

FINAL

**Mitigation Monitoring, Compliance, and
Reporting Program**

Sunrise Powerlink Project

Prepared for:
California Public Utilities Commission
U.S. Bureau of Land Management

Prepared by:
Aspen Environmental Group



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1.0 Introduction

The Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Sunrise Powerlink Project, as adopted by the California Public Utilities Commission (CPUC) on December 18, 2008, includes procedures for preparing and implementing a Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) to ensure compliance with mitigation measures approved in the Final EIR/EIS, as well as with the terms and conditions associated with the BLM Right of Way. The CPUC is the Lead Agency under the California Environmental Quality Act (CEQA). The Lead Agency for the National Environmental Policy Act (NEPA) is the Bureau of Land Management (BLM), which issued a Record of Decision approving the project on January 20, 2009. The route also crosses lands under jurisdiction of the U.S. Department of Agriculture (USDA) Forest Service (FS) on the Cleveland National Forest (CNF); however, the Forest Service has not yet issued its Record of Decision [update when published].

Section I of the Final EIR/EIS provides the recommended framework for the implementation of the MMCRP by the CEQA Lead Agency, the CPUC, and the BLM (NEPA Lead Agency), and describes the roles and responsibilities of government agencies in implementing and enforcing adopted mitigation measures. This MMCRP includes the information provided in EIR/EIS Section I, as well as specific protocols to be followed prior to and during construction by CPUC third-party Environmental Monitors (CPUC EMs) and SDG&E project staff. Long-term monitoring during operations and maintenance will be addressed through consultation and a plan with the appropriate resource agencies.

The project's MMCRP includes direct participation and commitment from SDG&E and CPUC EMs. The success of the program depends on the project management staff, monitors, and construction contractor personnel. Therefore, the goal of the MMCRP is to provide a clear understanding of the project's organization, establish lines of communication, and effectively document and report compliance with all of the mitigation measures.

The MMCRP was developed to provide guidelines and standardize procedures for environmental compliance on the project. The procedures have been developed by the CPUC and BLM, in coordination with SDG&E, USFS, and other responsible agencies to help define the reporting relationships, provide detailed information about the roles and responsibilities of the project's environmental compliance team members, define compliance reporting procedures, and to establish a communication protocol. The communication lists in the MMCRP will be updated throughout construction.

1.1 Authority for the Mitigation Monitoring, Compliance, and Reporting Program

Mitigation monitoring is required through both CEQA and NEPA. Section 21081.6 of the California Public Resources Code requires a public agency, such as the CPUC, to adopt a Mitigation Monitoring, Compliance, and Reporting Program when it approves a project that is subject to preparation of an EIR and where the EIR for the project identifies significant adverse environmental effects. *CEQA Guidelines* Section 15097 was added in 1999 to further clarify agency requirements for mitigation monitoring or reporting.

The Council on Environmental Quality (CEQ) has established regulation for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508). NEPA requires mitigation monitoring in 40 CFR 1505.2(c), with additional specificity provided in the BLM NEPA Handbook (H-1790-1), Chapter 10

(Monitoring). BLM also served as the lead federal agency for section 7 consultation under the Endangered Species Act, section 106 consultation under the National Historic Preservation Act, and is responsible for conducting Tribal Consultation. BLM is responsible for ensuring that mitigation measures adopted in its ROD are implemented and other terms and conditions associated the ROW Grant are adhered to on BLM land. The goal of the MMCRP is to seek prevention of problems and timely, comprehensive communication.

1.2 Agencies With Jurisdiction

In addition to the CPUC, BLM, and the Forest Service, many other local, state, and federal agencies have jurisdiction over lands or resources that are crossed by the project route. Table 1 lists jurisdictional agencies associated with the project.

The CPUC and BLM, as the Lead Agencies, are responsible for ensuring that all mitigation measures are implemented throughout construction and operation, and the CPUC monitors will verify SDG&E's compliance with conditions of permits issued by other agencies. Jurisdictional agencies' designated representatives may visit construction areas at any reasonable and safe time, and may require information regarding the status of compliance with particular mitigation measures. SDG&E is responsible for satisfying requests from jurisdictional agencies and will notify and copy the CPUC and BLM on all correspondences related to final approvals and verifications for the project if not otherwise copied on the correspondence. Additional information on communication protocols is presented in Section 2.3 below. Long-term monitoring during operations and maintenance will be addressed through consultation and a plan with the appropriate resource agencies.

Table 1. Jurisdictional Agencies Associated with the Sunrise Powerlink Project

Agency	Address	Contact Person	Phone	Email Address
LEAD AGENCIES				
California Public Utilities Commission	505 Van Ness Ave, 4th Floor San Francisco CA 94102	Billie Blanchard	415-703-2068	bcb@cpuc.ca.gov
Bureau of Land Management (BLM)	El Centro Field Office 1661 S. 4th St El Centro CA 92243	Daniel Steward	760-337-4424	Daniel_Steward@ca.blm.gov
		Carrie Simmons	760-337-4437	Carrie_Simmons@ca.blm.gov
	Palm Springs/South Coast Field Office 1201 Bird Center Dr Palm Springs CA 92262	Michael Bennett	760-833-7139	Michael_Bennett@blm.gov
		Greg Hill	760-833-7140	Greg_Hill@blm.gov
		Janaye Byergo (San Diego)	858-451-1767	Janaye_Byergo@blm.gov
FEDERAL AGENCIES				
U.S. Department of Agriculture (USDA) Forest Service	10845 Rancho Bernardo Rd Suite 200 San Diego CA 92127	Bob Hawkins	707-562-8699	rhawkins@fs.fed.us
	Cleveland National Forest	Kirsten Winter (Biologist)	858-674-2956	kwinter@fs.fed.us
	Cleveland National Forest	Stephen Harvey (Archaeologist)	858-674-2973	slharvey@fs.fed.us
	San Bernardino National Forest	Robert Taylor (Hydrologist)	909-382-2660	rgtaylor@fs.fed.us
	San Bernardino National Forest	Kermit Johansson (Landscape Architect)	909-382-2712	kjohansson@fs.fed.us
U.S. Fish and Wildlife Service	6010 Hidden Valley Rd Suite 101 Carlsbad CA 92011	Eric Porter	760-431-9440 x285	eric_porter@fws.gov
		Doreen Stadlander	760-431-9440 x223	doreen_stadlander@fws.gov
U.S. Army Corps of Engineers	6010 Hidden Valley Rd Suite 105 Carlsbad CA 92011	Robert R. Smith Jr., P.E. (404 Permit)	760-602-4831	robert.r.smith@usace.army.mil
U.S. Department of Transportation, Federal Highway Administration	Federal Highway Administration 1200 New Jersey Ave SE Washington, DC 20590	Director, Raja Veeramachaneni Office of Project Development & Environmental Review	202-366-2058	N/A [SDG&E does not anticipate direct contact with FHWA. Our contact is with Caltrans, who in turn will contact FHWA regarding any highway encroachment issues for I-8.]
U.S. Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms	Alcohol and Tobacco Tax and Trade Bureau Public Information Officer 1310 G St NW Suite 300 Washington DC 20220	General Contact	202-927-5000	ttbquestions@ttb.treas.gov [SDG&E does not anticipate direct contact with the Treasury Dept., BATF]

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Table 1. Jurisdictional Agencies Associated with the Sunrise Powerlink Project

Agency	Address	Contact Person	Phone	Email Address
Federal Aviation Administration	Western-Pacific Regional Office Air Traffic Division, AWP-520 15000 Aviation Blvd Hawthorne CA 92060	General Contact/TBD	310-725-6557	N/A
U.S. Department of Defense – MCAS Miramar	Marine Corps Air Bases Western Area PO Box 452007 San Diego CA 92145-2007	Jack Harkins, Deputy Assistant Chief of Staff G-4 I&L	858-577-6678 (O) 858-864-3464 (C)	Jack.Harkins@usmc.mil
U.S. Department of Defense – La Posta Mountain Warfare Facility	U.S. Department of Defense NFEC SW Attn: Sheila Donovan, CPL 1220 Pacific Highway San Diego CA 92132	Sheila Donovan	619-532-1253	sheila.donovan@navy.mil
STATE AGENCIES				
State Lands Commission	100 Howe Ave Suite 100 South Sacramento CA 95825-8202	Jim Porter	916-574-1865	porterj@slc.ca.gov
California Dept of Fish & Game	South Coast Region 4949 Viewridge Ave San Diego CA 92123	Helen Birss (main contact)	805-569-6863	hbirss@dfg.ca.gov
		Marilyn Fluharty	858-467-4231	mfluharty@dfg.ca.gov
		Paul Schlitt (Region 5 CEQA/CESA)	858-637-5510	pschlitt@dfg.ca.gov
		James Sheridan (Region 6 CEQA/CESA)	760-200-9419	jsheridan@dfg.ca.gov
		Kelly Fisher (Region 5 LSAA Program within San Diego County)	858-467-4207	kfisher@dfg.ca.gov
		Heather Pert (Region 6 LSAA Program in Imperial County, Region 6).	858-395-9692	hpert@dfg.ca.gov
California Dept of Transportation	4050 Taylor St San Diego CA 92110	Jacob Armstrong	619-688-6960	Jacob.Armstrong@dot.ca.gov
California Dept of Toxic Substances Control	PO Box 806 Sacramento CA 95812-0806	General Contact/TBD	800-728-6942	webcoord@dtsc.ca.gov
State Historic Preservation Office	M. Wayne Donaldson 1416 9th St #1442-7 Sacramento CA 95814	M. Wayne Donaldson	916-653-6624	calshpo@parks.ca.gov

Table 1. Jurisdictional Agencies Associated with the Sunrise Powerlink Project

Agency	Address	Contact Person	Phone	Email Address
California Air Resources Board	1001 "I" St PO Box 2815 Sacramento CA 95812	General Contact	800-242-4450 916-322-3260	webmaster@arb.ca.gov [SDG&E does not anticipate direct contact with CARB, only with local air districts]
State Water Resources Control Board	1001 I St 15th floor Sacramento CA 95814	Cliff Harvey	916-558-1709	charvey@waterboards.ca.gov
Regional Water Quality Control Board, Region 7 (Colorado River Basin)	73-720 Fred Waring Dr Suite 100 Palm Desert CA 92260	Jay Mirpour	760-776-8981	jmirpour@waterboards.ca.gov
		John Carmona	760-341-6820	jcarmona@waterboards.ca.gov
Regional Water Quality Control Board, Region 9 (San Diego)	9174 Sky Park Ct Suite 100 San Diego CA 92123	Chiara Clemente	858-467-2359	Cclemente@waterboards.ca.gov
California Reclamation Board	PO Box 942836 Sacramento CA 94236	Jill Phinney Support Staff	916-574-0609	jphinney@water.ca.gov
LOCAL AND REGIONAL				
Imperial County	155 So. 11th St El Centro CA 92243	Jurg Heuberger, Community of Economic Development	760-482-4462	jurgheuberger@imperialcounty.net
San Diego County	Resource Management Division 9150 Chesapeake Dr Suite 200 San Diego CA 92123	Trish Boaz, Chief, Resource Management for Department of Parks and Recreation	858-966-1371	Trish.boaz@sdcounty.ca.gov
	5201 Ruffin Rd Suite B San Diego CA 92123	Leann Carmichael, Planning Manager for Department of Planning and Land Use	858-694-3739	Leann.Carmichael@sdcounty.ca.gov
City of San Diego	Public Utilities Department	Jeff Pasek – Watershed Manager/Senior Biologist	619-533-7599 (O); 619-980-5332 (C)	jpasek@sandiego.gov
		Niki McGinnis – Water Resources Protection Manager/Senior Environmental Planner	619-533-4101 (O); 619-756-3478 (C)	nmcginnis@sandiego.gov
Imperial County APCD	Air Pollution Control Officer 150 S. 9th St El Centro CA 92243	Brad Poiriez	760-482-4606	bradpoiriez@imperialcounty.net
		Reyes Romero	760-482-4606	reyesromero@imperialcounty.net
San Diego County APCD	10124 Old Grove Road San Diego CA 92131	Bob Kard, Director	858-586-2600	Robert.Kard@sdcounty.CA.gov
		Rob Reider		Robert.Reider@sdcounty.CA.gov

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Table 1. Jurisdictional Agencies Associated with the Sunrise Powerlink Project

Agency	Address	Contact Person	Phone	Email Address
Imperial County Environmental Health Services	935 Broadway El Centro CA 92243	Robin Hodgkin, M.P.A., Department Director	760-482-4438	icphd@imperialcounty.net
San Diego County Environmental Health Services	PO Box 129261 San Diego CA 92112-9261	General Contact/TBD	619-338-2231	hmdutyeh@sdcounty.ca.gov
OTHER UTILITIES				
San Diego & Arizona Eastern Railway	SD & AE Railway facilities are owned by the Metropolitan Transit System. 1255 Imperial Ave Suite 1000 San Diego CA 92101	Tim Allison	619-595-4903	tim.allison@sdmts.com
Union Pacific Railroad	Union Pacific Railroad 1400 Douglas St Omaha NE 68179	General Contact	UP Main Number: N/A 402-544-5000 UP Operator: 888-870-8777	
Imperial Irrigation District	333 E. Barioni Blvd Imperial CA 92251	General Contact	Energy Customer Service: 800-303-7756; Water Customer Service: 760-339-9322	N/A
San Diego County Water Authority	4677 Overland Ave San Diego CA 92123	General Contact	858-522-6600	info@sdcwa.org

1.3 Project Description

1.3.1 Project Overview

The CPUC granted a certificate of public convenience and necessity (CPCN), and the BLM issued two Right-of-Way grants (one for temporary use) for the Sunrise Powerlink Project as defined in the CPUC's Decision. The Sunrise Powerlink Project includes the construction of new electric transmission lines between the existing Imperial Valley substation near El Centro in Imperial County to SDG&E's Sycamore Canyon Substation in coastal San Diego County, and other system modifications to reliably operate the new lines. The entire Project will extend approximately 118.1 miles¹, and traverse private and public lands (*e.g.*, BLM land and Cleveland National Forest).

The 500 kV segment of the Project will include the following segments of alternatives or route options, from east to west.

- **Interstate 8 Alternative (including SWPL Archaeological Site Revision and Jacumba Breakaway Revision):** The route follows the Interstate 8 Alternative starting at the Imperial Valley Substation and continuing west for 40.0 miles and includes:
 - SWPL Archaeological Site Revision
 - Jacumba SWPL Breakaway Point Revision
- **BCD Alternative Revision:** The route turns north-northwest for 13 miles, then southwest for 2 miles to meet the BCD South Option Revision. The route will be slightly modified as dictated by Mitigation Measure WR-2a (Final EIR/EIS Figure E.2.1-1b), which provides for an additional route revision to be developed by SDG&E in consultation with the U.S. Forest Service.
- **BCD South Option Revision:** The BCD South Option Revision continues south for approximately 6 miles and joins the Modified Route D Alternative at MP MRD-3.6.
- **Modified Route D Alternative (including Cameron Reroute, PCT Route Option A, and Western Modified Route D Alternative Reroute):** The route follows the Modified Route D Alternative to the Modified Route D Substation for approximately 31 miles, including the following route revisions:
 - **Cameron Reroute** from approximately MP MRD-8.5 to MP MRD-10.15
 - **PCT Route Option A** from approximately MP MRD-10.9 to MP MRD-14
 - **Western Modified Route D Alternative Revision** from MP MRD-18.5 to the "Suncrest Substation" (called the "Modified Route D Substation" in the EIR/EIS) at MP MRD-34

There are two route options for the first 230 kV segment of the Project to exit the Suncrest Substation.

- The first option is the original **Modified Route D Alternative** route would exit to the north, and follow the Modified Route D Alternative until reaching the Interstate 8 Alternative at Alpine Boulevard (MP I8-71.3).
- The second option would be implemented if the first is found to be infeasible. This is the **Star Valley Option**, which would eliminate the eastern underground segment in Alpine Boulevard, and would exit the Modified Route D Substation to the west-northwest. The option would be an overhead double-circuit 230 kV transmission line, heading west and northwest for 2.2 miles, then north for approximately 0.3 miles to a location near Star Valley Road, the route would transition under-

¹ Note that the USFWS BO and CDFG CESA Application references 120 miles.

ground and continue north to Alpine Boulevard, where it would join the Interstate 8 Alternative in its underground segment on Alpine Boulevard.

After entering Alpine Boulevard underground, the route continues west as follows:

- **Interstate 8 Alternative:** The route reconnects with the Interstate 8 Alternative where it meets Alpine Boulevard. From the Star Valley Option, the route would remain underground for 6 miles along Alpine Boulevard.
- **Chocolate Canyon Option Revision:** The route follows the Chocolate Canyon Option including the Chocolate Canyon Option Revision for 3.7 miles (MP CC-0 to CC-3.7).
- **Interstate 8 Alternative (including High Meadow Reroute and Highway 67 Hansen Quarry Reroute):** The Chocolate Canyon Option Revision connects with the Interstate 8 Alternative at MP I8-82.2 and the route travels for 10 miles to meet the Proposed Project route at approximately MP 131. This route segment includes:
 - The High Meadows Reroute
 - The Highway 67 Hansen Quarry Reroute
- **Proposed Project: The route follows** the Proposed Project route from MP 131 to the Sycamore Canyon Substation for 5.3 miles (MP 131 to MP 136.3). The approved Project includes the “Other System Upgrades” (Reconductoring of the existing 69 kV transmission line between the existing Sycamore Canyon and Elliot Substations, and improvements at the existing San Luis Rey and South Bay Substations).

Coastal Link System Upgrades Alternative Revision: The approved Project incorporates the Coastal Link System Upgrades Alternative Revision, in which the westernmost 15 miles of the Proposed Project will be replaced with upgrades to existing facilities (reconductoring and substation upgrades).

Schedule

SDG&E expects to have the project energized in 2012. Project related construction activities on each segment (see *Table 2*) will not begin until pre-construction mitigation measures and submittals have been satisfied for that segment (see Section 1.3.2). Once pre-construction mitigation measures have been completed, the CPUC will issue a Notice-to-Proceed (NTP), indicating that construction can commence for that particular segment. The NTP may include CPUC or other agency conditions or requirements that must be satisfied prior to the start of work or during construction. In some cases, it may be appropriate to issue segment- or component-specific NTPs when pre-construction mitigation measures have been completed for one segment or component and not another. Section 6.3 lists the mitigation measures, the timing for completion, and whether CPUC review or approval is required before construction can commence.

1.3.2 Construction Segments and Components

A map of the construction segments is provided in *Attachment A*. The project has been divided into 25 segments. The segments and anticipated start dates are shown in Table 2 below.

Table 2. Construction Segments

Segment	Section	Link	Description	Location	Dates*
1	IV		Imperial Valley Substation	Imperial Valley Substation	Jun-10
2	10B	Link 1 (500 kV)	Imperial Valley Sub to Pyramid Mining	MP0 to MP19.2	Jun-10
3			Pyramid Mining to Mountain Springs Grade	MP19.2 to MP23.2	Jun-10
4	9C/10A		Mountain Springs Grade to Jade	MP23.2 to MP30.3	Aug-10
5	9C		Jade to I-8 (McCain Valley)	MP30.3 to MP39.7	Jun-10
6	9B		I-8 (McCain Valley) to USFS	MP39.7 to MP52.5	Jun-10
7	9A/8E	Link 2 (500 kV)	USFS East	MP52.5 to MP61.3	Jun-10
8	8E		USFS East to Cameron Substation	MP61.3 to MP65.4	Jun-10
9	8D		Section 8D	MP65.4 to MP70.9	Jun-10
10	8C		Section 8C	MP70.9 to MP74.8	Jun-10
11	8B		Section 8B	MP74.8 to MP77.6	Jun-10
12	8A		Section 8A	MP77.6 to MP90.0	Jun-10
13	Suncrest	Link 3	Suncrest Substation (Modified Route D Substation)	Suncrest Substation	Jun-10
14	7	Link 5	Section 7	MP90.0 to MP92.8	Jun-10
15	6	Link 4	Section 6 (Alpine Blvd. UG)	MP92.8 to MP99.0	Jun-10
16	5	Link 5 (230 kV)	Peutz Valley thru El Monte Valley	MP99.0 to MP105.5	Jun-10
17			El Monte Valley to Hwy 67	MP105.5 to MP112.7	Jun-10
18	4A		Hwy 67 to Sycamore Canyon Substation	MP112.7 to MP118.1	Jun-10
19	SX		Sycamore Canyon Substation	Sycamore Canyon Substation	Mar-10
20	SX-EI		Sycamore to Elliott 69 kV Reconductor	Sycamore to Elliott	May-11
21	SX-SC		Sycamore to Scripps 69 kV Reconductor	Sycamore to Scripps	Apr-10
22	SX-POM		Sycamore to Pomerado 69 kV Reconductor	Sycamore to Pomerado	Oct-10
23	South Bay		South Bay Substation Upgrades	South Bay Substation	Jan-11
24	Encina		Encina Substation Upgrades	Encina Substation	Oct-10
25	SLR		San Luis Rey Substation Upgrades	San Luis Rey Substation	Jan-11

*The construction dates listed in the table are current as of November 4, 2009, but are subject to change based on design, permitting, and compliance needs.

Note: Section 7 (in Segment 14) includes the overhead portion of the Star Valley Option Revision and Section 6 (in Segment 15) includes the underground portion of the Star Valley Option Revision. As a result, the mileposts for Segments 14 to the end of the route at Segment 18 reflect incorporation of the Star Valley Option Revision and are subject to change depending on the route constructed.

The mitigation measures listed in Section 6.3 include the location in which the mitigation measure applies. In general, the mitigation measures are applicable to all project areas; however certain biological and other resource protection measures are segment specific. SDG&E will work closely with contractor staff to ensure that site-specific mitigation measures are clearly identified.

1.3.3 Project Authorizations by Lead, Responsible, and Cooperating Agencies

This Plan is intended to provide pertinent information necessary to successfully implement the MMCRP during construction. The mitigation measures listed in Section 6.3 are presented in Sections D.2 through D.15 and E.1 through E.4 of the Final EIR/EIS. These sections also present discussions that explain the

intent of each mitigation measure and the potential impacts that could result if the mitigation measures are not implemented properly.

In addition to complying with the adopted mitigation measures and APMs, construction activities must be conducted in accordance with the requirements of a wide range of additional authorizations as listed below.

Lead Agencies – CPUC and BLM

- **California Public Utilities Commission** Certificate of Public Convenience and Necessity [issued on December 18, 2008]
- **BLM** Right-of-Way grants [issued on January 20, 2009], Temporary Use Permit, Antiquities and Cultural Use Permit, Plan of Development, Notice to Proceed, Clean Air Act Conformity, Fire Prevention Control Plan

Federal Agencies

- **U.S. Department of Agriculture (USDA) Forest Service** Special Use Permit, Special Use Easement, Record of Decision, Plan Amendment
- **U.S. Fish & Wildlife Service (USFWS)** Consultation per Section 7 of the Endangered Species Act, Biological Opinion [issued January 2009]
- **U.S. Army Corps of Engineers (Corps)** Individual/Nationwide Section 404 Permit – Dredge and Fill of jurisdictional waters of the U.S.
- **U.S. Department of Transportation, Federal Highway Administration** Encroachment Permits, Review of obstruction and objects affecting airspace
- **U.S. Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms** Explosive User's Permit
- **Federal Aviation Administration** Helicopter Lift Plan, Form 7460-1
- **U.S. Department of Defense – Marine Corps Air Station (MCAS) Miramar** FAR Part 77 Request (via FAA), SECNAVINST 11011.47A (access road outside of easement).

State Agencies

- **California Independent System Operator** Interconnection approval
- **California State Lands Commission** Right-of-Way Easement
- **California Department of Fish and Game** Lake or Streambed Alteration Agreement (Fish and Game Code §§1600-1616), California Endangered Species Act Incidental Take Permit (Fish and Game Code §§2081(b)(c)), Mitigation Monitoring, Compliance and Reporting Program Plan, Certification of EIR, Recorded Conservation Easements.

- **State Water Resources Control Board** Clean Water Act Section 401 Water Quality Certification and associated Waste Discharge Requirements; Stormwater Construction General Permit 99-08 DWQ (issued by State Board, then separately issued by Regional Boards):²
 - **Regional Water Quality Control Board, Region 7** (Colorado River Basin), Storm Water Construction General Permit 99-08-DWQ;
 - **Regional Water Quality Control Board, Region 9** (San Diego), Storm Water Construction General Permit 99-08-DWQ.
- **California Department of Transportation** Encroachment Permits, Traffic Control Plans
- **California Department of Toxic Substances Control** EPA Hazardous Waste Generator ID
- **California State Historic Preservation Office** Cultural Resources Use Permit, Field Use Authorization, or an Archaeological Resources Protection Act (ARPA) Permit (if required), Consultation for Section 106 of the National Historic Preservation Act
- **California Air Resources Board** Portable Engine Registration for specified non-mobile portable engines
- **California Reclamation Board** Encroachment Permit

Local Agencies

- **Imperial County** Road/Highway Encroachment/Crossing Permit, Grading Permit, Flood Control/Drainage Channel Encroachment/Crossing Permit, Explosives Permit
- **San Diego County** Road/Highway Encroachment/Crossing Permit/Review, Grading and Wall Permit/Review, Traffic Control Plans, Explosives Permit, New or Expanded ROW Grant, Flood Control/Drainage Channel Encroachment/Crossing Permit/Review, Excavation Permit/Review
- **Imperial County APCD, San Diego County APCD** Permit to Operate, Dust Control Plan
- **San Diego and Imperial County Environmental Health Services** Hazardous Materials Business Plan, Spill Prevention Control & Countermeasures Plan
- **Cities of San Diego and Poway** Road/Highway Encroachment/Crossing Permit/Review, Flood Control Channel, Encroachment/Crossing Permit/Review, Temporary Use/Occupancy Permit/Review – Material and Storage Yards

² Note that while the Stormwater Construction General Permit is issued by the State Water Board, enforcement of this statewide permit is typically conducted by the staff of the regional Water Boards. State Water Board staff may also inspect and enforce compliance with this permit.

2.0 Roles and Responsibilities

This section describes the roles and responsibilities of key project personnel with respect to the MMCRP.

Figure 1 provides an organizational chart of project members responsible for implementing the MMCRP and their relationship to other staff working on the project. The organization chart also establishes preliminary lines of communication between the project team.

Figure 2 provides an organizational chart of San Diego Gas & Electric project members responsible for implementing the MMCRP and their relationship to other staff working on the project.

Following Figures 1 and 2, the roles and responsibilities of each position shown on the Organization Charts have been defined.

Attachment B, Mitigation Monitoring Program Contact List contains contact information for each position shown in Figure 2.

2.1 Organization and Roles of Each Entity

2.1.1 SDG&E

SDG&E Vice President

SDG&E's Vice President (VP), as referenced in the *Contact List (Attachment B)* provides the overall direction, management, leadership and corporate coordination for the construction project. The VP's responsibilities related to the environmental program include, but are not limited to:

- Coordinate between financial, safety, public affairs, construction, engineering, land services and environmental staff
- Provide direction by integrating environmental compliance into all levels of the project organization
- Communicate corporate coordination for all levels of the project organization
- Assure financial support, corporate leadership and management staff to effectively comply with all project policies, requirements and procedures.

Figure 1. MMCRP Organization – Reporting Relationships

Lines of authority shown in yellow.

Coordination shown in purple.

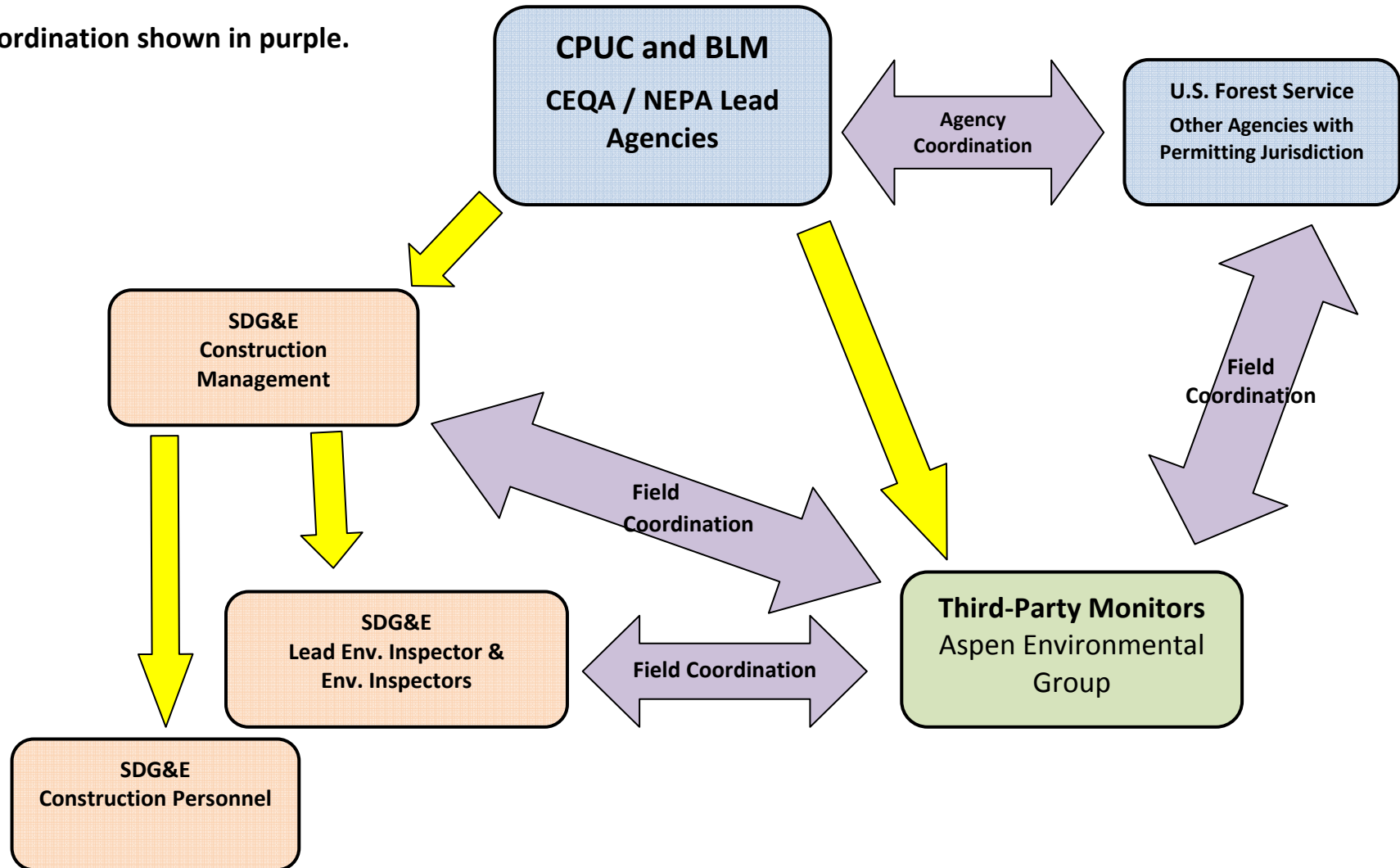
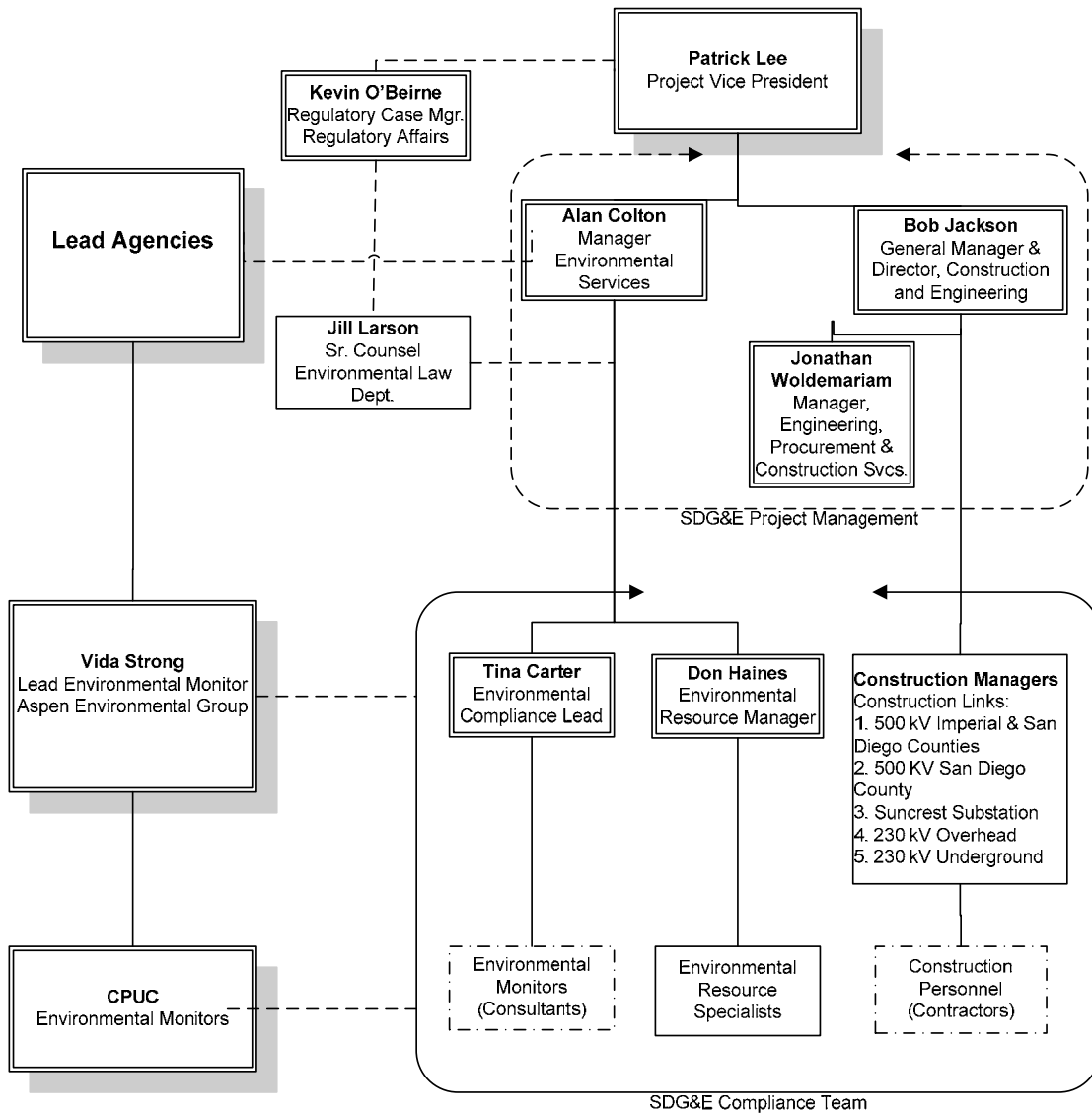


Figure 2. MMCRP Organization –
 San Diego Gas & Electric Company



July 15, 2009

SDG&E General Manager and Director, Construction & Engineering

SDG&E's General Manager and Director (GM&D), Construction & Engineering, as referenced in the *Contact List (Attachment B)* provides the specific direction, management, leadership and corporate coordination for the construction project to the Construction & Engineering Managers. The GM&D's responsibilities related to the environmental program include, but are not limited to:

- Coordinate between construction management, engineering management, and environmental staff
- Provide leadership for the construction and engineering management by integrating environmental responsibility into the project organization
- Communicate corporate coordination for the construction and engineering management of the project organization
- Assure financial support for the construction and engineering management in order to effectively comply with all project policies, requirements and procedures.

