009.		Rick Neugebauer	Oak Grove Equities Inc.	City of Murietta	
			Murrieta Town Square includes 34 acres of well-situated land just two blocks from Interstate 15 and the redeveloping downtown. The square includes Town Square Park, a four-acre park tha tfeatures festival seating, and a 40-foot walking area around the permiter. The site plan calls for six additional pads of varying sizes suitable for office, light retail, and restaurants.		Bruce Coleman	City of Murrieta	City of Murietta	
			Oak Grove Professional is a 33,994 square foot, three-story, multi-tenant office building located on Jefferson Avenue. The project is near Murrieta's Town Center and numberous business amenities and eateries.		Nancy Austin	Austin-Brockett Commercial Real Estate	City of Murietta	
			Adams Industrial Park includes six buildings totaling 32,058 square feet for sale or lease. Most buildings have fenceable yards. It is located on Adams Avenue, south of Corporate Center Drive and north of Date Street.		Mike Strode	Lee & Associates	City of Murietta	
			Alesco Jefferson Avenue Business Park includes 37 buildings totaling 454,779 square feet for sale or lease. Located at Jefferson and Adams Avenues, north of Fig Street.		Les Young	Alesco Development	City of Murietta	
			Elm Street Business Park includes 8 industrial buildings totaling 162,138 square feet for sale or lease. Located on Elm Street between Adams and Jefferson Avenues.		Lisa Butterwegge	Coldwell Banker Associated Brokers	City of Murietta	
			Gateway Centre consists of two retail showroom buildings comprising 53,190 square feet with divisible suites and four small executive office buildings totaling 29,740 square feet. There are also three flex-tech buildings totaling 29,128 square feet. It is located at the northwest corner of Jefferson Avenue and Corning Place.		Laura Menden	Lee & Associates	City of Murietta	
			Golden Gate Industrial Park consists of 4 tilt-up concrete constructed buildings totaling 18,658 square feet with private enclosed yards. Located north of Golden Gate Circle, east of Madizon Avenue and west of Interstate 15.		Rob Crisell	Lee & Associates	City of Murietta	

City of Murrieta - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
			Jefferson Business Center comprises 224,000 square feet of retail and light industrial space. Includes 18 showroom/office units for sale or lease and 14 industrial buildilngs for sale or lease. Located at the southwest corner of Jefferson Avenue and Fig Street.		Mike Strode	Lee & Associates	City of Murietta	
			Margarita Ville is an 110,000 square foot shopping center located at the southwest corner of Murrieta Hot Springs and margarita Roads.		Brian Bielatowicz	Lee & Associates	City of Murietta	
			Murrieta Auto Mall is a master-planned auto mall offering prime freeway visibility and space for up to six dealers. It is located at Interstate 15 and Date Street, via Jefferson Avenue.		Mike Strode	Lee & Associates	City of Murietta	
			Murrieta Marketplace will have about 500,000 square feet of buildable space available on the 55-acre site. The community shopping center will open Fall 2009. Located at the northwest corner of Clinton Keith Road and Winchester Road.		Peter Moersch	Regency Centers	City of Murietta	
			Murrieta Plaza's Phase 2 is the final 100,000 square feet of the Murrieta Plaza center, located at Murrieta Hot Springs Road and the I-15/I-215 Interchange. The final phase of this project will be completed by Fall 2008.		Steve Lewis	Terramar Retail Centers	City of Murietta	
			Murrieta Spectrum, located at 25115 to 25175 Madison Avenue.		Beverly Search	Grubb & Ellis/WestMar, Inc.	City of Murietta	
			Antelope Square is an 84,000 square foot retail shopping center located at the southeast corner of Scott and Antelope Roads at Interstate 215.		Brian Bielatowicz	Lee & Associates	City of Murietta	
			Bella Piazza includes 28,209 square feet of prime upscale retail. Located west of Jefferson Avenue, south of Kalmia, and north of Juniper Streets.		Beverly Search	Grubb & Ellis/WestMar, Inc.	City of Murietta	
