

4. Revisions to the Draft Environmental Impact Report

In accordance with Section 15132 of the State CEQA Guidelines, this section presents the changes and revisions that were made to the EIR in response to comments received on the Draft EIR. Revisions made merely clarify information presented in the Draft EIR and only minor technical changes or additions have been made. These changes and additions to the Draft EIR do not raise important new issues about significant effects on the environment. Such changes are insignificant as the term is used in Section 15088.5(b) of the State CEQA Guidelines.

A compilation of revisions to the Draft EIR is presented below. Changes in text reflect revisions, additions, or replacements to existing text. Revisions to existing text are denoted by strikethrough (~~strikethrough~~) where existing text is removed, and by underline (underline) where text is added for clarification. The following revisions are organized sequentially as they appear in the Draft EIR.

4.1 EXECUTIVE SUMMARY

- Page ES-3:

Based on comparison of the environmental impacts of the Proposed Project and alternatives, the Environmentally Superior Alternative is identified as required by CEQA. The Environmentally Superior Alternative would be the ~~Proposed Project~~ Partial Underground Alternative. Impacts of the Environmentally Superior Alternative are defined in each issue area's impact analysis as presented in Section D (Environmental Analysis) within this EIR. As described above, the ~~Proposed Project~~ Partial Underground Alternative would result in significant unavoidable impacts. However, as described in Section D (Environmental Analysis), the impacts associated with ~~construction and long-term~~ operation of the ~~Proposed Project~~ Partial Underground Alternative would be less than those generated by ~~construction and operation~~ of the CPUC's Northerly Route Alternative Option 3 and the ~~Partial Underground Alternative~~ Proposed Project.

4.2 SECTION A – INTRODUCTION

- Page A-2:

Currently, SCE's existing subtransmission line right-of-way (ROW) ~~is an active line between Maraschino and Banning Substations~~ contains an active line fed from the Devers System. ~~servicing as an overload~~ This line serves as an emergency electrical source to Maraschino Substation in the event that the preferred line serving Maraschino from the ~~between the Devers and Vista~~ 115 kV Systems in the event either system reaches capacity experiences an outage. When the ~~Devers and Vista Systems~~ are preferred line is operating normally, no load travels through the ~~existing~~ emergency 115 kV subtransmission line.

- Page A-10:

The CPUC has assigned Administrative Law Judge (ALJ) Victoria Kolakowski to oversee the hearings on the Proposed Project, and Commissioner Dian Grueneich is the Assigned Commissioner for the PTC application. The ALJ will issue a Proposed Decision on the Project in

Spring 2008. The Commission may, at its discretion, hold Evidentiary Hearings to define the scope of the proceeding in regard to issues of Project need, Project cost, and other considerations.

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Table A-1. Permits Required for the El Casco System Project

Permits	Agency	Jurisdiction/Purpose
Federal Agencies		
Nationwide or Individual Permit (Section 404 of the Clean Water Act)	U.S. Army Corps of Engineers	Waters of the United States, including wetlands, ephemeral drainages
Section 7 consultation (through U.S. Army Corps of Engineer's review process)	U.S. Fish and Wildlife Service (USFWS)	Consultation on federally listed species; incidental take authorization (if required)
Lift Plan Permit	Federal Aviation Administration (FAA)	Potential Helicopter Construction Plans at the Mill Creek Communications Site (if applicable)
Form 7460-1	Federal Aviation Administration (FAA)	Evaluation of impacts to National Airspace System (NAS)
Section 106 of the NHPA Review (through U.S. Army Corp of Engineer's review process)	Advisory Council on Historic Preservation	Cultural Resource Management Plan (if appropriate)
State Agencies		
Permit to Construct	CPUC	Overall Project approval and CEQA environmental review process
National Pollutant Discharge Elimination System – General Construction Stormwater Permit Section 402	California Regional Water Quality Control Boards (RWQCB), Regions 7 and 8	This permit applies to all construction Projects that disturb more than 5 acres
Section 401 Water Quality Certification (or waiver thereof)	RWQCB	Requests RWQCB's certification that the Project is consistent with State water quality standards
Road Closures	Caltrans	Permit to install guard poles in roadway ROWs, temporary road closures, and potential stringing activities across I-10 (for Route Alternative Option 3)
Endangered Species consultation 2081	California Department of Fish and Game (CDFG)	Consultation on State-listed species; incidental take authorization (if required)
Section 1602 Streambed Alteration Agreement	CDFG	Modifications to bank of San Timoteo Creek, Jurisdictional Washes near Smith Creek
Consultation (through CEQA review process)	State Historic Preservation Officer	Cultural resources management (if appropriate)
Authority to Construct/Permit to Operate	South Coast Air Quality Management District	Demolition of existing towers
Local Agencies		
Western Riverside County Multi-Species Habitat Conservation Plan	Riverside County	Compliance with MSHCP, documentation of HANS process or receive local waiver
Roadway Encroachment and Closure Permit	Riverside County, San Bernardino County	Permit to install guard poles in roadway ROWs, temporary road closures
Roadway Encroachment and Closure Permit	City of Beaumont, City of Banning, City of Redlands	Permit to install guard poles in roadway ROWs, temporary road closures
Grading and Building Permits	City of Beaumont, City of Banning, City of Yucaipa, Riverside County	Permission to conduct grading and building activities

4.3 SECTION B – PROJECT DESCRIPTION

- Page B-1 to B-2:

As part of the new ~~fiber optic~~ telecommunications system, microwave towers would be installed at El Casco Substation and the existing Mill Creek Communications Site, located on SCE-owned property within the San Bernardino National Forest.

- Page B-9:

An approximately ~~24~~ 30-foot wide asphalt concrete paved entry road located to the north and west of the substation site would be constructed to provide access to the substation from San Timoteo Canyon Road.

- Page B-9:

The access road would be constructed in accordance with the proposed substation site plan, as depicted in Figure B-~~2~~ 3a, El Casco Substation Site Plan.

- Page B-33:

Overhead ground wires would be installed ~~on the peaks of the steel poles~~ below the phase conductors.

- Page B-36:

At the northeast substation corner, the duct banks would enter separate 26 inch (internal dimension) bore casings, spaced six feet apart, which would be installed underground for about 300 feet, beneath both the San Timoteo Creek and the adjacent railroad tracks, and then terminate in separate vaults on the ~~south~~ north side of San Timoteo Canyon Road (see Figure B-3b, El Casco Substation Site Plan Aerial View).

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Table B-12 Construction Personnel And Equipment Summary (Microwave System)

Construction Element	Number of Personnel	Number of Days (per site)	Equipment Requirements
Antenna Tower Construction Crew	4	30 (Ph. 1) 0 (Ph. 2)	2 - Crew Trucks (Gas/Diesel) 1 - 100' Crane (Diesel) - El Casco 1 - 150' Crane (Diesel) - Mill Creek ¹ 1 - 100' Lift Truck (Diesel) - El Casco 1 - 150' Lift Truck (Diesel) - Mill Creek ¹ <u>1 - Backhoe or Auger Truck</u>
Telecommunications Installation Crew	4	15 (Ph. 1) 10 (Ph. 2)	1 - 2-ton Truck (Gas/Diesel) 1 - Crew Truck (Gas)

4.4 SECTION C – ALTERNATIVES

- Page C-12:

“In addition, it should be noted that with implementation of this alternative, SCE would need to ~~energize its~~ use its existing 115 kV line between Banning and Maraschino Substations to carry load at all times (i.e., Green Line shown on Figure C-1).”

4.5 SECTION D.2 – AIR QUALITY

- Page D.2-3:

Table D.2-3: Attainment Status for South Coast Air Quality Management District – South Coast Air Basin

Pollutant	Federal Designation	State Designation
Ozone	Severe Nonattainment	Extreme Nonattainment
PM10	Serious Nonattainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
CO	Serious Nonattainment Attainment	Attainment
NO ₂	Unclassified/Attainment	Unclassified/Attainment
SO ₂	Attainment	Attainment

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In the presence of ultraviolet radiation, both NO_x and VOCs go through a number of complex chemical reactions to form ozone. Table D.2-4 summarizes the best representative ambient ozone data for the Project area collected over the past ~~nine~~ ten years from the monitoring station at the Banning Municipal Airport. The table includes the maximum hourly concentration and the number of days above the National and State standards. As indicated in this table, ozone formation is generally higher in spring and summer and lower in the winter. The SCAB is classified as an extreme nonattainment area for the ozone CAAQS and as a severe nonattainment area for the 8-hour ozone NAAQS.

Table D.2-4. Ozone Air Quality Summary 1997-2006
 Recorded at Banning Municipal Airport – Riverside County

Year	Days Above CAAQS 1-Hr	Month of Max. 1-Hr Avg.	Max. 1-Hr Avg. (ppm)	Days Above NAAQS CAAQS 8-Hr	Month of Max. 8-Hr Avg.	Max. 8-hr Avg. (ppm)
1997	100	JUN	0.180	140	JUN	0.149
1998	53	AUG	0.168	90	AUG	0.134
1999	55	JUN	0.144	90	JUN	0.124
2000	53	SEP	0.138	85	JUN	0.113
2001	63	JUN	0.149	97	JUN	0.129
2002	64	AUG	0.160	102	AUG	0.131
2003	75	JUL	0.166	107	JUL	0.146
2004	49	AUG	0.156	92	JUL	0.116
2005	47	JUL	0.144	91	JUL	0.132
2006	57	AUG	0.156	99	JUN	0.116

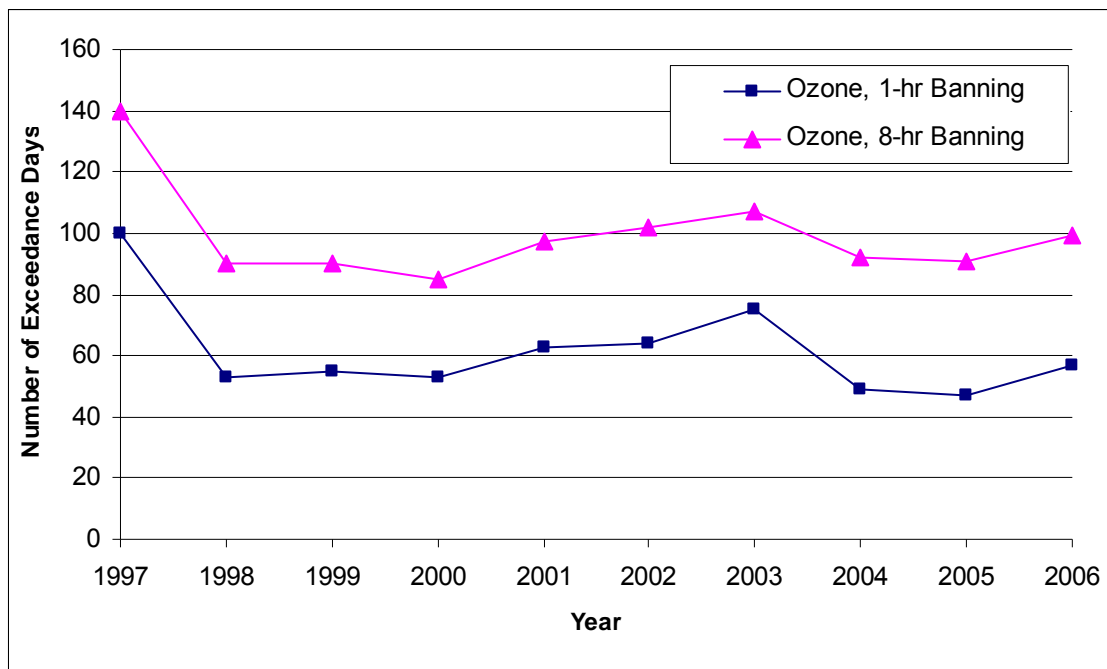
Source: CARB, 2006 and 2007c.
 California Ambient Air Quality Standard (CAAQS): 1-hr, 0.09 ppm, 8-hr, 0.07 ppm
 National Ambient Air Quality Standard (NAAQS): 1-hr, 0.12 ppm; 8-hr, 0.08 ppm

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The year 1997 to 2006 trends for the maximum 1-hour and 8-hour ozone concentrations, referenced to the most stringent standard, and the number of days exceeding the California 1-hour ~~standard~~ and the ~~Federal~~ 8-hour standards for the Banning Airport monitoring station are shown in Figures D.2-2 and D.2-3, respectively.

- Page D.2-5:

Figure D.2-3. Ozone – Number of Days Exceeding the 1-Hr CAAQS and 8-hr NAAQS CAAQS (1997-2006)



Source: CARB, 2006; CARB, 2007c.

- Page D.2-6:

Table D.2-6 summarizes the ambient nitrogen dioxide data for the past ~~ten~~ nine years from the Banning Airport monitoring station. As indicated in Table D.2-6, there have been no exceedances of California Ambient Air Quality Standards or National Ambient Air Quality Standards since 1999.

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Table D.2-8 summarizes the ambient fine particulate matter data collected over the past ~~seven~~ eight years from San Bernardino which is considered the most representative PM_{2.5} monitoring station located near the Project area.