SDG&E Manager, Engineering, Procurement & Construction Services:

SDG&E's Manager, Engineering, Procurement & Construction Services (MEPCS), as referenced in the *Contact List (Attachment B)* will provide the specific direction, management, and leadership for the construction project to the Engineering, Procurement & Construction Services. The MEPCS's responsibilities related to the environmental program include, but are not limited to:

- Coordinate between engineering, procurement, construction services, and environmental staff
- Provide leadership for the engineering, procurement & construction services by integrating environmental responsibility into the project organization
- Communicate engineering, procurement and construction services project activities and schedules to the environmental staff.
- Assure engineering, procurement and construction services compliance with all project policies, requirements and procedures, including the MMCRP.

SDG&E Project Managers

SDG&E's Project Managers (PMs), as referenced in the *Contact List (Attachment B)* oversee the activities of the assigned Construction Segments *Table 2*, and the SDG&E designated construction Links. Specific responsibilities of the PMs include, but are not limited to:

- Ensure compliance with project specifications, drawings, permit conditions, construction contracts and applicable codes
- Notify Environmental Manager and Compliance Lead of project schedule changes
- Work with SDG&E Compliance Team to evaluate and improve the implementation of the MMCRP as construction progresses
- Regularly facilitate project meetings
- Assure all construction personnel receive environmental training, (Safe Worker and Environmental Awareness Program, SWEAP), as required under Mitigation Measures B-7b, Bio-APM-2, C-1f, CR-APM-1, PAL-1e, HS-APM-1, AQ-4c, WQ-APM-3, and F-1a as new workers arrive on the project. SDG&E may elect to have a construction management contractor design, deliver and record the SWEAP.

SDG&E Construction Personnel

Construction activity will take place at any given time within multiple Construction Segments *Table 2*, and the SDG&E designated construction Links. Construction contractors will have significant responsibilities for implementation of and compliance with the environmental requirements of the project. The contractors will be responsible for incorporating all project environmental requirements into their day-to-day construction activities.

Key environmental responsibilities for contractors' staff include, but are not limited to:

- Verify that all construction workers attend the project's Safe Worker and Environmental Awareness Program (SWEAP) prior to beginning work on the project
- Review and understand the environmental requirements
- Implement and maintain mitigation measure requirements and conditions during construction
- Respond to requests by SDG&E Environmental Resource Specialists and Monitors, during construction

SDG&E Manager, Environmental Services

SDG&E's Manager, Environmental Services (MES), as referenced in the *Contact List (Attachment B)* is responsible for providing the appropriate level of resources for successful implementation of the MMCRP. The MES will provide management, direction, and leadership to the SDG&E Environmental Compliance Team. Specific responsibilities of the MES, include, but are not limited to:

- Directing the development and implementation of the pre-construction environmental planning, permitting, and compliance activities.
- Assures the development and implementation of the Safe Worker and Environmental Awareness Program (SWEAP)
- Provide the leadership and resources to assure compliance with the MMCRP
- Actively communicate with all Lead Agencies
- Establish and support the lines of communication between the SDG&E Environmental Staff, Construction personnel, Agencies and Third-Party Monitors.

SDG&E Environmental Resource Manager

SDG&E's Environmental Resource Manager (ERM) as referenced in the *Contact List (Attachment B)* will provide support to the MES, for successful implementation, planning, permitting and compliance activities required under the MMCRP. The ERM responsibilities include, but are not limited to:

- Coordinating the activities of the biological, paleontological, cultural and hazardous materials Environmental Resource Specialists
- Directing the development and implementation of the pre-construction environmental planning, permitting, and compliance activities.
- Provide leadership, direction and management of the Environmental Resource Specialists
- Actively communicate with all agencies respective to mitigation measures in the MMCRP
- Assure continued communication between the SDG&E Environmental Compliance Team, Construction personnel, Agencies, and Third-Party Monitors.

SDG&E Environmental Compliance Lead

SDG&E's Environmental Compliance Lead (ECL) as referenced in the *Contact List (Attachment B)* will provide oversight of all activities required for compliance of the MMCRP. The ECL will also provide coordination of activities for agriculture, transportation, fire and training. The ECL responsibilities include, but are not limited to:

- Coordination and tracking of the submittal process in order to receive Notices to Proceed
- Work closely with CPUC EMs to evaluate the effectiveness of mitigation measures
- Actively communicate with the Lead Agencies, particularly in regards to the MMCRP
- Provide coordination with construction and engineering groups to assure mitigation measures are understood and implemented
- Assure frequent and clear communication between the SDG&E Environmental Staff, Construction personnel, Agencies, and Third-Party Monitors.

SDG&E Environmental Resource Specialists

SDG&E's Environmental Resource Specialists, as referenced in the *Contact List (Attachment B)* will support the ERM for successful implementation, planning, permitting and compliance activities required under the MMCRP. The ERM responsibilities include, but are not limited to:

- Coordinating the activities of the biological, paleontological, cultural, air, water, visual, wilderness & recreation and noise mitigation measure requirements
- Coordinating the development and implementation of the pre-construction environmental planning, permitting, and compliance activities.
- Actively communicate with all agencies respective to the above mitigation measure requirements
- Provide direction and management of the Environmental Monitors

SDG&E Environmental Monitors

Several mitigation measures require a qualified specialty monitor during construction, as referenced in *Table 3 (Mitigation Measures Requiring Onsite Monitoring)*. The measures listed in *Table 3* require SDG&E to provide an on-site specialty monitor. The information will be completed as it becomes available and as consultant and contract personnel are finalized. The Environmental Monitors will provide oversight, protection and direction for compliance within their field of expertise at the applicable Construction Segments (*Table 2*) and Construction Links.

Additional SDG&E Roles

SDG&E Regulatory Affairs

The SDG&E Regulatory Case Manager for Regulatory Affairs provides information and guidance to both the Sunrise Powerlink Project Construction Management and Environmental Management Teams as needed.

SDG&E Environmental Law Department

The SDG&E Senior Counsel Environmental, for the Environmental Law Department provides information and guidance to both the Sunrise Powerlink Project Construction Management and Environmental Management Teams as needed.

Table 3. Mitigation Measures Requiring Onsite Monitoring During Construction by Qualified Inspectors

Mitigation Measure No.	Resource	Purpose	Monitor	Segments
B-1c	Biology	sensitive vegetation communities or wildlife habitat	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments (segments 4 and 5, only, for the barefoot banded gecko)
B-5a	Biology	special status plants	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7a	Biology	wildlife (<i>e.g.</i> , reptiles and small mammals)	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7b	Biology	FTHL	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7d	Biology	burrowing owl	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7e	Biology	least Bell's vireo and southwestern willow flycatcher	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7i	Biology	QCB	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7j	Biology	arroyo toad	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-7l	Biology	coastal California gnatcatcher	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	TBD
B-8a	Biology	breeding birds	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
B-9a	Biology	bat nursery colonies	Natural History Museum	Pending survey results
BIO-APM-8	Biology	sensitive plant populations	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	Pending survey results
BIO-APM-14	Biology	wildlife entrapment	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
BIO-APM-16	Biology	nesting birds	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments
BIO-APM-17	Biology	vegetation along access roads	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	All segments

Table 3. Mitigation Measures Requiring Onsite Monitoring During Construction by Qualified Inspectors

Mitigation Measure No.	Resource	Purpose	Monitor	Segments
BIO-APM-27	Biology	active raptor nests	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD	Pending survey results
C-1a	Cultural	cultural resources	ASM Affiliates, 760-504-5757 jrcook@asmaffiliates.com	All segments
C-1b	Cultural	Potentially NRHP and/or CRHR eligible resources in environmentally sensitive areas	TBD	All segments
C-1c	Cultural	historic properties and cultural resources	TBD	All segments
C-1e	Cultural	cultural resource Environmentally Sensitive Areas	TBD	All segments
C-2a	Cultural	human remains	TBD	All segments
C-3a	Cultural	buried prehistoric or historical archaeological sites or Native American human remains	TBD	All segments
CR-APM-3	Cultural	previously unidentified cultural resource	TBD	All segments
PAL-1b	Paleontology	paleontological resources	TBD	All segments
PAL-1c	Paleontology	paleontological resources	TBD	All segments
GEO-APM-9	Paleontology	paleontological resources	TBD	All segments
P-1a	Public Health & Safety	Environment Field Representative must be available at all times –either on site or on call	TBD	All segments
P-3a	Public Health & Safety	contaminated soil or groundwater	TBD	Pending Phase I Assessment
WQ-APM-16	Hydrology & Water	riparian areas, habitats of endangered species, streambeds, cultural resources, and wetlands	Pre-Constr.: Chambers Group, Inc., Recon, TRC Solutions, Inc. During Constr.: TBD*	For all segments, pending survey results

*Inspectors should be trained in stormwater, non-point-source and watershed modification/hydromodification impacts should be specified as an essential part of the inspection and monitoring teams. These inspectors should have experience and training in use, adaptation and inspection of BMPs for wild land settings, as well as an ability to assess watershed effects of construction practices. Inspectors that hold qualifications such as Certified Professional in Sediment and Erosion Control (CPESC) or similar certifications should be preferred.

Several additional mitigation measures require a qualified specialty monitor during maintenance of the transmission line. These measures are Mitigation Measure B-12a (nesting territories of the coastal California gnatcatcher, least Bell’s vireo, southwestern willow flycatcher, and burrowing owl), Mitigation Measure B-12b (arroyo toads), Mitigation Measure B-12c (QCB), and Mitigation Measure C-5a (NRHP and/or CRHR eligible properties).

Mitigation Compliance

SDG&E is responsible for successfully implementing all the adopted mitigation measures in the MMCRP. The MMCRP contains criteria that define whether mitigation is successful. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining non-discretionary permits or avoiding a specific impact entirely. Additional mitigation success thresholds may be imposed by applicable agencies with jurisdiction through the discretionary permit process.

SDG&E shall inform the CPUC and its monitors in writing (i.e., Variance Request) of any mitigation measures that are not or cannot be successfully implemented and their proposed mitigation options to reduce the subject impact(s) to less than significant. The CPUC in coordination with its monitors and jurisdictional agencies will assess whether alternative mitigation is appropriate and specify in writing to SDG&E the subsequent actions required.

2.1.2 California Public Utilities Commission

CPUC Project Manager

The CPUC Project Manager (see *Attachment B, Contact List*) has the overall responsibility for ensuring that mitigation measures are implemented as adopted by the CPUC. She will determine the effectiveness of the MMCRP based on the success criteria included in the mitigation monitoring table. The CPUC delegates field monitoring and reporting responsibilities to Aspen Environmental Group, the third-party monitoring firm and the firm that prepared the EIR/EIS for the CPUC and BLM. The CPUC Project Manager will oversee Aspen's work through telephone calls, and review of daily and weekly status reports. The CPUC Project Manager will be notified of all noncompliance situations and may suggest measures to help resolve the issue(s). All variance requests will be submitted to the CPUC Project Manager for review and approval.

The CPUC PM will issue Notices to Proceed (NTPs) for construction of each segment identified by SDG&E. Where a NTP covers BLM, CNF, CDFG, or other jurisdictional lands, the CPUC's NTP does *not* authorize construction to start, but only documents compliance with all relevant mitigation measures and permit conditions. *No construction may occur on BLM or CNF or other jurisdictional lands without specific approval by those agencies.*

CPUC Third-Party Monitors

The overall monitoring program will be administered under the direction and oversight of the CPUC Project Manager. The CPUC has delegated daily monitoring and reporting responsibilities to Aspen Environmental Group, a third-party monitoring firm. Individual roles are defined in *Attachment B, Contact List*. The number of third-party monitors (CPUC EMs) and frequency of site inspections will depend on the number of concurrent construction activities and their locations with respect to sensitive resources and land uses, and compliance with project mitigation measures and permit conditions during construction.

SDG&E environmental monitors have primary responsibility for ensuring that construction activities are conducted in accordance with approved Project mitigation measures, compliance plans and permit conditions. The role of the CPUC third-party monitors (Aspen) is to ensure and document that compliance is being achieved using verbal and written communications.

- **Aspen Monitoring Manager.** The Monitoring Manager supervises Aspen's Lead and Environmental Monitors, as well as determines the appropriate level of inspection frequency and is responsible for weekly report preparation. The Monitoring Manager also serves as the main point of contact with the CPUC Project Manager for major issues and noncompliance discussions.
- **Lead Environmental Monitor (CPUC LEM).** The CPUC LEM will oversee the day to day monitoring activities of the EMs, be the primary point of contact with in-field agency personnel, and coordinate preparation of draft weekly reports. The LEM will have the most direct contact with the CPUC Project Manager on day-to-day issues.
- **CPUC Environmental Monitors (CPUC EMs).** CPUC EMs will be an integral part of the project team and will stay apprised of construction activities and schedule changes, and will monitor construction activities for compliance with project mitigation measures, compliance plans, and permit conditions. The CPUC EMs will document compliance through maintaining daily logs and use of a mitigation measure tracking table. The CPUC EMs will also provide input for the draft weekly reports. The CPUC EMs shall note problems with monitoring, notify designated project members, and report the problems to the CPUC Project Manager. The enforcement and shut-down authority of the CPUC EM in the field is limited to issues that address imminent safety issues or resource danger. All other issues will be brought to the attention of the SDG&E field representative to address appropriately.

Enforcement Authority

The CPUC and other jurisdictional agencies are responsible for enforcing the procedures adopted for monitoring through the CPUC EMs assigned to each segment. Other jurisdictional agencies, including the BLM and USFS, have the independent authority to halt construction, operation, or maintenance activity associated with the Sunrise Powerlink Project within their respective jurisdictions if the activity is determined to be a deviation from the approved project or adopted mitigation measures or puts a sensitive resource at undue risk.

2.1.3 Bureau of Land Management

As the NEPA Lead Agency, BLM is responsible for ensuring that mitigation measures are implemented on BLM land. BLM intends to work with the CPUC in implementation of mitigation monitoring during construction of the Sunrise Powerlink Project, and will use Aspen, the CPUC's environmental contractor, for monitoring on its lands. However, BLM's resource specialists may also have a field presence for project inspection and to review and resolve any on-the-ground issues that may arise on BLM land. No activities may occur on BLM-managed lands without BLM approval.

Field Manager

The El Centro Field Manager is the authorized officer to make BLM decisions pertinent to this project. The Field Manager will issue all authorizations or permits for the use of BLM land. For portions of the project on lands under the jurisdiction of the Palm Springs/South Coast Field Office, the El Centro Field Manager would seek concurrence with the Palm Springs/South Coast Field Manager before issuing any decision.

BLM Project Manager

The Project Manager reports to the Field Office Manager and is responsible for coordinating the implementation of the project between the BLM staff at the field, district, and state office levels. The Project Manager is the primary point of contact with the SDG&E and other agencies for review of documents, reports, mitigation progress, and project planning.

BLM Resource Specialists

Various resource staff will be involved with implementation of this project. They will be assisting the Project Manager and environmental monitors with evaluation of conditions and project status relative to mitigation requirements or other stipulations. These support staff will include archaeologists, biologists, geologists, and other staff as required.

2.1.4 United States Department of Agriculture Forest Service

The approved project route crosses lands under jurisdiction of the U.S. Department of Agriculture (USDA) Forest Service on Cleveland National Forest (CNF), and therefore, requires issuance of a Special Use authorization from the Forest Service. As a result, the Forest Service was a Cooperating Agency during preparation of the Final EIR/EIS in compliance with NEPA, the Council on Environmental Quality (CEQ) regulation for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the USDA Forest Service Handbook (CFR 1909.15, Environmental Policy and Procedures Handbook).

The Forest Service's Record of Decision, [not issued at this time, update when published] on [date], documents the decision to issue a Special Use Permit (SUP) to SDG&E for the construction, maintenance, and use of the 500 kV and 230 kV transmission lines along with ancillary improvements within the Descanso Ranger District of the CNF. The SUP is signed by the Forest Supervisor.

The SUP incorporates the appropriate terms and conditions that apply to National Forest System (NFS) lands, and is monitored and enforced by the Forest Service. The CPUC EMs (Aspen) will coordinate with the Forest Service and will serve as field monitors for the CPUC on NFS lands. No activities may occur without Forest Service and CPUC approval.

Authorized Officer

The Forest Supervisor will issue the permit if the project is approved by the Forest Service, and is responsible for the overall permit administration. Decisions to amend the permit or revoke or suspend permit operations are made at this level.

Authorized Officer for Administration

The District Ranger is delegated the authority to administer the day-to-day activities associated with the permit. The District Ranger may approve plans and activities as required under the permit, issue NTPs for activities on NFS lands, and would issue letters of non-compliance if necessary.

Permit Administrator

The District Special Uses staff handles the permit administration for the District Ranger and Forest Supervisor, included preparation of correspondence, plan review, NTPs, and field inspections.

Permit Monitor

The Permit Monitor is responsible for monitoring compliance with permit requirements in the field. The permit monitor documents observations and provides summaries of key findings to the Permit Administrator and Authorized Officer. Several permit monitors will be assigned to the project.

Project Coordinator

The Project Coordinator reports to the Forest Lands Staff Officer and is responsible for coordinating the permit implementation between the various staff units on the Cleveland National Forest. The Project Coordinator is the primary point of contact with the permittee and other agencies for plan review and approval prior to the SUP being issued.

Resource Specialists

Various resource staff will be involved with plan review and approval under the permit, as well as assisting the Permit Administrator and Permit Monitors with evaluation of conditions on the ground relative to permit requirements. These support staff will include engineers, botanists, biologists, earth scientists, fuels specialists, and other staff as required by permit conditions.

2.1.5 United States Department of Defense – Marine Corps Air Station (MCAS) Miramar

A portion of the approved route east of Sycamore Canyon Substation (approximately 0.7 miles) and the Sycamore-Elliot reconductoring would cross lands owned by the Department of Defense (DoD) MCAS Miramar. Therefore, MCAS Miramar was a Cooperating Agency for the EIR/EIS under NEPA. As part of the project, SDG&E must obtain the following permits from MCAS Miramar: FAR Part 77 Request (via FAA) and SECNAVINST 11011.47A (for access roads outside of the easement).

The CPUC EMs will coordinate with MCAS Miramar regarding construction on its land to determine whether MCAS Miramar would like CPUC EMs to monitor on its land. The CPUC EMs are familiar with the agency permit conditions and check for implementation in the field. If an issue arises during construction, the CPUC EMs will notify the MCAS Miramar representative so that he/she can take action. The MCAS Miramar representative will be included on the weekly report distribution.

2.1.6 United States Army Corps of Engineers

Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972) authorizes the U.S. Army Corps of Engineers (ACOE) to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands associated with the approved project. The ACOE issues individual site-specific or general (Nationwide) permits for such discharges. ACOE issuance of a Section 404 permit triggers the requirement that a Section 401 certification also be obtained.

The CPUC EMs are familiar with the ACOE permit conditions and check for implementation in the field. If an issue arises during construction, the CPUC EMs will notify the ACOE representative so that he/she can take action. In addition, the ACOE representative will be asked if he/she would like to be on the weekly report distribution. No activities that would potentially affect waters of the U.S. or adjacent wetlands may occur until the Section 404 permits are approved and certified.

2.1.7 United States Fish and Wildlife Service

Under Section 7 of the Federal Endangered Species Act (FESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and the Fish and Wildlife Coordination Act, BLM has consulted with the United States Fish and Wildlife Service (USFWS) and the appropriate State wildlife agency (California Department of Fish and Game, see Section 2.1.8 below). As part of the FESA Section 7 consultation process, USFWS issued a

Biological Opinion (BO) in January 2009 in response to the Biological Assessment (BA) that was submitted by BLM, the NEPA Lead Agency. In its BO, USFWS stated the SDG&E had committed to implement general and species-specific conservation measures to avoid, minimize and offset the impacts of this project on endangered and threatened species and their designated and proposed critical habitats.

Where conservation measures relate to construction activities the CPUC EMs will ensure that the conservation measures in the BO are implemented. If a potential violation occurs during construction, the CPUC EMs will notify the USFWS representative(s) (as well as the CPUC and BLM PMs) so that appropriate action can be taken. USFWS representatives will also be consulted by the CPUC PM if an issue arises relevant to an adopted conservation measure to protect federally listed species, or if any species addressed in the BO are affected during construction in a manner not anticipated in the BO. In addition, the USFWS representative(s) will be included in the weekly report distribution. Long-term monitoring during operations and maintenance will be addressed through consultation and a plan with USFWS.

2.1.8 California Department of Fish and Game

The California Department of Fish and Game (CDFG) has jurisdiction over the conservation, protection and management of California's fish, wildlife, native plants and the habitats necessary for their sustenance. CEQA lead Agencies have a legal obligation to consult with CDFG as to their projects' impacts on biological resources.

The Department issues California Endangered Species Act ("CESA") Incidental Take Permits ("Permit") pursuant to Fish and Game Code sections 2081(b) and 2081(c), and California Code of Regulations, title 14, subdivision 3, chapter 6, article 1, commencing with section 783. CESA prohibits the take of any species of wildlife designated as an endangered, threatened, or candidate species by the Fish and Game Commission. The Department, however, may authorize the take of such species by permit if the conditions set forth in Fish and Game Code sections 2081(b) and 2081(c) are met. (See also Cal. Code Regs., title. 14, § 783.4.)

As part of this CESA Section 2081 permitting process, CDFG was consulted by the CPUC during the development of the mitigation measures in the EIR/EIS. In addition, a set of measures and standards were developed by CDFG as part of its permit conditions for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

The California Fish and Game Code §3511, §4700, §5050, and §5515 provides for the highest level of protection for mammals, birds, reptiles and amphibians, and fish listed as Fully Protected. Designated species may not be taken or possessed at any time. CDFG cannot issue permits that authorize the "take of any fully protected species, except for certain circumstances such as scientific research and live capture and relocation to protect livestock.

Two statutes outside of CESA provide protection for birds, nests and eggs. They include Fish and Game Code §3503 that prohibits the taking, possession or needless destruction of nest or eggs of and bird and §3503.5 that prohibits the taking, possession, or destruction of birds of prey (*Falconiformes* and *Strigiformes*) or their nests and eggs.

CESA's protection for plants is subject to the Native Plant Protection Act (NPPA, §§ 1900-1913). The NPPA afforded the CDFG Commission the authority to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. The CESA expanded on the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the Fish and Game Code.

The CDFG will require a Streambed Alteration Agreement, pursuant to Section 1600 *et seq.* of the Fish and Game Code, that prior to the commencement of any activity that will substantially change the bed, channel, or bank (which may include associated riparian resources) of a river, stream or lake; use materials from a streambed; and/or result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. The CDFG's issuance of a Streambed Alteration Agreement for a project that is subject to the CEQA requires CEQA compliance actions by the Department as a Responsible Agency. As a Responsible Agency under CEQA, CDFG may consider the local jurisdiction (Lead Agency's) CEQA documentation for the project.

The CPUC EMs will coordinate with the CDFG, as needed during construction. The CPUC EMs are familiar with the CDFG permit conditions and will ensure implementation in the field. If an issue arises during construction, the CPUC EMs will notify the CDFG representative (as well as the CPUC and BLM PMs) so that appropriate action can be taken. In addition, the CDFG representative will be included in the weekly report distribution.

2.1.9 California Environmental Protection Agency – State Water Resources Control Board

Because the approved route spans more than one water quality control region, the State Water Resources Control Board (SWRCB) is responsible for the project's Water Quality Certification.

The Porter Cologne Water Quality Control Act of 1967, Water Code Section 13000 *et seq.*, as amended requires the Water Board and the nine RWQCBs to adopt water quality criteria to protect State waters. The Water Board's purpose is to avoid or to minimize impacts to waters of the State associated with the Sunrise Powerlink Project. The CPUC EMs will coordinate with the Water Board. The CPUC EMs shall be familiar with the SWRCB permit conditions and shall check for implementation in the field. The CPUC EMs shall include staff trained and experienced in wildland wetland and stream protection, wildland project stormwater management, and restoration/reclamation methods and practices. If an issue arises during construction, the CPUC EMs will notify the SWRCB representative so that he/she can take action. In addition, the SWRCB representative will be on the weekly report distribution. No activities can occur that would potentially affect waters of the State until all Water Boards orders, permits, certifications, WDRs and notifications are approved.

The approved route of the project spans more than one Water Quality Control Region: Region 7 under the Colorado River Basin Regional Water Quality Control Board (RWQCB), and Region 9, the San Diego RWQCB. Because of the multi-regional nature of the project, the State Water Resources Control Board (SWRCB) is responsible for the project's Water Quality Certification for discharges of dredge and fill to State waters including wetlands. The State Water Board also administers Storm Water Construction General Permit 99 08 DWQ, which is enforced by Regional Board Staff.

National Forest System Lands. Pursuant to CWA Section 208, the State Water Board approved the document entitled Water Quality Management for Forest System lands in California (dated Sept. 2000), including its BMPs, as the Water Quality Management Plan (WQMP) for National Forest System Lands in California. The BMPs for this Plan were updated in 2000.

The State Water Board designated the U.S. Forest Service (USFS) as the water quality management agency with primary responsibility for those Forest system lands and it executed a management agency agreement with USFS setting forth the latter's commitment to WQMP implementation. In order to com-

ply with water quality standards, the USFS implements this WQMP. Practice 7-5 of the WQMP requires that Special Use Permits include measures to protect water quality, including conformance with other water quality agency permit requirements. See Section 2.1.4 for a discussion of the Forest Service's role during mitigation monitoring.

3.0 Communication

Communication is a critical component of a successful environmental compliance program. In order to avoid project delays and possible shut-downs, environmental and construction representatives will need to interact regularly and maintain professional, responsive communications at all times. Similarly, SDG&E representatives will need to coordinate closely with CPUC EMs to address and resolve issues in a timely manner. Therefore, this section of the MMCRP provides a communication protocol to accurately disseminate information on on-going surveys and mitigation measures, construction activities, contractors, and planned or upcoming work to all levels of the project.

3.1 Pre-Construction Compliance Coordination

SDG&E is required by the terms of the mitigation measures and the permitting requirements of various other regulating agencies to prepare plans and obtain approval of these documents, in addition to performing various surveys and studies prior to construction. During this pre-construction process, SDG&E has been conducting meetings, conference calls, and site visits with technical representatives of the Aspen Team, the CPUC and other agencies, and SDG&E's environmental representatives. The purpose of the pre-construction coordination process has been to discuss document submittal status, document the findings of data reviews and jurisdictional agency approvals, review SDG&E submittals, and document the status of mitigation measures as they apply to the project or phased project segment. The goal of the pre-construction process is to complete all required actions so the CPUC and other agencies, as appropriate, can issue Notice to Proceed authorizations for each segment.

Pre-Construction Activities

A pre-construction meeting was held on March 18, 2009 with the CPUC, BLM, SDG&E, and CPUC EMs to review the MMCRP and mutually agree upon the project's communication protocol. Based on discussion at the meeting and ongoing input from each party, this MMCRP has been updated. Other pre-construction activities include the following:

- On May 20, 2009, an introductory meeting was held with the BLM, USFS, State Water Board, and the CPUC and Aspen Team representatives.
- The Cultural Resources Survey Plan has been finalized after a series of meetings with tribal representatives and agency input and comment on the plan itself. The cultural resources surveys were completed in September 2009.
- SDG&E has been coordinating with the USFS to prepare required supporting documentation (Biological Evaluations, Management Indicator Species Reports) and to finalize routing details.
- SDG&E has been coordinating with USFS and Aspen Team visual specialist to define tower colors.
- SDG&E's biologists are completing protocol surveys for species of concern.
- Periodic discussions between SDG&E, CPUC, BLM, USFS, and Aspen Team representatives have been held to clarify implementation requirements and a meeting was held on August 31 and September 1, 2009.
- On November 4, 2009, a meeting was held between SDG&E, CPUC, BLM, USFS, State Water Board, CDFG, City and County of San Diego and Aspen Team representatives to discuss final engineering/routing, construction design plans, and agency coordination.