			Cascada Del Sol is approximately 78,000 square feet for retail. Groundbreaking is estimated for the third quarter of 2008. Located at Madison Avenue and Interstate 15.		Beverly Search	Grubb & Ellis/WestMar, Inc.	City of Murietta	
			Date Street Plaza consists of 16,986 square feet of retail space highlighted by upscale architecture and attractive landscaping. Located at the northeast corner of Date Street and Margarita Road.		Brian Bielatowicz	Lee & Associates	City of Murietta	
			French Valley Marketplace is a planned 65,500 square foot shopping center located at the southwest corner of Winchester Road and Clinton Keith Road. It will include retail shops, financial and restaurant pads, a service station, tire store, and office space.		Beverly Search	Grubb & Ellis/WestMar, Inc.	City of Murietta	
			Homecenter Murrieta contains more than 230,000 square feet of freeway showrooms. Located at the southwest corner of I-215 and Los Alamos Road.		Brian Bielatowicz	Lee & Associates	City of Murietta	
			Murrieta Town Center East offers retail pads/shop spaces ranging from 1,000 to 7,000 square feet. The center is undergoing renovation and two 5,000 square foot build-to-suit or ground lease pads are available. Located at Murrieta Hot Springs Road, east of I-215.		Charles Cheng	Triumshire Corporation	City of Murietta	
			The Orchard - Stone Creek is a 47-acre, 430,000 square foot planned community shopping center located at the intersection of Interstate 215 and Clinton Keith Road.		Hil Mercado	CB Richard Ellis	City of Murietta	

City of Murrieta - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
			Village Walk Plaza is a 50-acre commercial project. phase I is complete. Phase II includes 312,000 square feet of retail with freeqay visibility. Located at the northwest corner of I-15 and Kalmia Street.		Art Pearlman	Arthur Pearlman Corp.	City of Murietta	
			Westside Marketplace is a proposed 384,773 square foot retail center. It is expected to open in the first quarter of 2009. The project is located at Jefferson Avenue and the northside of Guava Street.		Beverly Search	Grubb & Ellis/WestMar, Inc.	City of Murietta	

City of Temecula - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
PA08-0160	7/22/2008	Applied	A Minor Modification for Food 4 Less to locate a staffed 496 square foot 2-bin recycling facility at the rear of the property, generally located at the southwest corner of Winchester and Ynez at 26419 Ynez Road. (APN 910 300-018)	BETSY LOWREY		KIMCO PALM PLAZA	City of Temecula	8/5/2008
PA08-0159	7/21/2008	Applied	A Minor Modification to the Rodrigo's Conditional Use Permit (PA08-0031) to allow live entertainment (mood and ambiance table music) and allow the sale of alcohol during business hours not to exceed 1am.	CHERYL KITZEROW/MATT PETERS		TEMECURICH	City of Temecula	8/5/2008
PA08-0158	7/11/2008	Applied	A Minor Modification Application (Planning Review Only) to remove stone facade and replace with stucco to allow for a sign to be located on the Vitamin Shoppe within the mall outlots, on the south side of Winchester approximately 500 feet east of Ynez [APN 910-130-052].	BETSY LOWREY	SUSIE ROSSINI	PLAZA TEMECULA	City of Temecula	8/5/2008
PA08-0157	7/10/2008	Applied	A Massage Establishment permit for Mr. Chuyen, Bui, located at 40695 Winchester Road, Suite 3.	KNUTE NOLAND	SUSIE ROSSINI	CCL TEMEUCLA LLC	City of Temecula	8/5/2008
PA08-0155	7/9/2008	Approved	Minor Temporary Use Permit for EZ Lube Grand Opening located at 30625 Temecula Parkway on July 18, 2008 at 7:30 am -7:00 pm through July 19, 2008 at 7:30 am - 6:00 pm. The event will offer oil changes, transmission and radiator services within the existing building. Hot dogs will be served in a 10' x 10' tent.		ADRIA MCCLANAHAN	JAKE CXIV INC A CALIFORNIA CORP	City of Temecula	8/5/2008
PA08-0156	7/9/2008	Applied	A Development Plan for a one story 8,630 office building/bank located on a 1.2 acre parcel at APN 909-360-019.	ERIC JONES	SUSIE ROSSINI	AMERICAN AGCREDIT/GREGG WARREN	City of Temecula	8/5/2008