- Page D.2-9:

Year	Month of Max. Daily Avg.	Max. Daily Avg. (µg/m ³)	98 th Percentile of Max. Daily Avg. (µg/m ³)	Days Above 98 th Percentile Daily NAAQS	3-Yr. Avg. 98 th Percentile of Max. Daily Avg. (µg/m ³)	National Annual Avg. (µg/m ³)	3-Yr. Avg. of National Annual Avg. (µg/m ³)
1999	NOV	121.4	71.5	4	---	25.6	---
2000	OCT	89.8	70.3	2	---	25.9	---
2001	APR	78.5	68.4	5	70	26.1	25

Year	Month of Max. Daily Avg.	Max. Daily Avg. (µg/m ³)	98 th Percentile of Max. Daily Avg. (µg/m ³)	Days Above 98 th Percentile Daily NAAQS	3-Yr. Avg. 98 th Percentile of Max. Daily Avg. (µg/m ³)	National Annual Avg. (µg/m ³)	3-Yr. Avg. of National Annual Avg. (µg/m ³)
2002	OCT	82.1	66.3	3	68	25.8	25
2003	OCT	73.9	58.4	1	64	22.2	24
2004	JUL	93.4	72.4	4	66	21.9	23
2005	OCT	106.2	43.4	1	58	17.4	20
2006	MAY	55	47.7	0	55	17.7	19

Source: CARB, 2007c.

California Ambient Air Quality Standard (CAAQS): Annual Arithmetic Mean (State Annual Average), 12 µg/m³

National Ambient Air Quality Standard: 3-Year Average - 98th Percentile of 24-Hr Avg. Conc., 35 µg/m³.

3-Year Average of Annual Arithmetic Mean (National Annual Average), 15 µg/m³; ~~3-Year Average of Annual Arithmetic Mean (State Annual Average), 12 µg/m³.~~

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As discussed above and presented in Table D.2-3, the SCAB is in nonattainment of the federal ~~1-hour and 8-hour~~ and State ozone, CO, PM10, and PM2.5 standards; and nonattainment with the State ~~1-hour~~ ozone, ~~CO~~, PM10, and PM2.5 standards. The Project area is designated as attainment/unclassified for the nitrogen dioxide, carbon monoxide, and sulfur dioxide for both State and federal standards. The Project area continues to exceed the State ~~1-hour~~ and federal ~~8-hour~~ ozone and particulate matter standards with little or no progress since 1998. As such, an increase in emissions of ozone precursors and particulate matter and particulate matter precursors would cause or contribute to existing air quality violations, causing a significant air quality impact.

- Page D.2-13

Strategies that the State should pursue for managing GHG emissions in California are identified in the California Climate Action Team’s Report to the Governor (CalEPA, 2006). Many focus on generally reducing consumption of petroleum across all areas of the California economy. Improvements in transportation energy efficiency (fuel economy) and alternatives to petroleum-based fuels are slated to provide substantial reductions by 2020 (CalEPA, 2006). Initially, three “discrete” early action measures to reduce GHG emissions between 13 and 26 MMTCO₂ Eq. annually by 2020 are being pursued: the Low Carbon Fuel Standard; reduction of refrigerant losses from motor vehicle air conditioning maintenance; and increased methane capture from landfills (CARB, 2007). In early 2008, the CPUC and California Energy Commission found that a cap-and-trade program would enable CARB to cost-effectively reduce GHG emissions from the electricity sector, but allowances and offset programs for carbon trading in California are still in the developmental phase (CPUC Rulemaking R. 06-04-009).

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Table D.2-13: Applicant-Proposed Measures (APMs)¹

Air Quality	
APM AQ-1: Earth-moving	<ul style="list-style-type: none"> • Cease all active operations; OR • Apply water to soil not more than 15 minutes prior to moving such soil (SCAQMD Rule 403 Table 3, additional requirements for large operations when performance standards cannot be met through the use of Table 2 actions).

¹ Applicant Proposed Measures (APMs) are numbered based on the section and sequence in which they appear in the PEA.

Table D.2-13: Applicant-Proposed Measures (APMs)¹

APM AQ-2: Disturbed surface areas	<ul style="list-style-type: none"> • On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR • Apply chemical stabilizers prior to wind event; OR • Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind-driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR • Utilize any combination of control actions presented above such that, in total, these actions apply to all disturbed surface areas. • (SCAQMD Rule 403 Table 3, additional requirements for large operations when performance standards cannot be met through the use of Table 2 actions)
APM AQ-3: Unpaved roads	<ul style="list-style-type: none"> • Apply chemical stabilizers prior to wind event; OR • Apply water twice per hour during active operation; OR • Stop all vehicular traffic. • (SCAQMD Rule 403 Table 3, additional requirements for large operations when performance standards cannot be met through the use of Table 2 actions)
APM AQ-4: Open storage piles	<ul style="list-style-type: none"> • Apply water twice per hour. • Install temporary coverings. <p>(SCAQMD Rule 403 Table 3, additional requirements for large operations when performance standards cannot be met through the use of Table 2 actions)</p>
APM AQ-5: Paved road track-out	<ul style="list-style-type: none"> • Cover all haul vehicles; OR • Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads. • (SCAQMD Rule 403 Table 3, additional requirements for large operations when performance standards cannot be met through the use of Table 2 actions)
APM AQ-6: All categories	Any other control measures approved by the SCAQMD Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 of SCAQMD Rule 403 may be used.
APM AQ-7: Earth-moving (except construction cutting and filling areas, and mining operations)	<ul style="list-style-type: none"> • Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operation during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR • For any earth-moving, which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction. <p>(SCAQMD Rule 403 Table 2)</p>
APM AQ-8: Earth-moving: Construction fill areas	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four hour period of active operations. (SCAQMD Rule 403 Table 2).
APM AQ-9: Construction cut areas and mining operations	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors. (SCAQMD Rule 403 Table 2)
APM AQ-10: Disturbed surface areas (except completed grading areas)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area. (SCAQMD Rule 403 Table 2)
APM AQ-11: Disturbed surface areas: Completed grading areas	Apply chemical stabilizers within five working days of grading completion; <u>or take actions listed in the first or third bullet I APM AQ-12.</u> (SCAQMD Rule 403 Table 2)

Table D.2-13: Applicant-Proposed Measures (APMs)¹

APM AQ-12: Inactive disturbed surface areas	<ul style="list-style-type: none"> Apply water to at least 70<u>80</u> percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; <u>or</u> Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface, <u>or</u> Establish a vegetative ground cover within 21 {30} days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; <u>or</u> Utilize any combination of control actions presented above such that, in total, these actions apply to all inactive disturbed surface areas. <p>(SCAQMD Rule 403 Table 2)</p>
APM AQ-13: Unpaved Roads	<ul style="list-style-type: none"> Water all roads used for any vehicular traffic at least once per every two hours of active operations (3 times per normal 8 hour work day); <u>or</u> Water all roads for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; <u>or</u> Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface. <p>(SCAQMD Rule 403 Table 2)</p>
APM AQ-14: Open storage piles	<ul style="list-style-type: none"> Apply chemical stabilizers; <u>or</u> Apply water to at least 80 {70} percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; <u>or</u> Install temporary coverings; <u>or</u> Install a three-sided enclosure with walls with no more than 50 percent porosity, which extend, at a minimum, to the top of the pile. <p>(SCAQMD Rule 403 Table 2)</p>
APM AQ-15: All Categories	Any other control measures approved by the Executive Officer and the USEPA as equivalent to the methods specified in Rule 403 Table 2 may be used. (SCAQMD Rule 403 Table 2)
APM AQ-16: Track Control Options	<ul style="list-style-type: none"> Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet; <u>or</u> Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device; <u>or</u> Any other control measures approved by the Executive Officer and the USEPA <u>as equivalent to the two above track-out control options.</u> <p>(SCAQMD Rule 403(d)(5) for activities of 5 or more disturbed acres or the daily export of more than 100 cubic yards of bulk material)</p>

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Table D.2-14. Proposed Project Construction Emissions

	Emissions (daily – lbs/day, annual – tons/yr)						
	VOC	CO	NOx	SOx	PM10	PM2.5	
Maximum Daily Emissions	30.84 <u>31</u>	124.60 <u>125</u>	209.56 <u>210</u>	0.24	190.98 <u>191</u>	44.46 <u>44</u>	
Significance Threshold	75	550	100	150	150	55	
Exceeds (YES/NO)	NO	NO	YES	NO	YES	NO	
Annual Emissions (2008)	0.28 <u>0.3</u>	1.03 <u>1.0</u>	1.99 <u>2.0</u>	0.00	5.57 <u>5.6</u>	0.97 <u>1.0</u>	
Annual Emissions (2009)	1.57 <u>1.6</u>	6.79 <u>6.8</u>	9.66 <u>9.7</u>	0.01	12.92 <u>12.9</u>	2.63 <u>2.6</u>	
Annual Emissions (2010)	0.67 <u>0.7</u>	3.64 <u>3.6</u>	4.30 <u>4.3</u>	0.01	5.27 <u>5.3</u>	0.99 <u>1.0</u>	
Project Total Emissions	2.53 <u>2.5</u>	11.42 <u>11.4</u>	15.95 <u>16.0</u>	0.02	23.76 <u>23.8</u>	4.60 <u>4.6</u>	

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Table D.2-15. Proposed Project Localized Construction Impacts (lbs/day)

	NOx	PM10	PM2.5
El Casco Substation Maximum Daily Emissions	108-0	121.4	20.3
Localized Significance Thresholds (SRA 28, 5-acre site, 500 meters)	1,657	207	105
Exceeds (YES/NO)	NO	NO	NO
Banning Substation Maximum Daily Emissions	51.5 52	21.77 22	7.8
Localized Significance Thresholds (SRA 29, 1-acre site, 25 meters)	236	6	4
Exceeds (YES/NO)	NO	YES	YES
Zanja Substation Maximum Daily Emissions	39.4	21.4	7.2
Localized Significance Thresholds (SRA 35, 1-acre site, 50 meters)	240	12	5
Exceeds (YES/NO)	NO	YES	YES
115 kV Installation Maximum Daily Emissions	12.0	19.9 20	3.5
Localized Significance Thresholds (SRA 29, 1-acre site, 25 meters)	236	6	4
Exceeds (YES/NO)	NO	YES	NO
220 kV Installation Maximum Daily Emissions	42.9 43	8.5	2.9
Localized Significance Thresholds (SRA 28, 1-acre site, 500 meters)	1,385	178	86
Exceeds (YES/NO)	NO	NO	NO
Mill Creek Tower Maximum Daily Emissions	26.5 27	19.6 20	3.5
Localized Significance Thresholds (SRA 38, 1-acre site, 500 meters)	1,059	220	112
Exceeds (YES/NO)	NO	NO	NO
Fiber Optics Installation Maximum Daily Emissions	8.7	0.7	0.4
Localized Significance Thresholds (SRA 29/35, 1-acre site, 25 meters)	191	4	4
Exceeds (YES/NO)	NO	NO	NO
12kV Installation Maximum Daily Emissions	10.8 11	5.0	1.2
Localized Significance Thresholds (SRA 28, 1-acre site, 500 meters)	1,385	178	86
Exceeds (YES/NO)	NO	NO	NO

Source: Appendix 3.

1. This represents onsite emissions only. Onroad vehicle emissions not occurring onsite are not included.
2. The CO emission LST values that would be used for each construction element are all within ten percent or are greater than the regional threshold of 550 lbs/day, so using the regional determination (see Table D.2-13) as a basis there is no potential for this Project to exceed the CO emission LSTs.

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The Proposed Project would cause greenhouse gas (GHG) emissions during the short-term duration of project construction. During operation of the project, minor quantities of long-term greenhouse gas emissions would also occur from the Proposed Project. ~~There would be a minimal increase in the~~ Inspection and maintenance activities would also cause additional GHG emissions for the new subtransmission lines; however, these increases ~~would~~ could be somewhat offset because ~~the~~ by the project ~~would~~ providing greater transmission effectiveness and efficiency. The new subtransmission lines that could slightly reduce power plant generation requirements and line loss totals, which together might cause a slight indirect reduction in greenhouse gases from power plants connected to the grid during project operation, but this benefit has not been quantified here or by SCE. Demand for electricity would not change as a result of the Proposed Project, and power generated by power plants in response to the demand would occur at some location regardless of whether the Proposed Project is approved or disapproved. No direct or indirect air quality impacts would be related to the project through increased power plant operation. The intent of the Proposed Project is to improve delivery of power that is currently generated to the local area and prevent overload of the existing system. In this way, by improving the distribution efficiency of the

California transmission grid, the Proposed Project would partially implement one of the IPCC key strategies for mitigating climate change.

An unquantifiable direct air quality impact of subtransmission system operation would be the potential escape of SF₆, a potent greenhouse gas, used in operation of the electrical switchgear equipment and circuit breakers. Because of the high global warming potential of SF₆ even small quantities of emissions are a concern. Any increase in SF₆ emissions absent a commensurate GHG emission reduction would result in an ~~net~~ increase of GHG emissions and a significant and unavoidable impact. SCE currently takes voluntary steps to address this issue by participating in the U.S. EPA SF₆ Emissions Reduction Partnership for Electric Power Systems, however, to ensure that all feasible SF₆ reduction strategies are implemented, Mitigation Measure AQ-3 would be required to minimize the impact of SF₆ escape. Although the measure would reduce SF₆ escape and because carbon offset programs are still in the developmental phase, it would not be possible to entirely eliminate this impact. Therefore, the direct impact of the Proposed Project on greenhouse gases would remain significant and unavoidable (Class I).