3.2 Agency Compliance Website

An interactive website is being set up to make available current versions of reports, maps, and other documents prepared for mitigation compliance. The purpose of the website is to facilitate sharing of data and status reports, which change on almost a daily basis, especially during the pre-construction period, but also during project construction.

The website will be available to all interested Lead and permitting agencies (see Table 1). Access will be by assigned password and email address.

The website will include the following documents:

- Action Item table, tracking status of submitted items and items to be completed by various parties.
- A status table, tracking status of compliance with each mitigation measure.
- SDG&E's current versions of project design drawings and maps.

3.3 Communication Protocol During Construction

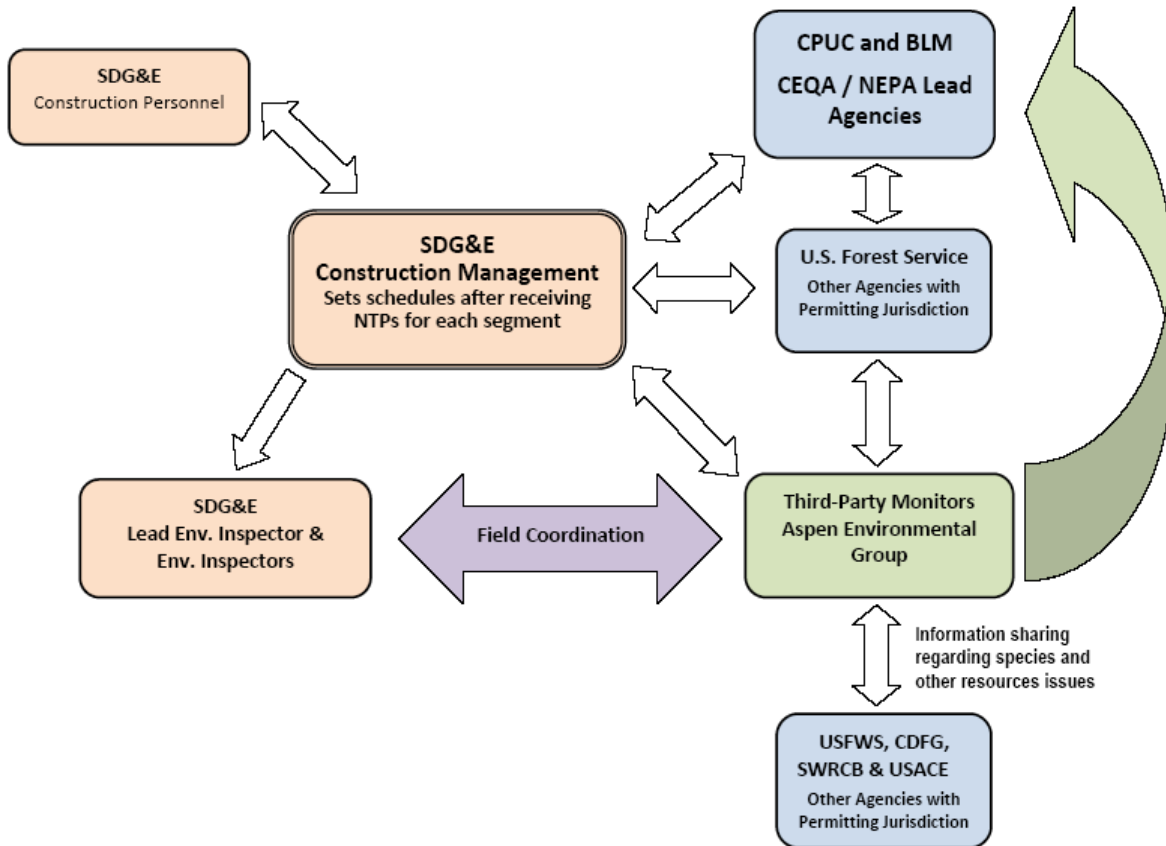
In order to ensure that the CPUC EMs can get accurate information on ongoing surveys, construction work, and schedules, and that SDG&E management is kept in the loop, the following protocols have been formulated:

- The CPUC EM's primary point of contact will be SDG&E's lead environmental monitor. If he/she is not available, the construction segment environmental monitor will be the point of contact. If issues can't be resolved at the EM/SDG&E environmental monitor level they will be initially elevated to CPUC EM Project Manager/SDG&E Mitigation Monitoring Coordinator via e-mail or telephone.
- SDG&E will inform environmental monitors of all survey and construction activity, including status of permits and activity locations in a timely manner. Timely notification of activity is that which allows reasonable response time for agency monitors to be present for that activity. Notification will correspond to organization and roles for each entity as identified in Section 2.1.1.
- The CPUC EM and any other designated agency representatives or staff can talk to anyone on the construction site to ask questions about their activity, but the construction personnel may opt to refer him/her to the construction segment manager for an answer. Construction segment managers are the appropriate contacts for information on construction activity schedules or construction practices.
- SDG&E will provide a list of all construction monitoring personnel and segment managers, identified by segment, title, and contact information for each person. Updated distributions will be utilized to keep all parties informed of monitor and staff additions/changes. This list of personnel, and all subsequent updates, shall be distributed to all persons on the list throughout the construction process.
- CPUC EMs will continue to point out compliance concerns first to SDG&E and SDG&E environmental monitors and give them time to contact resource agencies and resolve compliance before contacting resource agencies directly. Documentation of each of these communication efforts, along with documentation of subsequent actions to achieve compliance, will be reported. However, at any time when the CPUC EMs have an unresolved concern about compliance, the SDG&E environmental monitors and CPUC EMs will call the appropriate resource agency together to discuss the issue.
- The resource agencies will be notified immediately by SDG&E of any issues (*e.g.*, non-compliance events, special status specie sightings, etc.) regarding their respective resources. In addition, the CPUC EM

will also receive immediate notification. Subsequent to immediate agency notification, SDG&E will develop a plan to handle the situation and will follow up with the respective agencies to explain their strategy and receive agency approval.

- If “take” is imminent or there is a danger/hazard, the CPUC EM can request work to be stopped in that area immediately (as long as it can be done safely); this request should be made to the construction segment manager or the segment EM. At any time, anyone can order an activity to be halted temporarily if take or a hazard is imminent.
- Weekly conference calls will include a discussion of construction and compliance activities, with CPUC EMs, SDG&E lead environmental monitor, and agency staff participating.
- The first flowchart below illustrates how information generally flows during construction.

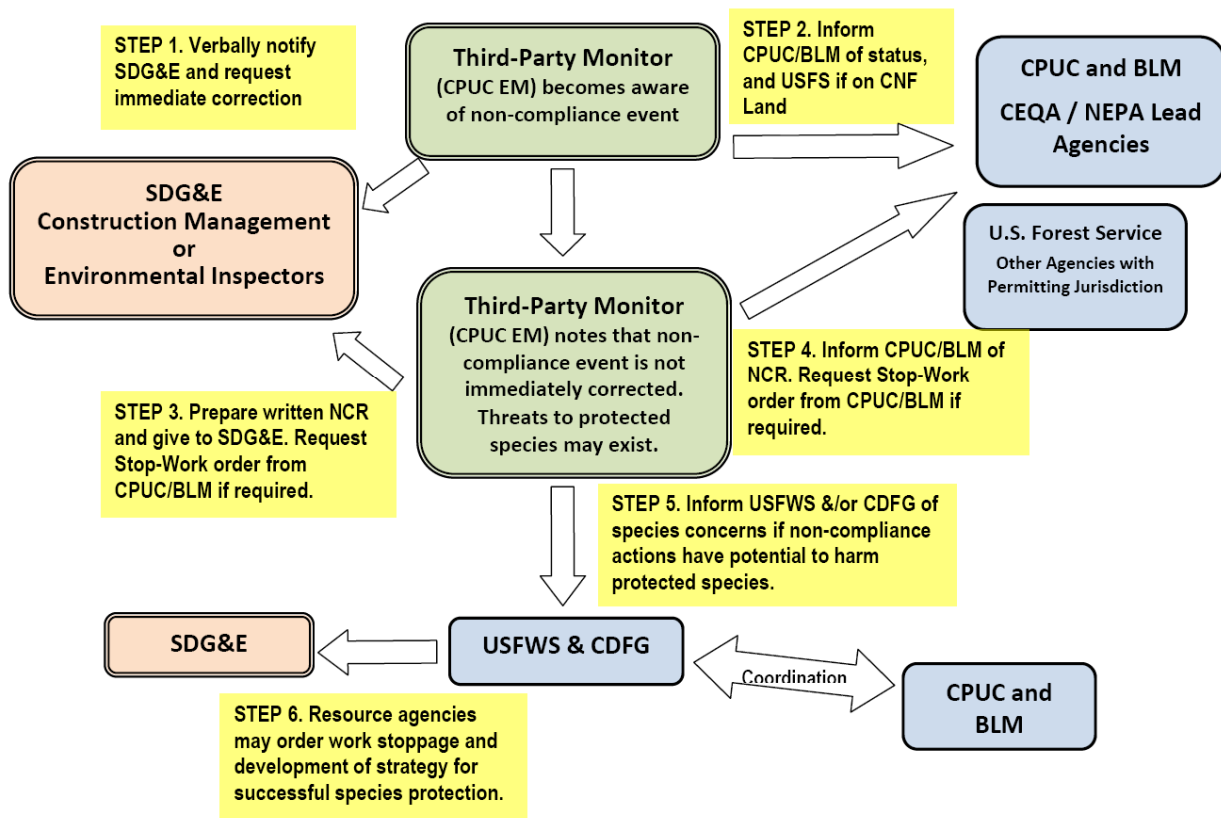
General Communication Protocol During Construction



The following list and flowchart below take the communication protocol laid out in the flowchart above and further illustrates an example of the communication process that would occur when the CPUC EM identifies a non-compliance event regarding biological resources during construction. If no sensitive species or resources are affected by the non-compliance event, Steps 5 and 6 would not be required. A non-compliance event regarding other environmental resources would involve other applicable agencies. Section 4.1 discusses Mitigation Measures Compliance and Reporting and non-compliance events.

- **Step 1.** Verbally notify SDG&E and request immediate correction.
- **Step 2.** Inform CPUC/BLM of status and USFS if on CNF land.
- **Step 3.** Prepare written Non-Compliance Report (NCR) and give it to SDG&E.
- **Step 4.** Inform CPUC/BLM of the NCR. Request a Stop-Work Order from CPUC/BLM if required.
- **Step 5.** Inform applicable resource agency if non-compliance actions have the potential to harm an environmental resource or species.
- **Step 6.** Resource agencies may order work stoppage and development of strategy for successful resource/species protection.

Communication Protocol During Construction Non-Compliance Events



3.4 Weekly Progress Meetings During Construction

SDG&E will conduct weekly field meetings with construction managers, contract administrators, contractor supervisors, and SDG&E's environmental representatives to discuss work completed, work anticipated for the following period, and the status of mitigation measures. The weekly field meetings will also be a forum for discussing environmental compliance issues or concerns with the construction contractors. SDG&E may request CPUC's and any other agency's EM(s) to participate in the meeting to help resolve any issue that may have arisen during the previous period. Alternatively, SDG&E or CPUC's EM(s) may recommend a separate meeting to discuss mitigation, variance requests, or other project related issues. These meetings may be held at the field trailer or on the project ROW to discuss a site-specific issue.

In addition to the weekly progress meetings conducted at the field level, the SDG&E Project Manager, SDG&E Construction Manager, SDG&E IM, CPUC Lead EM, CPUC Project Manager, BLM, USFS, and/or other jurisdictional agencies may participate in a weekly teleconference call. The weekly teleconference calls would be similar to the weekly progress meeting; however, the conference calls would focus on the Mitigation Monitoring Program.

3.5 Daily Communication During Construction

Many of the problems that come up during construction can be resolved in the field through regular communication between CPUC EMs, SDG&E, and construction contractors. Field staff will be equipped with cell phones and will be available to receive phone calls at all times during construction. A project contact list has been included in *Attachment B*. The organization chart depicted in Section 2.0 and Communication Protocol in Section 3.3 illustrate the lines of communication to be used during construction. The following provides additional guidelines to ensure effective communication in the field.

CPUC EM

The CPUC EM's primary point of contact in the field is SDG&E's Lead Environmental Inspector. The CPUC EM will contact SDG&E's Lead Environmental Inspector if an activity is observed that conflicts with one or more of the mitigation measures, so that the situation can be corrected. If the CPUC EM cannot immediately reach SDG&E's Lead Environmental Inspector, then the Mitigation Monitoring Coordinator or SDG&E Environmental Manager will be contacted to address the problem. Similarly, the CPUC EM will contact SDG&E's Lead Environmental Inspector for information on where construction crews are working, the status of mitigation measures, and schedule forecasts. The CPUC EM may discuss construction procedures directly with the construction contractors; however, SDG&E may require their contractors to defer questions to an onsite SDG&E representative. In all cases, the CPUC EM will contact the designated SDG&E representative if a problem is noted that requires action from the contractor. The CPUC EM will not direct the contractor, however, the CPUC EM has the authority to stop work, assuming it is safe to do so, if an activity poses an imminent threat or puts a sensitive resource at undue risk (*e.g.*, stopping a clearing crew from unknowingly cutting coastal sage scrub in an exclusion area).

SDG&E

SDG&E will provide the CPUC EM with a list of construction monitoring personnel and construction supervisory staff to contact regarding compliance issues. The contact list will include each person's title, responsibility, contact information, and whether their position is segment-specific. The contact list will be updated as new project personnel are assigned to the project and redistributed as necessary.

SDG&E will prepare and distribute a weekly environmental compliance status report for distribution to key project members, including the CPUC. The CPUC EM will review the weekly report to ensure that the status of mitigation measures is consistent with observations in the field. Any questions regarding the status of mitigation measures will be directed to the SDG&E Mitigation Monitoring Coordinator. The weekly environmental compliance status report will also be a tool to keep all parties informed of construction progress and schedule changes.

It should be noted that daily and weekly compliance reports would also be prepared by CPUC environmental monitors, as described in Section 4.1.4.

3.6 Communicating Compliance Issues

Section 4.0 below describes procedures to communicate incidences and non-compliances identified by the CPUC EMs during site inspections.

3.7 Coordination with Other Agencies Before and During Construction

As discussed in Section 2.0, several local, state, and federal agencies have jurisdiction over portions of the project. In addition, many of the mitigation measures were derived from specific permit conditions or agency input. The CPUC EM will be responsible for contacting resource agencies and immediately notifying them of issues regarding their jurisdiction.

During Construction

The CPUC EM may request copies of email correspondences, phone logs, or other documentation between SDG&E and resource agencies to avoid direct involvement from CPUC EMs. However, if there is an unresolved issue regarding compliance with a mitigation measure or permit requirement under the jurisdiction of a resource agency, the CPUC EM may elect to contact the agency to discuss resolution.

Interagency Conference Calls

During the pre-construction process or during construction, the Lead Agencies and/or SDG&E may determine that conference calls may be necessary or appropriate to discuss the status of specific mitigation compliance with responsible and permitting agencies. These calls will be noticed one to two weeks in advance, by email, and an agenda will be provided prior to each call.

3.8 Mitigation Implementation Dispute Resolution

It is expected that the MMCRP will reduce or eliminate many potential disputes. However, even with the best preparation, disputes may occur. In such event, the following procedure will be used:

Step 1 Disputes and complaints (including those of the public) should be directed to the CPUC Project Manager for resolution. The Project Manager will attempt to resolve the dispute with SDG&E's Project Manager.

Step 2 Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the Proposed Project or adopted Mitigation Monitoring Program.

Step 3 If a dispute or complaint regarding the implementation or evaluation of the Program or the mitigation measures cannot be resolved informally or through enforcement or compliance action by the CPUC, any affected participant in the dispute or complaint may file a written “notice of dispute” with the CPUC’s Executive Director. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) shall meet or confer with the filer and other affected participants for purposes of resolving the dispute. The Executive Director shall issue an Executive Resolution describing his/her decision, and serve it on the filer and other affected participants.

Step 4 If one or more of the affected parties is not satisfied with the decision as described in the Resolution, such party(ies) may appeal it to the Commission via a procedure to be specified by the Commission.

Involved parties may also seek review by the Commission through existing procedures specified in the Commission’s Rules of Practice and Procedure for formal and expedited dispute resolution, although a good faith effort should first be made to use the foregoing procedure.

Separate enforcement steps by the regulatory agencies may not follow these steps. The CPUC Project Manager will coordinate with other permitting agencies for issues outside the CPUC jurisdiction.

3.9 Contact List

A project contact list has been included as *Attachment B*. The contact list includes the names of SDG&E and CPUC monitors, project managers, supervisory staff, and other members of the project team. The list also includes phone numbers, fax numbers, and email addresses where project members can be reached during construction. The contact list will be updated periodically and redistributed to the project team.

4.0 Environmental Compliance and Field Procedures

4.1 Mitigation Measures Compliance and Reporting

4.1.1 Pre-Construction Compliance Verification

SDG&E is required by the terms of the mitigation measures and the permitting requirements of various other regulating agencies to prepare plans and obtain approval of these documents, in addition to performing various surveys and studies prior to construction. Copies of this documentation will be retained by the CPUC third-party monitors, and provided to the CPUC with all files at the completion of the project. The plans, surveys, studies, and other documentation required to be completed by SDG&E before construction are listed in the Mitigation Measure/Applicant Proposed Measure tables in Section 6.3 and as presented in Attachment G.

While these documents are being reviewed by the approving agencies, they are also reviewed by the CPUC. Compliance with all pre-construction mitigation measures and APMs presented will be verified prior to construction, and construction may not start on any segment before SDG&E receives a written Notice to Proceed (NTP) from the CPUC Project Manager.

The CPUC third-party monitors, including Project Management staff and the technical experts, will review all mitigation plans and reports and provide comments. Resource agencies will also be involved in the review of applicable plans and reports, primarily restoration related, and will provide comments. Comments on these documents will be provided to SDG&E to ensure that they adequately accomplish the intended reduction in impacts. For required local and State agency permitting/consultations, the CPUC third-party monitors will track SDG&E's progress as it relates to SDG&E's construction plans and project mitigation and permitting requirements. Based on SDG&E's construction plans, CPUC may authorize construction to begin on a phased basis and the CPUC third-party monitors will handle pre-construction compliance review accordingly. CPUC may issue NTPs for construction of each phase separately, as soon as pre-construction compliance is satisfactorily accomplished for that phase.

IMPORTANT: The CPUC will not authorize construction to begin until all pre-construction requirements have been fulfilled for a given phase. To save time, SDG&E should identify extra work space needs required for each phase of construction prior to the start of active construction, so that the locations and their use can be included in the NTP. Refer to Section 3.2.2.2.

4.1.2 Notice to Proceed Procedures

The CPUC Project Manager and all EIR/EIS team reviewers will ensure that the Notice to Proceed (NTP) process is consistent with the adopted CEQA and NEPA documents. The NTP approval(s) shall document that pre-construction mitigation measure requirements, applicable survey and study, as well as project permit requirements have been met. In consideration of linear or phased projects, more than one NTP can be requested for the Project. Each NTP request would be applicable to a defined aspect or segment of construction. Construction is defined as any mobilization activity which would move construction related equipment and/or materials onto a site. In some instances compliance with every

requirement cannot be met prior to NTP issuance and in such cases the NTP may be conditioned to define actions to be taken and documented prior to construction or prior to energizing the line. Therefore, a NTP may be issued for a particular segment or project component upon compliance with applicable mitigation measures and permits, and this process could occur in advance of mitigation compliance for the entire project as a whole.

In general, an NTP request must include the following information:

- A description of the work.
- Detailed description of the location, including maps, photos, and/or other supporting documents.
- Verification that all mitigation measures and Applicant Proposed Measures, have been met or do not apply to the work covered by the NTP request.
- Verification that all applicable permit conditions or requirements, project parameters, or other project stipulations have been met for the work covered by the NTP request.
- In the case where some outstanding compliance items cannot be met prior to issuance of the NTP, a request shall be submitted which outlines what submittals are outstanding and how they will be met and approved in a timely manner prior to construction.
- Up-to-date biological resource surveys or a commitment to survey and submit results prior to construction.
- Cultural resource surveys or verification that no cultural resources would be significantly impacted.
- All applicable jurisdictional permits or agency approvals (if necessary).
- Date of expected construction and duration of work.

CPUC/Aspen will review the NTP request and pre-construction requirement submittals per the steps outlined below to ensure that all of the information required to process the approval is included.

1. SDG&E submits NTP request and posts the request to the collaboration site. Notification of posting to include CPUC, BLM, USFS, CDFG, USFWS, Corps, and SWRCB.
2. CPUC/Aspen will distribute the NTP request for review as follows:
 - i.) To the Team biological resources expert for review for biological resources. Review question/comments will be provided in a letter or e-mail.
 - ii.) To the Team cultural resources expert for review for cultural resources. Review question/comments will be provided in a letter or e-mail which will be forwarded by CPUC/Aspen to BLM with the request. BLM will provide cultural review and will supply any conditions to add to the NTP as well as an approval regarding cultural reporting.
 - iii.) The remaining portions of the NTP request will be sent to issue area reviewers where appropriate.
3. CPUC/Aspen will also review and, if needed, will prepare a bullet list of outstanding requirements and where additional information or clarification is needed.
4. All questions and comments as well as required additional information or clarifications shall be sent to SDG&E by CPUC/Aspen in an e-mail.

5. SDG&E will supply clarifications and/or additional information to be added to the NTP request in a memo or letter format along with responses addressing all comments and questions forwarded by CPUC/Aspen.
6. CPUC/Aspen will complete a Compliance Status Table documenting compliance and any outstanding requirements that can be made conditions of the NTP including any conditions supplied by BLM. If comments/conditions are provided by CDFG, USFWS, Corps, and/or SWRCB, they will be considered for incorporation into the NTP approval letter and compliance table. Note: BO conditions are included in the table documenting compliance.
7. Aspen will prepare the draft NTP approval letter which will document the scope of work, compliance with EIR/EIS and BO mitigation requirements, and bullet outstanding conditions.
8. CPUC will review the draft NTP approval letter and send the approval and an updated compliance table to SDG&E.
9. CPUC/Aspen will then post the approved NTP documentation on the public CPUC project website.

Please note that variance requests can be submitted with the NTP request for incorporation into the NTP (please see Section 4.2.2 for variance submittal requirements).

4.1.3 Compliance Reporting During Construction

As described in Section 2, the CPUC EMs will perform compliance inspection throughout the construction period to ensure compliance with all applicable mitigation measures, plans, permits, and conditions of approval of the CPUC. Site visits may be coordinated with SDG&E or conducted unannounced. Supplemental information provided by SDG&E, including pre-construction submittals, survey reports, weekly reports, meeting notes, and agency correspondences, will also be used to verify compliance.

The CPUC EMs will document observations along the ROW through the use of field notes and digital photography. The photos are provided in the weekly reports and correlate to a discussion of specific construction or compliance activity. In addition, field inspection forms will be utilized in the field to document compliance of specific crews, construction activities, or resource protection measures. The forms will provide a standardized checklist to facilitate inspections, as well as list mitigation measures that were verified during the site visit. Information gathered from the inspection forms and field notes will be used to generate weekly status reports and update the status of mitigation measures listed in Section 6.3. A sample site inspection form has been included in Attachment C. Weekly reports will be provided to all permitting agencies via e-mail and/or posted on a collaboration website during construction.

Separate enforcement steps by the regulatory agencies may not follow these steps.

4.1.4 Compliance Levels

The CPUC EM shall document all observations and communications in her logbook and will determine whether the observed construction activities are consistent with mitigation measures, APMs, and project parameters, as identified in the Final EIR/EIS and adopted by the CPUC. All compliance issues regardless of level will be documented in the daily/weekly reports, which will be provided to all agencies. Any regulatory agency has the authority to issue compliance violations regardless of CPUC and BLM actions. The CPUC EM shall not direct the work of a construction contractor or subcontractor. A construction activity that deviates from permit conditions or mitigation measures, particularly when the activity puts a resource at risk, would be considered a non-compliance. A non-compliance may

also be issued if a mitigation measure is not implemented according to the timing restrictions listed in the mitigation table. Examples of non-compliances include, but are not limited to:

- Use of new access roads, staging areas, or extra workspaces not identified on the project drawings or approved for use during construction.
- Encroachment into an exclusion zone or sensitive resource area designated for avoidance.
- Brush clearing outside the approved work limits.
- Activity during seasonal activity restrictions.
- Grading, foundation, or line work without required biological pre-construction surveys or biological monitor onsite.
- Improper installation of erosion or sediment control structures if it puts a sensitive resource at risk.
- Discharge of sediment laden trench or foundation hole water into a waterbody or storm drain.

The CPUC EM will immediately notify the designated SDG&E representative of a non-compliance that requires immediate corrective action. A Non-Compliance Report will be sent to SDG&E from the CPUC Project Manager that outlines the incident, lists actions required to bring the activity back into compliance, and provides a timeline for follow-up. All Non-Compliance Reports and Project Memoranda will be provided to the agencies and applicable jurisdictions.

If a construction activity or observed resource protection measure only slightly deviates from project requirements and does not put a resource at immediate risk, the CPUC EM may elect to issue a Project Memorandum to get the issue corrected. Construction activities that could result in a Project Memorandum include, but are not limited to:

- Failure to properly maintain an erosion or sediment control structure, but the structure remains functional.
- Use of an existing unapproved access road (first offense).
- Project personnel begin work on the ROW without proof of training.
- Work outside the approved work limits where the off-ROW incident is within a previously disturbed area, such as a gravel lot.

Through the issuance of Project Memoranda and Non-Compliance Reports patterns of compliance issues can be discerned, preventative measures can be developed, and remedial work, if needed, can be scheduled. Incident reports (i.e., spills) would also be tracked in the Weekly Reports. Repeated events that individually might not be considered non-compliance may become non-compliance if continued occurrence after initial non-compliance activity is observed and documented. In other words, repeated incidences will result in a non-compliance.

Compliance and Non-Compliance Violation Levels

Project compliance and non-compliance violation levels and the specific corrective actions are defined as follows:

- **Level 0 Compliance.** This level indicates that all mitigation measures and permit conditions are being complied with and there are no violations. No corrective action is necessary.

- **Level 1 Non-Compliance.** One aspect of a mitigation measure has not been complied with resulting in only partial implementation of a mitigation measure, but no significant impact. An oral warning shall be issued to SDG&E's Environmental Coordinator (or assigned designee) and corrective action shall be required within a stated maximum period, to be determined by the CPUC EM. If corrective action is not taken within the stated period, a Project Memorandum will be issued.
- **Level 2 Non-Compliance.** One or more aspects of a mitigation measure have not been complied with, making the mitigation ineffective and resulting in minor impacts. If allowed to continue, this non-compliance could result in a significant impact over time. An oral warning followed by a Project Memorandum shall be submitted to SDG&E's Environmental Coordinator (or assigned designee). Corrective action shall begin by the next construction day. If corrective action is not begun by the next construction day, a Non-Compliance Report shall be issued.
- **Level 3 Non-Compliance.** One or more of the aspects or a mitigation measure are not complied with and the implementation of a mitigation measure is deficient or non-existent, resulting in significant impact(s), or there is immediate threat of major, irreversible environmental damage or property loss. An oral warning, followed by a Non-Compliance Report, shall be submitted to SDG&E's Environmental Coordinator (or assigned designee). Corrective action shall begin immediately.

All non-compliance activity will be reported by Aspen to the CPUC Project Manager via immediate notification, or daily or weekly reporting based on the severity of the non-compliance. Based on the severity of a given infraction or pattern of non-compliance activity, the CPUC Project Manager has the authority to shut down project construction activities. If a shutdown of construction activity occurs, construction shall not resume until the CPUC Project Manager authorizes it to do so. **No Aspen personnel (PM, CPUC Lead EM, or CPUC EM) has the authority to shut down or restart construction activities on a segment- or project-wide scale.** However, the CPUC EM has the authority to redirect work if an immediate threat to safety or a sensitive resource is imminent.

4.2 Project Changes

4.2.1 Transition from Preliminary Design to Final Engineering

The EIR/EIS analysis of the Sunrise Powerlink Project is based on preliminary design, as described in Section B.1 of the Final EIR/EIS, which states that:

[The Project Description] section includes maps of the Proposed Project area that illustrate land-ownership and general routing. Appendix 11 of the Environmental Impact Report/ Environmental Impact Statement (EIR/EIS) includes detailed maps that illustrate the approximate proposed locations of each transmission structure and associated facilities based upon the status of SDG&E's preliminary engineering studies to date.

Because the project has now been approved by CPUC, BLM, and other jurisdictional agencies, SDG&E is in the process of completing final project design and engineering. Some project component locations are being modified as engineering is completed and to comply with mitigation measures requiring resource avoidance to minimize or avoid environmental impacts and reduce or eliminate feasibility constraints. In addition, some project components will be moved to accommodate landowner location preferences where possible, in compliance with Mitigation Measure L-2b (Revise project elements to minimize land use conflicts).

SDG&E will submit to the Lead Agencies a construction plan that illustrates the location of project components at the time of the Final EIR/EIS, and any changes that have been made since that time. All changes will be reviewed by the CPUC and BLM, to ensure that there are no changes that require additional CEQA or NEPA compliance review (i.e., that no new or more severe impacts are created by the changes). A memorandum will be prepared to document the changes and the impacts of the final plan. This memorandum will be approved by the CPUC and BLM. Detailed maps will be presented on the project website.

4.2.2 Project Changes After Final Engineering

At various times throughout project construction (following approval of final design plans), the need for extra workspace or additional access roads may be identified. Similarly, changes to the project requirements (e.g., mitigation measures, specifications, etc.) may be needed to facilitate construction or provide more effective protection of resources. SDG&E in consultation the applicable resource agencies should work together to find solutions when variations or adjustments are necessary for specific field situations to avoid conflicts with adopted mitigation measures, conservation measures or specifications.

4.2.2.1 Variance Procedures

The CPUC and BLM Project Managers along with the CPUC EMs will ensure that any variance process or deviation from the procedures identified under the monitoring program is consistent with CEQA and NEPA requirements. No project variance will be approved by the CPUC or BLM if it creates new significant impacts. A variance should be strictly limited to minor project changes that will not trigger other permit requirements, that does not increase the severity of an impact to a level of significance or create a new significant impact, and that clearly and strictly complies with the intent of the mitigation measure.

A proposed project change that has the potential for creating significant environmental effects will be evaluated to determine whether supplemental CEQA and/or NEPA review is required. Any proposed deviation from the approved project, adopted mitigation measures, APMs, and correction of such deviation, will be reported immediately to the CPUC EM for their review. The CPUC EM will review the variance request to ensure that all of the information required to process the variance is included and then forward the request to the CPUC and/or BLM Project Manager for review and approval. The CPUC and/or BLM Project Manager may request a site visit from the CPUC EM or need additional information to process the variance. In some cases, a variance may also require approval by jurisdictional agencies. In general a variance request must include the following information:

- A description of the Variance.
- An explanation of the necessity for the Variance.
- Detailed description of the location, including maps, photos, and/or other supporting documents.
- Which mitigation measure, Applicant Proposed Measure, permit condition or requirement, project parameters, or other project stipulation is the variance being requested for, and a reference to the approved documents.
- How the variance request deviates from a project requirement.
- Biological resource surveys or verification that no biological resources would be significantly impacted.