PA08-0154	7/8/2008	Applied	A Minor Condtional Use Permit for the Iron Wok, located at 26520 Ynez Road, to conduct live entertainment with a band or DJ.	ERIC JONES		TEMECULA PAD PQ LLC	City of Temecula	8/5/2008
PA08-0153	7/7/2008	Applied	A Major Modification Application to construct a 6,476 square foot two-story worship center attached to an existing sanctuary, generally located at the southwest corner of Nicolas and Calle Medusa at 31143 Nicolas Road [APN 957-140-010]. This project is related to previously approved Development Plan Planning Application PA02-0257.	BETSY LOWREY		GRACE PRESBYTERIAN CHURCH OF TEMECULA	City of Temecula	8/5/2008
PA07-0200	1/9/2008	Approved	Development Plan to construct approximately 565,260 square feet of hospital, medical office, cancer center, and fitness rehabilitation center on 35.31 acres. The proposed project is located north of Temecula Parkway (Highway 79 South), south of De Portola Road and approximately 700 feet west of Margarita Road.	EMERY PAPP		Universal Health Services of Ranch Springs, Inc.	City of Temecula	1/9/2008
PA07-0229	3/5/2008	Approved	Planning Application to construct 274 apartment units within 16 buildings on 13.7 acres with an associated clubhouse, storage rooms, detached garages, carports, and tot lots, located at the southwest intersection of Pujol Street and First Street.	CHRISTINE DAMKO		DMC Temecula Villa	City of Temecula	3/5/2008
PA07-0339	4/2/2008	Approved	An Extension of Time for a Development Plan and Minor Exception for a 13,709 square foot commercial buliding on .51 acres, located at 28865 Old Town Front Street.	ERIC JONES		Janet Lee	City of Temecula	4/2/2008
PA06-0389	6/4/2008	Approved	A Conditional Use Permit and Development Plan to construct a 26,418 square foot self-storage facility with nine storage buildings and 42 covered RV parking spaces located at 41705 Overland Drive.	DANA SCHUMA		Ken High	City of Temecula	6/4/2008

City of Temecula - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
PA07-0239	5/7/2008	Approved	A Development Plan for the restoration of the historic Vail Ranch Headquarters Complex proposing re-use of six historic structures totaling 13,390 square feet and 13,738 square feet of historically appropriate new construction for retail, office, retsaurant and museum display uses on four acres within the Vail Ranch specific plan zoned historic commercial located at 32115-32125 Temecula Parkway.	BETSY LOWREY		Vail Ranch Restoration Association	City of Temecula	5/7/2008
PA06-0113	1/3/2007	Approved	A Development Plan to construct a 50,376 square foot mixed-use restaurant and office building on 0.5 acres located at 42081 3rd Street.	FISK		Matthew Fagan	City of Temecula	1/3/2007
PA06-0060	1/3/2007	Approved	A Tentative Parcel Map and Development Plan for a multi-family residential project to construct 97 condominium units on 8.9 gross acres, located within Planning Area 13 of the Redhawk Specific Plan at the southeast corner of Peach Tree Street and Deer Hollow Way.	DANA SCHUMA		Artisan Communities	City of Temecula	2/7/2007
PA06-0293	2/21/2008	Approved	A Development Plan and Conditional Use Permit to expand the Promenade Mall by 125,950 square feet with an outdoor life-style main street shopping center and construct two parking structures, located between Edwards Cinema and Macy's.	MATT PETERS		Forest City Commercial Development	City of Temecula	2/21/2007
PA006-0140	3/7/2007	Approved	A Development Plan and Minor Exception to construct a 13,500 square foot, two-story medical building on .86 acres and to reduce the number of required parking spaces by three spaces, from 45 spaces required to 42 provided, located approximately 450 feet west of Interstate 15 and approximately 1200 feet north of Highway 79 South just south of Old Town Temecula.	LECOMTE	Joseph Orloff	Interactive Architects	City of Temecula	3/7/2007
PA006-0325	4/4/2007	Approved	A first Extension of Time for a previously approved Development Plan for 98 detached single-family homes, located in Planning Area 1A of the Roripaugh Specific Plan south of Murrieta Hot Springs Road and west of the future extension of Butterfield Stage Road.	DANA SCHUMA		DR Horton	City of Temecula	4/4/2007