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Table D.2-16. CPUC's Northerly Route Alternative Option 3 Construction Emissions

	Emissions (daily - lbs/day, annual - tons/yr)					
	VOC	CO	NOx	SOx	PM10	PM2.5
Maximum Daily Emissions	32.54	135.97 <u>136</u>	221.72 <u>222</u>	0.27	217.30	48.65 <u>48.7</u>
Significance Threshold	75	550	100	150	150	55
Exceeds (YES/NO)	NO	NO	YES	NO	YES	NO
Annual Emissions (2008)	0.28 <u>0.3</u>	1.03	1.99 <u>2.0</u>	0.00	5.57 <u>5.6</u>	0.97 <u>1.0</u>
Annual Emissions (2009)	4.66 <u>1.7</u>	7.32	10.34	0.01	14.54	2.92
Annual Emissions (2010)	0.67 <u>0.7</u>	3.58 <u>3.6</u>	4.28 <u>4.3</u>	0.01	4.10	0.84
Project Total Emissions	2.64	11.93	16.60	0.02	24.24	4.74

Source: Appendix 3.

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Construction and operation of Route Alternative Option 3 would result in similar emissions as those described above for the Proposed Project. An unquantifiable direct air quality impact of subtransmission system operation would be the potential escape of SF₆, a potent greenhouse gas, used in operation of the electrical switchgear equipment and circuit breakers. Any increase in SF₆ emissions absent a commensurate GHG emission reduction would result in an ~~net~~ increase of GHG emissions and is considered adverse. Mitigation Measure AQ-3 would be required to minimize the impact of SF₆ escape. Although the measure would reduce SF₆ escape and because carbon offset programs are still in the developmental phase, it would not be possible to entirely eliminate this impact. Therefore, the direct impact of Route Alternative Option 3 on greenhouse gases would be significant and unavoidable (Class I).

• Page D.2-26

Table D.2-17. Partial Underground Alternative Construction Emissions

	Emissions (daily – lbs/day, annual – tons/yr)					
	VOC	CO	NOx	SOx	PM10	PM2.5
Maximum Daily Emissions	34.26 <u>34.3</u>	138.52 <u>139</u>	223.60 <u>224</u>	0.26	227.60 <u>228</u>	51.05 <u>51.1</u>
Significance Threshold	75	550	100	150	150	55
Exceeds (YES/NO)	NO	NO	YES	NO	YES	NO
Annual Emissions (2008)	0.28 <u>0.3</u>	1.03	1.99 <u>2.0</u>	0.00	5.57 <u>5.6</u>	0.97 <u>1.0</u>
Annual Emissions (2009)	1.77 <u>1.8</u>	7.53	10.76 <u>10.8</u>	0.01	15.54	3.12
Annual Emissions (2010)	0.87 <u>0.9</u>	4.50	5.54	0.01	6.56 <u>6.6</u>	1.06 <u>1.1</u>
Project Total Emissions	2.92	13.06 <u>13.1</u>	18.29 <u>18.3</u>	0.02	27.64	5.15 <u>5.2</u>

Source: Appendix 3.

• Page D.2-27

Table D.2-18. Partial Underground Alternative Localized Construction Impacts (lbs/day)

	NOx	PM10	PM2.5
115 kV Installation Maximum Daily Emissions	24.3	28.4	5.6
Localized Significance Thresholds (SRA 29, 1-acre site, 25 meters)	236	6	4
Exceeds (YES/NO)	NO	YES	YES

Source: Appendix 3.

- Notes:
1. This represents onsite emissions only. Onroad vehicle emissions not occurring onsite are not included.
 2. The CO emission LST values that would be used for each construction element are all within ten percent or are greater than the regional threshold of 550 lbs/day, so using the regional determination (see Table D.2-13) as a basis there is no potential for this Project to exceed the CO emission LSTs.

• Page D.2-28

Construction and operation of the Partial Underground Alternative would result in similar emissions as those described above for the Proposed Project. An unquantifiable direct air quality impact of subtransmission system operation would be the potential escape of SF₆, a potent greenhouse gas, used in operation of the electrical switchgear equipment and circuit breakers. Any increase in SF₆ emissions absent a commensurate GHG emission reduction would result in an ~~net~~ increase of GHG emissions and is considered adverse. Mitigation Measure AQ-3 would be required to minimize the impact of SF₆ escape. Although the measure would reduce SF₆ escape and because carbon offset programs are still in the developmental phase, it would not be possible to entirely eliminate this impact. Therefore, the direct impact of the Partial Underground Alternative on greenhouse gases would be significant and unavoidable (Class I).

• Page D.2-29

Construction and operation of required No Project Alternative would result in fewer emissions than those described above for the Proposed Project. The construction emissions and possible fugitive emissions of SF₆ from the transformer and substation improvements would cause an increase of greenhouse gas emissions similar to those of the Proposed Project. Mitigation similar to Measure AQ-3 described above would be required to minimize the impact of SF₆ escape associated with the No Project Alternative. Although the measure would reduce SF₆ escape and because carbon offset programs are still in the developmental phase, it would not be possible to entirely eliminate this

impact. Therefore, significant unavoidable greenhouse gas emissions would occur (Class I). Furthermore, the No Project Alternative would not be as effective as the Proposed Project in improving the distribution efficiency of the California transmission grid, thus resulting in more greenhouse gas release.

4.6 SECTION D.3 – LAND USE

- Page D.3-14:

San Bernardino National Forest. The Mill Creek Communications Site would be located within the San Bernardino National Forest on SCE fee-owned property, north of the Cities of Yucaipa and Redlands. This National Forest offers over 500 miles of hiking trails within 700,000 acres of forest land. The San Bernardino National Forest offers a variety of recreational opportunities including hiking and backpacking, trail riding by horse, bicycling, off-highway vehicle use, camping and picnicking, and fishing, as well as winter activities such as snowshoeing and cross-country and alpine skiing (USDA Forest Service, 2007b).

- Page D.3-23:

LU-2a Coordinate Construction Schedule with Public and Community Facilities. SCE shall coordinate with public and community facilities and services regarding the construction schedule and duration in order to minimize impacts to these land uses. The purpose of this measure is to work with sensitive land uses that would be impacted by construction and to identify construction times/periods that would have the least impact to peak use of these public and community facilities. This coordination could result in limiting or avoiding construction during peak facility uses. ~~Thirty days prior~~ Prior to construction at a particular location or construction spread, SCE shall document its coordination efforts including contact persons, information provided, and comments received, and submit this documentation to the CPUC.

- Page D.3-26:

Construction activities would occur ~~on~~ along the fairway, and would temporarily disturb approximately 0.6 acre.

4.7 SECTION D.4 – BIOLOGICAL RESOURCES

- Page D.4-3:

Areas where the fiber optic equipment would be installed on existing lines or within existing facilities were not surveyed. ~~as these areas would be avoided during the breeding season for migratory birds.~~

- Page D.4-17:

Additionally, red-tailed hawk nests were observed on subtransmission line towers in the vicinity of the proposed El Casco Substation site and immediately adjacent to ~~within the fenced boundaries of~~ the existing Zanja Substation.

- Page D.4-19:

The CNDDDB and CNPS literature search identified 15 sensitive plant species that are known to occur within the vicinity of the Proposed Project and that have a moderate to high potential to occur within the survey area.

- Page D.4-45 to D.4-46:

Temporary impacts are expected to occur along portions of San Timoteo Creek, an ephemeral tributary to San Timoteo Creek, ~~a concrete V ditch located north of Fourth Street in the City of Beaumont,~~ and the unnamed ephemeral drainage located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning.

- Page D.4-50:

If discretionary permits are required, SCE will be acquiring coverage under the MSHCP by participating as a developer and obtaining the required permits from the County of Riverside, and the cities of Banning and Beaumont, and any other coordinating MSHCP signatories.

- Page D.4-57:

However, in some locations the proposed towers are located in project activities such as the placement of culverts near the proposed substation would result in the loss of ephemeral washes or riparian habitat.

- Page D.4-57:

SCE would also mitigate the loss of vegetation through the implementation of the MSHCP process. APM BIO-4 indicates SCE would comply with all regulations outlined in the MSHCP. Provided SCE complies with the Best Management Practices identified in the MSHCP (Volume 1-Appendix C of the MSHCP) and provides the appropriate fees, Project impacts to vegetation are mitigated. ~~This process would require SCE to document the total acres of habitat subject to Project disturbance and provide fees that mitigate for the loss of covered habitats.~~

- Page D.4-58:

~~Foraging habitat may also be lost in some of the small drainages that would be subject to Project disturbance. These areas are known to support several sensitive mammal species including the Los Angeles pocket mouse.~~

- Page D.4-63:

~~Similar to other stations, SCE may propose motion activated lighting to illuminate the locked gate at night. Motion activated lighting can be triggered by animals as well as maintenance vehicles, and therefore, would create adverse lighting effects in the nighttime landscape even when no maintenance vehicle is present.~~

- Page D.4-63:

~~By providing the MSHCP development fee (Section D.4.1.3.1 Special Habitat Management Areas Overview – Western Riverside County MSHCP) SCE would mitigate impacts to species by the acquisition of mitigation land within the MSHCP Core Area.~~

- Page D.4-66:

B-6 Conduct Surveys for Sensitive Plant Species and Flag for Avoidance. SCE shall conduct focused surveys prior to construction during the floristic period appropriate for each of the sensitive plant species identified in Table D.4-3 with the potential to occur within the Project ROW *and* within 100 feet of all surface-disturbing activities. Populations of sensitive plants shall be flagged and mapped prior to construction. If sensitive plants (CNPS List 1A, 1B, or 2) are located during the focused surveys, then modification of the placement of structures, access roads, laydown areas, and other ground-disturbing activities would be implemented in order to avoid the plants. If listed plant species or species requiring 90 percent avoidance by the MSHCP cannot be avoided, SCE shall avoid the plants until authorized to proceed through the context of a Biological Opinion and authorized through the MSHCP Determination of Biologically Equivalent or Superior Preservation process.

- Page D.4-71:

The relatively low-elevation San Timoteo Canyon and San Gorgonio Pass area is a likely migratory pathway for birds, including raptors, moving between the desert/inland areas and coastal ranges (EPA, 2007; England and Laudenslayer, Jr., 1995).

- Page D.4-80:

With the exception of the proposed El Casco substation, the Proposed Project would not substantially interfere with the movement of any native resident or migratory fish species.

- Page D.4-80:

Riparian or wash habitat in the Project area would also be spanned by the 115 kV subtransmission line, ~~and where the LWS and TSPs would be placed within a wash, impacts would be short term and would not substantially alter the existing conditions at the sites.~~

4.8 SECTION D.5 – CULTURAL AND PALEONTOLOGICAL RESOURCES

- Page D.5-2:

SCE provided Morongo with a copy of the Cultural Resources Technical Study on June 13, 2007. On November 29, 2007, Morongo responded and made requests related to monitoring during construction and disposition of artifacts.

- Page D.5-13:

In 1869, Noble sold the 160-acre Williams/Chapin Ranch to James Gilman. Gilman took up residence in Pope’s adobe. After Gilman married, he built a new home and converted the adobe into a blacksmith shop. In addition to ranching and the businesses surrounding the stagecoach stop, Gilman also established a sawmill and the area’s first general store, and also provided pastureland for nearby farmers (Swope, 1987; Hughes, 1938). ~~A portion of the 115 kV subtransmission line corridor crosses the vast Gilman Ranch (P-33-1701). The Ranch is listed on the National Register. The Gilman Ranch is more than a 1/2-mile from the Proposed Project and all alternatives.~~

- Page D.5-16:

None of the newly recorded resources in this portion of the project area are recommended eligible for listing on the NRHP or are considered to be cultural historical resources for the purposes of CEQA. However, two structures (P-33-8334 and P-33-9150) are eligible for local listing or designation.

- Page D.5-21:

Table D.5-8. Cultural Resources Recorded Within the Study Area of the Banning Substation to Tower M17-T1 Fiber Optic Segment							
Trinomial / Primary Record #	Period	Site Description	Eligible for Listing			Fiber Optic Overhead or Underground	Recorded by (Date)
			NRHP	CRHR	Local		
P-33-8347H	Historic	Rose House ca. 1915 House	No	No	Listed Yes	Overhead	?A. Rutherford (1983)
CA-RIV-6381H P-33-9498	Historic	Union Pacific (formerly Southern Pacific) Railroad	-	-	-	Overhead	Ashkar (1999) C. Taniguchi (2005)
P-33-15193	Historic	Bonilla Residence 402 East Ramsey Street, Banning	No	No	-	Overhead	J. Marvin, Shannon Carmack, & J. Michalsky (2005)
P-33-15195	Historic	Cortez Residence 403-411 East Williams Street, Banning	No	No	-	Overhead	J. Marvin, Shannon Carmack, & J. Michalsky (2005)

- Page D.5-28 to D.5-29:

- **El Casco Substation to Banning Substation Segment.** A total of approximately 91,000 feet of fiber optic cable would be installed between the El Casco Substation and the Banning Substation, of which approximately 7,000 ft would be underground. There are 14 cultural resources recorded along the El Casco Substation to Banning Substation fiber optic segment. None of the resources along this segment are recommended eligible for listing on the NRHP or are considered to be cultural historical resources for the purposes of CEQA. However, one of these sites, 1222 West Lincoln Street (P-33-9150H), is listed as locally significant and located within a portion of the segment where fiber optic cable will be strung overhead on existing poles.
- **El Casco Substation to Tower M29-T2 Segment.** Approximately 3,000 feet of fiber optic cable would be installed underground between the El Casco Substation and the existing transmission tower numbered M29-T2. The El Casco Substation to Tower M29-T2 fiber optic segment contains no previously recorded or newly identified cultural resources.