- Cultural resource surveys or verification that no cultural resources would be significantly impacted.
- Landowner approval if the location is not within SDG&E's ROW or property.
- Water/wetland/stormwater related resource information if the variance would approve any additional land disturbance, road distance or width, changes to jurisdictional delineation of waters, changes to water protection BMPs, etc.
- Agency approval (if necessary)
- Date of expected construction at the variance site.

A sample variance request form is included as *Attachment D*. All variances issued throughout project construction are tracked in tabular format in the weekly reports.

4.2.2.2 Temporary Extra Work Space Procedures

For the purposes of this MMCRP, Temporary Extra Work Space (TEWS) is defined as a work space that would be utilized by SDG&E during construction for a period of up to 60 days, and that was not identified and evaluated during the CEQA process. Anything required to be utilized for a period longer than 60 days will require a variance (see Section 3.2.2.1). SDG&E must demonstrate that: the TEWS is located in a disturbed area with no sensitive resources or land uses onsite or adjacent to the proposed work space, SDG&E has permission of the applicable landowner (*e.g.*, municipality or private) to use the work space, and that use of the TEWS would not result in any significant environmental impacts.

In the event that SDG&E determines a need for a construction TEWS, it must submit such a request to the CPUC EM. The CPUC EM will have the authority to approve or deny use of a TEWS, assuming it meets the criteria defined in the previous paragraph. SDG&E will not be permitted to use a TEWS prior to receiving written authorization from the CPUC EM. The CPUC EM will also send a copy of the TEWS to USFWS.

Following is a list of the specific information that SDG&E would be required to submit with its TEWS request:

- Date of request;
- Location of the TEWS (detailed description, including maps if required);
- Property owner of TEWS;
- An explanation of the necessity for the TEWS;
- An analysis that demonstrates no new significant impacts would result from use of the TEWS including: compaction contributing to runoff rates or other stormwater/watershed effects; observed existing impacts to the site, such as old oil spills or other potentially hazardous or polluting substances; abandoned vehicles, equipment or other materials; or other sensitive resources;
- Biological and botanical survey, especially for invasive plants, and mitigation for invasive plants if present.
- Duration and dates of expected use of the TEWS.
- Details of the expected condition of the site after use.

A sample TEWS form is included as *Attachment E*.

5.0 Records Management

Daily inspection and weekly status reports will be filed and used by the CPUC third-party monitor to prepare a final environmental compliance report following the completion of construction. The final report will provide a discussion on how each mitigation measure was implemented and include copies of submittals required for compliance. In addition, the success criteria will be evaluated and used for future projects.

5.1 Agency Records During Monitoring

As described in Section 3.2, Aspen will develop a password-protected website for use by Lead Agencies and responsible agencies during pre-construction and construction, to facilitate the sharing of project documents, files, reports, and maps.

5.2 Public Access to Records

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available by the CPUC for public inspection on request. In order to facilitate the public's awareness, the CPUC will post this MMCRP document, and also will make weekly reports and other pertinent project documents available on the project, accessible at:

<http://www.cpuc.ca.gov/environment/info/aspen/sunrise/sunrise.htm>

6.0 Mitigation Monitoring Program Tables

6.1 Using the Tables

Section 6.3 below lists the mitigation measures and Applicant Proposed Measures included in the Final EIR/EIS and referenced by the CPUC decision (D.08-12-058) dated December 18, 2008. The Mitigation Measure/Applicant Proposed Measure tables (separated by environmental issue area) and inclusive agency/jurisdiction consultation and resulting permit and/or MOU requirements is the core document for environmental requirements on the project and will be the primary guideline for determining compliance with the MMCRP. The CPUC will use an expanded version of the Mitigation Measure/Applicant Proposed Measure tables during the pre-construction planning and construction monitoring phases of the project to accurately track the status of mitigation measures. Attachment F lists the titles of all mitigation measures by the time of implementation of each. The tables have also been sorted and divided into pre-construction measures (Attachment G), measures to be implemented during construction (Attachment H), measures to be implemented post-construction but pre-energizing of the transmission line (Attachment I), and post-construction mitigation measures (Attachment J). Similarly, separate tables listing measures that require CPUC approval may be generated. The pre-construction measure table (Attachment G) includes a status column that will be updated with all pre-construction submittals as they come in, as well as review/approval status. During construction a copy of the Mitigation Measure/Applicant Proposed Measure tables with measures to be implemented during construction (Attachment H) should be kept with each crew working on the ROW, and all supervisory staff working on the project should be familiar with its contents. In addition copies of all applicable plans and permits compiled prior to construction as a result of the pre-construction measures (i.e., SWPPP, Hazardous Substance Treatment Plan, USFWS BO, etc.) shall also be kept with each crew working on the ROW and all supervisory staff working on the project should be familiar with their contents.

6.2 Effectiveness Review

The CPUC may conduct a comprehensive review of conditions which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the Dispute Resolution procedure outlined in Section 3.7. If in review the Commission determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, then the Commission in coordination with the jurisdictional agency(ies) may impose additional reasonable conditions to effectively mitigate these impacts. These reviews will be conducted in a manner consistent with the Commission's rules and practices.

6.3 Mitigation Measures and Applicant Proposed Measures

Note: In Table 4, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task. In addition, a row has been added that includes a further discussion and/or clarification of implementation and approach for each mitigation measure where necessary.

Several of the biological resources APMs have been updated to show changes (in ~~underline/strikeout~~) that were originally incorporated into Appendix 8N of the Final EIR/EIS. These changes are included in the following table where applicable, and also reflected in *Attachments G, H, I and J* of this MMCRP.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

<p>MITIGATION MEASURE</p>	<p>— B-1a: Provide restoration/compensation for impacted sensitive vegetation communities. Surface-disturbing components of the project shall be located in previously disturbed areas or where habitat quality is poor to the extent possible, and disturbance of vegetation and soils shall be minimized. Temporary construction mats may be used to minimize vegetation and soil disturbance only where deemed appropriate by the qualified biologist (see Mitigation Measure B-1c). The construction mats shall not be left on the ground for more than three weeks. Use of construction mats shall be considered a temporary impact to vegetation and shall be mitigated in accordance with this mitigation measure. If avoidance of sensitive vegetation communities is not feasible due, for example, to physical or safety constraints, the Applicant shall restore temporarily impacted areas to pre-construction conditions following construction (or emergency repairs) and shall permanently block off all public access to them, and/or shall purchase/dedicate suitable habitat for preservation to off-set permanently impacted areas. Restoration of some vegetation communities in temporarily impacted areas may not be possible if those areas are subject to vegetation management to maintain proper clearance between transmission lines and vegetation. In those instances, the mitigation shall consist of offsite acquisition and preservation of the vegetation community instead. Any area that can be preserved as intact or restored habitat, or if it contains any species (plant or animal) that require project-related compensatory mitigation will qualify as offsite mitigation lands. Restoration involves recontouring the land, replacing the topsoil (if it was collected), planting seed and/or container stock, and maintaining (<i>i.e.</i>, weeding, replacement planting, supplemental watering, etc.) and monitoring the restored area for a period five years (or less if the restoration meets all success criteria). Restoration in ABDSP shall be maintained and monitored for a minimum of five years. The success of the restoration is usually based on how the habitat compares with similar, nearby, undisturbed habitat. Any restoration efforts would be subject to a Habitat Restoration Plan approved by the CPUC, BLM, Wildlife Agencies, State Parks (for restoration in ABDSP), and USDA Forest Service (for alternatives with restoration on National Forest lands). Mitigation ratios and mitigation acreages for construction within authorized limits are provided in Table D.2-7 for the Proposed Project (see Impacts to Vegetation Communities and Required Mitigation tables in alternatives sections for the alternatives). The mitigation ratios also apply to impacts from emergency repairs. In cases where the impacts to sensitive vegetation communities occur on lands already in use as mitigation for other projects, the mitigation ratios shall be doubled, as is standard practice in San Diego County.</p>
	<p>— (B-1a) All limits of construction shall be delineated with orange construction fencing. SDG&E shall coordinate with the authorized officer for the applicable federal, State, or local land owner/administrator at least 60 days before construction in order to determine if gates shall be installed on access roads, especially trails that would be dually used as access roads, to prevent unauthorized vehicular access to the ROW. Gate installation shall be required at the discretion of the land management agency. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. SDG&E shall document its coordination efforts with the administering agency of the road/trail and provide this documentation to the CPUC, BLM, and all affected jurisdictions 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on the installed gates. To control unauthorized use of project access roads by off-road vehicle enthusiasts, SDG&E shall provide funding to land management entities responsible for areas set aside for habitat conservation to provide for off-road vehicle enforcement patrols. The responsible land management entities will formulate what funding is reasonable to control unauthorized use of project access roads.</p>
	<p>— (B-1a) Any impacts associated with unauthorized activity (<i>e.g.</i>, exceeding approved construction footprints) shall be mitigated at a 5:1 ratio (5.5:1 in FTHL MA). Restoration of the unauthorized impacts shall be credited at a 1:1 ratio (<i>i.e.</i>, mitigated by in-place habitat restoration); the remaining 4:1 (or 4.5:1 in FTHL MA) shall be acquired off site.</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

— (B-1a) Areas to be restored shall include all areas temporarily impacted by construction, such as tower construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations where towers are removed. Where onsite restoration is planned, the Applicant shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC, BLM, State Parks (for restoration in ABDSP), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies. The Habitat Restoration Specialist shall prepare and implement a Habitat Restoration Plan, for restoring temporarily impacted sensitive vegetation communities, to be approved by the CPUC, Wildlife Agencies, BLM, State Parks (for ABDSP restoration), and USDA Forest Service (for National Forest land restoration). The Applicant shall work with the CPUC, BLM, Wildlife Agencies, and State Parks until a plan is approved by all. This Habitat Restoration Plan must be approved in writing by the above-listed agencies prior to the initiation of any vegetation disturbing activities. Hydroseeding, drill seeding, or an otherwise proven restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC, Wildlife Agencies, BLM, State Parks (for ABDSP restoration), and USDA Forest Service (for National Forest land restoration).

The Habitat Restoration Plan shall incorporate Desert Bioregion Revegetation/Restoration Guidance measures for restoration of temporary impacts to desert scrub and dune habitats. These measures generally include alleviating soil compaction, returning the surface to its original contour, pitting or imprinting the surface to allow small areas where seeds and rain water can be captured, planting seedlings that have acquired the necessary root mass to survive without watering, planting seedlings in the spring with herbivory cages, broadcasting locally collected seed immediately prior to the rainy season, and covering the seeds with mulch.

The Habitat Restoration Plan shall also incorporate the measures identified in the May 25, 2006 Memorandum of Understanding among Edison Electric Institute, USDA Forest Service, BLM, USFWS, National Park Service, and the Environmental Protection Agency (Edison Electric Institute, et al., 2006) where applicable. The MOU discusses vegetation management along ROWs for electrical transmission and distribution facilities on federal lands. The major provisions of the MOU include reducing soil erosion and water quality impacts; promoting local ecotypes in revegetation projects; planting native species and protecting rare species; and reducing the introduction of non-native, invasive or noxious plant species to the ROWs. The MOU can be viewed online at http://www.eei.org/industry_issues/environment/land/vegetation_management/EEI_MOU_FINAL_5-25-06.pdf.

The following habitat restoration requirements are not included in the MOU described above. The restoration of habitat shall be maintained and monitored for five years after installation by an experienced, licensed Habitat Restoration Contractor, or until established success criteria identified in the Restoration Plan (specified percent cover of native and non-native species, species diversity, and species composition as compared with an undisturbed reference site) are met. Maintenance and monitoring for restoration in ABDSP shall be for a minimum of five years, even if established success criteria are met before the end of five years. Maintenance and monitoring shall be conducted following a prescribed schedule to assess progress and identify potential problems with the restoration. Remedial action (*e.g.*, additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken by an experienced, licensed Habitat Restoration Contractor during the maintenance and monitoring period if necessary to ensure the success of the restoration. If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise approved by the CPUC, BLM, State Parks (for ABDSP restoration), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies. For areas where habitat restoration cannot meet mitigation requirements, as determined by the Habitat Restoration Specialist in coordination with CPUC, BLM, State Parks (for ABDSP restoration), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies, offsite purchase and dedication of habitat shall be provided at the mitigation ratios provided in Table D.2-7 for the Proposed Project (see Impacts to Vegetation Communities and Required Mitigation tables in alternatives sections for the alternatives) or as otherwise required by the Wildlife Agencies, ABDSP, or USDA Forest Service (supersedes the mitigation ratios in BIO-APM-1).

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

— **(B-1a) Tree Mitigation.** Mitigation for loss of native trees or native tree trimming shall be provided by (1) acquiring and preserving habitat within which the trees occur and/or (2) restoring (*i.e.*, planting) trees on land that would not be subject to vegetation clearing (either in the Applicant's ROW and/or on land acquired and preserved). Any land to be used for this mitigation shall be approved by the CPUC, BLM, State Parks (for ABDSP restoration), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies.

For habitat acquisition and preservation, the mitigation ratios shall follow those in Table D.2-7 for the Proposed Project (see Impacts to Vegetation Communities and Required Mitigation tables in alternatives sections for the alternatives). For example, removal of coast live oak trees (that occur in coast live oak woodland) shall require mitigation at a 3:1 ratio based on the permanent impact to the summed acreage of all individual coast live oak trees impacted. Therefore, if the total acreage of all individual coast live oak trees in coast live oak woodland impacted is 10 acres, then 30 acres of coast live oak woodland shall be acquired and preserved. For all trimmed native trees, the trees shall be monitored for a period of three years. If a trimmed tree declines or suffers mortality during that period, the tree shall be replaced in-kind (by species) at a 2:1 or 5:1 ratio as recommended by the CDFG (see below). If a tree does not decline or suffer mortality, no mitigation shall be required.

— **(B-1a)** For restoration (planting trees), these guidelines, based on recommendations from the CDFG, shall be followed.

Native trees that are removed shall be replaced in-kind (by species) as follows.

- Trees less than five inches diameter at breast height (DBH) shall be replaced at 3:1
- Trees between five and 12 inches DBH shall be replaced at 5:1
- Trees between 12 and 36 inches shall be replaced at 10:1
- Trees greater than 36 inches shall be replaced at 20:1
- Native trees that are trimmed shall be replaced in-kind (by species) as follows.
- Trees less than 12 inches DBH shall be replaced at 2:1
- Trees greater than 12 inches DBH shall be replaced at 5:1

All restoration shall be maintained and monitored for a minimum of 10 years. The restoration shall be directed according to a Habitat Restoration Plan approved by the CPUC, BLM, State Parks (for ABDSP restoration), USDA Forest Service (for National Forest land restoration), and the Wildlife Agencies.

— **(B-1a) Mitigation Parcels/Habitat Management Plans.** All offsite mitigation parcels shall be approved by the CPUC, BLM, Wildlife Agencies, State Parks (for impacts to ABDSP), and USDA Forest Service (for alternatives with impacts to National Forest lands) and must be acquired or their acquisition must be assured before the line is energized. To demonstrate that such parcels shall be acquired, SDG&E shall submit a Habitat Acquisition Plan at least 120 days prior to any ground disturbing activities. The Plan shall be submitted to the CPUC, BLM, the Wildlife Agencies, State Parks (for impacts in ABDSP) and USDA Forest Service (for impacts on National Forest Lands) for review and approval, and shall include, but shall not be limited to: legal descriptions and maps of all parcels to be acquired; schedule that includes phasing relative to impacts; timing of conservation easement recording; initiation of habitat management activities relative to acquisition; and assurance mechanisms (*e.g.*, performance bonds to assure adequate funding) for any parcels not actually acquired prior to vegetation disturbing activities.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-1a) A Habitat Management Plan shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) for all acquired offsite mitigation parcels. The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any vegetation disturbing activities. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, State Parks, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired, offsite mitigation parcels. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all mitigation parcels approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) • Baseline biological data for all mitigation parcels • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to National Forest lands) to provide in-perpetuity management • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity) • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands). <p>Also, see U.S. Fish and Wildlife Conservation Measures G-CM-6, G-CM-7, G-CM-12, G-CM-14, G-CM-15, G-CM-16, G-CM-17, G-CM-21, G-CM-22, G-CM-26, G-CM-28, G-CM-29, and G-CM-34.</p>
Location	All areas disturbed by construction activities.
Monitoring/Reporting Action	BLM and CPUC shall approve habitat restoration plans, habitat acquisition plans, and long-term habitat management plans, and ensure their implementation. CPUC/BLM biological monitor shall confirm that proposed habitat restoration mitigation plans are implemented.
Effectiveness Criteria	Habitat restoration plans are implemented and meet success criteria. Long-term habitat management is provided for all mitigation sites.
Responsible Agency	BLM, CPUC, USFWS, CDFG, State Parks (for mitigation lands in ABDSP), and USDA Forest Service (for mitigation lands on USFS land).
Timing	Pre-, during and post construction.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

Interpretation & Approach	<p><u>7/2/09</u>: SDG&E will provide all documentation of correspondence with agencies regarding BHS mitigation as part of the Mitigation Land Plan. The CDFG Section 2081 is not required for Segment 4, Mountain Springs Grade since BHS are not covered under this take permit.</p> <p>Restoration, including tree mitigation, which references ABDSP is not applicable to FESSR. Application is for mitigation parcels in the ABDSP.</p> <p><u>8/20/09</u>: Review with Aspen, Helix, and BLM. B-1a-1: It was agreed upon that ‘permanently blocking off all public access’ was in reference to temporary access/spur/fly yards in order to prevent a situation where the public may access sensitive vegetation communities where prior to the project work, they had not. Vertical mulching was suggested as an acceptable method of restoring temporarily impacted areas in the desert. Vertical mulching is the practice of replanting plants (either dead or live) that are removed during construction. The replanted plants are not irrigated and those that may be alive when replanted are allowed to die.</p> <p><u>8/20/09</u>: B-1a-1: It was agreed that recontouring the land for the purposes of restoration need not apply to previously disturbed areas where the topography doesn’t match the surrounding topography. Restored areas should blend naturally into the surrounding habitat, both in terms of vegetation and topography.</p> <p><u>8/20/09</u>: ‘Restoration of “some” vegetation types’ as stated in B-1a section 1 was included to acknowledge that in certain areas due to site-specific conditions, only some of the vegetation types will be able to be revegetated while other vegetation types may not be able to be re-vegetated and will need to be mitigated off-site. This will be addressed on a site by site basis.</p> <p><u>8/20/09</u>: Flagging is acceptable as a delineation method instead of orange fencing. Orange fencing can be limited to unique situations.</p> <p><u>8/20/09</u>: Off-site mitigation parcels need not be acquired prior to construction, however, the assurance that there are willing sellers for mitigation lands is necessary. Mitigation parcels must be secured prior to energization.</p> <p><u>8/20/09</u>: The purpose of baseline biological data for off-site mitigation parcels is to prove that proposed mitigation land is appropriate mitigation for impacted areas. Proposed mitigation land need not be exactly representative of areas that are impacted. (USFWS/CDFG will decide this.)</p> <p><u>8/31/09</u>: Permanent impact areas will be restored at the end of the construction process in accordance with the approved Storm water Pollution Prevention Plan (SWPPP) documents.</p> <p><u>10/22/09</u>: In summary, the EIR/EIS includes the following milestones with regard to meeting biology mitigation parcel preservation requirements:</p> <ul style="list-style-type: none"> • Habitat Acquisition Plan: 120 days prior to any ground disturbing activities • Habitat Management Plan: prior to initiation of any vegetation disturbing activities • Acquisition or assurance of acquisition of parcels: prior to energizing the transmission line. <p>Following are recommendations for how SDG&E can best proceed and meet these requirements.</p> <p>1. SDG&E submitted a draft Habitat Acquisition Plan on June 24, 2009, however, this habitat acquisition plan will need to be resubmitted with the parcels proposed for mitigation more narrowly defined. The following information must be included: legal descriptions and maps, schedule that includes phasing relative to impacts, timing of conservation easement recording, initiation of habitat management activities relative to acquisition and assurance mechanisms. The Habitat Acquisition Plan should be in final or close to final form in February 2010, which is 120 days prior to the beginning of most of the construction. It is noted that SDG&E received many comments on the Habitat Acquisition Plan submitted in June 2009, and that the final Habitat Acquisition Plan may be significantly revised to adequately address those comment.</p> <p>2. A final Habitat Management Plan will be required prior to the June 2010 start date for the majority of the project. It is anticipated that all the mitigation parcels identified in the Habitat Acquisition Plan (expected in February 2010) will have been agreed to and that the required elements of the HMP for all the mitigation sites can be completed prior to the start of construction in June 2010.</p>
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Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-1c: Conduct biological monitoring. Monitoring shall be provided by a qualified biologist approved by the CPUC, BLM, State Parks (for monitoring in ABDSP), USDA Forest Service (for alternatives that require monitoring on National Forest lands), and the Wildlife Agencies to ensure that all impacts occur within designated limits. Monitoring entails communicating with contractors, taking daily notes, and ensuring that the requirements of the APMs and mitigation measures are being met by being present during construction activities including all initial grubbing and clearing of vegetation. Additionally, a qualified biologist employed by SDG&E shall be present during maintenance involving ROW repair requiring ground disturbance (<i>i.e.</i>, grading/repair of access road and work areas and spot repair of areas subject to flooding or scouring). Biological monitoring of these maintenance activities is to prevent impacts to vegetation communities or wildlife habitat not within the permanent project impact footprint or to record and report unauthorized impacts outside the footprint to the CPUC, BLM, State Parks (for monitoring in ABDSP), USDA Forest Service (for alternatives that require monitoring on National Forest lands), and the Wildlife Agencies to ensure the unauthorized impacts are mitigated in accordance with Mitigation Measure B-1a. The qualified biologist shall conduct monitoring for any area subject to disturbance from construction and the maintenance activities listed above (or access roads used during maintenance activities in the case of vernal pools/water-holding basins; see Mitigation Measure B1-b). The qualified biologist shall perform periodic inspections of construction once or twice per week, as defined by the Wildlife Agencies, depending on the sensitivity of the resources. The qualified biologist shall send weekly monitoring reports to the CPUC and BLM and shall record any reduction or increase in construction impacts so that mitigation requirements can be revised accordingly. The final impact/mitigation calculations shall be submitted to the CPUC, BLM, State Parks (for monitoring in ABDSP), USDA Forest Service (for alternatives that require monitoring on National Forest lands), and the Wildlife Agencies for review and approval. The qualified biologist shall send annual monitoring reports of maintenance activities to the CPUC, BLM, State Parks (for monitoring of maintenance activities in ABDSP), and USDA Forest Service (for alternatives that require monitoring of maintenance activities on National Forest lands) that describe the types of maintenance that occurred, at what locations they occurred, and whether or not there were unauthorized impacts that require mitigation. The Applicant, its contractors and subcontractors, and their respective project personnel, shall refer all environmental issues, including wildlife relocation, sick or dead wildlife, hazardous waste, or questions about environmental impacts to the qualified biologist. Experts in wildlife handling (<i>e.g.</i>, Project Wildlife) may need to be brought in by the qualified biologist for assistance with wildlife relocations.</p>
	<p>— (B-1c) The qualified biologist shall have the authority to issue stop work orders if any part of the mitigation measures or APMs are being violated. The qualified biologist shall immediately notify the CPUC, BLM, State Parks (for monitoring in ABDSP), USDA Forest Service (for alternatives that require monitoring on National Forest lands), the Wildlife Agencies, and SDG&E of any significant events, including impacts outside the construction zone or maintenance impacts outside the authorized permanent impact footprints if they are discovered during construction or monitoring of maintenance activities. Reinitiation of work following a stop work order shall only occur when the CPUC, BLM, State Parks (for impacts in ABDSP), USDA Forest Service (for alternatives with impacts on National Forest lands), and the Wildlife Agencies are satisfied that the impacts have been fully documented, that compensation for these impacts shall be made, and that any additional protection measures they deem necessary shall be undertaken.</p>
	<p>Also, see U.S. Fish and Wildlife Conservation Measure G-CM-1.</p>
Location	Entire project area.
Monitoring/Reporting Action	<p>CPUC/BLM biological monitor shall oversee monitoring and ensure compliance with APMs and mitigation measures. The biological monitor shall submit weekly monitoring reports to SDG&E during construction. The biological monitor shall submit weekly reports to the CPUC and BLM during construction and throughout the maintenance period. Reports shall include a summary of activities and tracking of the APM and mitigation measure requirements. The biological monitor shall submit a final report of impact/mitigation calculations to the CPUC, BLM, State Parks (for monitoring in ABDSP), USDA Forest Service (for alternatives that require monitoring on National Forest lands), and the Wildlife Agencies.</p>
Effectiveness Criteria	Successful avoidance of unforeseen impacts and compliance with APMs and mitigation measures.
Responsible Agency	BLM, CPUC, USFWS, CDFG, State Parks (for ABDSP land), and USDA Forest Service (for USFS land).

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR. Application is for mitigation parcels in the ABDSP.
MITIGATION MEASURE	B-1k: Re-seed disturbed areas after a transmission line–caused fire. Should a fire occur and be determined by the CPUC’s Consumer Protection and Safety Division (CPSD) or the California Department of Forestry and Fire Protection (CAL FIRE) to be caused by the Proposed Project or a constructed alternative, the Applicant shall re-seed all natural areas — both public and private — that are burned as a result of the project-caused fire. Re-seeding shall be required for areas that have been burned due to the minimum 10-year period required for arid chaparral to establish an adequate seed bank and thereby resist vegetation type conversion. A re-seeding plan shall be developed with input from Cal Fire, the U.S. Forest Service, BLM, and CPUC, based on a native seed mix. Seeds shall be raked into the soil to avoid seed predation, and re-seeding shall be carried out once to coincide with the rainy season (October 1 through April 1) to increase the likelihood of germination success. The Applicant shall provide a written report documenting all re-seeding activities to the CPUC. The Applicant shall make a good faith effort to obtain approval to re-seed on private lands as appropriate, and documentation of this good faith effort shall be submitted to the CPUC upon request. Specific re-seeding requirements stipulated in this mitigation measure shall be subject to approval and modification by any public landowning agency.
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-18.
Location	Areas burned as a result of a project-caused fire and that have also been burned at least once in the preceding 10-year period.
Monitoring/Reporting Action	CPUC/BLM shall oversee the development of re-seeding plan and shall collect written documentation of all re-seeding activities from the Applicant.
Effectiveness Criteria	Re-seeding occurs per re-seeding plan requirements.
Responsible Agency	CPUC, BLM, and USDA Forest Service
Timing	During and post construction.
Interpretation & Approach	8/20/09 – The concern for this mitigation measure is to reduce vegetation type conversion from native to non-native. Re-seeding Plan will be developed after a fire and not before energization.
MITIGATION MEASURE	B-1l: SDG&E shall continue to work with the USDA Forest Service to minimize impacts to the RCA between Structures 184 and 187. SDG&E shall continue to work with the USDA Forest Service to adjust the siting of project features to minimize impacts to the RCA located between Structures 184 and 187 of the BCD South Option. SDG&E shall continue to coordinate with the USDA Forest Service until the impacts to this RCA are fully resolved to the satisfaction of the USDA Forest Service.
Location	RCA located between Structures 184 and 187 of the BCD South Option.
Monitoring/Reporting Action	Upon final approval of the USDA Forest Service, SDG&E shall send the engineering changes made to project features between Structures 184 and 187 of the BCD South Option to the CPUC and BLM prior to the start of construction.
Effectiveness Criteria	Minimization of impacts to the RCA to the satisfaction of the USDA Forest Service.
Responsible Agency	CPUC, BLM, and USDA Forest Service
Timing	Pre-construction.
Interpretation & Approach	6/13/08, Submitted to CPUC and USDA Forest Service a revision of these structures. This MM applies to revised Structure numbers P118-1 to P114.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

<p>MITIGATION MEASURE</p>	<p>— B-2a: Provide restoration/compensation for impacted jurisdictional areas. Impacts to areas under the jurisdiction of the ACOE, Regional Water Boards, State Water Board, and CDFG shall be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible (including for emergency repairs), the Applicant shall provide the necessary mitigation required as part of wetland permitting by creation/restoration/preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation would be determined in consultation with the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation in ABDSP), USDA Forest Service (for alternatives with mitigation on National Forest lands), ACOE, Regional Water Boards, State Water Board, and CDFG as part of the wetland permitting process. It is anticipated that the sites would be in close proximity to the impacts or in the same watershed. A jurisdictional delineation and impact assessment shall be prepared based on the final alignment and final engineering plans when they are complete. Mitigation ratios would range from 1:1 up to 4:1 and would depend on the sensitivity of the jurisdictional habitat and on the requirements of the wetland permitting agencies. The width of wetland buffers would also depend on the sensitivity of the jurisdictional habitat and on the requirements of the wetland permitting agencies. Recommended mitigation ratios for vegetation communities that generally occur in jurisdictional areas are provided in Table D.2-7 for the Proposed Project (see Impacts to Vegetation Communities and Required Mitigation tables in alternatives sections for the alternatives). It is anticipated that at least a 1:1 ratio of the mitigation would include creation of jurisdictional habitat so there would be no net loss of jurisdictional habitat. For example, permanent impacts to emergent wetland would require a 2:1 mitigation ratio. Half (or 1:1) of the mitigation acreage would have to consist of created emergent wetland in an appropriate location to be preserved, and the other half (1:1) would require acquisition and preservation of already-existing emergent wetland (or other wetland community acceptable to the permitting agencies — ACOE, Regional Water Boards, State Water Board, and CDFG). It is also anticipated that a 1:1 ratio would be required for impacts to jurisdictional non-wetland Waters of the U.S. in the form of wetland enhancement, restoration, or creation as determined in consultation with the permitting agencies. Wetland permits shall be obtained from the ACOE, Regional Water Boards, State Water Board, and CDFG prior to initiating construction in jurisdictional areas.</p>
	<p>— (B-2a) All limits of construction shall be delineated with orange construction fencing and/or silt fencing. All stakes, flagging, or fencing shall be removed no later than 30 days after construction is complete. If silt fencing is used to delineate the limits of construction or as part of implementation of erosion control BMPs, the silt fencing may be left in place longer than 30 days if erosion control is still necessary. During and after construction, entrances to access roads shall be gated to prevent the unauthorized use of these roads by the general public. Signs prohibiting unauthorized use of the access roads shall be posted on these gates.</p>
	<p>— (B-2a) Any impacts associated with unauthorized activity (<i>e.g.</i>, exceeding approved construction footprints) shall be mitigated at a 5:1 ratio, unless otherwise directed by the ACOE, Regional Water Boards, State Water Board, and CDFG: restoration of the unauthorized impacts shall be credited at a 1:1 ratio; the remaining 4:1 (or 4.5:1 in FTHL MA) shall be acquired off site.</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-2a) The Applicant shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC, BLM, ACOE, Regional Water Boards, State Water Board, CDFG, State Parks (for restoration in ABDSP), and USDA Forest Service (for alternatives with restoration on National Forest lands). The Habitat Restoration Specialist shall prepare and implement a Wetland Mitigation Plan to be approved in writing by the CPUC, BLM, ACOE, Regional Water Boards, State Water Board, CDFG, State Parks (for ABDSP mitigation), and USDA Forest Service (for alternatives with mitigation on National Forest lands). The Applicant shall work with the above-listed agencies until a plan is approved by all. The mitigation of habitat shall be maintained and monitored for five years after installation, or until established success criteria (specified percent cover of native and non-native species, species diversity, and species composition as compared with an undisturbed reference site) are met, to assess progress and identify potential problems with the mitigation. Maintenance and monitoring in ABDSP shall be for a minimum of five years, even if established success criteria are met before the end of five years. Remedial action (<i>e.g.</i>, additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken during the maintenance and monitoring period if necessary to ensure the success of the mitigation. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, maintenance and monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise approved by the CPUC, BLM, ACOE, Regional Water Boards, State Water Board, CDFG, State Parks (for ABDSP restoration), and USDA Forest Service (for alternatives with restoration on National Forest lands).</p>
	<p>— (B-2a) A Habitat Management Plan shall be prepared by a biologist approved by the CPUC, BLM, ACOE, Regional Water Boards, State Water Board, CDFG, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) for all acquired offsite mitigation parcels. The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any activities which may impact jurisdictional areas. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, State Parks, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired, offsite mitigation parcels. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) mitigation parcels approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands); • Baseline biological data for all mitigation parcels; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands).
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-41.
Location	All locations with impacts to jurisdictional areas.
Monitoring/Reporting Action	BLM, CPUC, and wetland permitting agencies shall approve habitat restoration plans, habitat acquisition plans, and long-term habitat management plans. BLM/CPUC biological monitor to confirm that proposed habitat restoration mitigation plans are implemented.
Effectiveness Criteria	Habitat restoration plans are implemented and meet success criteria. Long-term habitat management is provided for all mitigation sites.
Responsible Agency	BLM, CPUC, USFWS, CDFG, ACOE, RWQCB, State Parks (for mitigation lands in ABDSP), and USDA Forest Service (for mitigation lands on USFS land).