PA05-0365	4/4/2007	Approved	A Development Plan to construct and operate a recreation facility totalin 26,100 square feet on a 20.23 acre site, located at 29119 Margarita Road.	WEST		YMCA	City of Temecula	4/4/2007
PA04-0544	5/2/2007	Approved	A Development Plan to construct two concrete tilt-up buildings totaling 32,386 square feet for industrial and service commercial uses on 2.5 acres, located between Calle Cortez and Las Haciendas Street east of Del Rio Road.	DANA SCHUMA		HB & A Architects	City of Temecula	5/2/2007
PA06-0613	5/16/2007	Approved	A Development Plan to construct a three-story 77,408 square foot hotel (Marriott Springhill Suites) with 142 units, located on a vacant 3.47 acre parcel, on the east side of Jefferson, approximately 1,000 feet north of Rancho California Road.	BETSY LOWREY	David Simmons	Key West Engineering	City of Temecula	5/16/2007
PA06-0026	6/6/2007	Approved	A Conditional Use Permit to construct a 70-foot tall T-Mobile wireless telecommunication facility designed as a broadleaf tree within a 676 square foot enclosure, located at 42010 Moraga Road, adjacent to the northwest corner of Rancho California and Moraga Roads.	CHRISTINE DAMKO	Randi Newton	Spectrum Surveying	City of Temecula	6/6/2007
PA06-0338	6/20/2007	Approved	A Development Plan for a proposed three-story commercial/office building totaling 29,409 square feet, located on the southeast corner of Old Town Front Street and 5th Street within the Old Town Specific Plan.	CHRISTINE DAMKO	Rick COnroy	C&R Architects	City of Temecula	6/20/2007
PA07-0132	7/18/2007	Approved	A Development Plan for the construction of a one-story 13,958 square foot commercial building, located on the northwest corner of Landings and Village Roads wtihin the Harveston Specific Plan.	CHRISTINE DAMKO		Michael Crews Development	City of Temecula	7/18/2007

City of Temecula - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
PA06-0278	7/18/2007	Approved	A Development Plan to construct three professional office buildings totaling 38,501 square feet on a 2.8 acre site, located on the southwest corner of De Portola Road and Margarita Road.	DANA SCHUMA		Kal Pacific & Associates	City of Temecula	7/18/2007
PA06-0313	8/1/2008	Approved	A Development Plan for the construction of a 20,820 square foot industrial building, located on the south side of Via Montezuma west of Jefferson Avenue.	DANA SCHUMA	Kenneth Kaplan	Front & Montezuma, LLC	City of Temecula	8/1/2007
PA07-0058	8/1/2007	Approved	An Extension of Time for a Development Plan and COnditional Use Permit for the construction and operation of St. Thomas of Canterbury Episcopal Church with preschool including 30,473 total building square footage on 3.75 acres, located at 44651 Avenida de Missiones.	BETSY LOWREY	Mel Malkoff	Malkoff & Associates	City of Temecula	8/1/2007
PA06-0329	8/29/2007	Approved	A Development Plan to construct an 11,595 square foot one-story office building, located on the east side of Margarita Road, approximately 300 feet north of De Portola Road.	LECOMTE		Elias Alfata	City of Temecula	8/29/2007
PA07-0220	9/5/2007	Approved	A Development agreement to authorize the development of an approximate 84 acre site generally located at the northwest corner of Winchester Road and Dendy Parkway in the City of Temecula.	DANA SCHUMA		Temecula Properties, LLC	City of Temecula	9/5/2007
PA07-0085	10/3/2007	Approved	A Development Plan to construct a three-story 35,000 square foot office building and three-story 50,000 square foot building on a 5.3 acre site, located at the southwest corner of Rancho California Road and Moraga Road.	BETSY LOWREY	Bob Crisell	Rancho View Professional Center	City of Temecula	10/3/2007
PA07-0176	10/17/2007	Approved	A Development Plan for an 11,456 square foot expansion to the existing Temecula Stage Stop complex to include the addition of a 4,257 square foot office retail building, a 3,328 square foot second floor expansion over the existing Temecula Wine and Beer Garden, an3,871 square feet of associated improvements, located at 28464 Old Town Front Street.	DANA SCHUMA		Walt Allen Architects	City of Temecula	11/7/2007