- **El Casco Substation to Tower M30-T3 Segment.** Four new wood poles, each approximately 40 feet tall, would be installed southeast of Fisherman's Retreat Campground. A total of approximately 8,000 feet of fiber optic cable would be installed between the El Casco Substation and the existing transmission tower numbered M30-T3, of which approximately 3,000 feet would be underground. There are three cultural resources recorded along the El Casco Substation to Tower M30-T3 fiber optic segment. None of the resources along this segment are recommended eligible for listing on the NRHP or are considered to be cultural historical resources for the purposes of CEQA.
 - **Banning Substation to Tower M17-T1 Segment.** Approximately 12,000 feet of fiber optic cable would be installed between the Banning Substation and the existing transmission tower numbered M17-T1, of which approximately 2,000 feet would be underground. There are four cultural resources recorded along the Banning Substation to Tower M17-T1 fiber optic segment. None of the resources along this segment are recommended eligible for listing on the NRHP or are considered to be ~~cultural~~ historical resources for the purposes of CEQA. However, one of these sites, the Rose House (P-33-8347H), is listed as locally significant and located within a portion of the segment where fiber optic cable will be strung overhead on existing poles.
- Page D.5-30, Mitigation Measures for Impact CR-1:

CR-1b Cultural Resources Treatment Plan (CRTP). SCE shall develop a Cultural Resources Treatment Plan (CRTP) for all known and newly discovered cultural resources within areas of direct impact of project activities, including:

- Procedures for protection and avoidance of ESAs, evaluation and treatment of the unexpected discovery of cultural resources including Native American burials;
- Provisions and procedures for Native American consultation--specifically with Morongo Band of Mission Indians;
- Detailed reporting requirements by the project Archaeologist;
- Notification of the Morongo Band of Mission Indians upon discovery of human remains;
- ~~Curation~~ Consultation with Morongo Band of Mission Indians to determine disposition of any cultural materials collected during the project; and
- Requirements to specify that archaeologists and other discipline specialists meet the Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP).

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

The CRTP shall define construction procedures for areas near known/recorded cultural sites. Wherever a tower, access road, equipment, etc., must be placed or accessed within 100 feet of a recorded, reported, or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an ESA (without disclosure of the exact nature of the environmental sensitivity [i.e., the ESA is *not* identified as an archaeological site]). Construction equipment shall then be directed away from the ESA, and construction personnel shall be directed not to enter the ESA. Archaeological monitoring of project construction shall be focused in the immediate vicinity of the designated ESAs.

- Page D.5-32:

The area within the Banning Substation is designated as a High Paleontologic Sensitivity Area because ~~both the Mount Eden and of San Timoteo Formations are considered to have a high potential to contain significant non-renewable paleontological resources. Construction within this area may cause inadvertent impacts to paleontological resources. This impact is potentially significant (Class II), but mitigable to less than significant levels with implementation of Mitigation Measures CR-3a (Inventory Paleontological Resources in Final APE), CR-3b (Develop Paleontological Monitoring and Treatment Plan), CR-3c (Monitor Construction for Paleontology), CR-3d (Conduct Paleontological Data Recovery), and CR-3e (Train Construction Personnel) localities. However, the soils within the Banning Substation have been substantially disturbed. Therefore, no impacts to paleontological resources are anticipated, and consequently no mitigation measures are needed.~~

- Page D.5-33 to D.5-34, Mitigation Measures for Impact CR-3:

CR-3a Inventory Paleontological Resources in Final APE. Prior to construction, SCE shall conduct and submit for approval to the CPUC an inventory of potentially significant paleontological resources, based, in part, on field inspection of areas of high or undetermined paleontological sensitivity that would be affected by the project.

CR-3e Train Construction Personnel. All construction personnel shall be trained regarding the recognition of possible buried paleontological resources and protection of all paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. SCE shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials.

Upon discovery of potential buried paleontological materials by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and SCE's paleontologist notified. Once the find has been inspected and a preliminary assessment made, SCE's assigned paleontologist shall notify the CPUC and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure CR-3b (Develop Paleontological Monitoring and Treatment Plan).

• Page D.5-45:

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
CR-1: Project Construction Has the Potential to Affect Known Archaeological Resource (Class II)	<p>CR-1a: Avoid Environmentally Sensitive Areas. SCE shall perform pre-construction surveys for any project areas not yet surveyed (e.g., new or modified staging areas or pull sites). Resources discovered during those surveys would be subject to Mitigation Measures CR-1b (Cultural Resources Treatment Plan [CRTP]) and CR-1c (Construction Monitoring). Newly discovered and previously known prehistoric and historic archaeological sites located within, or just outside, of the project Area of Potential Effect (APE) shall be designated as Environmentally Sensitive Areas (ESAs). Construction personnel shall be instructed how to avoid ESAs.</p> <p>All construction personnel shall be trained regarding the recognition of possible buried cultural remains, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. SCE shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend training so that they are aware of the potential for inadvertently exposing buried archaeological deposits. SCE shall provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA, and anticipated procedures to treat unexpected discoveries.</p>	All locations where ground-disturbing activities would occur.	<ul style="list-style-type: none"> • SCE submit final survey report to CPUC. • CPUC verifies completion of training. 	<ul style="list-style-type: none"> • Known archaeological resources are not adversely affected by construction activity. • Appropriate Native American consultation is completed. 	CPUC	Prior to construction.
	<p>CR-1b: Cultural Resources Treatment Plan (CRTP). SCE shall develop a Cultural Resources Treatment Plan (CRTP) for all known and newly discovered cultural resources within areas of direct impact of project activities, including:</p> <ul style="list-style-type: none"> • Procedures for protection and avoidance of ESAs, evaluation and treatment of the unexpected discovery of cultural resources including Native American burials; • Provisions and procedures for Native American consultation--<u>specifically with Morongo Band of Mission Indians</u>; • Detailed reporting requirements by the project Archaeologist; • <u>Notification of the Morongo Band of Mission Indians upon discovery of human remains</u>; • <u>Curation Consultation with Morongo Band of Mission Indians to determine disposition</u> of any cultural materials collected during the project; and • Requirements to specify that archaeologists and other discipline specialists meet the Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP). <p>Implementation of the CRTP shall ensure that known and recorded cultural resources will be avoided during construction and operation and maintenance.</p>	All locations where ground-disturbing activities would occur with potentially CRHR-eligible resources.	<ul style="list-style-type: none"> • CPUC review and approve HPTP. • SCE conduct required Native American consultation. 	<ul style="list-style-type: none"> • Known archaeological resources are not adversely affected by construction activity. • Appropriate Native American consultation is completed. 	CPUC	CPUC approval prior to construction.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>Specific protective measures shall be defined in the CRTP to reduce the potential adverse impacts on any presently undetected cultural resources to less-than-significant levels. The CRTP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction.</p> <p>The CRTP shall define construction procedures for areas near known/recorded cultural sites. Wherever a tower, access road, equipment, etc., must be placed or accessed within 100 feet of a recorded, reported, or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an ESA (without disclosure of the exact nature of the environmental sensitivity [i.e., the ESA is not identified as an archaeological site]). Construction equipment shall then be directed away from the ESA, and construction personnel shall be directed not to enter the ESA. Archaeological monitoring of project construction shall be focused in the immediate vicinity of the designated ESAs.</p>					
	<p>CR-1c: Construction Monitoring. Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historic and prehistoric resources that could be encountered along the subtransmission line corridor. Monitoring shall occur in all areas of ground disturbing activity that occur within 100 feet of a cultural resource ESA, and during removal of all sediments above bedrock at the El Casco Substation site. The qualifications of the principal archaeologist shall be approved by the CPUC. Intermittent monitoring may occur in areas of moderate archaeological sensitivity after consultation and approval from the CPUC Lead Environmental Monitor. A Native American monitor is required at all culturally sensitive locations, as specified in the CRTP.</p> <p>APM CUL-4: Cultural resource surveys would be conducted in areas that have not been previously surveyed and surveys would be conducted to relocate previously recorded cultural resources once construction and staging areas are called out in final engineering. Any identified resources would be recorded and evaluated. If a cultural resource is identified within a construction/staging area then the construction/staging area would be shifted to avoid cultural resources. If construction/staging areas cannot avoid a significant resource, then appropriate mitigation measures would be developed to reduce any impacts to less than significant and all ground disturbing activities would be monitored by a qualified archaeologist.</p>	All locations identified in the CRTP.	<ul style="list-style-type: none"> • CPUC reviews and approves monthly monitoring reports. • CPUC receives and acts on reports of failure of ESAs to protect cultural resources. 	Known archaeological resources are not adversely impacted by construction activities.	CPUC	During construction.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
CR-2: Unanticipated Archaeological Resources May Be Damaged or Destroyed During Project Construction (Class II)	<p>CR 1a: Avoid Environmentally Sensitive Areas.</p> <p>CR 1c: Construction Monitoring.</p> <p>CR-2: Treatment of New Discoveries. Upon discovery of potential buried cultural materials, work in the immediate area of the find shall be halted and SCE’s archaeologist notified. Once the find has been identified, SCE’s archaeologist will make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be historically significant according to CEQA (CEQA Guidelines Section 15064.5 [a]).</p> <p>APM CUL-2: There is a high potential for buried cultural resources at the proposed El Casco Substation site, including possible structures and features from the historic Weaver Ranch. Prior to construction, a subsurface exploration program such as ground-penetrating radar, would be conducted to search for buried resources. Should resources be found by this means, they would be evaluated for CRHR-eligibility. Appropriate mitigation measures would be devised for eligible resources. Additionally, ground disturbing activity would be monitored by a qualified archaeologist.</p> <p>APM CUL-3: In the event that unexpected cultural resources are encountered during the course of project construction, work is to be halted in that location until a qualified archaeologist is able to evaluate the resource.</p>	All locations where ground disturbing activities would occur.	<ul style="list-style-type: none"> • CPUC reviews and approves monthly monitoring reports. • CPUC receives immediate notification of new discoveries. 	Unanticipated archaeological resources are not adversely impacted by construction activities.	CPUC	During construction.
CR-3: Project Construction Would Affect Significant Paleontological Resources (Class II)	CR-3a: Inventory Paleontological Resources in Final APE. Prior to construction, SCE shall conduct and submit for approval to the CPUC an inventory of potentially significant paleontological resources, based, <u>in part</u> , on field inspection of areas of high or undetermined paleontological sensitivity that would be affected by the project.	All locations of high or undetermined paleontological sensitivity where potential ground-disturbing activities would occur, <u>except the Banning Substation.</u>	CPUC to review inventory and sensitivity findings.	Identification and preliminary evaluation of all resources within potentially ground-disturbing activities.	CPUC	Prior to construction.
	CR-3b: Develop Paleontological Monitoring and Treatment Plan. SCE shall, upon approval of the paleontological inventory report by the CPUC, prepare and submit for approval a plan to mitigate identified impacts. The Paleontological Monitoring and Treatment Plan shall identify construction impact areas with high potential for encountering significant resources and the depths at which those resources are likely to be discovered. The Plan shall outline a coordination strategy to ensure that all construction disturbance in high sensitivity sediments would be monitored full-time by	Entire project.	CPUC review and approve treatment plan.	CPUC approval of treatment plan.	CPUC	Prior to construction.

Table D.5-11. Mitigation Monitoring Program – Cultural and Paleontological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	qualified professionals. The Plan shall also detail methods of recovery; post-excavation preparation and analysis of specimens; final curation of specimens at a recognized, accredited facility; data analysis; and reporting. The Plan shall also specify a program of sample collection prior to construction, including water washing to recover small vertebrate fossils (as defined by the Society of Vertebrate Paleontologists).					
	CR-3c: Monitor Construction for Paleontology. Based on the paleontological sensitivity assessment and Monitoring and Treatment Plan consistent with Mitigation Measure CR 3b (Develop Paleontological Monitoring and Treatment Plan), SCE shall conduct full-time construction monitoring in areas where and when sediments of high paleontological sensitivity would be disturbed. Construction activities shall be diverted when data recovery of significant fossils is warranted.	Locations identified in paleontological treatment plan.	Progress reporting CPUC as identified in treatment plan.	Discovery of significant fossil resources from all localities affected by construction.	CPUC	During construction.
	CR-3d: Conduct Paleontological Data Recovery. If avoidance of significant paleontological resources is not feasible or appropriate, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by SCE, in accordance with the approved Treatment Plan per Mitigation Measure CR 3b (Develop Paleontological Monitoring and Treatment Plan).	Locations identified in paleontological treatment plan.	<ul style="list-style-type: none"> • CPUC review and approve treatment plan. • CPUC review and approval of final data-recovery report and disposition of fossils. 	Recovery of adequate samples of significant fossil resources from all localities affected by construction.	CPUC	During construction; report within one year of data-recovery fieldwork.
	CR-3e: Train Construction Personnel. All construction personnel shall be trained regarding the recognition of possible buried paleontological resources and protection of all paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. SCE shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Upon discovery of potential buried paleontological materials by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and SCE's paleontologist notified. Once the find has been inspected and a preliminary assessment made, SCE's assigned paleontologist shall notify the CPUC and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure CR 3b (Develop Paleontological Monitoring and Treatment Plan).	Entire project.	<ul style="list-style-type: none"> • CPUC reviews and approves contract specifications. • CPUC reviews verification of required training. • CPUC receives prompt notification of new resource discoveries and violations. 	Paleontological resources are not adversely affected by construction activity.	CPUC	Prior to and during construction.