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

Timing	Pre-, during and post construction.
Interpretation & Approach	8/20/09 meeting with BLM, Aspen, and Helix: Land acquisition and/or securing property rights need not occur for the Habitat Management Plan until pre-energization. SDG&E will work with the regulating agencies to identify appropriate mitigation land which will adequately compensate for the approved impacts although the mitigation lands may not be located within each affected watershed area. This approach is consistent with the Federal Register Rules and Regulations as stated in Volume 73, No. 70/Thursday, April 10, 2008/ Rules and Regulations under Mitigation Mechanisms on page 19605, "For linear projects, such as roads and utility lines, district engineers may determine that consolidated compensatory mitigation projects provide appropriate compensation for the authorized impacts, and are environmentally preferable to requiring numerous small permittee-responsible compensatory mitigation projects along the linear project corridor."

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-3a: Prepare and implement a Weed Control Plan. The Applicant shall prepare and implement a comprehensive, adaptive Weed Control Plan for pre-construction and long-term invasive weed abatement. Where the Applicant owns the ROW property, the Weed Control Plan shall include specific weed abatement methods, practices and treatment timing developed in consultation with the San Diego County Agriculture Commissioner's Office and the California Invasive Plant Council (Cal-IPC), or the tribal government, as appropriate. On the ROW easement lands administered by public agencies (BLM, USDA Forest Service (for alternatives routes within Cleveland National Forest lands), Wildlife Agencies, and State Parks (ABDSP) the Weed Control Plan shall incorporate all appropriate and legal agency-stipulated regulations. The Weed Control Plan shall be submitted to the ROW land-holding governmental agencies for final authorization of weed control methods, practices, and timing prior to implementation of the Weed Control Plan on public lands. ROW easements located on private lands shall include adaptive provisions for the implementation of the Weed Control Plan. Prior to implementation, the Applicant shall work with the landowners to obtain authorization of the weed control treatment that is required. State Parks shall have review and approval authority over the Weed Control Plan for ROW within or adjacent to the boundaries of ABDSP. Developed land shall be excluded from weed control.</p> <hr/> <p>— (B-3a) The Weed Control Plan shall include the following:</p> <ul style="list-style-type: none"> • A pre-construction weed inventory shall be conducted by surveying the entire ROW and areas immediately adjacent to the ROW (where access and permission can be secured) as well as at all ancillary facilities associated with the project for weed populations that: (1) are considered by the San Diego County Agriculture Commissioner or State Parks (for ROW within or adjacent to ABDSP) as being a priority for control and (2) aid and promote the spread of wildfires (such as cheatgrass [<i>Bromus tectorum</i>], Saharan mustard [<i>Brassica tournefortii</i>] and medusa head [<i>Taeniatherum caput-medusae</i>]). These populations shall be mapped and described according to density and area covered. These plant species shall be treated (where access and permission can be secured) prior to construction or at a time when treatments would be most effective based on phenology according to control methods and practices for invasive weed populations designed in consultation with the San Diego County Agriculture Commissioner's Office and Cal-IPC, or the tribal government, as appropriate. <p>A pre-construction weed inventory shall also be conducted by surveying areas that will be directly impacted by the project for weed populations that are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006) or are weed species of concern to State Parks (for ROW within or adjacent to ABDSP). These plant species shall be treated prior to construction or at a time when treatments would be most effective based on phenology according to control methods and practices for invasive weed populations designed in consultation with Cal-IPC and State Parks (for treatment in ROW within ABDSP).</p> <hr/> <p>— (B-3a) Weed control treatments shall include all legally permitted chemical, manual and mechanical methods applied with the authorization of the San Diego County Agriculture Commissioner and the ROW easement land-holding agencies where appropriate. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the San Diego County Agriculture Commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the PCA, the San Diego County Agriculture Commissioner, State Parks (for treatment in ABDSP) and Cal-IPC, or the tribal government, as appropriate, with the goal of controlling populations before they start producing seeds.</p>
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Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-3a) For the lifespan of the project (<i>i.e.</i>, as long as the project is physically present), long-term measures to control the introduction and spread of noxious weeds in the project area shall be taken as follows.</p> <ul style="list-style-type: none"> • From the time construction begins until two years after construction is complete, annual surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required in the survey areas described above. After this time, surveying for new invasive weed populations and monitoring of identified and treated populations shall be required at an interval of every two years. However, the treatment of weeds shall occur on a minimum annual basis, unless otherwise approved by the PCA, the San Diego County Agriculture Commissioner, State Parks (for treatment in ABDSP) and Cal-IPC. • During project construction and operation/maintenance, all seeds and straw materials shall be certified weed free, and all gravel and fill material shall be certified weed free by the San Diego County Agriculture Commissioner's Office, or the tribal government, as appropriate. • During project construction and operation/maintenance, vehicles and all equipment shall be washed (including wheels, undercarriages, and bumpers) at an offsite washing facility (<i>e.g.</i>, a car wash or truck wash) immediately before project construction begins and prior to returning to project construction should equipment be used in a different construction area. In addition, tools such as chainsaws, hand clippers, pruners, etc. shall be washed at an offsite washing facility immediately before project construction begins and prior to returning to project construction should tools be used in a different construction area. In addition, vehicles, tools, and equipment shall be washed at an offsite washing facility should these vehicles, tools, and equipment have been used in an area where invasive plants have been mapped during the pre-construction weed control inventory and as directed by the biological construction monitor, prior to entering a project area free of populations of invasive plants (as determined by the pre-construction weed control inventory). Finally, vehicles, tools, and equipment used for maintenance shall be washed at an offsite washing facility immediately before each maintenance event. All washing shall take place where rinse water is collected and disposed of in either a sanitary sewer or landfill; an effort shall be made to use wash facilities that use recycled water. A written daily log shall be kept for all vehicle/equipment/tool washing that states the date, time, location, type of equipment washed, methods used, and staff present. The log shall include the signature of a responsible staff member. Logs shall be available to the CPUC, BLM, USDA Forest Service (for alternative routes within Cleveland National Forest lands), Wildlife Agencies, State Parks (for weeds in ABDSP), tribal governments (for weeds on tribal lands), and biological monitor for inspection at any time and shall be submitted to the CPUC on a monthly basis during construction and submitted annually to the CPUC during operation/maintenance.
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-20.
Location	Entire project area.
Monitoring/Reporting Action	BLM/CPUC biological monitor to confirm preparation and implementation of a weed control plan.
Effectiveness Criteria	Weed control plan prepared and successfully implemented.
Responsible Agency	BLM, CPUC, and ROW land-holding agencies (BLM, State Parks for ABDSP, USDA Forest Services for USFS lands).
Timing	Pre-, during and post construction.
Interpretation & Approach	<p>Reference to ABDSP is not applicable to FESSR. Application is for mitigation parcels in the ABDSP.</p> <p>8/20/09: Weed Control Plans are to be developed for all areas disturbed during construction activities.</p> <p>Vehicle and equipment washing – The definition of 'a different construction area' for those vehicles and pieces of equipment that have been washed prior to start of project construction and have continuously worked on the project construction shall be as follows: A different construction area shall be delineated by the weed control plan/weed inventory (8/31/09)</p> <p>8/31/09 - An O&M Plan for vehicle washing showing mapping for where washing will be created and will be based on the weed control plan.</p> <p>Wash water will be allowed to evaporate when possible, and debris will be collected for disposal to land fills. Weed control plan will include vegetation clearing equipment (<i>e.g.</i>, shovels) and buckets of water to dip the equipment in for remote areas.</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	
	<p>— B-5a: Conduct rare plant surveys, and implement appropriate avoidance/minimization/compensation strategies. A qualified biologist shall survey for special status plants in the spring of a year with adequate rainfall prior to initiating construction activities in a given area. If a survey cannot be conducted due to inadequate rainfall, then SDG&E shall consult with the Wildlife Agencies, State Parks (for impacts in ABDSP), and the USFS (for impacts on National Forest lands) to determine if construction may begin in the absence of survey data and what mitigation would be required, or whether construction would not be allowed until such data is collected. A report of special status plants observed shall be prepared and submitted for approval by the CPUC, BLM, State Parks (for activities in ABDSP), USDA Forest Service (for alternatives with activities on National Forest lands), and the Wildlife Agencies prior to activities which may impact the plant resources.</p>
	<p>— (B-5a) All special status plant populations shall be staked or flagged by a qualified biologist approved by the CPUC, BLM, State Parks (for activities in ABDSP), USDA Forest Service (for alternatives with activities on National Forest lands), and the Wildlife Agencies. All stakes, flagging, or fencing shall be removed no later than 30 days after construction is complete.</p>
	<p>— (B-5a) Impacts to federal or State listed plant species shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through salvage and relocation (salvage and relocation for plants in ABDSP shall be determined in consultation with, and approval of, State Parks) via a restoration program and/or offsite acquisition and preservation of habitat containing the plant at a 2:1 ratio. Avoidance may not be feasible due to physical or safety constraints. The CPUC, BLM, State Parks (for activities in ABDSP), USDA Forest Service (for alternatives with activities on National Forest lands), and the Wildlife Agencies shall decide whether the Applicant can restore rare plant populations or shall acquire habitat with rare plant populations off site (locations to be approved by the CPUC, BLM, State Parks [for activities in ABDSP], USDA Forest Service [for alternatives with activities on National Forest lands], and the Wildlife Agencies). A qualified biologist shall prepare a Restoration Plan that shall indicate where restoration would take place. The restoration plan shall also identify the goals of the restoration, responsible parties, methods of restoration implementation, maintenance and monitoring requirements, final success criteria, and contingency measures. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, State Parks, and USDA Forest Service (for alternatives with restoration on National Forest lands) until a plan is approved by all.</p> <p>Impacts to moderately sensitive plant species (<i>i.e.</i>, BLM Sensitive, USDA Forest Service Sensitive, CNPS List 1 and 2 species) shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeded (with locally collected seed stock) or relocation to temporarily disturbed areas (reseeded and relocation of plants in ABDSP shall be determined in consultation with, and approval of, State Parks). Avoidance may not be feasible due to physical or safety constraints. Mitigation Measure B-1a would also provide habitat-based mitigation for these impacts.</p>
	<p>— (B-5a) Where reseeded or salvage and relocation is required, the Applicant shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC, BLM, State Parks (for restoration in ABDSP), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies. The Habitat Restoration Specialist shall prepare and implement a Restoration Plan for reseeded or salvaging and relocating special status plant species to be approved by the CPUC, BLM, State Parks (for restoration in ABDSP), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies in writing prior to impacting the plant resources. The Applicant shall work with the above-listed agencies until a plan is approved by all. The reseeded or relocation of plants shall be maintained and monitored for five years after installation, or until established success criteria are met, to assess progress and identify potential problems with the mitigation. The reseeded or relocation of plants in ABDSP shall be maintained and monitored for a minimum of five years, even if established success criteria are met before the end of five years. Remedial action (<i>e.g.</i>, additional seeding, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken during the maintenance and monitoring period if necessary to ensure the success of the restoration. If the restoration fails to meet the established performance criteria after the five-year maintenance and monitoring period, maintenance and monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise approved by the CPUC, BLM, State Parks (for restoration in ABDSP), USDA Forest Service (for alternatives with restoration on National Forest lands), and the Wildlife Agencies.</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-5a) A Habitat Management Plan for any required, offsite mitigation shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands). The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any activities which may impact special status plant resources. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, State Parks, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired offsite mitigation parcels. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) offsite mitigation parcels approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands); • Baseline biological data for all mitigation parcels; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands).
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-32, G-CM-33, G-CM-35, San Diego Thornmint SS-CM-1 and SS-CM-2.
Location	Entire project area.
Monitoring/Reporting Action	BLM and CPUC shall approve habitat restoration plans, habitat acquisition plans, and long-term habitat management plans, and ensure their implementation. BLM/CPUC biological monitor shall oversee surveys and monitoring and ensure compliance with APMs and mitigation measures, and confirm that habitat restoration plans are implemented.
Effectiveness Criteria	Successful avoidance or restoration/relocation of sensitive plants, purchase of appropriate mitigation lands, and provision of long-term habitat management for all mitigation sites.
Responsible Agency	BLM, CPUC, USFWS, CDFG, State Parks (for ABDSP), and USDA Forest Service (for USFS land).
Timing	Pre-, during and post construction.
Interpretation & Approach	Reference to ABDSP applicable only for mitigation parcels.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>B-7a: Cover all steep-walled trenches or excavations used during construction to prevent the entrapment of wildlife (e.g., reptiles and small mammals). BIO-APM-14 shall be modified to ensure that all steep-walled trenches or excavations used during construction shall be covered at all times except when being actively utilized. If the trenches or excavations cannot be covered, exclusion fencing (<i>i.e.</i>, silt fencing) shall be installed around the trench or excavation, or it shall be covered to prevent entrapment of wildlife. Open trenches, or other excavations that could entrap wildlife shall be inspected by the qualified biologist (see Mitigation Measure B-1c) a minimum of three times per day and immediately before backfilling. Furthermore, employees and contractors shall look under vehicles and equipment for the presence of wildlife before movement. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by the qualified biologist. Should a dead or injured listed species be found in a trench or excavation or anywhere in the construction zone or along an access road, the qualified biologist shall contact the CPUC, BLM, State Parks (for activities in ABDSP), USDA Forest Service (for alternatives with activities on National Forest lands), and the Wildlife Agencies within 48 hours of the finding. The qualified biologist shall report the species found, the location of the finding, the cause of death (if known), and shall submit a photograph and any other pertinent information.</p>
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-39 and G-CM-40.
Location	Entire project area.
Monitoring/Reporting Action	BLM/CPUC biological monitor shall ensure compliance with APMs and mitigation measures.
Effectiveness Criteria	Steep-walled trenches or excavations are covered at all times except when being actively utilized, or exclusion fencing is installed around the trench or excavation.
Responsible Agency	BLM, CPUC, USFWS, CDFG, State Parks (for ABDSP land), and USDA Forest Service (for USFS land).
Timing	During construction.
Interpretation & Approach	Reference to ABDSP applicable only for mitigation parcels. 8/20/09: B-7a supersedes APM-12 and APM-24. See Appendix 8N of the Final EIR/EIS. Implement BIO-APM 14 & BIO-APM 24 with B-7a.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-7b: Implement avoidance/mitigation/compensation according to the Flat-Tailed Horned Lizard Rangewide Management Strategy. Mitigation for impacts to the FTHL shall follow all applicable measures in the Flat-Tailed Horned Lizard Rangewide Management Strategy (Flat-Tailed Horned Lizard Interagency Coordinating Committee, 2003). This mitigation includes, but is not limited to, locating impacts outside of MAs, delineating work limits, using existing roads, biological monitoring, and worker education.</p>
	<p>— (B-7b) According to the Flat-Tailed Horned Lizard Rangewide Management Strategy (Flat-Tailed Horned Lizard Interagency Coordinating Committee, 2003), compensation for FTHL habitat impacts could involve purchase of FTHL habitat and/or monetary compensation as determined by the Flat-Tailed Horned Lizard Interagency Coordinating Committee. Impacts shall be mitigated at a 1:1 ratio for habitat outside a MA. Furthermore, mitigation inside a MA shall be at a 3.5:1 ratio for temporary impacts (2.5:1 for disturbed habitat, developed land, or agriculture) and a 5.5:1 ratio for permanent impacts (4.5:1 for disturbed habitat, developed land, or agriculture) . For the Proposed Project, the required mitigation for FTHL impacts (if offsite acquisition is the method of compensation) is 403.48 acres. On-site restoration requirements for the Project would be 232.84 acres. Any FTHL habitat acquired shall be approved by the Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks (for land in ABDSP)</p>
	<p>— (B-7b) A Habitat Management Plan shall be prepared by a biologist approved by the Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks (for land in ABDSP) for all acquired FTHL habitat. The Habitat Management Plan must be approved in writing by the Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks (for land in ABDSP) prior to the initiation of any activities which may impact (directly or indirectly) the FTHL or its habitat. The Applicant shall work with the Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired FTHL habitat. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) FTHL habitat approved by the Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP); • Baseline biological data for all acquired FTHL habitat; • Designation of a land management entity approved by the Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to Flat-Tailed Horned Lizard Interagency Coordinating Committee, CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP).
Location	FTHL MAs and where potential FTHL habitat occurs.
Monitoring/Reporting Action	BLM and CPUC shall ensure that required purchase of mitigation land and provision of long-term management occurs. BLM/CPUC biological monitor shall ensure that applicable measures in the FTHL Rangewide Management Strategy are implemented.
Effectiveness Criteria	Direct impacts to the flat-tailed horned lizard are minimized. Compensatory mitigation for impacts to FTHL is implemented, including purchase of habitat and provision of long-term management for mitigation sites.
Responsible Agency	BLM, CPUC, and Flat-Tailed Horned Lizard Interagency Coordinating Committee.
Timing	Pre-, during and post construction.
Interpretation & Approach	8/20/09 In lieu of purchasing habitat, SDG&E will provide monetary compensation, as determined by the Flat-Tailed Horned Lizard Interagency Coordinating Committee.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-7c: Minimize impacts to Peninsular bighorn sheep and provide compensation for loss of critical habitat. With regard to timing of activities, construction and maintenance activities (including the use of helicopters) in bighorn sheep critical habitat shall be limited to outside the lambing season and the period of greatest water need, or a minimum ceiling of 1,500 feet for helicopter flights shall be maintained. The lambing season is January 1 through June 30. The period of greatest water need is May through September. Construction and maintenance activities in PBS critical habitat may occur during the lambing season and/or period of greatest water need if prior approval is obtained from the Wildlife Agencies.</p> <hr/> <p>— (B-7c) To help reconnect PBS subpopulations and at least partially offset impacts to the overall population of PBS caused by the project, the Applicant shall:</p> <ul style="list-style-type: none"> • fund the design and construction of an overpass (for sheep) or tunnel (for vehicles) to facilitate PBS movement across a highway at a location determined by the USFWS (in coordination with State Parks and CDFG. Tunnel or overpass design must be approved by the Wildlife Agencies. • fund removal of tamarisk and fences for the life of the project, and install and maintain water sources at locations determined by the USFWS (in coordination with State Parks and CDFG) • fund a minimum 10-year-long program to monitor the effects of the project on PBS behavior, movements, and dispersal in the project corridor (ten years is needed to measure the influence of the project while factoring in rainfall cycles, vegetative productivity, and drought). This program would be implemented by the Wildlife Agencies and State Parks following construction. <hr/> <p>— (B-7c) Furthermore, the Applicant shall provide compensation for direct loss of critical habitat at a 5:1 ratio for permanent impacts and at a 3:1 ratio (including a combination of onsite restoration and offsite purchase) for temporary impacts with PBS critical habitat or other habitat acceptable to the Wildlife Agencies, BLM, and State Parks (for critical habitat in ABDSP). Impacts to PBS critical habitat must be mitigated within the same Critical Habitat Unit where the impacts occurred. For the Proposed Project, the required mitigation for PBS impacts includes offsite purchase of 525.7 acres and onsite restoration of 111.81 acres. The determination of impact acreage shall be based on the definition of critical habitat in effect as of the time of publication of the Final EIR/EIS.</p> <hr/> <p>— (B-7c) A Habitat Management Plan shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, and State Parks for all acquired PBS habitat. The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, and State Parks (for land in ABDSP) prior to the initiation of any activities which may impact (directly or indirectly) PBS or its habitat. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, and State Parks until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired PBS habitat. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) PBS habitat approved by the CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP) • Baseline biological data for all acquired PBS habitat • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP) to provide in-perpetuity management • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity) • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP). <hr/> <p>Also, see U.S. Fish and Wildlife Conservation Measures SS-CM-22, SS-CM-23, SS-CM-24, and SS-CM-25.</p>
Location	Where bighorn sheep or designated bighorn sheep critical habitat occur.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