PA07-0180	11/7/2007	Approved	A Major Modification to construct a 4,034 square foot First Bank building with drive-thru , located on the northeast corner of Winchester and Nicolas Roads in the Rancho Temecula Town Center.	CHERYL KITZEROW		Joseph Jaworski	City of Temecula	11/7/2007
PA07-0057	12/5/2007	Approved	A Development Plan for a Major Modification to construct a combined high school, middle school and gymnasium facility totaling 93,164 square feet, located north of Temecula Parkway, east of Jedidiah Smith Road approximately 800 feet west of Rancho Pueblo Road.	LECOMTE		Malkoff and Associates	City of Temecula	12/5/2007
PA04-0463	12/7/2005	Approved	A Development Plan to construct a 408,160 square foot hospital, a helipad, two medical office buildings totaling 140,000 square feet, a 10,000 square foot cancer center, and an 8,000 square foot fitness rehabilitation center all totaling 566,160 square feet on 35.31 acres, located on the north side of Highway 79 South, approximately 700 feet west of Margarita Road.	EMERY PAPP		Universal Health Services, Inc.	City of Temecula	1/5/2006
PA05-0312	3/15/2006	Applied	An Extension of Time for a three-story, 31,600 square foot, 56-unit hotel building on 1.35 acres, located 200 feet east of Jefferson Avenue and 200 feet north of Winchester Road.	VERONICA MCCOY		MDMG, Inc.	City of Temecula	
PA05-0105	3/15/2006	Applied	A Development Plan to construct an 11,271 square foot commercial building on .987 acres, located at 41755 Enterprise Circle South.	HARMONY LINTON		Walt Allen Architects	City of Temecula	
PA05-0139	3/15/2006	Applied	A Development Plan to construct a two-story 18,689 square foot office building on 1.41 acres, located on the northwest corner of Diaz Road and Blackdeer Loop.	HARMONY LINTON		James Horecka	City of Temecula	

City of Temecula - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
PA05-0189	3/1/2006	Approved	A Development Plan and Conditional Use Permit to construct a 119,755 square foot self-storage facility which includes a canopy for RV storage and a manager's living quarters, located on the southeast corner of Butterfield Stage Road and Highway 79 South.	CHRISTINE DAMKO	Ariel Valli	Valli Architectural Group	City of Temecula	3/1/2006
PA04-0492	1/18/2006	Approved	A Development Plan for the development of 96 single-family units, 96 tri-plex units, and 236 four-plex units (428 total units) located at the north eastern corner of the intersection of Loma Linda Road and Temecula Lane.	CHRISTINE DAMKO		DR Horton	City of Temecula	1/18/2006
PA04-0584	1/18/2006	Approved	A Development Plan to construct and operate a three-story, 15,333 square foot mixed-use retail/office building and a Minor Exception to permit a 15 percent reduction in the parking requirements for a project on a 1.4 acre site located on the west side of Old Town Front Street, approximately 1,400 feet south of Santiago Road.	FISK	Rick Conroy	Newport Architects	City of Temecula	1/18/2006
PA05-0275	2/15/2006	Approved	A Development Plan to construct an 8,374 square foot building on .95 acres, located on the southeast corner of Ynez Road and Overland Drive.	FISK	Bob Lombardo	BJ's Restaurant	City of Temecula	2/15/2006
PA05-0294	4/19/2006	Approved	A Comprehensive Sign Program to construct a 73,306 square foot shopping center that includes five retail buildings, located on Highway 79 South between Mahlon Vail and Butterfield Stage Road.	EMERY PAPP		Vail Properties	City of Temecula	4/19/2006
PA05-0167	4/19/2006	Approved	A Development Plan to construct a 21 acre multi-family housing development consisting of 70 buildings with a total f 210 individually owned attached triplex units, located near the westerly end of Temecula.	EMERY PAPP		Pulte Home COrporation	City of Temecula	5/3/2006
PA05-0096	5/3/2006	Approved	A Development Plan for the construction of four single story industrial buildings totaling 54,504 square feet, located on the south side of Winchester Road, west of the Diaz Road and Winchester Road intersection.	CHRISTINE DAMKO	Andrew Kjellberg	McArdle Associates	City of Temecula	5/3/2006