Table D.5-11. Mitigation Monitoring Program – Cultural and Paleontological Resources						
Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>APM PALEO-1: Conduct a paleontological field assessment of the finalized right of way for the substation location.</p> <p>APM PALEO-2: Prior to construction a paleontologist would salvage known exposed paleontological resources. This would consist of collected standard samples of fossiliferous sediments.</p> <p>APM PALEO-3: A paleontological monitor would be present during ground disturbing activities within the Project area. The monitor would be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts.</p> <p>APM PALEO-4: Upon encountering a large deposit of bone, salvage of all bone in the area would be conducted in accordance with modern paleontological techniques.</p> <p>APM PALEO-5: All fossils collected would be prepared to a reasonable point of identification. Itemized catalogs of all material collected and identified would be provided to the museum repository along with the specimens. A specimen repository would be arranged in writing with a museum prior to initiation of construction excavation.</p> <p>APM PALEO-6: A report documenting the results of the monitoring and salvage activities and the significance of the fossils would be prepared.</p>					

4.9 SECTION D.6 – GEOLOGY AND SOILS

- Page D.6-15:

GEO-5a Reduce Effects of Groundshaking. The design-level geotechnical investigations performed by SCE shall include site-specific seismic analyses to evaluate the peak ground accelerations for design of Project components. The Applicant shall follow the Institute of Electrical and Electronics Engineers (IEEE) 693 “Recommended Practices for Seismic Design of Substations,” which has specific requirements to mitigate the types of damage that equipment at substations have had in the past from such seismic activity. These design guidelines shall be implemented during construction of substation modifications. ~~Substation control buildings shall be designed in accordance with the 2001 California Building Code for sites in Seismic Zone 4 with near-field factors.~~

- Page D.6-23:

Although the underground portion of this alternative does not cross any known active fault traces, ~~impacts for this alternative would be identical to those described for~~ since this alternative follows the same route and crosses the same faults, geologic formations, and soil types as the Proposed Project, the potential for impacts related to damage by seismically induced groundshaking and ground failure, including liquefaction and lateral spreading, to occur would be identical to that of the Proposed Project and would be reduced to a level of less than significant (Class II) with implementation of Mitigation Measures GEO-5a (Reduce Effects of Groundshaking) and GEO-5b (Protect Against Liquefaction and Lateral Spreading), which adds specific requirements to the geotechnical investigations that would be implemented under APM GEO-2.

• Page D.6-26

Table D.6-9. Mitigation Monitoring Program – Geology and Soils

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>GEO-1: Construction activities would cause slope instability (Class II).</p>	<p>GEO-1: Protect Against Slope Instability. Appropriate support and protection measures shall be implemented to maintain the stability of excavations and protect surrounding structures and utilities to limit ground deformation. Design-level geotechnical investigations shall be performed to evaluate subsurface conditions, identify potential hazards, and provide information for development of excavation plans and procedures. Based on the results of the geotechnical investigations, appropriate support and protection measures shall be designed and implemented to maintain the stability of slopes adjacent to newly graded or re-graded access roads and work areas during and after construction. These measures shall include, but are not limited to, retaining walls, visqueen, removal of unstable materials, and avoidance of highly unstable areas. SCE shall document compliance with this measure prior to the start of construction by submitting a report to the CPUC for review and approval. The report shall document the investigations and detail the specific support and protection measures that will be implemented.</p>	<p>Areas where surface units are not coherent enough to support themselves during excavation</p>	<p>CPUC-approved engineer shall review and approve construction plans, including the report that will document the investigations and provide the support and protection measures</p>	<p>Plan/ remediation prevents collapse of excavations and risk or injury to workers to the extent feasible</p>	<p>CPUC, local planning agencies</p>	<p>Prior to construction. Could be staged to stay ahead of construction at particular site</p>
	<p>APM GEO-1: A geotechnical investigation of slope stability and geologic conditions, coupled with engineering design, would delineate the extent of potential landslide hazards and develop recommendations to support appropriate design measures to mitigate these hazards. Landslide mitigation may include one or more of the measures listed below.</p> <ul style="list-style-type: none"> • Over-excavation of adverse bedding and landslide failure surfaces, and placement of a large stabilizing buttress fill. • Over-excavation of adverse bedding and landslide failure surfaces to remove potential slope stability hazards. • Other appropriate design measures, or combinations of design measures. 					

Table D.6-9. Mitigation Monitoring Program – Geology and Soils

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GEO-2: Construction activities would accelerate erosion (Class II).	GEO-2: Minimize Soil Erosion. The Construction SWPPP for the Project shall include Best Management Practices (BMPs) designed to minimize soil erosion along access roads and at work areas. Appropriate BMPs may include construction of water bars, grading road surfaces to direct flow away from natural slopes, use of soil stabilizers, and consistent maintenance of roads and culverts to maintain appropriate flow paths. Silt fences and straw bales installed during construction shall be removed to restore natural drainage during the cleanup and restoration phase of the Proposed Project. Where access roads cross streams or drainages, they shall be built at or close to right angles to the streambeds and washes and culverts or rock crossings shall be used to cross streambeds and washes. Design of appropriate BMPs should be conducted by or under the direction of a qualified geologist or engineer.	Entire Project alignment	Review and approve final construction plans demonstrating compliance with this measure. Onsite monitor to verify effective use of screening fencing and compliance with additional requirements of this measure.	Ground-level clutter from equipment, materials, and vehicles will be effectively screened from views in areas of high public visibility.	CPUC, <u>local planning agencies</u>	Prior to and during construction.
GEO-3: Project structures would be damaged by problematic soils (Class II).	GEO-3: Geotechnical Studies for Corrosive Soils. In areas underlain by potentially corrosive soils, the design-level geotechnical studies performed by SCE shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates, and soil parameters, such as pH and electrical resistivity. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of Project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems.	In areas identified as having corrosive soils	CPUC-approved engineer shall review test results and approve geotechnical report, grading plans, and foundation designs	Plan/ remediation prevents corrosion of foundations and trench facilities to extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site
	APM GEO-1: Perform geotechnical investigation of slope stability and geologic conditions (see Impact GEO-1, above for full description).					

Table D.6-9. Mitigation Monitoring Program – Geology and Soils

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GEO-4: Project structures would be damaged by unstable soils, landslides, earthflows, and/or debris flows (Class II).	GEO-4: Geotechnical Surveys for Landslides. The design-level geologic/geotechnical investigation performed by SCE shall include detailed surveys to evaluate the potential for unstable slopes, landslides, earth flows, and debris flows along the approved subtransmission line route and in the vicinity of other Project facilities. Based on these surveys, approved Project facilities shall be located away from known landslides, very steep hillsides, debris-flow source areas, the mouths of steep sidehill drainages, and the mouths of canyons that drain steep terrain. Where these landslide hazard areas cannot be avoided, appropriate engineering design and construction measures shall be incorporated into the Project designs to minimize potential for damage to Project facilities.	Areas of steep slopes and incompetent rock, colluvium, or soil such as portions of the Proposed Project underlain by the San Timoteo Formation	CPUC-approved engineer shall review and approve construction plans.	Plan/ remediation prevents damage to Proposed Project facilities during a groundshaking event to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site
	APM GEO-1: Perform geotechnical investigation of slope stability and geologic conditions (see Impact GEO-1, above for full description).					
GEO-5: Project structures would be damaged by seismically induced groundshaking and ground failure, including liquefaction and lateral spreading (Class II).	GEO 5a Reduce Effects of Groundshaking. The design-level geotechnical investigations performed by SCE shall include site-specific seismic analyses to evaluate the peak ground accelerations for design of Project components. The Applicant shall follow the Institute of Electrical and Electronics Engineers (IEEE) 693 “Recommended Practices for Seismic Design of Substations” which has specific requirements to mitigate the types of damage that equipment at substations have had in the past from such seismic activity. These design guidelines shall be implemented during construction of substation modifications. Substation control buildings shall be designed in accordance with the 2001 California Building Code for sites in Seismic Zone 4 with near-field factors.	Areas having moderate potential for liquefaction, especially along the sub-transmission line route between MP-3.5 and MP 5.5 and between MP-12 and MP-13.9, and both Maraschino Loop routes	CPUC-approved engineer shall review and approve construction plans.	Plan/ remediation prevents liquefaction/differential settling to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site

Table D.6-9. Mitigation Monitoring Program – Geology and Soils

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>GEO-5b Protect Against Liquefaction and Lateral Spreading. Since seismically induced ground failure has the potential to damage or destroy Proposed Project components, SCE shall perform design-level geotechnical investigations to assess the potential for liquefaction and lateral spreading hazards to affect the approved Proposed Project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the Proposed Project designs. Appropriate measures could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. SCE shall submit a report of the required investigations to the CPUC for review and approval at least 60 days before construction.</p> <p>APM GEO-2: A geotechnical investigation of site soils and geologic conditions, coupled with engineering design, would identify the hazards and develop recommendations to support appropriate seismic designs to mitigate the effects of ground shaking. Specific requirements for seismic design would be based on the IEEE 693 "Recommended Practices for Seismic Design of Substations", and/or CBC Seismic Design criteria for sites within seismic Zone IV.</p>	The entire Project area, but especially along the subtransmission line route at MP-6.58 and MP-7.9, and both Maraschino Loop routes	CPUC-approved engineer shall review and approve construction plans	Plan/ remediation prevents damage to Proposed Project facilities during a groundshaking event to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site
GEO-6: Project structures would be damaged by surface fault rupture at crossings of active and potentially active faults (Class II).	GEO-6: Minimize Project Structures within Active Fault Zones. Perform a geologic/geotechnical study to confirm location of active and potentially mapped traces of the Beaumont Plain, San Andreas, and Crafton Hills faults where crossed by the Project alignment. Tower locations shall be adjusted as necessary to avoid placing tower footings on or across mapped fault traces. Towers on either side of a fault shall be designed to provide a significant amount of slack to allow for potential fault movement and ground surface displacement.	At crossings of the Beaumont Plain Fault Zone, the San Andreas Fault, and the Crafton Hills Fault.	CPUC-approved engineer shall review and approve construction plans	Plan/ remediation prevents damage to Proposed Project facilities during a groundshaking event to the extent feasible	CPUC, local planning agencies	During planning stages of fault crossings

Table D.6-9. Mitigation Monitoring Program – Geology and Soils

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>APM GEO-2: Perform geotechnical investigation of geologic conditions and seismic hazards (see Impact GEO-5, above for full description).</p> <p>APM GEO-3: Where appropriate, subsurface trenching along active fault traces would be required to ensure tower foundations are not placed on, or immediately adjacent to, these features. In addition, tower locations would be selected to accommodate anticipated fault offset, and minimize excessive tension in lines should a fault movement occur.</p>					
GEO-7: Expansive, Soft, Loose and/or Compressible Soils would damage Proposed Project structures (Class II).	<p>GEO-7: Implement Standard Engineering Methods for Problematic Soils. SCE shall perform design-level geotechnical studies to identify areas with potentially problematic soils and develop appropriate design features, including excavation of potentially problematic soils during construction and replacement with engineered backfill, ground-treatment processes, redirection of surface water and drainage away from expansive foundation soils. Study results and proposed solutions shall be provided to the CPUC for review and approval at least 60 days before construction.</p> <p>APM GEO-1: Perform geotechnical investigation of slope stability and geologic conditions (see Impact GEO-1, above for full description).</p>	Areas having soils with moderate to high shrink-swell potential, soft or loose soils	CPUC-approved engineer shall review and approve geotechnical report, grading plans, and foundation designs	Plan/ remediation prevents differential settling to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site

4.10 SECTION D.7 – HAZARDS AND HAZARDOUS MATERIALS

- Page D.7-5:

~~D.8.2.2~~ D.7.2.2 State

- Page D.7-6:

~~D.8.2.3~~ D.7.2.3 Regional and Local

- Page D.7-26:

Additional concerns regarding the Proposed Project related to ~~power~~ electric line fields include corona and audible noise; radio, television, electronic equipment interference; induced currents and shock hazards; and effects on cardiac pacemakers.

- Page D.7-29:

~~Power~~ Electric line fields can induce voltages and currents on conductive objects, such as metal roofs or buildings, fences, and vehicles.

- Page D.7-30:

For more than ~~20~~ 30 years, research has been conducted to address questions regarding the potential effects within the environment of EMF from power lines. Earlier studies focused primarily on interactions with the electric fields from power lines. In the late 1970s, the subject of magnetic field interactions began to receive additional public attention and research levels have since increased. A substantial amount of research investigating both electric and magnetic fields has been conducted over the past ~~20~~ 30 years; however, much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive.

- Page D.7-30:

¹ The power frequencies (50/60 Hz) are part of the ELF (3 Hz to 3000 Hz) bandwidth.

- Page D.7-31:

Numerous panels of expert scientists have convened to review the data relevant to the question of whether exposure to power-frequency EMF is associated with ~~adverse~~ potential health ~~effects~~ risks.

- Page D.7-36:

Table D.7-5 presents the ~~estimated~~ calculated magnetic field along the Proposed Project.