Monitoring/Reporting Action	BLM/CPUC biological monitor shall ensure compliance with APMs and bighorn sheep impact minimization measures. BLM and CPUC shall ensure that funding is provided for bighorn sheep studies and crossing mitigation; and that habitat acquisition and long-term management of mitigation sites is implemented.
Effectiveness Criteria	Successful avoidance/minimization of bighorn sheep impacts, and implementation of funding for studies and a wildlife crossing, habitat acquisition and long-term management for mitigation parcels.
Responsible Agency	BLM, CPUC, USFWS, CDFG, and State Parks.
Timing	Pre-, during and post construction.
Interpretation & Approach	8/20/09 Discussion with BLM, Aspen, and Helix, helicopter work must occur at a minimum of 1500 feet or an alternative elevation as may be agreed upon with the appropriate agencies from January 1 through September 30. The wildlife agencies will provide direction on the location and type of construction that will meet the requirement to “fund the design and construction of an overpass.” The 10-year-long monitoring program will start once construction has been completed. Since the issuance of the Final EIR/EIS and BO, a revised delineation of the critical habitat designation for the Bighorn Sheep was issued. The wildlife agencies will determine which delineation will be utilized for the project going forward.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	
	<p>— B-7d: Conduct burrowing owl surveys, and implement appropriate avoidance/minimization/compensation strategies. A survey shall be conducted within 30 days prior to the initiation of construction by a qualified biologist to determine the presence or absence of the burrowing owl in the construction zone plus 250 feet beyond. In addition, the burrowing owl shall be looked for opportunistically as part of other surveys and monitoring required during project construction. If the burrowing owl is absent, then no mitigation is required.</p>
	<p>— (B-7d) If the burrowing owl is present, no disturbance shall occur within 50 meters (approximately 160 ft) of occupied burrows from September 1 through January 31 or within 75 meters (approximately 250 ft) of occupied burrows from February 1 through August 31 (CDFG, 1995).</p>
	<p>— (B-7d) During construction, any pipe or similar construction material that is stored on site for one or more nights shall be inspected for burrowing owls by a qualified biologist before the material is moved, buried, or capped</p>
	<p>— (B-7d) Passive relocation of owls shall be implemented prior to construction only at the direction of the CDFG and only if the above-described occupied burrow disturbance absolutely cannot be avoided (<i>e.g.</i>, due to physical or safety constraints). Relocation of owls shall only be implemented during the non-breeding season (September 1 through January 31; CDFG, 1995). Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 50 meters from the impact zone and that are within or contiguous to a minimum of 6.5 acres of preserved (or acquired and preserved if not already preserved) foraging habitat for each relocated owl (single owl or owl pair). Passive relocation is accomplished by first creating two artificial burrows in contiguous, preserved foraging habitat (if no natural burrows exist) for each occupied burrow that would be impacted; and second, installing one-way doors on occupied burrow entrances so owls can leave the burrow but not re-enter it. Following passive relocation, the area of impact and the preserved foraging habitat with alternate burrows are surveyed daily for one week to confirm owl use of alternate burrows before excavation of burrows in the impact zone. All passive relocation shall be conducted by a biologist approved by the CDFG. If the alternate burrows are not used by the relocated owls, then the Applicant shall work with the CDFG to provide alternate mitigation for burrowing owls. If the alternate burrows are used, no other mitigation shall be required.</p> <p>If it is not possible to preserve contiguous habitat on which to provide alternate burrows (<i>e.g.</i>, on private land), and occupied owl burrows would be directly impacted, then the owls shall be passively relocated without the creation of alternate burrows prior to construction (relocation should only be implemented during the non-breeding season [September 1 through January 31]). The loss of occupied owl habitat shall be mitigated by acquiring and preserving other occupied habitat elsewhere (as explained below) per the Staff Report on Burrowing Owl Mitigation (CDFG, 1995) and the Burrowing Owl Survey Protocol and Mitigation Guidelines (The Burrowing Owl Consortium, 1993), or as otherwise determined in consultation with the CDFG.</p>
	<p>— (B-7d) Impacted occupied habitat shall be mitigated by 1) acquiring and preserving occupied habitat at a rate of 1.5 times 6.5 acres (or 9.75 acres) per pair or single bird impacted, or 2) acquiring and preserving unoccupied habitat contiguous with currently occupied habitat at a rate of two times 6.5 acres (or 13 acres) per pair or single bird impacted, or 3) acquiring and preserving suitable unoccupied habitat at a rate of three times 6.5 acres (or 19.5 acres) per pair or single bird impacted. All acquired habitat shall be acceptable to the CDFG and shall be protected and managed for the burrowing owl in perpetuity.</p>
	<p>— (B-7d) The survey required within 30 days prior to the initiation of construction will determine the presence or absence of the burrowing owl in the construction zone plus 250 feet beyond and whether or not the mitigation needs to be revised.</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-7d) A Habitat Management Plan shall be prepared by a biologist approved by the CPUC, BLM, CDFG, and State Parks (for land in ABDSP) for all acquired burrowing owl habitat. The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, and State Parks (for land in ABDSP) prior to the initiation of any activities which may impact (directly or indirectly) the burrowing owl or its habitat. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, and State Parks until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired burrowing owl habitat. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) burrowing owl habitat approved by the CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP); • Baseline biological data for all acquired burrowing owl habitat; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, and State Parks (for mitigation parcels to be part of ABDSP).
Location	Where occupied burrowing owl habitat occurs.
Monitoring/Reporting Action	BLM/CPUC biological monitor shall oversee surveys and monitoring and ensure compliance with APMs and mitigation measures. If necessary, BLM and CPUC shall approve habitat acquisition plans, and long-term habitat management plans, and ensure their implementation.
Effectiveness Criteria	Avoidance of occupied burrows and surrounding foraging area, successful passive relocation, and/or replacement of occupied habitat that is managed in perpetuity.
Responsible Agency	BLM, CPUC, USFWS, and CDFG.
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-7e: Conduct least Bell's vireo and southwestern willow flycatcher surveys, and implement appropriate avoidance/minimization/compensation strategies. All grading or brushing taking place within riparian habitats of the least Bell's vireo or southwestern willow flycatcher during construction shall be conducted from September 16 (October 1 in ABDSP) through March 14, which is outside the least Bell's vireo and southwestern willow flycatcher breeding seasons.</p>
	<p>— (B-7e) When conducting all other construction activities during the breeding season of March 15 through September 15 (September 30 in ABDSP) within 500 feet (USFWS, 2007b) of habitat in which least Bell's vireos and/or southwestern willow flycatchers are known to occur or have potential to occur, a biologist permitted by the USFWS shall survey for least Bell's vireos and southwestern willow flycatchers within 10 calendar days prior to initiating activities in an area. The results of the survey shall be submitted to the Wildlife Agencies for review and approval prior to initiating any construction activities.</p>
	<p>— (B-7e) If least Bell's vireos or southwestern willow flycatchers are present, a permitted biologist shall survey for nesting vireos and flycatchers approximately once per week within 500 feet of the construction area (USFWS, 2007b), for the duration of the activity in that area during the breeding season.</p>
	<p>— (B-7e) If/when an active nest is located, a 300-foot no-construction buffer zone (USFWS, 2007b) shall be established around each nest site; however, there may be a reduction of this buffer zone depending on site-specific conditions or the existing ambient level of activity. The Applicant shall contact Wildlife Agencies to determine the appropriate buffer zone. No construction shall take place within this buffer until the nest is no longer active unless there are physical or safety constraints. If construction must take place within the buffer, a qualified acoustician shall monitor noise as construction approaches the edge of the occupied vireo/flycatcher habitat as directed by the permitted biologist. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that the activities in general are disturbing the nesting activities, the biologist shall have the authority to halt construction and shall consult with the Wildlife Agencies, State Parks (for activities in ABDSP), and USDA Forest Service (for activities on National Forest lands) to devise methods to reduce the noise and/or disturbance. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nesting birds and the activities, and working in other areas until the young have fledged. The permitted biologist shall monitor the nest daily until either activities are no longer within 300 feet of the nest, or the fledglings become independent of their nest.</p>
	<p>— (B-7e) Mitigation for the loss of least Bell's vireo- or southwestern willow flycatcher-occupied habitat (or designated critical habitat for the flycatcher) shall be implemented as follows. Permanent impacts to occupied habitat and/or designated critical habitat shall include offsite acquisition and preservation of occupied habitat or designated critical habitat at a 3:1 ratio. Temporary impacts to occupied habitat or designated critical habitat shall include 1:1 onsite restoration and 2:1 offsite acquisition and preservation of occupied habitat and/or designated critical habitat. Impacts to least Bell's vireo or southwestern willow flycatcher critical habitat must be mitigated within the same Critical Habitat Unit where the impacts occurred.</p> <p>If a USFWS protocol, pre-construction survey, conducted in an area where presence of the vireo or flycatcher was assumed in this analysis (see Appendix 8B) determines that the species is absent, then the mitigation shall be reduced accordingly. Any acquired habitat shall be approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands).</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-7e) A Habitat Management Plan for any required, offsite mitigation shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands). The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any activities which may impact (directly or indirectly) the least Bell's vireo or southwestern willow flycatcher or its habitat. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, State Parks, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired vireo or flycatcher habitat. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) least Bell's vireo or southwestern willow flycatcher habitat approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands); • Baseline biological data for all least Bell's vireo or southwestern willow flycatcher habitat; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands).
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-32, SS-CM-16, SS-CM-17, and SS-CM-18.
Location	Areas where the vireo or flycatcher occur or have potential to occur.
Monitoring/Reporting Action	BLM/CPUC biological monitor shall oversee surveys and ensure compliance with APMs and avoidance/minimization/mitigation measures. BLM and CPUC shall approve habitat restoration plans, habitat acquisition plans, and long-term habitat management plans, and ensure their implementation.
Effectiveness Criteria	Impacts to nesting vireos and flycatchers are avoided/minimized/mitigated. Habitat restoration plans are implemented and meet success criteria, and long-term habitat management is provided for all mitigation sites.
Responsible Agency	BLM, CPUC, USFWS, and CDFG.
Timing	Pre-, during and post construction.
Interpretation & Approach	Reference to ABDSP is only applicable for mitigation parcels.
MITIGATION MEASURE	B-7h: Implement appropriate avoidance/minimization strategies for eagle nests. No construction or maintenance activities shall occur within 4,000 feet of an eagle nest during the eagle breeding season (December through June).
Location	Within 4,000 feet of eagle nests
Monitoring/Reporting Action	BLM/CPUC biological monitor shall ensure compliance with restrictions before and during construction. A qualified biologist shall ensure compliance during maintenance.
Effectiveness Criteria	Successful avoidance of indirect impacts to eagle nests.
Responsible Agency	BLM and CPUC.
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-7i: Conduct Quino checkerspot butterfly surveys, and implement appropriate avoidance/minimization/compensation strategies. A biologist permitted by the USFWS shall determine suitable habitat areas (<i>i.e.</i>, non-excluded areas per the 2002 USFWS protocol; USFWS, 2002b) within any designated USFWS QCB survey area (<i>e.g.</i>, Survey Area 2) that would be impacted by project construction.</p>
	<p>— (B-7i) A pre-construction, USFWS protocol presence/absence survey for the adult QCB shall be conducted within all suitable habitat for this species in the construction zone within any designated USFWS QCB survey area. The survey shall be conducted in a year where the QCB is readily observed at USFWS QCB-monitored reference sites to determine what areas are occupied by the QCB (<i>i.e.</i>, any suitable habitat within 1 km of a current QCB sighting is considered occupied) and what areas are not occupied. The USFWS permitted biologist shall record the precise locations of QCB larval host plants within the construction zone (and 10 meters beyond) using GPS technology. If the protocol pre-construction survey is conclusive for determining absence of the QCB, then areas without the butterfly would not require mitigation.</p>
	<p>— (B-7i) If the protocol pre-construction survey is not conclusive for determining QCB absence (due to limited detectability per the 2002 protocol, for example), or if a survey is not conducted, then all suitable habitat areas would be considered potentially occupied and would require mitigation as follows. If construction occurs outside the larvae and adult activity season (June 1 through October 15) and stays at least 10 meters away from all host plant locations, then no mitigation is required (USFWS, 2007d). If construction occurs between October 16 and May 31 or within 10 meters of host plant locations, or within designated critical habitat, then (1) temporary impacts to the habitat shall be mitigated through onsite restoration of temporarily disturbed areas and offsite acquisition and preservation of an equal sized area of QCB-occupied habitat (a 2:1 mitigation ratio) and (2) permanent impacts shall be mitigated through offsite acquisition and preservation of QCB-occupied habitat (or QCB-designated critical habitat for impacts to designated critical habitat) at a 2:1 ratio (<i>i.e.</i>, two acres acquired for each acre lost). Any acquired habitat shall be approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation land to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands). A USFWS permitted biologist shall be present during all construction activities in potentially occupied habitat to monitor and assist the construction crews to ensure impacts occur only as allowed. This same mitigation shall apply where the protocol pre-construction survey was conclusive for determining that the QCB is present and where construction would occur in designated critical habitat. Impacts to QCB critical habitat must be mitigated within the same Critical Habitat Unit where the impacts occurred. If host plant mapping is not possible during the pre-construction survey (<i>e.g.</i>, drought prevents plant germination), then all suitable habitat (<i>i.e.</i>, non-excluded habitat per the 2002 protocol) shall be considered occupied by the QCB and mitigated under the assumption that the QCB is present.</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>— (B-7i) A Habitat Management Plan for any required, offsite mitigation shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands). The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any activities which may impact (directly or indirectly) the QCB or its habitat. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, State Parks, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired QCB habitat. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) QCB habitat approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands); • Baseline biological data for all QCB habitat; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, State Parks (for mitigation parcels to be part of ABDSP), and USDA Forest Service (for mitigation parcels to be National Forest lands). <p>Also, see U.S. Fish and Wildlife Conservation Measures G-CM-32, SS-CM-3, SS-CM-4, SS-CM-5, SS-CM-6, SS-CM-7, SS-CM-26, and SS-CM-27.</p>
Location	Where suitable Quino checkerspot butterfly habitat occurs.
Monitoring/Reporting Action	A qualified biologist shall oversee surveys and ensure compliance with APMs and Quino checkerspot avoidance/minimization/mitigation measures. If required, BLM and CPUC shall approve habitat acquisition plans and long-term management plans.
Effectiveness Criteria	Successful avoidance of impacts to the Quino checkerspot or impacts as allowed by the USFWS, and if necessary, implementation of mitigation land acquisition.
Responsible Agency	BLM, CPUC, and USFWS.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP applicable only for mitigation parcels. Impacts to QCB critical habitat must be mitigated within the same Critical Habitat Unit where the impacts occurred. Furthermore, should the Proposed Rule issued on January 17, 2008 by the USFWS to revise the area of designated critical habitat for the Quino be adopted by USFWS prior to construction, the impacts to critical habitat shall be recalculated by a qualified biologist (see Mitigation Measure B-1c), and the required number of acres of compensation/restoration land required by this mitigation measure shall be revised based on the ratios set forth in Mitigation Measure B-7i. The recalculations and revisions to the required mitigation shall be submitted to the CPUC, BLM, and the Wildlife Agencies for review and approval prior to the commencement of construction in critical habitat.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-7j: Conduct arroyo toad surveys, and implement appropriate avoidance/minimization/compensation strategies. A pre-construction, USFWS protocol survey shall be conducted for the toad in the construction zone (by a biologist permitted by the USFWS to handle the toad) where absence of the species has not been proven to conclusively define the impacts to occupied habitat. In the absence of this survey data, the mitigation acreages required below shall stand. Where the pre-construction survey determines the species is absent, the mitigation shall be reduced accordingly.</p> <p>(— B-7j) The removal of toad riparian breeding habitat shall occur from October through December to minimize potential impacts to breeding adults (including potential sedimentation impacts to toad eggs) and dispersing juveniles.</p> <p>(— B-7j) Where the toad is present (or assumed to be present if no pre-construction survey is conducted), the construction zone shall be fenced with exclusion fencing to prevent toad access to it. The fencing shall be a silt-screen type barrier comprised of a minimum 24-inch high fence with the remainder (minimum 12 inches) anchored firmly against the ground. The fence may be buried if necessary to exclude toad access. The fence locations shall be identified by a USFWS permitted biologist and adjusted as necessary. Exclusion fencing shall be monitored daily by a qualified biologist (see Mitigation Measure B-1c) and maintained in its original condition by construction personnel for the entire length of the construction period in toad habitat. Pre- and post-exclusion fencing surveys within the construction zone shall be conducted for arroyo toads by a biologist permitted by the USFWS to handle the toad. Prior to construction commencement, a minimum of three surveys shall be conducted by this biologist following installation of the fencing and prior to construction activities. One of these clearance surveys must take place no more than 24 hours prior to activity commencement. These surveys shall be conducted during appropriate climatic conditions and during the appropriate time of day or night to maximize the likelihood of encountering arroyo toads. If conditions are not appropriate for arroyo toad movement during surveys, the biologist may attempt to elicit a response from the toads during nights (<i>i.e.</i>, at least one hour after sunset), provided that temperatures are above 50°F, by spraying the project area with water to simulate a rain event. After the three clearance surveys outlined above have been completed, daily surveys shall be conducted each morning prior to the continuation of construction or maintenance activity. Any toads found shall be relocated to appropriate similar habitat outside project impact areas.</p> <p>(— B-7j) Mitigation for the loss of arroyo toad-occupied habitat shall be implemented as follows. Permanent impacts to occupied, arroyo toad breeding habitat shall include offsite acquisition and preservation of occupied arroyo toad breeding habitat at a 3:1 ratio. Permanent impacts to occupied, upland burrowing habitat shall include offsite acquisition and preservation of occupied, upland burrowing habitat at a 2:1 ratio. Temporary impacts to occupied breeding habitat shall include 1:1 onsite restoration and 2:1 offsite acquisition and preservation of occupied breeding habitat. Temporary impacts to occupied, upland burrowing habitat shall include 1:1 onsite restoration and 1:1 offsite acquisition and preservation of occupied, upland burrowing habitat. Any acquired arroyo toad habitat shall be approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands).</p>
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Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>(— B-7j) A Habitat Management Plan for any required, offsite mitigation shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands). The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any activities which may impact (directly or indirectly) the arroyo toad or its habitat. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired arroyo toad habitat. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) arroyo toad habitat approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands); • Baseline biological data for all arroyo toad habitat; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands).
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-32, SS-CM-8, SS-CM-9, SS-CM-10, SS-CM-11, SS-CM-12, SS-CM-13, SS-CM-14, and SS-CM-15.
Location	Areas where the arroyo toad occurs or has potential to occur.
Monitoring/Reporting Action	A qualified biologist shall oversee surveys and ensure compliance with APMs and avoidance/minimization/mitigation measures. BLM and CPUC shall approve habitat restoration plans, habitat acquisition plans, and long-term habitat management plans, and ensure their implementation.
Effectiveness Criteria	Impacts to arroyo toads are avoided/minimized/mitigated. Habitat restoration plans are implemented and meet success criteria, and long-term habitat management is provided for all mitigation sites.
Responsible Agency	BLM, CPUC, USFWS, CDFG, State parks (for ABDSP) and USDA Forest Services (for USFS lands).
Timing	Pre-, during and post construction.
Interpretation & Approach	Reference to ABDSP applicable only for mitigation parcels.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-7I: Conduct coastal California gnatcatcher surveys, and implement appropriate avoidance/minimization/compensation strategies. All brushing or grading taking place within occupied habitat of the coastal California gnatcatcher (defined as within 500 feet of any gnatcatcher sightings [USFWS, 2007b]) during construction shall be conducted from September 1 through February 14, which is outside the coastal California gnatcatcher breeding season.</p>
	<p>(— B-7I) When conducting all other construction activities during the coastal California gnatcatcher breeding season of February 15 through August 31, within habitat in which coastal California gnatcatchers are known to occur or have potential to occur, the following avoidance measures shall apply.</p> <p>A USFWS permitted biologist shall survey for coastal California gnatcatchers within 10 calendar days prior to initiating activities in an area. The results of the survey shall be submitted to the Wildlife Agencies for review and approval prior to initiating any construction activities. If coastal California gnatcatchers are present, but not nesting, a USFWS permitted biologist shall survey for nesting coastal California gnatcatchers approximately once per week within 500 feet of the construction area for the duration of the activity in that area during the breeding season.</p>
	<p>(— B-7I) If/when an active nest is located, a 300-foot no-construction buffer (USFWS, 2007b) shall be established around each nest site; however, there may be a reduction of this buffer zone depending on site-specific conditions or the existing ambient level of activity. The Applicant shall contact Wildlife Agencies to determine the appropriate buffer zone. To the extent feasible, no construction shall take place within this buffer until the nest is no longer active. However, if construction must take place within the 300-foot buffer, a qualified acoustician shall monitor noise as construction approaches the edge of the occupied gnatcatcher habitat as directed by the permitted biologist. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that the activities in general are disturbing the nesting activities, the biologist shall have the authority to halt construction and shall consult with the Wildlife Agencies to devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nesting coastal California gnatcatchers and the activities, and working in other areas until the young have fledged.</p>
	<p>(— B-7I) Mitigation for the loss of coastal California gnatcatcher-occupied habitat shall be implemented as follows. Permanent impacts to occupied habitat shall include offsite acquisition and preservation of occupied habitat at a 2:1 ratio. Temporary impacts to occupied habitat shall be mitigated at a 2:1 ratio and shall include 1:1 onsite restoration and 1:1 offsite acquisition and preservation of occupied habitat.</p> <p>Mitigation for the loss of unoccupied designated critical habitat for the gnatcatcher shall be implemented as follows. Permanent impacts to unoccupied designated critical habitat shall include offsite acquisition and preservation of designated critical habitat at a 2:1 ratio. Temporary impacts to unoccupied designated critical habitat shall include 1:1 onsite restoration. Impacts to coastal California gnatcatcher critical habitat must be mitigated within the same Critical Habitat Unit where the impacts occurred. Any acquired coastal California gnatcatcher habitat shall be approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands).</p>

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

	<p>(— B-7I) A Habitat Management Plan for any required, offsite mitigation shall be prepared by a biologist approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands). The Habitat Management Plan must be approved in writing by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands) prior to the initiation of any activities which may impact (directly or indirectly) the coastal California gnatcatcher or its habitat. The Applicant shall work with the CPUC, BLM, Wildlife Agencies, and USDA Forest Service until a plan is approved by all. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired coastal California gnatcatcher. The Habitat Management Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> • Legal descriptions of all acquired or assured (as defined in Mitigation Measure B-1a) coastal California gnatcatcher habitat approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands); • Baseline biological data for all coastal California gnatcatcher habitat; • Designation of a land management entity approved by the CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands) to provide in-perpetuity management; • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; • Designation of responsible parties and their roles (<i>e.g.</i>, provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity); and • Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to CPUC, BLM, Wildlife Agencies, and USDA Forest Service (for mitigation parcels to be National Forest lands).
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-32, SS-CM-19, SS-CM-20, and SS-CM-21.
Location	Occupied gnatcatcher habitat.
Monitoring/Reporting Action	A qualified biologist shall oversee surveys and ensure compliance with APMs and avoidance/minimization/mitigation measures. BLM and CPUC shall approve habitat restoration plans, habitat acquisition plans, and long-term habitat management plans, and ensure their implementation.
Effectiveness Criteria	Impacts to coastal California gnatcatchers are avoided/minimized/mitigated. Habitat restoration plans are implemented and meet success criteria, and long-term habitat management is provided for all mitigation sites.
Responsible Agency	BLM, CPUC, USFWS, CDFG, State parks (for ABDSP) and USDA Forest Services (for USFS lands).
Timing	Pre-, during and post construction.
Interpretation & Approach	Reference to ABDSP applicable only for mitigation parcels.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-8a: Conduct pre-construction surveys and monitoring for breeding birds. All vegetation clearing, except tree trimming or removal, shall take place between August 16 and January 14 (<i>i.e.</i>, outside of the general avian breeding season of January 15 through August 15). Tree removal or trimming shall take place between September 16 and December 31 (<i>i.e.</i>, outside the raptor breeding season of January 1 through September 15).</p> <p>— (B-8a) If project construction (not vegetation clearing or tree trimming/removal) cannot occur completely outside the general avian breeding season, then pre-construction surveys for non-listed bird species' nests shall be conducted by a qualified biologist within 100 feet of the construction zone within 10 calendar days prior to the initiation of construction that would occur between January 15 and August 15. The results of the survey shall be submitted to the Wildlife Agencies for review and approval prior to initiating any construction activities.</p> <p>— (B-8a) If project construction (not vegetation clearing or tree trimming/removal) including the use of helicopters cannot occur completely outside the raptor breeding season, then pre-construction surveys for active raptor nests shall be conducted by a qualified biologist within 500 feet of the construction zone within 10 calendar days prior to the initiation of construction that would occur between January 1 and September 15. The results of the survey shall be submitted to the Wildlife Agencies for review and approval prior to initiating any construction activities.</p> <p>— (B-8a) If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is 1) located at least 500 feet from raptor nests (USFWS, 2007b), 2) located at least 160 to 250 feet from occupied burrowing owl burrows (CDFG, 1995; see Mitigation Measure B-7d), 3) located at least 300 feet from listed bird species nests (see Mitigation Measure B-7e and B-7l), 4) located at least 100 feet from non-listed bird species nests, and 5) noise levels do not exceed 60 dB(A)hourly Leq at the edge of nesting territories (American Institute of Physics, 2005) as determined by a qualified biologist in coordination with a qualified acoustician. There may be a reduction of these buffer zones depending on site-specific conditions or the existing ambient level of activity. The Applicant shall contact Wildlife Agencies to determine the appropriate buffer zone. In the case of raptors (except the burrowing owl), the noise level restriction stated above does not apply (USFWS, 2007b). Otherwise, if the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to the CPUC, BLM, Wildlife Agencies, State Parks (for construction in ABDSP), and USDA Forest Service (for alternatives with construction on National Forest lands).</p>
Location	Entire project area.
Monitoring/Reporting Action	BLM/CPUC biological monitor shall oversee surveys and monitoring to ensure compliance with APMs and the mitigation.
Effectiveness Criteria	Successful avoidance/minimization of impacts to nesting birds.
Responsible Agency	BLM, CPUC, and CDFG.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	B-9a: Survey for bat nursery colonies. A CDFG-approved biologist shall conduct a habitat assessment for bat nursery colonies prior to any construction activity. Then, the approved biologist shall conduct a survey for bat nursery colonies or signs of such colonies prior to construction. Direct impacts to a nursery colony site shall not be allowed, and approach of, or entrance to, an active nursery colony site shall be prohibited. Before any blasting or drilling in the vicinity of a nursery colony site, the CDFG-approved biologist shall work with the construction crew to devise and implement methods to minimize potential indirect impacts to the nursery colony site from falling rock or substantial vibration (while a nursery colony is active). The methods shall include an option to halt any construction activity that would cause falling rock, substantial vibration impacts, or any other construction-related impact (including lighting used for night work) to a nursery colony as determined by the approved biologist, until the colony is inactive. Should falling rock block the entrance to a nursery colony site, the contractor shall work with the approved biologist to re-open an entrance to the site.
Location	Areas with potential to support bat nursery colonies (typically caves or rock crevices in the desert).
Monitoring/Reporting Action	BLM/CPUC biological monitor shall oversee surveys and ensure avoidance of impacts to bat nursery colonies.
Effectiveness Criteria	Successful avoidance of impacts to bat nursery colonies.
Responsible Agency	BLM, CPUC, and CDFG.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— B-10a: Utilize collision-reducing techniques in installation of transmission lines. The Applicant shall install the transmission lines utilizing Avian Power Line Interaction Committee standards for collision-reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994" (APLIC, 1994) as follows.</p> <ul style="list-style-type: none"> • Placement of towers and lines shall not be located above existing towers and lines, topographic features, or tree lines to the maximum extent practicable. Power lines should be clustered in the vertical and horizontal planes aligned with existing geographic features or tree lines, and located parallel (rather than perpendicular) to prevailing wind patterns to the maximum degree feasible. • Additionally, overhead lines that are located in highly utilized avian flight paths shall be marked utilizing fixed mount Firefly Flapper/Diverter, swan flight diverter coils, or other diversion devices, if proven more effective, as to be visible to birds and to reduce avian collision with power lines. <p>— (B-10a) Where such markers are installed, the Applicant shall fund a study to determine the effectiveness of the markers as a collision prevention measure since there are few, if any, studies that show if such markers work, especially on transmission lines (CEC, 2007). The Applicant shall develop a draft study protocol and submit it to the Wildlife Agencies and State Parks, as well as to CPUC and BLM, for review. The Applicant shall continue to work with these agencies until approval of a final study protocol is obtained. If the study shows the markers to be ineffective, the Applicant shall coordinate with the Wildlife Agencies and State Parks (for markers in ABDSP) to develop alternate collision protection measures.</p> <p>— (B-10a) The Applicant shall implement an avian reporting system for documenting bird mortalities to help identify problem areas. The reporting system shall follow the format in Appendix C of "Suggested Practices for Avian Protection On Power Lines: The State of the Art in 2006" (APLIC, 2006) or a similar format. The Applicant shall submit a draft reporting protocol and reporting system to the Wildlife Agencies and State Parks, as well as to CPUC and BLM, for review and approval. The Applicant shall continue to work with these agencies until approval of a final reporting protocol and reporting system is obtained. The Applicant shall develop and implement methods to reduce mortalities in identified problem areas. The methods shall be approved by the Wildlife Agencies, State Parks (for problem areas in ABDSP), CPUC, and BLM prior to implementation. Bird mortality shall continue to be documented in the problem areas per the avian reporting system to determine the effectiveness of the mortality reduction methods and to determine if new methods need to be developed.</p>
Location	Highly utilized avian flight paths
Monitoring/Reporting Action	BLM/CPUC biological monitor shall ensure installation of markers. BLM and CPUC shall ensure that the Applicant funds and implements a study to document bird mortalities.
Effectiveness Criteria	Markers installed, bird mortality study implemented, and corrective measures taken.
Responsible Agency	CPUC, BLM, State Parks (for ABDSP), USFWS and CDFG
Timing	During and post construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>B-11a: Prepare and implement a Raven Control Plan. The Applicant shall prepare and implement a Raven Control Plan where it occurs in FTHL habitat inside and outside FTHL MAs. The raven control plan shall include the use of raven perching/nesting deterrents (such as those manufactured by Prommel Enterprises, Inc. [www.ZENAdesign.com], Mission Environmental [www.missionenviro.co.za], or Kaddas Enterprises, Inc. [www.kaddas.com] and/or shall describe the procedure for obtaining a permit from the USFWS Law Enforcement Division to legally remove ravens. The plan shall identify the purpose of conducting raven control; provide training in how to identify raven nests and how to determine whether a nest belongs to a raven or a raptor species; describe the seasonal limitations on disturbing nesting raptors; and describe procedures for documenting the activities on an annual basis. The Applicant shall obtain approval of this plan from the USFWS prior to the start of construction. The Applicant shall work with the USFWS until approval of a plan is obtained.</p> <p>Also, see U.S. Fish and Wildlife Conservation Measure G-CM-19.</p>
Location	FTHL habitat inside and outside FTHL MAs, and where desert tortoise has potential to occur?, outside ABDSP.
Monitoring/Reporting Action	BLM/CPUC biological monitor shall verify that SDG&E submitted a raven control plan and received approval from USFWS prior to construction, and that the plan is implemented after construction.
Effectiveness Criteria	A raven control plan is submitted by SDG&E, approved by USFWS, and implemented.
Responsible Agency	BLM, CPUC, and USFWS Law Enforcement Division.
Timing	Pre- and post construction.
Interpretation & Approach	8/20/09: The Raven Control Plan does not have to be in place prior to construction for Segment 4, Mt. Springs Grade. Reference to ABDSP is not applicable to FESSR.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	<p>— (B-12a): Conduct maintenance activities outside the general avian breeding season. The Applicant shall educate all maintenance workers about the sensitivity of biological resources associated with the project and the necessity to avoid unauthorized impacts to them.</p> <p>— (B-12a)In areas not cleared of vegetation in the prior two years, all vegetation clearing, except tree trimming or removal, shall take place between September 16 and February 14 (<i>i.e.</i>, outside of the general avian breeding season of February 15 through September 15). Tree trimming or removal shall only take place between September 16 and December 31 (<i>i.e.</i>, outside the raptor breeding season of January 1 through September 15).</p> <p>Other maintenance activities shall occur outside the general avian breeding season where feasible. For other maintenance activities that cannot occur outside the above-listed breeding seasons, a qualified biologist shall work with a qualified acoustician to determine if a maintenance activity would meet or exceed the 60 dB(A) Leq hourly noise threshold where nesting territories of the coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and burrowing owl occur. If the noise threshold would not be met or exceeded at the edge of their nesting territories, then maintenance may proceed. If the noise threshold would be met or exceeded at the edge of their nesting territories, pre-maintenance surveys for nests of these species shall be conducted by a qualified biologist (USFWS permitted biologist for gnatcatcher, vireo, and flycatcher) within 300 feet of the maintenance area no more than seven days prior to initiation of maintenance that would occur between February 15 and August 30 for the gnatcatcher, March 15 and September 15 for the vireo, April 15 and September 15 for the flycatcher, and February 1 and August 31 for the burrowing owl. If active nests are found, work may proceed provided that methods, determined by the qualified acoustician to be effective, are implemented to reduce noise below the threshold. These methods include, but are not limited to, turning off vehicle engines and other equipment whenever possible and/or installing a protective noise barrier between a nesting territory and maintenance activities. If the qualified acoustician determines that no methods would reduce noise to below the threshold, maintenance shall be deferred until the nestlings have fledged as determined the qualified biologist. Where noise-reducing methods are employed, active nests shall be monitored by the qualified biologist on a weekly basis until maintenance is complete or until the nestlings fledge, whichever comes first. The qualified biologist shall be responsible for documenting the results of the pre-maintenance nest surveys and the nest monitoring and for reporting these results to the CPUC, BLM, Wildlife Agencies, State Parks (for maintenance in ABDSP), and USDA Forest Service (for alternatives with maintenance on National Forest lands).</p> <p>— (B-12a) Animal Burrows/Dens. If any animal burrows or dens are identified during the pre-maintenance surveys for active bird nests, soil in a brush-clearing area shall be sufficiently dry before brush clearing to prevent damage to burrows or dens. At any time of year where maintenance would occur in occupied SKR habitat, all equipment and vehicles shall remain on existing access roads/staging areas (<i>e.g.</i>, they shall not pull off the shoulder) to prevent the crushing of SKR burrows.</p> <p>Also, see U.S. Fish and Wildlife Conservation Measures G-CM-43, G-CM-44, G-CM-45, G-CM-46, G-CM-47, G-CM-48, G-CM-49, G-CM-50, and G-CM-51.</p>
Location	Entire project area.
Monitoring/Reporting Action	A qualified biologist shall conduct surveys and monitoring, and ensure compliance with APMs and the mitigation.
Effectiveness Criteria	Successful avoidance/minimization of impacts to nesting birds and prevention of damage to burrows or dens.
Responsible Agency	BLM, CPUC, USFWS, CDFG, state parks (for ABDSP) and USDA Forest Service (for USFS land).
Timing	Post construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR. Reference to ABDSP applicable only for mitigation parcels.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

MITIGATION MEASURE	B-12b: Conduct maintenance when arroyo toads are least active. To avoid impacts to arroyo toads during project maintenance (specifically the use and maintenance of access roads within 2 kilometers of occupied toad habitat), use and maintenance of these access roads shall only occur between two hours after sunrise until two hours before sunset.
Location	Access roads where occupied habitat (or potential habitat where absence has not been established) occurs.
Monitoring/Reporting Action	A qualified biologist shall ensure compliance with construction time restrictions.
Effectiveness Criteria	Avoidance of impacts to arroyo toads on access roads
Responsible Agency	BLM, CPUC
Timing	Post construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	B-12c: Maintain access roads and clear vegetation in Quino checkerspot butterfly habitat. If access roads in QCB-occupied or potentially occupied habitat (see Impact B-7J and Mitigation Measure B-7i) are maintained (<i>i.e.</i> , regraded) and vegetation around structures is cleared at least once every two years, then no additional mitigation shall be required for this ongoing maintenance. If more than two years pass without regrading or clearing, then the maintenance shall be considered a new impact to QCB habitat and shall be mitigated as prescribed in Mitigation Measure B-7i (<i>i.e.</i> , protocol pre-maintenance survey, biological monitoring, and avoidance or mitigation).
Location	Access roads in occupied or potential occupied habitat.
Monitoring/Reporting Action	A qualified biologist shall provide monitoring to ensure compliance.
Effectiveness Criteria	Avoidance or mitigation of impacts to QCB
Responsible Agency	BLM, CPUC
Timing	Post construction.
Interpretation & Approach	None required.
BIO-APM-1	SDG&E would perform any detailed on-the-ground protocol surveys with regard to specific sensitive plant or wildlife species whose habitat would be impacted by the project based on final design in accordance with federal or State regulations or statutes. SDG&E would submit results of these surveys to the USFWS and CDFG and consult on reasonable and feasible mitigation measures for potential impacts, prior to any ground disturbing activities in a particular area. Mitigation would prioritize avoidance as the primary means to address impacts. If avoidance is not feasible, then relocation/restoration would be implemented. Where relocation/restoration is not feasible or deemed not to fully address impacts, then mitigation through SDG&E's NCCP mitigation credits or if necessary compensation via another on- or offsite purchase or dedication of habitat at a ratio of 2:1 for impacts inside preserves and 1:1 for impacts outside of preserves would be identified and implemented. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-2	Prior to construction, all SDG&E's contractors, subcontractors and project personnel would receive training regarding the appropriate work practices necessary to effectively implement the biological APMs and to comply with the applicable environmental laws and regulations including appropriate wildlife avoidance, and impact minimization procedures, the importance of these resources and the purpose and necessity of protecting them; and methods for protecting sensitive ecological resources. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-4.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

Location	Entire project area.
Timing	Pre-construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-3	<p>Except when not feasible due to physical or safety constraints, all Project vehicle movement would be restricted to existing and constructed roads as a part of the project and determined and marked by SDG&E in advance for the contractor, contractor-acquired accesses, or public roads. New access road construction for the project would be allowed year-round. However, when feasible, every effort would be made to avoid constructing roads during the nesting season. When it is not feasible to keep vehicles on existing access roads or to avoid constructing new access roads during the nesting, breeding, or flight season, SDG&E would perform a site survey, or more as appropriate, in the area where the work is to occur. This survey would be performed to determine presence or absence of endangered nesting birds, or other endangered species in the work area. SDG&E would submit results of this survey to the USFWS and CDFG and consult on reasonable mitigation measures to avoid or minimize for potential impacts, prior to vehicle use off existing access roads or the construction of new access roads. However, this survey would not replace the need for SDG&E to perform detailed on-the-ground surveys otherwise required by BIO-APM-1. Parking or driving underneath oak trees is not allowed in order to protect root structures. In addition to regular watering to control fugitive dust created during clearing, grading, earth-moving, excavation, and other construction activities which could interfere with plant photosynthesis, a 15-mile-per-hour speed limit shall be observed on dirt access roads to reduce dust and allow reptiles and small mammals to disperse. (SDG&E)</p> <p>Also, see U.S. Fish and Wildlife Conservation Measures G-CM-5 and G-CM-25.</p>
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS. Note: (10/20/09) All Project vehicle movement will be restricted to existing roads and roads constructed as part of the project. These roads will be determined and marked by SDG&E in advance.
BIO-APM-4	<p>The area limits of Project construction and survey activities would be predetermined based on temporary and permanent disturbance areas noted on final design engineering drawings with activity restricted to and confined within those limits. Survey personnel shall keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat would require prior approval from the project biological resource monitor in conformance with the APMs. Hiking off roads or paths for survey data collection is allowed year-round as long as other APMs are met. Stringing of new wire and reconductoring for the project would be allowed year round in sensitive habitats if the conductor is not allowed to drag on the ground or in brush and all vehicles used during stringing remain on Project access roads. Where stringing requires that conductor drag on the brush or ground or vehicles leave Project access roads, SDG&E would perform a site survey (or more as appropriate) to determine presence/absence of endangered nesting birds or other endangered species in the work area. SDG&E would submit results of this survey to the USFWS and CDFG and consult on reasonable and feasible mitigation measures for potential impacts prior to dragging wire on the ground or through brush or taking vehicles off Project access roads. However, this survey would not replace the need for SDG&E to perform detailed on the ground surveys as otherwise required by BIO-APM-1. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate limits of survey or construction activity where any sensitive biological resources or wildlife habitats are encountered in the field. (SDG&E)</p> <p>Also, see U.S. Fish and Wildlife Conservation Measure G-CM-8.</p>
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

BIO-APM-5	To the extent feasible, access roads would be built at right angles to the streambeds and washes; where not feasible for access roads to cross at right angles, SDG&E would limit roads constructed parallel to streambeds or washes to a maximum length of 500 feet at any one transmission line crossing location. Such parallel roads would be constructed in a manner that minimizes potential adverse impacts on "waters of the U.S." or waters of the State. Streambed crossings and roads constructed parallel to streambeds would require review and approval of necessary permits from the ACOE, CDFG, and RWQCB. Culverts would be installed where needed for right angle crossings, but rock crossings would be utilized across most right angle drainage crossings. All construction and maintenance activities would be conducted in a manner that would minimize disturbance to vegetation, drainage channels and stream banks (<i>e.g.</i> , structures would not be located within a stream channel, construction activities would avoid sensitive features). Prior to construction in streambeds and washes, SDG&E would perform a pre-activity survey, or more as appropriate, to determine the presence/absence of endangered riparian species. However, this survey would not replace the need for SDG&E to perform detailed on-the-ground surveys as otherwise required by the BIO-APM-1. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-27.
Location	Entire project area.
Timing	During and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-6	In the construction, operation, and maintenance of the project, SDG&E would comply with all applicable environmental laws and regulations, including, without limitation, those regulating and protecting wildlife and its habitat. (SDG&E)
Location	Entire project area.
Timing	During and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-7	Littering is not allowed. Project personnel would not deposit or leave any food or waste in the project area, and no biodegradable or non-biodegradable debris would remain in the right-of-way following completion of construction. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-9.
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-8	Prior to construction, plant population boundaries designated as sensitive by USFWS or CDFG and other resources designated sensitive by SDG&E and resource agencies would be clearly delineated, with clearly visible flagging or fencing, which shall remain in place for the duration of construction. Flagged areas would be avoided to the extent practicable during construction activities in that area. Where these areas cannot be avoided, focused surveys for covered plant species shall be performed in conformance with BIO-APM-1, and the responsible resource agency(s) would be consulted for appropriate mitigation and/or revegetation measures prior to disturbance. Notification of presence of any covered plant species to be removed in the work area would occur within ten (10) working days prior to Project activity, during which time the USFWS or CDFG may remove such plant(s) or recommend measures to minimize or reduce the take. If neither USFWS nor CDFG has removed such plant(s) within ten (10) working days following written notice, SDG&E may proceed with work and cause a take of such plant(s), if minimization measures are not implemented. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-33.
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