PA05-0378	5/17/2006	Approved	A Development Plan for 130 detached single-family homes on the north side of Date Street, adjacent to the northeast corner of the intersection of Ynez Road and Date Street in the Harveston Specific Plan.		Matthew Fagan	Lnenar Homes	City of Temecula	5/17/2006
PA05-0236	5/17/2006	Approved	A Tetnative Tract Map and Development Plan to create one lot for condo purposes and construct 110 age-restricted units on 7.5 acres, located at the northwest corner of Margarita Road and Dartolo Road.	HARMONY LINTON		Vicki Mata	City of Temecula	5/17/2006
PA06-0037	5/17/2006	Approved	A Conditional Use Permit and Development Plan for a 22,522 square foot, three-story mixed use commercial/residential building consisting of approximately 4,669 square feet of retail space and 22 affordable apartment units, located on the north side of Fifth Street approximately 200 feet east of Front Street.	CHRISTINE DAMKO	David Kniff	KEA Architecture	City of Temecula	5/17/2006
PA06-0048	5/17/2006	Approved	A Conditional Use Permit and Development Plan to construct and operate an automobile dealership building with associated service facilities totaling 32,560 square feet on 3.7 acres, located at the southwest corner of Ynez Road and DLR Drive.	FISK		James Cappadocia	City of Temecula	5/17/2006
PA06-0055	6/7/2006	Approved	A Development Plan for 76 detached single-family cluster homes in Tracts 32436-1 and 32426-F, located on the north side of Date Street adjacent to the northeast corner of the intersection of Ynez Road and Date Street in Harveston Specific Plan.	CHRISTINE DAMKO	Scott Frick	Lennar Homes	City of Temecula	6/7/2006

City of Temecula - Current Planning Projects

Activity Number	Date Submitted	Status	Description	Planner	Technician	Owner	Source	Received Date
PA06-0046	6/7/2006	Approved	A Development Plan for three retail buildings totaling 29,498 square feet on 3.46 gross acres located on the southeast corner of Margarita Road and DePortola Road.	DANA SCHUMA	Paul Gupta	Binaca Properties	City of Temecula	6/7/2006
PA05-0396	7/5/2006		A Development Plan for the development and construction of 292 condominium residential units including 29 affordable housing units comprising of 189 tri-plex units in 63 buildings, 25 five-plex units in 5 buildings, 78 six-plex units in 13 buildings, located on the northeast corner of Pechanga Parkway and Loma Linda Road.	HAZEN	Lindsay Quackenbush	DR Horton	City of Temecula	
PA04-0543	9/6/2006	Approved	A Development Plan for a proposed one-story 17,378 square foot concrete tilt-up office and warehouse building, located on th east side of Del Rio Road, approximately 150 feet south of Calle Cortez Road.	CHRISTINE DAMKO	Mark Stock	HB&A Architects, Inc.	City of Temecula	9/6/2006
PA05-0389	9/6/2006	Approved	A Conditional Use Permit with a Development Plan for the construction of two new buildings to accommodate a sanctuary and classrooms, and for the use of an existing chapel totaling 15,043 square feet at an existing religious institution, located within the Rancho Highlands Specific Plan at 28871 Santiago Road.	HAZEN		Matthew Fagan	City of Temecula	9/6/2006
PA06-0213	10/18/2006	Approved	A Development Plan and Conditional Use Permit for the construction of a 13,000 square foot water park on approximately 15.4 acres consisting of pools, slids, and other types of water rides, other buildings, and an associated parking lot, located at the northwest intersection of Ynez Road and County Center Drive.	CHRISTINE DAMKO		Clearwater Waterpark Development	City of Temecula	10/18/2006
PA06-0135	11/15/2006	Approved	A Conditional Use Permit and Development Plan to construct and operate a liquid natural gas (LNG) station. The development will consist of one 45 foot high LNG tank, and emergency underground water storage tank, and a 14,776 square foot office/warehouse building, located at 28011 Diaz Road.	FISK		M & D Properties	City of Temecula	12/6/2006