Table D.7-5. Design Comparison of Baseline and Expected Magnetic Fields from Existing vs. Proposed Design Levels (mG) – Proposed Project¹

Segment ID	Location	Left Side of ROW ^{2,3}			Right Side of ROW ^{2,3}		
		Existing	Proposed	Change	Existing	Proposed	Change
<u>1</u>	El Casco Substation to Maraschino Loop West	10.2	2.1	-8.1	10.2	4.3	-5.9
<u>4</u> <u>2</u>	Maraschino Loop West	6.4	7.2	0.8	6.1	6.9	0.8
<u>2</u> <u>3</u>	Maraschino Loop South	0	2.3	2.3	0	2.2	2.2
<u>3</u> <u>4</u>	El Casco-Banning between Maraschino Loop West and Maraschino Loop South	0	5.1	5.1	0	4.8	4.8
<u>4</u> <u>5</u>	Maraschino Loop South to Banning Substation	0	4.1	4.1	0	2.7	2.7

Source: SCE, 2007a

1. Following completion of Phase 2
2. As measured 50 feet from the transmission line
3. mG = milliGauss

- Page D.7-37:

Upon completion of both Phases 1 and 2, the Proposed Project would generate slightly greater magnetic fields compared to the existing levels.

- Page D.7-41:

The CPUC Decision D.06-01-042 stated that “Low-cost EMF mitigation is not necessary in agricultural and undeveloped lands except for permanently occupied residences, schools or hospitals located on these lands.”

- Page D.7-41:

In accordance with CPUC Decisions D.93-11-013 and D.06-01-042, SCE proposes to incorporate “no-cost” and “low-cost” magnetic field reduction steps in the proposed transmission and substation facilities.

- Page D.7-42:

SCE’s plan for reducing magnetic fields for the Proposed Project is consistent with ~~the CPUC’s Interim EMF Opinion~~ Decisions No. D.93-11-013 and D.06-01-042 (“~~1993 CPUC Decision~~”) and also with recommendations made by the U.S. National Institute of Environmental Health Sciences.

- Page D.7-45:

The information included in the preceding sections identifies existing EMF exposures within the community, and specific information on the EMF levels ~~estimated~~ calculated for the proposed project.

- Page D.7-46:

Impact HAZ-9: Radio and Television Interference (Class II)

The existing single-circuit 115 kV subtransmission operating, operating under normal conditions, does not carry any electric load in some portions (i.e., between Maraschino and Banning Substations). Corona or gap discharges related to high frequency radio and television interference impacts are dependent upon several factors, including the strength of broadcast signals, and are anticipated to be very localized if they occur. With implementation of the Proposed Project, the new double-circuit 115 kV subtransmission line would carry load at all times, which may result in radio and television interference. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines. Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding, or changes at the monitor location.

4.11 SECTION D.8 – HYDROLOGY AND WATER QUALITY

- Page D.8-6:

Flooding Potential

The Federal Emergency Management Agency (FEMA) is responsible for mapping the areas that are predicted to flood during 100-year and 500-year storm events. Flood hazard zones are identified by FEMA on Flood Insurance Rate Maps. The maps indicate the estimated level of inundation under various conditions and intensities. ~~There are no areas within the Proposed Project that are within the 100-year flood hazard zones (SCE, 2007a).~~

- Page D.8-19:

HYD-1b Timing of Construction Activities. Construction activities, particularly regarding roadway installations and improvements, ~~must~~ should occur during the dry season (April to October) or when precipitation events are not expected.

- Page D.8-22:

HYD-2d Develop and Implement a Groundwater Remediation Plan. ~~SCE shall develop and implement a groundwater remediation plan in the event that groundwater is encountered during Project related construction activities at the El Casco Substation Site or along the subtransmission route from MP 0 to Maraschino Substation.~~ In the event that ~~unknown~~ groundwater resources are encountered ~~or an unplanned disturbance of known resources occurs~~, SCE shall immediately halt the ~~disruptive excavation activity and ground disturbing activities~~ and conduct appropriate water testing in compliance with State and federal regulations. If the water is determined to be contaminated, SCE shall develop and implement a site-specific remediation plan to prevent contamination of surrounding groundwater. If dewatering is necessary, SCE shall comply with state and federal regulations regarding discharge of groundwater to adjacent surface water bodies. ~~This remediation plan may~~

~~require activities such as bioremediation or other applicable technology, as determined appropriate under site-specific conditions.~~

- Page D.8-34:

Although there are no natural watercourses or drainages located along this portion of the route, drainage from the construction area would run into the ~~sewer~~ storm water drainage system within the roads of the Sun Lakes Community, which would ultimately travel downstream to other drainages within the watershed.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact HYD-1: Soil erosion and sedimentation caused by construction activities would degrade water quality (Class II).	<p>HYD-1a: Implementation of Erosion and Sediment BMPs. The following BMPs shall be implemented in order to minimize potential hydrologic and water quality impacts of erosion and sedimentation created through Project construction:</p> <ul style="list-style-type: none"> Mechanical and vegetative measures shall be implemented to provide surface soil stability where necessary. Mechanical measures may include but are not limited to: wattles, erosion nets, terraces, side drains, blankets, mats, riprapping, mulch, tackifiers, pavement, soil seals, and windrowing construction slash at the toe of fill slopes. Vegetative measures shall be used to supplement mechanical measures, as appropriate. Road slope stabilization practices shall be implemented prior to the first winter rains. These practices shall include: verification of the correct slope steepness as dependent upon the dominant soil type/s present, implementation of methods to handle surface and subsurface runoff, and finalization of road surface compaction or application of appropriate surfacing material. Any temporary roadways which are built or used for the purpose of transporting construction equipment and materials to construction sites shall be situated to prevent undercutting of the designated final cut slope, avoid deposition of materials outside the designated roadway limits, and accommodate drainage with temporary culverts as necessary. Embankment methods shall be implemented to ensure adequate strength of the roadway and shoulder and to minimize potential failure of road embankments and fill areas. Acceptable stabilization methods include: sidecasting and end dumping, layer placement (roller compaction), controlled compaction, minimization of fill volumes, or strengthening of fills using retaining walls, confinement systems, plantings, or a combination of techniques. The appropriate stabilization effort shall be determined by the supervising project or crew leader prior to the onset of construction, based on 	Areas having moderate to high erosion potential and anywhere grading occurs.	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prior to and during construction

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	site-specific conditions. • Strictly control vehicular traffic to only that which is necessary. • Restore temporary construction areas (e.g., temporary roads, pulling and splicing stations) to a near-natural condition and ensure that the sites are re-vegetated and stabilized, unless operation and maintenance of the Project would require the areas to remain clear. • Establish the use of concrete washout stations to capture and contain concrete washout material and wastewater to avoid direct release of washout to surface water. • Erosion control measures shall be completed prior to the first anticipated rains at all construction sites. An Erosion Control Plan shall be prepared as part of the Project SWPPP.					
	HYD-1b: Timing of Construction Activities. Construction activities, particularly regarding roadway installations and improvements, must <u>should</u> occur during the dry season (April to October) or when precipitation events are not expected.	Entire Project	Onsite monitor will verify that no construction occurs during periods of heavy rain.	Remediation prevents erosion and sedimentation from degrading water quality.	CPUC	During construction
	HYD-1c: Dispersion of Subsurface Drainage from Slope Construction Areas. In order to minimize sediment production from the potential failure of slope construction areas, subsurface drainage devices shall be implemented where necessary, as determined during final siting and engineering of transmission towers. Where it is determined necessary due to site-specific conditions such as slope severity, soil condition, precipitation levels, and inherent instability, subsurface drainage will be utilized to avoid moisture saturation and potential subsequent slope failure. Subsurface dispersion methods would include underdrains or subdrains such as pipes, horizontal drains, or chimney drains.	Any location with the potential for slope failure	CPUC-approved engineer shall review and approve construction plans, including the report that will document the investigations and provide the support and protection measures.	Remediation prevents erosion and sedimentation from degrading water quality.	CPUC	Prior to and during construction

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>HYD-1d: Control of Side-Cast Material, Right-of-Way Debris, and Roadway Debris. Side-cast material includes any loose, unconsolidated materials that must be re-located to facilitate construction activities. This may include rocks and boulders as well as organic materials. Prior to the onset of any construction activities, waste areas must be designated where excess material can be deposited and stabilized. During road construction and maintenance, potential sidecast and other waste material will be utilized on the road surface. Any unused material shall be removed to designated disposal sites. Waste areas shall not be left exposed and must be transported to disposal facilities on a regular basis, which will be determined based on site-specific conditions.</p>	Entire Project	Onsite monitor will verify proper handling and disposal of side-cast material and debris.	Remediation prevents erosion and sedimentation from degrading water quality.	CPUC	Prior to and during construction
	<p>GEO-1: Protect Against Slope Instability. Appropriate support and protection measures shall be implemented to maintain the stability of excavations and protect surrounding structures and utilities to limit ground deformation. Design-level geotechnical investigations shall be performed to evaluate subsurface conditions, identify potential hazards, and provide information for development of excavation plans and procedures. Based on the results of the geotechnical investigations, appropriate support and protection measures shall be designed and implemented to maintain the stability of slopes adjacent to newly graded or re-graded access roads and work areas during and after construction. These measures shall include, but are not limited to, retaining walls, visqueen, removal of unstable materials, and avoidance of highly unstable areas. SCE shall document compliance with this measure prior to the start of construction by submitting a report to the CPUC for review and approval. The report shall document the investigations and detail the specific support and protection measures that will be implemented.</p>	Areas where surface units are not coherent enough to support themselves during excavation	CPUC-approved engineer shall review and approve construction plans, including the report that will document the investigations and provide the support and protection measures	Plan/ remediation prevents collapse of excavations and risk or injury to workers to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	GEO-2: Minimize Soil Erosion. The Construction SWPPP for the Project shall include BMPs designed to minimize soil erosion along access roads and at work areas. Appropriate BMPs may include construction of water bars, grading road surfaces to direct flow away from natural slopes, use of soil stabilizers, and consistent maintenance of roads and culverts to maintain appropriate flow paths. Silt fences and straw bales installed during construction shall be removed to restore natural drainage during the cleanup and restoration phase of the Proposed Project. Where access roads cross streams or drainages, they shall be built at or close to right angles to the streambeds and washes and culverts or rock crossings shall be used to cross streambeds and washes. Design of appropriate BMPs should be conducted by or under the direction of a qualified geologist or engineer.	Areas having soils that are loosely compacted such as along the Maraschino Loop South, much of the subtransmission line route, and in patches on hillsides	CPUC-approved engineer shall review and approve construction plans	Plan/ remediation prevents failure of tower footings to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site
	APM HYDRO-1: Grading activities shall not be performed during heavy rains.	El Casco Substation site	Onsite monitor will verify that no construction occurs during periods of heavy rain.	Remediation prevents erosion and sedimentation from degrading water quality.	CPUC	During construction
	APM HYDRO-2a: An engineering erosion control plan shall be developed as part of the site grading plan.	El Casco Substation site	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, SARWQCB	Prior to and during construction
	APM HYDRO-2c: Develop erosion control plan.	Entire Project	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prior to and during construction
	APM HYDRO-7: Consult with agencies regarding road relocation.	Access road to proposed El Casco Substation	CPUC-approved engineer shall review and approve relocation plans for proposed access road and documentation of consultation with Riverside County, CDFG, and the SARWQCB. Onsite	Plan/remediation prevents erosion and sedimentation from degrading water quality. Existing access road is satisfactorily restored.	CPUC, Riverside County, CDFG, and the SARWQCB	Prior to final engineering of the proposed access road

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
			monitor will verify successful restoration of existing access road after completion of proposed access road.			
	APM GEO-1: Perform geotechnical investigation of slope stability and geologic conditions.	Areas where surface units are not coherent enough to support themselves during excavation	CPUC-approved engineer shall review and approve construction plans, including the report that will document the investigations and provide the support and protection measures	Plan/ remediation prevents collapse of excavations and risk or injury to workers to the extent feasible	CPUC, local planning agencies	Prior to construction. Could be staged to stay ahead of construction at particular site
Impact HYD-2: Degradation of surface water or groundwater quality would occur from the accidental release of potentially harmful materials during construction activities (Class II).	<p>HYD-2a: Prevent Frac-out. SCE's HDD contractor shall take the following precautions to prevent frac-out from occurring during drilling activities:</p> <ul style="list-style-type: none"> • Ensure that HDD casings are drilled to a depth of at least eight (8) feet below the bottom of San Timoteo Creek. • Ensure HDD machinery arrives onsite in clean condition and is free of fluid leaks. • Wash, refuel, and service machinery and store fuel and other materials for the machinery at least 50 feet away from San Timoteo Creek to prevent any hazardous substances from entering the water. • Keep emergency spill kits on site in case of fluid leaks or spills from machinery. • Restore banks to original condition if any disturbance occurs. • Ensure drilling mud, sediment-laden water, and any other deleterious substances are contained above the high water mark and do not enter San Timoteo Creek. • Dispose of excess drilling mud, cuttings, and other waste materials at an adequately sized disposal facility located at least 50 feet away from San Timoteo Creek to prevent it from entering the watercourse. • Monitor San Timoteo Creek to observe signs of surface migration (frac-out) of drilling mud during all phases of construction. 	Location of HDD activities at the proposed El Casco Substation site	CPUC-approved engineer shall review and approve plans.	Plan/remediation prevents construction-related hazardous materials from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prepare plans prior to construction and implement during construction