BIO-APM-9	Brush clearing around any Project facilities (<i>e.g.</i> , structures, substations) for fire protection, visual inspection or Project surveying, in areas which have been previously cleared or maintained within a two-year or shorter period shall not require a pre-activity survey. In areas not cleared or maintained within a two-year period, brush clearing shall not be conducted during the breeding season (March through August) without a pre-activity survey for vegetation containing active nests, burrows, or dens. The pre-activity survey performed by the onsite biological resource monitor would make sure that the vegetation to be cleared contains no active migratory bird nests, burrows, or active dens prior to clearing. If occupied migratory bird nests are present, fire protection or visual inspection brush clearing work would be avoided until after the nesting season, or until the nest becomes inactive. If no nests are observed, clearing may proceed. Where burrows or dens are identified in the reconnaissance-level survey, soil in the brush clearing area would be sufficiently dry before clearing activities occur to prevent mechanical damage to burrows that may be present. (SDG&E)
Location	Entire project area.
Timing	Post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-10	No wildlife, including rattlesnakes, may be harmed except to protect life and limb. Firearms shall be prohibited in all project areas except for those used by security personnel. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-36.
Location	Entire project area.
Timing	Pre-, during and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-11	Feeding of wildlife is not allowed. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-37.
Location	Entire project area.
Timing	Pre-, during and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-12	Project personnel are not allowed to bring pets to any project area in order to minimize harassment or killing of wildlife and to prevent the introduction of destructive animal diseases to native wildlife populations. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-38.
Location	Entire project area.
Timing	Pre-, during and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-13	Plant or wildlife species may not be collected for pets or any other reason. (SDG&E)
Location	Entire project area.
Timing	Pre-, during and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-14	All steep-walled trenches or excavations used during construction shall be inspected twice daily (early morning and evening) to protect against wildlife entrapment. If wildlife is located in the trench or excavation, the onsite biological resource monitor shall be called immediately to remove them if they cannot escape unimpeded. The onsite biological resource monitor would make required contacts with the USFWS and CDFG resource personnel and obtain verbal approval prior to removing any entrapped wildlife. If the biological resource monitor is not qualified to remove the entrapped wildlife, a recognized wildlife rescue agency (such as Project Wildlife) may be employed to remove the wildlife and transport them safely to other suitable habitats. (SDG&E)
Location	Entire project area.
Timing	During and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS. Note (10/20/09): If wildlife becomes entrapped in a trench or excavation, the onsite biological resource monitor shall be called immediately.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

BIO-APM-15	<p>Emergency repairs may be required during the construction and maintenance of the project to address situations (<i>e.g.</i>, downed lines, slides, slumps, major subsidence, etc.) that potentially or immediately threaten the integrity of the project facilities. During emergency repairs the APMs shall be followed to the fullest extent practicable. Once the emergency has been abated, any unavoidable environmental damage would be reported to the project biological construction monitor, who would promptly submit a written report of such impacts to the USFWS and CDFG and any other government agencies having jurisdiction over the emergency actions. If required by the government agencies, the biological construction monitor would develop a reasonable and feasible mitigation plan consistent with the APMs and any permits previously issued for the project by the governmental agencies. (SDG&E)</p> <p>Also, see U.S. Fish and Wildlife Conservation Measure G-CM-10.</p>
Location	Entire project area.
Timing	During and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-16	<p>Environmentally sensitive tree trimming locations for the project would be identified in SDG&E's existing vegetation management tree-trim database utilized by tree-trim contractors. The biological field construction monitor shall be contacted prior to Trimming in environmentally sensitive areas Whenever feasible, trees in environmentally sensitive areas, such as areas of riparian or native scrub vegetation, would be scheduled for trimming during non-sensitive (<i>i.e.</i>, outside breeding or nesting) times. Where trees cannot be trimmed during non-sensitive times, SDG&E would perform a site survey, or more as appropriate, to determine presence or absence of endangered nesting bird species in riparian or native scrub vegetation. SDG&E would submit results of this survey to the USFWS and CDFG and consult on mitigation measures for potential impacts, prior to tree trimming in environmentally sensitive areas. However, this survey would not replace the need for SDG&E to perform detailed on-the-ground surveys as otherwise required by BIO-APM-1. Where riparian areas with overstory vegetation are crossed, tree removal (<i>i.e.</i>, clear-cut) widths would be varied where feasible to minimize visual landscape contrast and to maintain habitat diversity at established wildlife corridor edges. Where tree removal widths cannot be varied, SDG&E would consult with the USFWS and CDFG to develop alternative tree removal options that could reasonably maintain edge diversity. (SDG&E)</p>
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	<p>For implementation, see Appendix 8N in Final EIR/EIS.</p> <p>Note (10/20/09): Where trees cannot be trimmed outside of the breeding or nesting seasons, a biological monitor would perform a pre-activity survey to determine the presence or absence of nesting birds.</p>
BIO-APM-17	<p>All new access roads or spur roads constructed as part of the project that are not required as permanent access for future Project maintenance and operation would be permanently closed. Where required, roads would be permanently closed using the most effective feasible and least environmentally damaging methods appropriate to that area with the concurrence of the underlying landowner and the governmental agency having jurisdiction (<i>e.g.</i>, stockpiling and replacing topsoil or rock replacement). This would limit new or improved accessibility into the area. Mowing of vegetation can be an effective method for protecting the vegetative understory while at the same time creating access to the work area. Mowing should be used when permanent access is not required since, with time, total revegetation is expected. If mowing is in response to a permanent access need, but the alternative of grading is undesirable because of downstream siltation potential, it should be recognized that periodic mowing would be necessary to maintain permanent access. The project biological construction monitor shall conduct checks on mowing procedures to ensure that mowing for temporary or permanent access roads is limited to a 14-foot-wide area on straight portions of the road and a 16- to 20-foot-wide area at turns, and that the mowing height is no less than 4 inches from finished grade. (SDG&E)</p> <p>Also, see U.S. Fish and Wildlife Conservation Measures G-CM-30 and G-CM-31.</p>
Location	Entire project area.
Timing	During and post construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

BIO-APM-18	In areas designated as sensitive by SDG&E or the resource agencies, to the extent feasible structures and access roads would be designed to minimize impacts to sensitive features. These areas of sensitive features include but are not limited to high-value wildlife habitats, sensitive vegetation communities, and high value plant habitats, and/or to allow conductors to clearly span the features, within limits of standard structure design. If the sensitive features cannot be completely avoided, structures and access roads would be placed to minimize the disturbance to the extent feasible. When it is not feasible to avoid constructing poles or access roads in high value wildlife habitats, SDG&E would perform a site survey to determine presence or absence of endangered species in sensitive habitats. SDG&E would submit results of this survey to the USFWS and consult on mitigation measures for potential impacts, prior to constructing structures or access roads. However, this survey would not replace the need for SDG&E to perform detailed on-the-ground surveys as otherwise required by BIO-APM-1. Where it is not feasible for access roads to avoid sensitive water resource features, such as streambed crossings, such crossings would be built at right angles to the streambeds. Where such crossings cannot be made at right angles, roads constructed parallel to streambeds would be limited to a maximum length of 500 feet at any one transmission line crossing location. Such parallel roads would be constructed in a manner that minimizes potential adverse impacts on "waters of the U.S." Streambed crossings or roads constructed parallel to streambeds would require review and approval of necessary permits from the ACOE, CDFG, and RWQCB. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-11, G-CM-27, and G-CM-42.
Location	Entire project area where sensitive features are present.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-19	Restoration and habitat enhancement and mitigation measures developed during the consultation period with the BLM under Section 7 of the Endangered Species Act (ESA) would be implemented and complied with as specified in the Biological Opinion (BO) of the USFWS. The Section 7 process would be used to obtain an incidental take authorization through a compensation-based mitigation program for permanent impacts to occupied sensitive plant and animal habitat at a ratio of 1:1 or 2:1 based on site-specific studies, as outlined in BIO-APM-1. The Section 7 process may include consideration of SDG&E's existing NCCP mitigation credits as compensation for project impacts. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-20	In construction areas where re-contouring is not required, vegetation shall be left in place wherever possible to avoid excessive root damage and allow for re-sprouting. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-21	Structures shall be constructed to conform to "Suggested Practices for Raptor Protection on Power Lines" (Raptor Research Foundation, Inc. 1981), to minimize impacts to raptors. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-22	Species identified as sensitive by the land managing agency shall be salvaged where avoidance is not feasible in accordance with State law. Generally, Salvage may include removal and stockpiling for replanting. on-site, removal and transplanting out of surface disturbance area, removal and salvage by private individuals, and removal and salvage by commercial dealers, or any combination. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.

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Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

BIO-APM-23	Only the minimum amount of vegetation necessary for the construction of structures and facilities will be removed. Topsoil located in areas containing sensitive habitat shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil located in developed or disturbed areas is excluded from this APM. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-24	Construction holes left open overnight shall be covered. Covers shall be secured in place nightly prior to workers leaving the site and shall be strong enough to prevent livestock or wildlife from falling through and into a hole. Holes and/or trenches shall be inspected prior to filling to ensure absence of mammals and reptiles. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-25	Disturbed soils shall be revegetated with an appropriate seed mix that does not contain invasive non-native plant species. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-26	Excavations shall be sloped on one end to provide an escape route for small mammals and reptiles. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-27	<ol style="list-style-type: none"> 1. Prior to construction, SDG&E shall remove all existing raptor nests from structures that would be affected by project construction. 2. Removal of nests shall occur outside the raptor breeding season (January to July). 3. If it is necessary to remove an existing raptor nest during the breeding season, a qualified biologist shall survey the nest prior to removal to determine if the nest is active. A nest would be considered active if it contains eggs or fledglings. If the nest does not contain eggs or nestlings and is inactive, it shall be removed promptly. If a nest is determined to be active, the nest shall not be removed and the biologist shall monitor the nest to ensure nesting activities/breeding activities are not disrupted. If the biological monitor determines that project activities are disturbing or disrupting nesting activities, the monitor shall make feasible recommendations to reduce the noise and/or disturbance in the vicinity of the nest. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.

Table 4. Mitigation Measures and Applicant Proposed Measures – Biological Resources

BIO-APM-28	<p>Potential roost trees that must be removed will be surveyed and identified in the field for application of the following procedures:</p> <p><i>Before felling the tree:</i></p> <ol style="list-style-type: none"> 1. Trees should be removed under the warmest possible conditions. 2. Peel any sections of the exfoliating bark off the tree gently and search for any roosting bats underneath. 3. Create noise and vibrations on the tree itself. Noise and vibrations include: <ol style="list-style-type: none"> a. Running chain saw and making shallow cuts in the trunk (where bark has been peeled off). b. Striking the tree base with fallen limbs or tools such as hammers. <p><i>Felling the tree:</i></p> <ol style="list-style-type: none"> 4. Disturbance should be near-continuous for ten minutes, and then another ten minutes should pass, before the tree is felled. 5. When cutting sections of the bole, if any hollows or cavities (such as woodpecker holes) are discovered, be especially careful to check for the presence of bats in those areas. Cut slowly and carefully at all times. If possible, section bole near cavities to focus noise and vibrations, and open hollows by sectioning off a side. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.
BIO-APM-29	<p>Reduce construction night lighting on sensitive habitats. Exterior lighting within the project area adjacent to preserved habitat shall be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat to the maximum extent practicable. Vehicle traffic associated with project activities would be kept to a minimum volume and speed to prevent mortality of nocturnal wildlife species that may be moving about. (SDG&E)</p> <p>Also, see U.S. Fish and Wildlife Conservation Measure G-CM-13.</p>
Location	Entire project area where sensitive habitats are present.
Timing	During construction.
Interpretation & Approach	For implementation, see Appendix 8N in Final EIR/EIS.

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Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	— 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, and helicopter fly yards 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 and fly yards shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Additionally, construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use shall be avoided.
	— (V-1a) SDG&E shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction. Where the project crosses lands administered by other public agencies (<i>e.g.</i> , Forest Service, Anza-Borrego Desert State Park), construction plans shall also be submitted to those agencies for review and approval within the same 60-day timeframe.
Location	Mitigation Measure V-1a applies to all sites and all routes.
Monitoring/Reporting Action	CPUC and BLM to verify in the field during construction and following construction
Effectiveness Criteria	Project construction sites (static), construction yards, and staging areas will be screened during construction and all construction areas will appear in their original or improved condition following construction.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre- and during construction.
Interpretation & Approach	7/2/09, Existing substations already have fences or screening in place, therefore no additional screening or changes to existing fences are required for construction within these fences. Reference to ABDSP is not applicable to FESSR.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>— V-1b: Reduce construction night lighting impacts. SDG&E shall design and install all lighting at construction and storage yards and staging areas and fly yards 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.</p> <p>— (V-1b) SDG&E shall submit a Construction Lighting Mitigation Plan to the BLM (only if on BLM lands), Forest Service (only if on National Forest lands), Anza-Borrego Desert State Park (for Park lands) and CPUC (for all areas) 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. SDG&E shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the reviewing agency. 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 is 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
Location	Mitigation Measure V-1b applies to all static sites.
Monitoring/Reporting Action	CPUC and BLM to review and approve the Construction Lighting Mitigation Plan prior to construction and to monitor implementation in the field during construction.
Effectiveness Criteria	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.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>— 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.</p> <p>— (V-2a) All proposed new access roads shall be evaluated for their visibility from sensitive viewing locations prior to final design. Prior to final design, SDG&E shall consult with a visual resources specialist representing the CPUC and BLM and a qualified biologist to identify the following:</p> <ul style="list-style-type: none"> • Definition of access roads with sensitive viewing areas from which visibility of access roads is a concern. • Approximate location and length of alternative access road routes if straight line roads are not used. Define habitat affected and steepness of terrain for consideration of habitat and erosion impacts. The biologist and visual resources specialist shall confirm that the overall impacts of the alternate access road are less than that of the original access road design. • “Drive and crush” access is a feasible measure for avoiding access road scars (<i>i.e.</i>, no grading or vegetation removal is required). If this means of access is to be used, SDG&E shall define frequency of driving and vehicle types such that a biologist confirms that vegetation would be likely to recover. • A table shall be submitted to the CPUC and BLM for review and approval at least 60 days before the start of construction to document towers for which this measure is applied, and the proposed resolution for each access road (<i>i.e.</i>, retain straight line roads due to greater impacts from alternative routes, use “drive and crush” access, or develop alternate access road route). <p>— (V-2a) SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC and BLM, as well as the Forest Service and Anza-Borrego Desert State Park (as appropriate), for review and approval at least 60 days prior to the start of construction.</p>
Location	All grading sites for access roads, spur roads, and ancillary facilities.
Monitoring/Reporting Action	CPUC and BLM to review construction plans prior to start of construction and verify compliance during construction.
Effectiveness Criteria	In-line views of land scars from grading will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>— 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. Furthermore, all graded roads and areas not required for on-going operation, maintenance, or access shall be returned to pre-construction conditions. In those cases where potential public access is opened by construction routes, SDG&E shall create barriers or fences to prevent public access and patrol construction routes to prevent vandalized access and litter clean-up until all vegetation removed returns to its pre-project state. SDG&E shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC, as well as Forest Service and Anza-Borrego Desert State Park (as appropriate), for review and approval at least 60 days prior to the start of construction.</p> <p>— (V-2b) SDG&E shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC, as well as Forest Service and Anza-Borrego Desert State Park (as appropriate), for review and approval at least 60 days prior to the start of construction.</p>
Location	All grading sites for access roads, spur roads, and ancillary facilities.
Monitoring/Reporting Action	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of unnatural vegetation lines will be minimized and the resulting visual contrast will be minimal.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
MITIGATION MEASURE	<p>— V-2c: Reduce color contrast of land scars on non-Forest lands. For non-USFS-administered land areas where views of land scars from sensitive public viewing locations are unavoidable, disturbed soils shall be treated with Eonite or similar treatments to reduce the visual contrast created by the lighter-colored disturbed soils with the darker vegetated surroundings (Eonite and Permeon are commercially available chemical treatments that “age” or oxidize rock and are used specifically for coloring concrete or rock surfaces to tone down glare and contrast and simulate naturally occurring desert varnish). SDG&E will consult with the Authorized Officer (as determined by the CPUC and BLM as appropriate) on a site-by-site basis for the use of Eonite.</p> <p>— (V-2c) SDG&E shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC, as well as Anza-Borrego Desert State Park (as appropriate), for review and approval at least 60 days prior to the start of construction.</p>
Location	Locations of all land scars that would be visible to the public.
Monitoring/Reporting Action	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of high-contrast colors from exposed soils will be minimized and the resulting visual contrast will be minimal.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	V-2d: Construction by helicopter. In those areas where long-term land-scarring and vegetation clearance impacts would be visible to sensitive public viewing locations, or where construction would occur on slopes over 15 percent, SDG&E will consult with the Authorized Officer and appropriate land management agency, on a site-by-site basis regarding the use of helicopter construction techniques and the prohibition of access and spur roads. Agency consultations must be conducted and approvals received at least 120 days prior to the start of construction.
Location	Locations of all land scars that would be visible to the public or where construction would occur on slopes over 15 percent.
Monitoring/Reporting Action	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of high-contrast colors from exposed soils will be minimized and the resulting visual contrast will be minimal.
Responsible Agency	CPUC, BLM on BLM-administered lands, USFS on USFS-administered lands
Timing	Pre- and during construction.
Interpretation & Approach	Mitigation Measure V-2d would apply to areas where the slope is >15% or the road would be visible from a sensitive public viewing location. However, there could be a particular circumstance where implementation of Mitigation Measure V-2d would be triggered, but given lack of public visibility, it may not be applied (at the discretion of the CPUC, BLM, or USFS). The Lead and Responsible Agencies are considered to be the "Authorized Officer and appropriate land management agency" referenced in the measure, which include BLM on BLM-administered lands, USFS on USFS-administered lands and the City and County of San Diego for City- and County-owned and administered lands, respectively. The CPUC is considered to be an Authorized Officer on all other non-federal private lands. It is the decision of the appropriate land management agency and/or Authorized Officer whether to bring in other agencies to provide review and/or input regarding the measure's applicability.
MITIGATION MEASURE	V-2f: Reduce land scarring and vegetation clearance impacts on USFS-administered lands. Vegetation within the right of way and ground clearing at the foot of each tower and between towers will be limited to the clearing necessary to comply with electrical safety and fire clearance requirements. Mitigation will be incorporated to reduce the total visual impact of all vegetation clearing performed for the power line (USFS Scenery Conservation Plan). CPUC and USFS to review Scenery Conservation Plan at least 120 days prior to start of construction and verify implementation following construction.
Location	Locations of all land scars and vegetation clearance on USFS – administered lands.
Monitoring/Reporting Action	CPUC and USFS to review Scenery Conservation Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of high-contrast colors from exposed soils will be minimized and the resulting visual contrast will be minimal.
Responsible Agency	CPUC, USFS
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>V-3a: Reduce visual contrast of towers and conductors. The following design measures shall be applied to all new structure locations, conductors, and re-conducted spans, in order to reduce the degree of visual contrast caused by the new towers and conductors:</p> <ul style="list-style-type: none"> • All new conductors and re-conducted spans are to be non-specular in design in order to reduce conductor visibility and visual contrast. • All proposed new access roads shall be evaluated for their visibility from sensitive viewing locations prior to final design. Sensitive viewing locations have been defined by Cleveland National Forest as campgrounds, trailheads, trails, wilderness areas, backcountry roads, heavily traveled roads, and overlooks. Access roads of concern are those that would be visible as they directly approach existing or proposed towers in a straight line from locations immediately downhill of the structures. Prior to final design, SDG&E shall consult with a visual resources specialist representing the CPUC and BLM and a qualified biologist to identify the following: <ul style="list-style-type: none"> – Definition of towers with sensitive viewing areas from which visibility of access roads is a concern. – Approximate location and length of alternative access road routes if straight line roads are not used. Define habitat affected and steepness of terrain for consideration of habitat and erosion impacts. The biologist and visual resources specialist shall confirm that the overall impacts of the alternate access road are less than that of the original access road design. – “Drive and crush” access is a feasible measure for avoiding access road scars (<i>i.e.</i>, no grading or vegetation removal is required). If this means of access is to be used, SDG&E shall define frequency of driving and vehicle types such that a biologist confirms that vegetation would be likely to recover. – A table shall be submitted to the CPUC and BLM for review and approval at least 60 days before the start of construction to document towers for which this measure is applied, and the proposed resolution for each tower (<i>i.e.</i>, retain straight line roads due to greater impacts from alternative routes, use “drive and crush” access, or develop alternate access road route.
Location	Applies to all tower locations and route segments.
Monitoring/Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>— V-7a: Reduce visual contrast associated with ancillary facilities. SDG&E shall submit to BLM and CPUC a Surface Treatment Plan describing the application of colors and textures to all new facility structures, buildings, walls, fences, and components comprising all ancillary facilities including substations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to BLM and CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the ancillary facility component, whichever comes first. If the BLM or CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include:</p> <ul style="list-style-type: none"> • Specification, and 11" x 17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture • A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation) • Two sets of brochures and/or color chips for each proposed color • A detailed schedule for completion of the treatment • A procedure to ensure proper treatment maintenance for the life of the project.
	<p>— (V-7a) SDG&E shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated onsite, until SDG&E receives notification of approval of the Treatment Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SDG&E shall notify the BLM and CPUC that all buildings and structures are ready for inspection.</p>
Location	Applies to all permanent ancillary facilities including substations and switchyards.
Monitoring/Reporting Action	CPUC and BLM to review Surface Treatment Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	<p>7/2/09 – SDG&E will match existing color schemes within existing substations. 8/31/09 – Visual contrast of transmission towers are addressed in measure V-3a in general; however, towers and ancillary facilities within substations are covered here.</p>

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>V-7b: Screen ancillary facilities. SDG&E shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities (except Imperial Valley Substation) and helps the facility blend in with the landscape. The use of berms to facilitate project screening may also be incorporated into the Plan. SDG&E shall submit the Plan to the BLM and CPUC for review and approval at least 90 days prior to installing the landscape screening. If the BLM or CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E 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"> • An 11" x 17" color simulation of the proposed landscaping at 5 years • A 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>— (V-7b) SDG&E shall complete installation of the screening prior to the start of project operation. SDG&E shall notify the BLM and CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.</p>
Location	Applies to all permanent ancillary facilities including substations and switchyards.
Monitoring/Reporting Action	CPUC and BLM to review Screening Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	7/2/09: SDG&E will match existing screening within existing substations.
MITIGATION MEASURE	<p>— V-21a: Reduce night lighting impacts. SDG&E 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.</p> <p>— (V-21) SDG&E shall submit a Lighting Mitigation Plan to the CPUC for review and approval at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SDG&E 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 is 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.
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring/Reporting Action	CPUC and BLM to review Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	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.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	<p>V-45a Prepare and implement Scenery Conservation Plan. Within one year after license issuance, or prior to any ground disturbing activities, the Licensee shall file with the Commission a Scenery Conservation Plan that is approved by the Forest Service. The purpose of this Scenery Conservation Plan is to identify specific actions that will minimize the project's visible disturbance to the naturally established scenery and to establish final direction to best achieve the spirit and intent of the Scenic Integrity Objectives of the Cleveland National Forest Land and Resource Management Plan. To achieve the greatest consistency with the Scenic Integrity Objectives, the project shall detail and integrate the following design recommendations into the Scenery Conservation Plan:</p> <ul style="list-style-type: none"> • Power Line and Support Towers. Transmission lines shall be nonspecular (nonreflective) and neutral in coloration. Support towers shall be custom-colored with a flat, non-reflective finish, to visually blend with native vegetation colors to appear as visually transparent as possible within the natural landscape pattern. Towers shall be designed to minimize their visual prominence and contrast to the natural landscape. • Distance Zones. The Applicant shall consult with the Forest Service on tower design for any approved route on Forest lands and implement tower styles in accordance with agency direction. In general, the USFS requires that support towers within approximately one mile of sensitive primary viewpoints and without a backdrop be a monopole design with a simple, clean and less industrial appearance and support towers viewed beyond one mile from sensitive viewpoints or only at distance be lattice towers. • Vegetation Clearing. Vegetation within the right of way and ground clearing at the foot of each tower and between towers will be limited to the clearing necessary to comply with electrical safety and fire clearance requirements. Mitigation will be incorporated to reduce the total visual impact of all vegetation clearing performed for the power line. • Roads. No new access or spur roads, or improvements (reconstruction/expansion) to existing roads are to be constructed in the following areas: (1) where ground slopes exceed 15%, or (2) on Forest lands subject to a HIGH Scenic Integrity Objective (SIO) where the new access or spur road would be visible from primary travel (paved) roads or the Pacific Crest National Scenic Trail, regardless of ground slope. Existing roads needing reconstruction/expansion on other areas of the forest shall be configured to minimize the creation of cut/fill slopes. Where such slopes are created, they shall be immediately treated to minimize their level of scenery disturbance. These treatments may include construction of structural elements designed to blend with the adjacent natural scenery, or revegetation with native species. • Structures. All structures and structural elements, that may be constructed as part of the project shall be designed, located, shaped, textured, colored and/or screened as necessary to minimize their visual contrast, blend, and complement the adjacent forest and community architectural character. • Evaluation of Effects. The Licensee may be required to provide photorealistic visual simulations of proposed designs and mitigation measures to demonstrate their effectiveness in achieving Land and Resource Management Plan Scenic Integrity Objectives as viewed from sensitive viewsheds. • Off-Site Mitigation. Where project features create unavoidable and permanent negative scenery effects that are inconsistent with CNF Plan Scenic Integrity Objectives, additional scenery enhancement activities approved by the Forest Service shall be performed in the nearest suitable areas in new viewsheds agreeable to the Forest shall be purchased and assigned to the Forest for its stewardship.
Location	Applies to all tower locations, facilities, and route segments within Cleveland National Forest Lands.
Monitoring/Reporting Action	CNF to review Scenery Conservation Plan within one year after license issuance, or prior to any ground disturbing activities.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CNF
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	V-66a: Reduce structural prominence and visual contrast associated with the Interstate 8/Chocolate Canyon transition structures. In order to reduce the structural prominence and visual contrast associated with the Interstate 8/Chocolate Canyon transition structures, SDG&E shall reconsider the location of the transition structures and attempt to lower their height by either relocating the next tower to shorten the span, or by moving the transition structures further downslope. This measure shall be implemented by SDG&E's submittal of a memo to the CPUC for review and approval that documents its attempts to fine-tune the location of the transition structures, as well as the submittal of final construction plans for review and approval at least 120 days prior to the start of construction.
Location	Applies to the Chocolate Canyon Option.
Monitoring/Reporting Action	CPUC to review and approve SDG&E's fine-tuning of the location of the transition structures and final construction plans 120 days prior to start of construction.
Effectiveness Criteria	The visibility of the Chocolate Canyon Option transition structures will be substantially reduced.
Responsible Agency	CPUC
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 5. Mitigation Measures and Applicant Proposed Measures – Visual Resources

MITIGATION MEASURE	V-68a: Eliminate skylining of ridgeline towers and conductors. In order to eliminate the skylining of ridgeline towers and conductors, the ridgeline towers shall be relocated to elevations sufficiently low on the ridge to eliminate structure skylining when viewed from Moreno Boulevard, SR67, and residences on the slopes west of SR67. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 120 days prior to the start of construction.
Location	Applies to the Interstate 8 Alternative.
Monitoring/Reporting Action	CPUC to review and approve SDG&E final construction plans at least 120 days prior to the start of construction.
Effectiveness Criteria	Structure skylining when viewed from Moreno Boulevard, SR67, will be substantially reduced.
Responsible Agency	CPUC
Timing	Pre- and during construction.
Interpretation & Approach	None required.
VR-APM-1	At highway, canyon, and trail crossings, structures shall be placed at the maximum feasible distance from the crossing to reduce visual impacts as long as other significant resources are not negatively affected. (SDG&E)
Location	Entire project area along highway, canyon, and trail crossing.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
VR-APM-2	SDG&E will use dulled metal finish transmission structures and non-specular conductors in visually sensitive areas including the ABDSP, new ROW in the Central Link and Peñasquitos Junction to Peñasquitos Substation in the Coastal Link. (SDG&E)
Location	Entire project area in visually sensitive areas.
Timing	During construction.
Interpretation & Approach	For the FESSR, this MM is not applicable to the Anza Borrego Desert State Park (ABDSP), the Central Link nor the Peñasquitos Junction to Peñasquitos Substation.
VR-APM-3	Where the line parallels existing transmission lines, the spacing of structures shall match the existing transmission structures, where feasible, to minimize visual effects. (SDG&E)
Location	Entire project area where the line parallels existing transmission lines (<i>e.g.</i> , MP 18-0 to MP 18-35)
Timing	Pre- and during construction.
Interpretation & Approach	None required.
VR-APM-4	No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
VR-APM-5	Transmission line structures will not be installed directly in front of residences or in direct line-of-sight from a residence where possible. SDG&E will consult with affected property owners on structure siting to reduce land use and visual impacts. (SDG&E)
Location	Entire project area near residences.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
VR-APM-6	In scenic view areas as designated by land management agencies, structures would be placed to avoid sensitive features and/or allow conductor to clearly span the features, within limits of standard design where possible. (SDG&E)
Location	Entire project area in scenic view areas.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 6. Mitigation Measures and Applicant Proposed Measures – Land Use

MITIGATION MEASURE	<p>— L-1a: Prepare Construction Notification Plan. Forty-five days prior to construction, SDG&E shall prepare and submit a Construction Notification Plan to the CPUC and the BLM for approval. The Plan shall identify the procedures SDG&E will use to inform property and business owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The plan shall address at a minimum the following components:</p> <ul style="list-style-type: none"> • Public notice mailer. A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall identify construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, wilderness and recreation facilities, and public facilities (<i>e.g.</i>, schools and memorial parks). The notice shall state the type of construction activities that will be conducted, and the location and duration of construction, including all helicopter activities. SDG&E shall mail the notice to all residents or property owners within 1,000 feet of the right-of-way, any property owners or tenants that could be impacted by construction activities and specific public agencies with facilities that could be impacted by construction. If construction delays of more than seven days occur, an additional notice shall be prepared and distributed.
	<p>— (L-1a)</p> <ul style="list-style-type: none"> • Newspaper advertisements. Fifteen days prior to construction, within a route segment, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins. The notice shall state when and where construction will occur and provide information on the public liaison person and hotline identified below. If construction is delayed for more than seven days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction.
	<p>— (L-1a)</p> <ul style="list-style-type: none"> • Public venue notices. Thirty days prior to construction, notice of construction shall be posted at public venues such as trail crossings, rest stops, desert centers, resource management offices (<i>e.g.</i>, Bureau of Land Management field offices, Anza-Borrego Desert State Park offices and campgrounds, Cleveland National Forest Ranger Stations), and other public venues to inform residents and visitors to the purpose and schedule of construction activities. For public trail closures, SDG&E shall post information on the trail detour at applicable resource management offices and post the notice on the trail within two miles of the detour. For recreation facilities, the notice shall be posted along the access routes to known recreational destinations that would be restricted, blocked, or detoured and shall provide information on alternative recreation areas that may be used during the closure of these facilities.
	<p>— (L-1a)</p> <ul style="list-style-type: none"> • Public liaison person and toll-free information hotline. SDG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. SDG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.
Location	Construction activity in all segments.
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E submits Construction Notification Plan, which identifies complete notification and public inquiry process.
Effectiveness Criteria	Residents, landowners and others potentially impacted are informed of construction activities; procedures are established and documented for taking and responding to construction comments and concerns.
Responsible Agency	CPUC; BLM El Centro Field Office.
Timing	Pre- and during construction.