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>HYD-2b: Implement HDD BMPs. SCE's HDD contractor shall implement BMPs during HDD activities to prevent water quality degradation. These measures shall include, but not be limited to:</p> <ul style="list-style-type: none"> • Perform all HDD activities outside of the rainy season (November to March). HDD activities shall be scheduled to occur only between the months of April and October. • A re-circulation system for drilling surface fluid returns shall be employed to minimize the amount of drilling fluid used. Residual materials separated from the drilling fluid shall be disposed of in accordance with applicable regulations. • All drilling fluid and fluid additives shall be disclosed, and Material Safety Data Sheets (MSDS) shall be maintained onsite during drilling. • Excess drilling fluid shall be confined in a containment pit at entry and exit locations until recycled or removed from the site. • Precautions shall be taken to ensure that drilling fluid does not enter roadways, streams, or any other drainage system or body of water. • Unintended surfacing of drilling fluid shall be contained at the point of discharge and recycled or removed from the site. • Drilling fluids that are not recycled and reused shall be removed from the site and disposed of at an approved disposal facility in compliance with all environmental regulations, right-of-ways and workspace agreements, and permit requirements. • Drilling fluids shall be completely removed from the construction site prior to back filling the open conduit pits. • Collection, transportation, and disposal of drilling fluids shall be conducted in an environmentally safe method and comply with local ordinances and government conditions SCE and its contractor shall ensure that all drilling materials and fluids are disposed properly. 	<p>Location of HDD activities at the proposed El Casco Substation site</p>	<p>CPUC-approved engineer shall review and approve plans. Onsite monitor shall verify compliance with all BMPs.</p>	<p>Plan/remediation prevents construction-related hazardous materials from degrading water quality.</p>	<p>CPUC, CRBRWQCB, SARWQCB</p>	<p>Prepare plans prior to construction and implement during construction</p>

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>HYD-2c: Prepare and Implement Frac-out Response Plan. Prior to construction SCE shall prepare a Frac-out Response Plan. The plan shall identify detailed, site-specific procedures to monitor, contain, and clean up a potential frac-out, to avoid introduction of drilling fluids into San Timoteo Creek. Procedures shall include measures to stop work, contain the drilling mud and prevent its further migration into the watercourse, notify all applicable authorities, and clean up and dispose of the drilling mud. The plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> • Ensuring all material and equipment needed to contain and clean up drilling mud releases is kept on-site and readily accessible in the event of a frac-out. • Ensuring clean-up measures do not result in greater damage to the banks and watercourse than from leaving the drilling mud in place. • Developing a contingency crossing plan including measures to either locate a more appropriate location to re-drill or to isolate the watercourse to complete the crossing at the current location. 	Location of HDD activities at the proposed El Casco Substation site	CPUC-approved engineer shall review and approve plans.	Plan/remediation prevents construction-related hazardous materials from degrading water quality.	CPUC,	Prepare plans prior to construction and implement during construction
	<p>HYD-2d: Develop and Implement a Groundwater Remediation Plan. SCE shall develop and implement a groundwater remediation plan in the event that groundwater is encountered during Project-related construction activities at the El Casco Substation Site or along the subtransmission route from MP 0 to Maraschino Substation. In the event that unknown groundwater resources are encountered or an unplanned disturbance of known resources occurs, SCE shall immediately halt the disruptive excavation activity and ground disturbing activities and conduct appropriate water testing in compliance with State and federal regulations. If the water is determined to be contaminated, SCE shall develop and implement a site-specific remediation plan to prevent contamination of surrounding groundwater. If dewatering is necessary, SCE shall comply with state and federal regulations regarding discharge of</p>	Entire Project	CPUC approved engineer shall review and approve plans.	Plan/remediation prevents construction-related hazardous materials from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prepare <u>work stoppage and testing plans</u> prior to construction and implement during construction. <u>Prepare remediation plan upon confirmation of contaminated water</u>

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality						
Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	groundwater to adjacent surface water bodies. This remediation plan may require activities such as bioremediation or other applicable technology, as determined appropriate under site specific conditions.					
	APM HYDRO-2a: An engineering erosion control plan shall be developed as part of the site grading plan.	El Casco Substation	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, SARWQCB	Prior to and during construction
	APM HYDRO-2b: Coordinate with DWR, CDFG, and FEMA if construction requires alteration or relocation of a watercourse and maintain the flood carrying capacity of the altered stream.	Any location where Project construction would alter or relocate a watercourse	CPUC-approved engineer shall review and approve plans for maintaining flood carrying capacity in any watercourse that would be altered or relocated during Project construction. In the event that a watercourse would be altered or relocated, CPUC shall review documentation of coordination with adjacent communities, DWR, CDFG, and FEMA.	Flood-carrying capacity is maintained in any watercourse that is altered or relocated during Project construction	CPUC, local jurisdictions, DWR, CDFG, and FEMA	Prepare plans prior to construction and implement during construction
	APM HYDRO-2c: Develop erosion control plan incorporating construction-phase.	Entire Project	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prior to and during construction
	APM HYDRO-2d: Establish environmental training program.	Entire Project	Review and approve environmental training program. Onsite monitor will verify compliance with program.	Minimize exposure of workers or the public to releases of hazardous materials. Prevent release of hazardous materials to water resources.	CPUC	Prepare program and train personnel prior to construction and monitor compliance during construction

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM HYDRO-6: Provide HDD contractor with copies of all applicable mitigation measures and permit conditions.	Location of HDD activities at the proposed El Casco Substation site	Review documentation that contractor received and agreed to comply with all applicable mitigation measures and permit conditions.	HDD contractor compliance with all applicable mitigation measures and permit conditions	CPUC	Prior to construction
	APM HYDRO-8: Prepare a Hazardous Substance Control and Emergency Response Plan.	Entire Project	CPUC-approved engineer shall review and approve Hazardous Substance Control and Emergency Response Plan.	Minimize exposure of workers or the public to releases of hazardous materials. Prevent release of hazardous materials to water resources.	CPUC	Prior to construction
Impact HYD-4: Disturbance of existing groundwater resources (Class II)	HYD-2d: Develop and Implement a Groundwater Remediation Plan	Entire Project	CPUC-approved engineer shall review and approve plans.	Plan/remediation prevents construction-related hazardous materials from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prepare plans prior to construction and implement during construction
	APM HYDRO-1: Grading activities shall not be performed during heavy rains.	El Casco Substation site	Onsite monitor will verify that no construction occurs during periods of heavy rain.	Remediation prevents erosion and sedimentation from degrading water quality.	CPUC	During construction
	APM HYDRO-2a: An engineering erosion control plan shall be developed as part of the site grading plan.	El Casco Substation site	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, SARWQCB	Prior to and during construction
	APM HYDRO-2c: Develop erosion control plan	Entire Project	CPUC-approved engineer shall review and approve erosion control plans.	Plan/remediation prevents erosion and sedimentation from degrading water quality.	CPUC, CRBRWQCB, SARWQCB	Prior to and during construction

Table D.8-7. Mitigation Monitoring Program – Hydrology and Water Quality						
Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM HYDRO-2d: Establish environmental training program.	Entire Project	Review and approve environmental training program. Onsite monitor will verify compliance with program.	Minimize exposure of workers or the public to releases of hazardous materials. Prevent release of hazardous materials to water resources.	CPUC	Prepare program and train personnel prior to construction and monitor compliance during construction
	APM HYDRO-8: Prepare a Hazardous Substance Control and Emergency Response Plan.	Entire Project	CPUC-approved engineer shall review and approve Hazardous Substance Control and Emergency Response Plan.	Minimize exposure of workers or the public to releases of hazardous materials. Prevent release of hazardous materials to water resources.	CPUC	Prior to construction
Impact HYD-7: Flood hazards created through the placement of permanent aboveground structures in a flood hazard area, a floodplain, or a watercourse (Class II).	HYD-7: Aboveground Structures Shall be Protected Against Flood and Erosion Damage. Aboveground Project features such as transmission line towers and substation facilities shall be designed and engineered to withstand any physical and mechanical stresses that may result from location, such as potential flooding or erosion of the surrounding area. Site-specific measures may include tower anchoring, installation of slope protection, or raising foundation levels. All Project-related facilities shall be placed outside the current and reasonably expected future flow path of watercourses. No Project-related facilities shall be positioned within a known watercourse.	Portions of the subtransmission route that are subject to flood flows	CPUC-approved engineer shall review and approve plans.	Aboveground Project features shall withstand physical and mechanical stresses resulting from flood flows, and shall not be placed within a known watercourse	CPUC	Prior to construction

4.12 SECTION D.9 – NOISE

- Page D.9-11:

Construction of the Project would require short-term use of cranes, augers, compressors, air tampers, generators, trucks, and other equipment, as identified in Section B (Project Description). As helicopters Helicopters would could be used at SCE's existing Mill Creek Communications Site within the San Bernardino National Forest for construction of the microwave system, and would be used during installation of fiber optic cable at locations between the Cities of Redlands and Banning, to ensure that construction noise impacts associated with helicopter construction are considered, helicopter use is evaluated for all possible locations where they may and would be used.

4.13 SECTION D.10 – PUBLIC SERVICES AND UTILITIES

- Page D.10-5:

As described above, SCE is required by State law to contact Underground Service Alert and manually probe for existing buried utilities in the Proposed Project corridor prior to any powered-equipment drilling or excavation. ~~Therefore, While it is unlikely that underground facilities would be located in proximity to natural gas and water pipelines, and SCE is required to probe for existing buried utilities prior to any excavation work, potential utility disruptions cannot be ruled out. the risk of accidental upset of existing utility lines within the street is unlikely. However, natural~~ Natural gas and water pipelines are likely located within public streets and service could potentially be temporarily disrupted during planned construction of the underground fiber optic cable installation if required.

4.14 SECTION D.11 – TRANSPORTATION AND TRAFFIC

- Page D.11-12:

However, there is the potential for unexpected physical damage to roads, sidewalks, medians, etc., within public roads or sidewalks to occur as a result of construction-related vehicle and equipment use. This would be potentially significant, but reduced to less-than-significant levels (Class II) with implementation of Mitigation Measure T-9 (Repair Damaged Road ROWs). It should be noted that SCE is a State-regulated utility and is subject to the Franchise Act of 1937. Under the Act, SCE is required to pay the local agencies the cost of all repairs made necessary by its operation under franchise (CPUC Code Section 6295).

4.15 SECTION D.12 – VISUAL RESOURCES

- Page D.12-4:

This portion of the route is characterized by predominantly natural appearing and rural residential landscapes. Continuing southeast and east, the route spans SR-79 and then passes adjacent and through newly developed suburban residential areas including a one-mile segment through the Sun Lakes residential/golf community. Two existing transmission lines are located in the immediate

vicinity of the Sun Lakes Community. The wood-pole, H-frame Banning-Garnet-Maraschino-Windfarm 115 kV subtransmission line traverses the Sun Lakes Community golf course (visible in Figures D.12-7A and D.12-15A). The steel-lattice Devers-Valley No. 1 500 kV transmission line borders the southern boundary of the Sun Lakes development. Continuing east, the Project would again pass through rural residential landscape before turning north at Wesley Street for approximately 0.65 mile through predominantly residential areas to Banning Substation.

- Page D.12-21 to D.12-22:

~~To ensure that viewers are not unnecessarily impacted during construction, Mitigation Measures V-1a (Reduce Visibility of Construction Activities and Equipment) is recommended, even though the impact is less than significant without mitigation.~~

- Page D.12-26:

Impact V-5: Increased structure contrast, industrial character, view blockage and glare when viewed from Key Viewpoint 3 in the new residential development north of San Timoteo Canyon Road (Class III).

Figure D.12-4A and D.12-4C present the existing views to the southwest from KVPs 3 and 3 Alternative respectively, from the new residential development under construction north of San Timoteo Canyon Road. Figure D.12-4B presents a visual simulation that depicts the addition of the proposed substation and the connecting subtransmission line structures. As shown in the simulation, El Casco Substation would introduce a highly industrial-appearing facility in a predominantly natural appearing landscape though there are several transmission lines that border the site. While the existing transmission lines have established a structural precedence with respect to vertical, linear features, they are more dispersed compared to the high concentration of industrial structures that comprises a substation. However, the new substation would be partially screened from view by intervening terrain and vegetation, especially when viewed from the lower elevations of the residential development (see Figure D.12-4C). The resulting visual contrast would be moderate and the proposed substation would appear co-dominant compared to the existing landforms and utility infrastructure. View blockage of the background hills would be low-to-moderate. The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). This conclusion is substantially influenced by the presence of the five existing transmission lines that border the site – three of which would pass between the residential viewers and the substation and two of which would pass behind the substation site. ~~While Impact V-5 is less than significant, Mitigation Measure V-3a (Reduce Visibility of the El Casco Substation Site) is recommended to further reduce the visibility of the substation and the resulting visual impact that would be experienced by the residential viewers.~~ The Project would also include the installation of night lighting fixtures, which would result in adverse but less than significant (Class III) night lighting and glare impacts on residents of the new residential development under construction north of San Timoteo Canyon Road. ~~Mitigation Measure V-3b (Reduce Operation Night Lighting Impacts) would ensure that adverse night lighting impacts do not occur.~~ This viewpoint analysis is considered representative of Project views from the new residential development north of San Timoteo Canyon Road.

Mitigation Measures for Impact V-5

~~V-3a — Reduce Visibility of the El Casco Substation Site.~~

~~V-3b — Reduce Night Lighting Impacts.~~

- Page D.12-29 to D.12-30:

Impact V-10: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 8 on North Juniper Avenue in the City of Yucaipa (Class ~~II~~ III).

Figure D.12-9A presents the existing view to the west from Key Viewpoint 8 on North Juniper Avenue, immediately east of Zanja Substation. Figure D.12-9B presents an elevational diagram of the existing substation facilities, viewing to the west. Figure D.12-9C presents an elevational diagram that depicts the addition of a new switchrack and communications equipment. All of the modifications would be accommodated within the existing substation property. In the context of the existing structural complexity and substantial industrial character exhibited by the existing substation facilities, the new structures and equipment would be minimally noticeable to the casual observer. Because the existing substation facilities have established a complex structural and industrial precedence with respect to form, line, and character; the resulting incremental increase in visual contrast would be low and the new equipment would appear subordinate-to-co-dominant compared to the existing substation components. View blockage of the background mountains and sky would be low-to-moderate. The overall visual change would be low-to-moderate when the three equally weighted factors of visual contrast, Project dominance, and view blockage are combined. In the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse, but less than significant (Class III). This conclusion is substantially influenced by the industrial character of the existing substation facility and the relatively minor amount of change that would be apparent. ~~However, because the substation is highly exposed to nearby residences with direct views of the substation, and additional residences are being built to the north and west, this impact is considered significant and it is recommended that Mitigation Measure V-10 (Reduce Visibility of the Zanja Substation Modifications) be implemented to reduce the visual impact of the proposed substation modifications on residential views to a level that is less than significant (Class II).~~ This viewpoint analysis is considered representative of residential views of the substation from adjacent and nearby properties.

Mitigation Measure for Impact V-10

~~V-10 — Reduce Visibility of the Zanja Substation Modifications. SCE shall submit to CPUC a Zanja Substation Screening Plan that reduces visibility of Zanja Substation and the connecting subtransmission line structures when viewed from existing residences along North Juniper Avenue and Juniper Avenue, and the new residential subdivision north and west of the substation. SCE shall plant habitat appropriate species of trees and shrubs to intersect sightlines of the substation and screen substation components and the lower portions of the connecting subtransmission line structures from residential views. SCE shall submit the Plan to CPUC for review and approval at least 90 days prior to installing the landscape screening. If CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, SCE shall prepare and submit for review and approval a revised Plan within 30 days of receiving that notification. The Plan shall include but not be limited to:~~

- ~~11"x17" color simulations of the proposed landscaping at 5 years when viewed from Key Viewpoint 8 and a new viewpoint that is representative of views from the new residential subdivision under construction north and west of the substation.~~

- ~~• Plan view to scale depicting the Project and the location of screening elements.~~
- ~~• A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity.~~

~~SCE shall complete installation of the screening prior to the start of Project operation. SCE shall notify CPUC within seven days after completing installation of the screening that the screening components are ready for inspection.~~

- Page D.12-45:

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
V-1: Short-term visibility of construction activities, equipment, and night lighting (Class II [Substation and Staging Areas] and Class III [Subtransmission Line, Loop-In, and Fiber Optic Routes])	V-1a: Reduce Visibility of Construction Activities and Equipment. Substation construction sites and all staging and material and equipment storage areas including storage sites for excavated materials shall be appropriately located away from areas of high public visibility. If visible from nearby roads; residences; public gathering areas; or recreational areas, facilities, or trails; construction sites and staging areas shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Additionally, avoid construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use. SCE shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.	Entire Project alignment.	Review and approve final construction plans demonstrating compliance with this measure. Onsite monitor to verify effective use of screening fencing and compliance with additional requirements of this measure.	Ground-level clutter from equipment, materials, and vehicles will be effectively screened from views in areas of high public visibility.	CPUC	Prior to and during construction.
	V-1b: Reduce Construction Night Lighting Impacts. SCE shall design and install all lighting at construction sites, storage yards, and staging areas such that light bulbs and reflectors are not visible from public viewing areas and private residences; lighting does not cause reflected glare; and illumination of the Project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction Lighting Mitigation Plan to the CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the CPUC. The Plan shall include but is not necessarily limited to the following: <ul style="list-style-type: none"> • Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the Project boundary • All lighting shall be of minimum necessary brightness consistent with worker safety • High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied. 	Construction sites, storage yards, and staging areas.	Review and approve Construction Lighting Mitigation Plan.	Light bulbs and reflectors will not be visible from public viewing areas (including roads) and private residences. Backscatter to the nighttime sky will be minimized and light trespass outside the Project boundary will be prevented.	CPUC	Prior to and during construction.

Table D.12-7. Mitigation Monitoring Program – Visual Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
V-2: Long-term visibility of land scarring and vegetation clearance in arid and semi-arid landscapes (Class II)	V-2a: Reduce In-Line Views of Land Scars. Construct access or spur roads at appropriate angles from the originating, primary travel facilities to minimize extended, in-line views of newly graded terrain. Contour grading should be used where possible to better blend graded surfaces with existing terrain. SCE shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. Construction plans will include sufficient photo-documentation to document pre-construction conditions.	Entire Project alignment.	Review Construction Plans to confirm appropriateness of angle for any proposed roads or access. Confirm effectiveness of contour grading.	New access and spur roads will be constructed such that no in-line views of those facilities will be available. Contour grading will effectively blend graded surfaces with the existing terrain.	CPUC	Prior to and during construction.
	V-2b: Reduce Visual Contrast from Unnatural Vegetation Lines. In those areas where views of land scars are unavoidable, the boundaries of disturbed areas shall be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. If necessary to ensure vegetative success, plantings will be watered. If Measure V-2b is not successful within two years following the completion of construction, a new plant palette will be developed in consultation with an approved restoration ecologist. Furthermore, all graded roads and areas not required for on-going operation, maintenance, or access shall be returned to pre-construction conditions. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. Construction plans will include sufficient photo-documentation to document pre-construction conditions.	Entire Project alignment.	Review construction plans to confirm compliance with this measure. CPUC-approved biologist to review and approve restoration plans. Onsite monitor to verify compliance with plans and to record status of revegetation efforts two years after construction.	The occurrence of unnatural vegetation lines and associated visual contrast will be either prevented or minimized. All graded roads and areas not required for on-going operation will be returned to pre-construction conditions.	CPUC	Prior to, during, and after construction.

Table D.12-7. Mitigation Monitoring Program – Visual Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
V-3: Increased structure contrast, industrial character, view blockage, skylining and glare when viewed from Key Viewpoint 1 on eastbound San Timoteo Canyon Road (Class II)	<p>V-3a: Reduce Visibility of the El Casco Substation Site. SCE shall submit to CPUC an El Casco Screening Plan that reduces visibility of the proposed El Casco Substation and connecting subtransmission line structures when viewed from San Timoteo Canyon Road, the Norton Younglove Reserve, and the new residential development on the north side of the road. Starting from the previously submitted El Casco Substation Preliminary Site Development Plan, SCE shall increase the density of Coast Live Oak (<i>Quercus agrifolia</i>) and Black Willow (<i>Salix gooddingii</i>) along the north to east boundaries of the site. Additional understory shrubs shall also be planted to intersect lower sightlines. Also, the existing gaps in the riparian vegetation must be filled with the appropriate riparian plant species to match the maximum heights of the densest riparian vegetation along San Timoteo Canyon Road. SCE shall submit the Plan to CPUC for review and approval at least 90 days prior to installing the landscape screening. If CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Plan shall include but not necessarily be limited to:</p> <ul style="list-style-type: none"> • 11"x17" color simulations of the proposed landscaping at 5 years when viewed from Key Viewpoints 1, 2, and 3. • Plan view to scale depicting the Project and the location of screening elements. • A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity. • SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection. 	El Casco Substation	CPUC to review and approve El Casco Screening Plan. Onsite monitor to verify implementation following construction.	Substation visibility and the occurrence of structure contrast, industrial character, and view blockage impacts will be minimized.	CPUC	Prior to and after construction.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>V-3b: Reduce Operation Night Lighting Impacts. SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SCE shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the CPUC. The Plan shall include but is not necessarily limited to the following:</p> <ul style="list-style-type: none"> • Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary; • All lighting shall be of minimum necessary brightness consistent with worker safety; and <p>High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.</p>	El Casco Substation	CPUC to review Lighting Mitigation Plan prior to start of construction and verify implementation following construction.	Light bulbs and reflectors at construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.	CPUC	Prior to and during construction.
V-4: Increased structure contrast, industrial character, view blockage, skylining and glare when viewed from Key Viewpoint 2 in Norton Younglove Reserve (Class II).	V-3a: Reduce Visibility of the El Casco Substation Site.	El Casco Substation	CPUC to review and approve El Casco Screening Plan. Onsite monitor to verify implementation following construction.	Substation visibility and the occurrence of structure contrast, industrial character, and view blockage impacts will be minimized.	CPUC	Prior to and after construction.

Table D.12-7. Mitigation Monitoring Program – Visual Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	V-3b: Reduce Operation Night Lighting Impacts.	El Casco Substation	CPUC to review Lighting Mitigation Plan prior to start of construction and verify implementation following construction.	Light bulbs and reflectors at construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.	CPUC	Prior to and during construction.
V-5: Increased structure contrast, industrial character, view blockage and glare when viewed from Key Viewpoint 3 in the new residential development under construction north of San Timoteo Canyon Road (Class III)	V-3a: Reduce Visibility of the El Casco Substation Site.	El Casco Substation	CPUC to review and approve El Casco Screening Plan. Onsite monitor to verify implementation following construction.	Substation visibility and the occurrence of structure contrast, industrial character, and view blockage impacts will be minimized.	CPUC	Prior to and after construction.
	V-3b: Reduce Operation Night Lighting Impacts.	El Casco Substation	CPUC to review Lighting Mitigation Plan prior to start of construction and verify implementation following construction.	Light bulbs and reflectors at construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected	CPUC	Prior to and during construction.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
				glare and illumination beyond the construction site and into the nighttime sky.		
V-10: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 8 on North Juniper Avenue in the City of Yucaipa (Class II).	<p>V-10: Reduce Visibility of the Zanja Substation Modifications. SCE shall submit to CPUC a Zanja Substation Screening Plan that reduces visibility of Zanja Substation and connecting transmission line structures when viewed from existing residences along North Juniper Avenue and Juniper Avenue, and the new residential subdivision north and west of the substation. SCE shall plant habitat-appropriate species of trees and shrubs to intersect sightlines of the substation and screen substation components and the lower portions of the connecting transmission line structures from residential views. SCE shall submit the Plan to CPUC for review and approval at least 90 days prior to installing the landscape screening. If CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:</p> <ul style="list-style-type: none"> ● 11"x17" color simulations of the proposed landscaping at 5 years when viewed from Key Viewpoint 8 and a new viewpoint that is representative of views from the new residential subdivision under construction north and west of the substation. ● Plan view to scale depicting the Project and the location of screening elements ● A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity. <p>SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.</p>	Zanja Substation	Review and approve Zanja Substation Screening Plan. Onsite monitor to verify implementation following construction.	Substation visibility and the occurrence of structure contrast, industrial character, and view blockage impacts will be minimized.	CPUC	Prior to and after construction.

4.16 SECTION F – OTHER CONSIDERATIONS

- Page F-34:

Contribution to Greenhouse Gases (Impact AQ-3). Air quality emissions during Partial Underground Alternative construction and operation would be similar to the Proposed Project as described above. Therefore, because escape of SF₆ would occur with Partial Underground Alternative operation, and will not be mitigated with a commensurate GHG emission reduction, the direct impact of the Partial Underground Alternative on greenhouse gases would be adverse, and result in a significant unavoidable cumulative contribution (Class I) to climate change when combined with cumulative development in the project area, which is also generating greenhouse gases.

- Page F-65:

The proposed development projects identified in Table F-2 (Cumulative Project List) would likely include mitigation similar to that of the Proposed Project; however, the mitigation would not eliminate the potential for ignition and so these projects would also increase the potential for a fire to occur within the project area.

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Greenhouse gases (GHGs) are defined as any gas that absorbs infrared radiation in the atmosphere. Common GHGs include water vapor, carbon dioxide (CO₂), methane, nitrous oxide (N₂O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), ozone, and aerosols. GHGs are emitted by both natural processes and human activities, and lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the "Greenhouse Effect." As discussed in detail within Section D. (Air Quality), an unquantifiable direct air quality impact of transmission system operation would be the potential escape of SF₆, a potent greenhouse gas, used in operation of the electrical switchgear equipment and circuit breakers. Because of the high global warming potential of SF₆ even small quantities of emissions are a concern. Any increase in SF₆ emissions would result in an net increase of GHG emissions and, absent a commensurate GHG emission reduction, a significant and unavoidable impact. Therefore, the Proposed Project and alternatives were found to have significant unavoidable (Class I) ~~to~~ greenhouse gas impacts toward climate change. In addition, this direct net increase to greenhouse gas production would result in a significant unavoidable (Class I) contribution to cumulative impacts to greenhouse gas emissions when combined with cumulative development in the project area, which is also generating greenhouse gases. Issues related to greenhouse gases are discussed in detail in Section D.2 (Air Quality), and above in Section F.1.5 (Cumulative Impact Analysis).

4.17 SECTION I – REFERENCES AND ORGANIZATIONS/PERSONS CONSULTED

- Page I-17:

Final EIR

Wilson, Ihrig, & Associates, Inc. (WIA). 1998. Northeast San Jose Transmission Reinforcement Project Proponent's Environmental Assessment.

4.18 REVISED ATTACHMENT VR-2 AND REVISED FIGURES

Following are Draft EIR figures and section attachments that have been revised as a result of responses to comments.