Table 6. Mitigation Measures and Applicant Proposed Measures – Land Use

Interpretation & Approach	Reference to ABDSP is not applicable to FESSR. The measure states that the Plan shall “identify approvals that are needed prior to posting or publication of construction notices.” Approvals from the CPUC, BLM (on BLM-administered land) and USFS (on USFS-administered land) have been identified as the only approvals that are needed prior to posting construction notification.
MITIGATION MEASURE	L-1c: Coordinate with MCAS Miramar. At least 90 days before construction, SDG&E shall provide all required project engineering details to MCAS Miramar for review and approval. Information provided shall include access roads to be used, expanded, or added. Information shall also include completed and authorized FAR Part 77 evaluations (Form 7460-1) for all objects exceeding the Outer Horizontal Surface (978 Ft AMSL) at MCAS Miramar. SDG&E shall provide the CPUC and BLM with evidence of its coordination with MCAS Miramar at least 60 days prior to the start of construction. When any towers are to be removed on MCAS Miramar, all portions of the towers/poles shall be removed. Cutting poles and leaving buried portions is not acceptable on MCAS Miramar lands.
Location	Construction activity within MCAS Miramar.
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E coordinates with MCAS Miramar.
Effectiveness Criteria	SDG&E submits documentation of its coordination with MCAS Miramar.
Responsible Agency	CPUC; BLM El Centro Field Office.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>— L-2b: Revise project elements to minimize land use conflicts. At least 90 days prior to completing final transmission line design for the approved route, SDG&E shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, pull sites, access roads, or other facilities associated with the project that would occur on the subject property or within 1,000 feet of the property. The notified parties shall be provided at least 30 days in which to identify conflicts with any existing structures or planned development on the subject property and to work with SDG&E to identify potential reroutes of the alignment that would be mutually acceptable to SDG&E and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. SDG&E shall endeavor to accommodate these reroutes only to the extent that they are reasonable and feasible, do not create a substantial increase in cost, and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned.</p> <p>— (L-2b) At or before the time property owners are notified and based on SDG&E’s own review of the alignment and facilities, SDG&E shall provide CPUC and BLM a written report identifying properties that are suspected of having a land use conflict as described above. This report shall identify and characterize existing buildings within the ROW and residences or occupied structures within or adjacent to the ROW, with which the alignment or other permanent facilities may conflict.</p> <p>— (L-2b) SDG&E shall provide a written report to the CPUC and BLM providing evidence of the notice provided to landowners and copies of any responses to the notice within 30 days of the notice closing date for responses. SDG&E shall also identify in the documentation submitted to CPUC and BLM whether reroutes recommended by the landowner or SDG&E can be accommodated. Where they cannot be accommodated, the reasons shall be provided. SDG&E shall provide information sufficient for the CPUC and BLM to determine that the reroute creates no more adverse impact than the originally planned alignment location. SDG&E shall include environmental information consistent with that required for a Variance (as defined in Section I, Mitigation Monitoring). Where a reroute is proposed, the CPUC and BLM will review and agree to accept or reject individual reroutes. CPUC and BLM also may recommend compromise reroutes for any of the parcels for which responses were provided to SDG&E in a timely fashion.</p>

Table 6. Mitigation Measures and Applicant Proposed Measures – Land Use

	<p>— (L-2b) The following specific modifications shall be developed by SDG&E, following the procedures defined above:</p> <p>Interstate 8 Alternative: MP I8-87 through I8-89.5, High Meadow Ranch. The initial alignment shall be shifted approximately 200 feet to the west, downslope, in order to minimize visual effects of the towers on the development. See Figure Ap.11C-56 for map of this area.</p> <p>Interstate 8 Alternative: MP I8-92 to I8-92.7, Private home. The alignment shall be shifted to the east side of Highway 67, to a point just south of the Preserve parking lot, where the alignment would cross Highway 67 to join the Proposed Project route. See Figure Ap.11C-57 for map of this area.</p> <p>Star Valley Option Revision: SDG&E shall work with affected landowners to refine the route in order to minimize effects on private properties along Star Valley Road.</p>
Location	Along Interstate 8 Alternative and other Alternatives along the SWPL corridor
Monitoring/Reporting Action	Confirm receipt of notice and results prior to final design
Effectiveness Criteria	Provision of a report indicating contents of notice, distribution of notice, and any responses and their resolution.
Responsible Agency	CPUC and BLM
Timing	Pre- and during construction.
Interpretation & Approach	8/31/09 – The 1000 foot measurement referenced for affected properties will be measured from the center line of the structure alignment
LU-APM-1	SDG&E will provide advance notice to residents, property owners, and tenants within 300 feet of construction activities and will appoint a public affairs officer to address public concerns or questions. (SDG&E)
Location	Entire project area where residences are within 300 feet.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
LU-APM-2	Place new transmission structures more than 330 feet from an existing residence to the extent feasible. (SDG&E)
Location	Entire project area near existing residences.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
LU-APM-4	To facilitate access to properties obstructed by construction activities, SDG&E will notify property owners and tenants in advance of construction activities. Provide alternative access if feasible. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
LU-APM-5	To remedy encroachment and safety conflicts with irrigation canals and flood management structures during construction, SDG&E will coordinate construction activities with appropriate water management representatives. (SDG&E)
Location	Entire project area along irrigation canals and flood management structures.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
LU-APM-6	The limits of construction activities within and outside the ROW will typically be predetermined, with activity restricted to and confined within those limits. The ROW boundary and limits of construction activity inside and outside the ROW will be flagged in environmentally sensitive areas to alert construction personnel that those areas should be minimize or avoided. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 6. Mitigation Measures and Applicant Proposed Measures – Land Use

LU-APM-7	To the extent feasible, project facilities would be installed along the edges or borders of private property, open space parks, and recreation areas. When it is not feasible to locate project facilities along property borders, SDG&E would consult with affected property owners to identify facility locations that create the least potential impact to property and are mutually acceptable to property owners to the extent feasible. SDG&E would pay just compensation to affected property owners based upon the impact to the property caused by the facility locations identified by SDG&E. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
LU-APM-8	SDG&E will continue its current coordination efforts with the Counties of Imperial and San Diego General Plan Updates and the City of San Diego General Plan Updates to include the Proposed Project in their respective General Plans. (SDG&E)
Location	San Diego and Imperial Counties and the City of San Diego
Timing	Pre- and during construction.
Interpretation & Approach	None required.
LU-APM-9	SDG&E would obtain all necessary and/or appropriate ministerial land use permits. (SDG&E)
Location	Entire project area.
Timing	Pre-construction.
Interpretation & Approach	None required.
LU-APM-10	SDG&E will match structure locations with existing transmission facilities where feasible and appropriate. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 7. Mitigation Measures and Applicant Proposed Measures – Wilderness and Recreation

MITIGATION MEASURE	<p>WR-1a: Coordinate construction schedule and activities with the authorized officer for the recreation area. No less than 60 days prior to construction, SDG&E shall coordinate construction activities and the project construction schedule with the authorized officer for the recreation areas listed below. SDG&E shall schedule construction activities to avoid heavy recreational use periods in coordination with and at the discretion of the authorized officer. SDG&E shall locate construction equipment to avoid temporary preclusion of recreation areas in accordance with the recommendation of the authorized officer. SDG&E shall document its coordination efforts with the authorized officer and provide this documentation to the CPUC, BLM, and affected park jurisdictions at least 30 days prior to construction.</p> <ul style="list-style-type: none"> • Trans-County Trail (County of San Diego Regional Trail) • Pacific Crest National Scenic Trail (County of San Diego Regional Trail) • California Riding and Hiking Trail (County of San Diego Regional Trail) • Sycamore Canyon Open Space Preserve • Mission Trails Regional Park
Location	Construction activity in or adjacent to the recreation areas listed above.
Monitoring/Reporting Action	CPUC, BLM, and affected park jurisdictions verify that SDG&E submits documentation of coordination efforts with the authorized officers for the listed recreation areas.
Effectiveness Criteria	Construction activities are scheduled to avoid heavy recreational use periods; construction equipment is located to avoid temporary preclusion of recreation areas.
Responsible Agency	CPUC; BLM; affected park jurisdictions.
Timing	Pre- and during construction.
Interpretation & Approach	Juan Bautista de Anza National Historic Trail nor for BLM Dunaway Camp not applicable to FESSR.
MITIGATION MEASURE	<p>WR-1b: Provide temporary detours for trail users. No less than 60 days prior to construction, SDG&E shall coordinate with the authorized officer of the trails listed below to establish temporary detours of the trails to avoid construction area hazards, if the trail is deemed unsafe to use during construction. Should new trail segments be constructed as detours during construction, the temporary new trail segments would be sited to avoid sensitive resources, in coordination with the authorized officer of the trail or recreation area, and would be restored to pre-construction condition by SDG&E when SRPL construction is complete, if required by the authorized officer of the trail or recreation area. SDG&E shall post a public notice of the temporary trail closure and information on the trail detour. SDG&E shall document its coordination efforts with the authorized officer and submit this documentation to the CPUC, BLM, and affected park jurisdictions at least 30 days prior to construction.</p> <ul style="list-style-type: none"> • Trans-County Trail • Pacific Crest National Scenic Trail • California Riding and Hiking Trail • Mission Trails Regional Park (Fortuna, Rim, and Quarry Loop Trails)
Location	Construction activity in or adjacent to the trails listed above.
Monitoring/Reporting Action	CPUC, BLM, and affected park jurisdictions verify that SDG&E submits documentation of coordination efforts with the authorized officers of the listed trails.
Effectiveness Criteria	Temporary detours of the trails are established to avoid construction area hazards; temporary new trail segments are sited to avoid sensitive resources and restored to pre-construction condition when construction is complete; public is notified of trail closures and detours.
Responsible Agency	CPUC; BLM; affected park jurisdictions.
Timing	Pre- and during construction.
Interpretation & Approach	Juan Bautista de Anza National Historic Trail not applicable to FESSR.

Table 7. Mitigation Measures and Applicant Proposed Measures – Wilderness and Recreation

MITIGATION MEASURE	WR-1c: Coordinate with local agencies to identify alternative recreation areas. SDG&E shall coordinate with the authorized officer for the applicable federal, State, or local parks and recreational facilities listed below at least 60 days before construction in order to identify alternative recreation facilities that may be used by the public during construction. SDG&E shall post a public notice at recreation facilities that are to be closed or where access would be limited during project construction. SDG&E shall document its coordination efforts with the parks and recreation departments and provide this documentation to the CPUC, BLM, and all affected park jurisdictions 30 days prior to construction. <ul style="list-style-type: none"> • Trans-County Trail • Pacific Crest National Scenic Trail • California Riding and Hiking Trail • Sycamore Canyon Open Space Preserve • Mission Trails Regional Park
Location	Construction activity in all segments.
Monitoring/Reporting Action	CPUC, BLM, and affected park jurisdictions verify that SDG&E submits documentation of coordination efforts with the authorized officers of the listed parks and recreational facilities.
Effectiveness Criteria	Alternative recreation facilities are identified for use by public during construction; public notice is posted at recreation facilities that are closed or have limited access during construction.
Responsible Agency	CPUC; BLM; affected park jurisdictions.
Timing	Pre- and during construction.
Interpretation & Approach	Juan Bautista de Anza National Historic Trail nor for BLM Dunaway Camp not applicable to FESSR.
MITIGATION MEASURE	WR-2a. Develop a reroute for the BCD Alternative Revision to reduce effects on recreation. SDG&E shall relocate the overhead 500 kV transmission line along the southern boundary of JAM properties as shown in Figure E.2.1-b to shorten the route and minimize effects on BLM land, Forest land, and private property. This reroute and its ground-disturbing components shall avoid Back Country Non-Motorized land use zones of the Cleveland National Forest, while also minimizing towers and disturbance on private property. SDG&E shall submit a memo to the CPUC for review and approval that documents its attempts to fine-tune the location of the BCD Alternative Revision, as well as the submittal of final construction plans for review and approval at least 120 days prior to the start of construction.
Location	BCD Alternative Revision
Monitoring/Reporting Action	Memo and final construction plans to CPUC
Effectiveness Criteria	A reroute is developed that minimizes impacts to Back Country Non-Motorized zones and towers/disturbance on private lands
Responsible Agency	CPUC; BLM; USFS
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	WR-2b: Evaluate and Implement PCT Route Revision. SDG&E shall consult and coordinate with the U.S. Forest Service, BLM, and the Pacific Crest Trail Association to develop route options for revising the PCT so it would cross the Modified Route D Alternative only once, rather than three times. SDG&E shall prepare and submit a report to the BLM and U.S. Forest Service prior to energizing the new transmission line. The report shall identify feasible PCT relocation options, and, under the direction of the federal agencies, shall evaluate whether its construction and restoration of the old trail segment would create overall greater impacts than those created by three crossings of the PCT that would occur with the Modified Route D Alternative. <p>— (WR-2b) If directed by the BLM, SDG&E shall be responsible for constructing the new trail segment and restoring the old trail segment in manner acceptable to the BLM and U.S. Forest Service. Trail construction and restoration shall be completed within one year of energizing the transmission line.</p>
Location	Modified Route D Alternative at PCT Crossing

Table 7. Mitigation Measures and Applicant Proposed Measures – Wilderness and Recreation

Monitoring/Reporting Action	Consult and coordinate with USFS, BLM, and Pacific Crest Trail Association
Effectiveness Criteria	PCT relocation options are identified and implemented at the direction of the agencies
Responsible Agency	USFS; BLM
Timing	Post construction, pre-energizing the line.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>— WR-3a: Coordinate tower and road locations with the authorized officer for the recreation area. Where the Proposed Project crosses the recreation areas listed below, SDG&E shall coordinate with the authorized officer for the recreation area to determine specific tower site and spur road locations in order to minimize impacts to recreational resources. If it is not feasible to site structures outside of a park/preserve, compensation shall be required for permanent impacts (<i>i.e.</i>, structure footings, access roads not dually used as trails) to park/preserve land at a 1:1 ratio. However, this mitigation measure is superseded by biological resource Mitigation Measure B-1a, which specifies restoration and compensation ratios for affected vegetation. In cases where the impacts to recreational resources occur on lands already in use as mitigation for other projects, the mitigation ratios shall be doubled, as is standard practice in San Diego County.</p> <p>— (WR-3a) In consultation with the authorized officer of the trail or recreation area, access roads shall not be located on trails (<i>e.g.</i>, PCT, Trans-County Trail) unless the authorized officer determines that the construction of new access roads would result in greater impacts than modifying the trail for use as an access road. If it is not feasible to site transmission structures off of a trail, SDG&E shall provide full funding for relocation of trail segments, including planning and trail construction, at location(s) identified by the authorized officer of the trail or recreation area. Trail segment relocation shall maintain the connectivity of regional and community trails.</p> <p>— (WR-3a) This coordination shall occur no less than 60 days prior to the start of construction. SDG&E shall document its coordination with the authorized officer and shall submit this documentation to the CPUC, BLM, and ABDSP, at least 30 days prior to project construction.</p> <ul style="list-style-type: none"> • Trans-County Trail • Pacific Crest National Scenic Trail • California Riding and Hiking Trail • San Vicente Highlands Open Space Preserve
Location	Central Link; Anza-Borrego Link; Inland Valley Link
Monitoring/Reporting Action	CPUC, BLM, and ABDSP verify that SDG&E submits documentation of coordination efforts with the authorized officers of the listed recreation areas.
Effectiveness Criteria	Tower sites and spur road locations minimize impacts to recreation resources; roads are not located on trails unless there would be greater impacts from doing otherwise.
Responsible Agency	CPUC, BLM, and ABDSP.
Timing	Pre- and during construction.
Interpretation & Approach	Juan Bautista de Anza National Historic Trail nor for Cleveland National Forest not applicable to FESSR. Reference to ABDSP is not applicable to FESSR.
R-APM-2a	Advance notice of restriction of conflicts with access routes to recreational use areas will be provided. (SDG&E)
Location	Entire project area near recreational use areas.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
R-APM-2b	No construction that affects trail use will be conducted in that area on federal holidays. (SDG&E)
Location	Entire project area near trails (recreational use areas).
Timing	During construction.
Interpretation & Approach	None required.

Sunrise Powerlink Project
MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

Table 7. Mitigation Measures and Applicant Proposed Measures – Wilderness and Recreation

R-APM-2c	SDG&E will coordinate all construction activities, including temporary trail closures, affecting the parklands and trail systems of San Diego and Imperial Counties with the counties' Parks and Recreation Department and the California State Parks Department (for ABDSP), respectively, before construction begins in these areas. (SDG&E)
Location	Entire project area near parklands and trail systems.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
R-APM-2d	Signs directing vehicles to alternative park access and parking will be posted in the event construction temporarily obstructs parking areas near trailheads. (SDG&E)
Location	Entire project area in areas near trailheads.
Timing	During construction.
Interpretation & Approach	None required.
R-APM-2e	Signs advising recreation users of construction activities and directing them to alternative trails or bikeways will be posted on both sides of all trail intersections or as determined through SDG&E's coordination with the respective jurisdictional agencies. (SDG&E)
Location	Entire project area near recreational use areas.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
R-APM-2f	Where helicopters are used for construction, signage advising equestrians of construction timeframes with helicopter use will be posted at all equestrian trail-access points within the vicinity of the flight paths. These signs will be checked and maintained regularly. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	None required.

Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 8. Mitigation Measures and Applicant Proposed Measures – Agricultural Resources

MITIGATION MEASURE	AG-1a: Avoid interference with agricultural operations. The Applicant shall coordinate with property owners and tenants to ensure that project construction will be conducted so as to avoid or minimize interference with agricultural operations. Agricultural operations include, but are not limited to, the use of farm vehicles and equipment, access to property; water delivery, drainage, and irrigation. This shall occur sixty (60) days prior to the start of project construction.
Location	Locations where the project could interfere with agricultural operations
Monitoring/Reporting Action	CPUC/BLM monitors verify that signed agreements between SDG&E and affected landowners have been submitted, and ensure that construction schedules occur during time periods agreed upon in the agreement and that agreed upon restoration occurs.
Effectiveness Criteria	Affected landowners are in agreement with construction activities
Responsible Agency	CPUC, BLM Offices
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	AG-1b: Restore compacted soil. The Applicant shall restore soils compacted or disturbed such as by excavation during construction by conferring with the property owner or tenant to identify and then implement a mutually agreed means to restore such soils. Restoration actions may include, but are not be limited to, disking, plowing, removal of excavated soil, or other suitable restoration methods. This shall occur thirty (30) days after completion of construction clean-up and site restoration at each property.
Location	Locations where changes to the existing environment due to construction activities could result in compacted soil.
Monitoring/Reporting Action	After construction is completed, land is restored per agreement with landowner. Monitors will verify that restoration activity has been completed and landowner has concurred that restoration effort is consistent with original agreement. SDG&E shall provide copies of the original agreements and the restoration concurrence acknowledgement from the landowner.
Effectiveness Criteria	Affected landowners are in agreement with restoration
Responsible Agency	CPUC, BLM Offices
Timing	Post construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	AG-1c: Coordinate with grazing operators. SDG&E shall coordinate with grazing operators to ensure that agricultural productivity and animal welfare are maintained both during and after construction to the maximum extent feasible. Coordination efforts will address issues including, but not necessarily limited to: <ul style="list-style-type: none"> • Interference with access to water (<i>e.g.</i>, provide alternate methods for livestock access to water) • Impairment of cattle movements (<i>e.g.</i>, provide alternate routes; reconfigure fencing/gates) • Removal and replacement of fencing (<i>e.g.</i>, during construction install temporary fencing/barriers, as appropriate, and following construction restore equal or better fencing to that which was removed or damaged) • Impacts to facilities such as corrals and watering structures, as well as related effects such as ingress/egress, and management activities (<i>e.g.</i>, replacement of damaged/removed facilities in kind; provide alternate access) This shall occur Sixty (60) days prior to the start of project construction and Thirty (30) days after construction on each property.
Location	Locations where the project could interfere with grazing operations

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Table 8. Mitigation Measures and Applicant Proposed Measures – Agricultural Resources

Monitoring/Reporting Action	Verify coordination has taken place and an agreement has been reached.
Effectiveness Criteria	Coordination has been conducted with appropriate landowners or tenants and reasonable procedures to implement the mitigation measure have been agreed to by all parties.
Responsible Agency	CPUC, BLM Offices
Timing	Pre-, during and post construction.
Interpretation & Approach	8/31/09: There are no grazing operators directly affected by this route.
MITIGATION MEASURE	AG-3b: Consult with and inform aerial applicators. The Applicant shall consult with landowners and the County Farm Bureaus to determine which aerial applicators operate in the county. The Applicant shall provide written notification to all aerial applicators working in the county and to the CPUC stating when and where the new transmission lines and towers will be erected. The Applicant shall also provide all aerial applicators, the County Farm Bureaus, and the CPUC with aerial photos or topographic maps clearly showing the new lines and towers in relation to agricultural lands. This shall occur Sixty (60) days prior to erection of any structure that could affect aerial applicator operations.
Location	Locations where changes to the existing environment could result in interference with dairy operations.
Monitoring/Reporting Action	Verify coordination has taken place and actions called for in Mitigation Measure AG-3b have been implemented.
Effectiveness Criteria	Communications have been provided to all aerial applicators operating in affected areas.
Responsible Agency	CPUC, BLM
Timing	Pre-construction.
Interpretation & Approach	None required.
LU-APM-3	1. Farmers will be compensated for losses of crops along ROW based upon a professional appraisal. 2. Construction activities in croplands will be scheduled to minimize or avoid planting, growing, and harvesting seasons to the extent feasible. (SDG&E)
Location	Entire project area near agriculture lands.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

MITIGATION MEASURE	<p>— C-1a: Inventory and evaluate cultural resources in Final Area of Potential Effect (APE). Prior to construction and all other surface disturbing activities, the Applicant shall have conducted and submitted for approval by the BLM and CPUC an inventory of cultural resources within the project's final Areas of Potential Effect.* This survey shall supplement inventories conducted for the EIS/EIR and shall satisfy Section 106 requirements for inventory of historic properties within all Areas of Potential Effect. The nature and extent of this inventory shall be determined by the BLM and CPUC in consultation with the appropriate State Historic Preservation Officer (SHPO) and other land-managing agencies (<i>e.g.</i>, Anza-Borrego Desert State Park, U.S. Forest Service, Bureau of Indian Affairs, etc.) and shall be based upon project engineering specifications and in accordance with the Secretary of the Interior's Standards and Guidelines (Secretary's Standards) (36 CFR 61). (* Area of Potential Effect is the horizontal and vertical extent of anticipated impacts that could affect historic properties. This includes direct impacts (physical disturbance from any project activity during or after construction) and indirect impacts, such as noise, vibration, visual intrusion, or erosion.)</p> <p>— (C-1a) A report documenting results of this inventory shall be filed with appropriate State repositories and local governments. As part of the inventory report, the Applicant shall evaluate the significance of all potentially affected cultural resources on the basis of surface observations. Evaluations shall be conducted by professionals meeting the Secretary's Standards and in accordance with those Standards to provide recommendations with regard to their eligibility for the NRHP, CRHR, or local registers. Preliminary determinations of NRHP eligibility will be made by the BLM, in consultation with the CPUC and other appropriate agencies and local governments, and the SHPO.</p> <p>— (C-1a) As part of the inventory, the Applicant shall conduct field surveys of sufficient nature and extent to identify cultural resources that would be affected by tower pad construction, reconductoring activities, trenching for underground transmission lines, access road installation, and transmission line construction and operation. At a minimum, field surveys shall be conducted along newly proposed access roads, new construction yards, new tower sites, and any other projected areas of potential ground disturbance outside of the previously surveyed potential impact areas. Site-specific field surveys also shall be undertaken at all projected areas of impact within the previously surveyed corridor that coincide with previously recorded resource locations. The selected right-of-way and tower locations shall be staked prior to the cultural resource field surveys.</p>
Location	All locations within potential ground-disturbing activities.
Monitoring/Reporting Action	BLM, CPUC, ABDSP, and USFS, where applicable, to review inventory findings and eligibility evaluation.
Effectiveness Criteria	Identification and preliminary evaluation of all resources within areas of potential ground disturbance.
Responsible Agency	BLM and CPUC; ABDSP and USFS where applicable.
Timing	Pre-construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

MITIGATION MEASURE	<p>— C-1b: Avoid and protect potentially significant resources. Where feasible, potentially register-eligible resources and register-eligible resources shall be protected from direct project impacts by project redesign; complete avoidance of impacts to such resources shall be the preferred protection strategy. On the basis of preliminary National Register of Historic Places (NRHP) eligibility assessments (Mitigation Measure C-1a) or previous determinations of resource eligibility, the BLM and CPUC, in consultation with the SHPO, may request the relocation of the line, ancillary facilities, or temporary facilities or work areas, if any, where relocation would avoid or reduce damage to cultural resource values.</p>
	<p>— (C-1b) Where the BLM and CPUC, in consultation with the Applicant, decide that potentially NRHP- and/or CRHR-eligible cultural resources cannot be protected from direct impacts by project redesign, or that avoidance is not feasible, the Applicant shall undertake additional studies to evaluate the resources' NRHP- and/or CRHR-eligibility and to recommend further mitigative treatment. The nature and extent of this evaluation shall be determined by the BLM in consultation with the CPUC and the SHPO and shall be based upon final project engineering specifications. Evaluations shall be based on surface remains, subsurface testing, archival and ethnographic resources, and in the framework of the historic context and important research questions of the project area. Results of those evaluation studies and recommendations for mitigation of project effects shall be incorporated into a Historic Properties Treatment Plan consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan).</p>
	<p>— (C-1b) All potentially NRHP- and/or CRHR-eligible resources (as determined by the BLM and CPUC, in consultation with the SHPO) that will not be affected by direct impacts, but are within 50 feet of direct impact areas shall be designated as Environmentally Sensitive Areas (ESAs) to ensure that construction activities do not encroach on site peripheries. Protective fencing, or other markers (after approval by CPUC/BLM), shall be erected and maintained to protect ESAs from inadvertent trespass for the duration of construction in the vicinity. ESAs shall not be identified specifically as cultural resources. A monitoring program shall be developed as part of a Historic Properties Treatment Plan and implemented by the Applicant to ensure the effectiveness of ESA protection (as detailed in Mitigation Measure C-1e).</p>
Location	All locations within ground-disturbing activities with potentially NRHP-eligible resources.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM and CPUC review final construction drawings and rationale for necessity of impacting potentially NRHP-eligible resources. • BLM and CPUC review NRHP-eligibility recommendations. BLM forwards NRHP-eligibility determinations to appropriate SHPO. • BLM and CPUC verify location and protective measures of all ESAs.
Effectiveness Criteria	Known archaeological resources are not adversely affected by construction activity.
Responsible Agency	BLM and CPUC.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>— C-1c: Develop and implement Historic Properties Treatment Plan. Upon approval of the inventory report and the National Register of Historic Places (NRHP)-eligibility and CRHR-eligibility evaluations consistent with Mitigation Measures C-1a (Inventory and evaluate cultural resources in Final APE) and C-1b (Avoid and protect potentially significant resources), the Applicant shall prepare and submit for approval a Historic Properties Treatment Plan (HPTP) for register-eligible cultural resources to avoid or mitigate identified potential impacts. Treatment of cultural resources shall follow the procedures established by the Advisory Council on Historic Preservation for compliance with Section 106 of the National Historic Preservation Act and other appropriate State and local regulations, as explicated in Section D.7.8. Avoidance, recordation, and data recovery will be used as mitigation alternatives; avoidance and protection shall be the preferred strategy. The HPTP shall be submitted to the BLM and CPUC for review and approval.</p>

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

	<p>— (C-1c) As part of the HPTP, the Applicant shall prepare a research design and a scope of work for evaluation of cultural resources and for data recovery or additional treatment of NRHP- and/or CRHR-eligible sites that cannot be avoided. Data recovery on most resources would consist of sample excavation and/or surface artifact collection, and site documentation. A possible exception would be a site where burials, cremations, or sacred features are discovered that cannot be avoided (see Mitigation Measure C-2).</p>
	<p>— (C-1c) The HPTP shall define and map all known NRHP- and/or CRHR-eligible properties in or within 50 feet of all project APEs and shall identify the cultural values that contribute to their NRHP- and/or CRHR-eligibility. The HPTP shall also detail how NRHP- and/or CRHR-eligible properties shall be marked and protected as ESAs (in accordance with Mitigation Measure C-1b) during construction.</p>
	<p>— (C-1c) The HPTP shall also define any additional areas that are considered to be of high-sensitivity for discovery of buried register-eligible cultural resources, including burials, cremations, or sacred features. This sensitivity evaluation shall be conducted by an archaeologist who meets the Secretary's Standards and who takes into account geomorphic setting and surrounding distributions of archaeological deposits. The HPTP shall detail provisions for monitoring construction in these high-sensitivity areas for proper implementation of Mitigation Measures C-1e and C-3a. It shall also detail procedures for halting construction, making appropriate notifications to agencies, officials, and Native Americans, and assessing register-eligibility in the event that unknown cultural resources are discovered during construction. For all unanticipated cultural resource discoveries, the HPTP shall detail the methods, the consultation procedures, and the timelines for assessing register-eligibility, formulating a mitigation plan, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries shall be approved by the BLM and CPUC, other appropriate agencies and local governments, appropriate Native Americans, and the SHPO prior to implementation.</p>
	<p>— (C-1c) The HPTP shall also identify all historic built environment resources (structures, roads, dams, etc.) that would be affected indirectly by visual intrusion of the Proposed Project on qualities that contribute to their register eligibility. Although the current analysis has assessed the potential for indirect visual impacts to previously recorded historic built environment resources within 0.5 miles of the Proposed Project and Alternatives, the HPTP shall include an identification effort focused on identifying any such resources that may not have been previously recorded. The scope of this identification effort shall be in accordance with 36 CFR 800, which requires a reasonable effort to identify potentially NRHP-eligible resources that would be adversely affected by indirect project impacts. The HPTP shall also detail the treatment for each affected resource that will minimize those long-term visual impacts (as detailed in Mitigation Measure C-6a).</p>
	<p>— (C-1c) The HPTP shall include provisions for analysis of data in a regional context, reporting of results within one year of completion of field studies, curation of artifacts (except from private land) and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved by BLM, and dissemination of reports to local and State repositories, libraries, and interested professionals. The BLM will retain ownership of artifacts collected from BLM managed lands. The Applicant shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. The HPTP shall specify that archaeologists and other discipline specialists conducting the studies meet the Secretary's Standards (per 36 CFR 61).</p>
Location	All locations within ground-disturbing activities with potentially NRHP-eligible resources.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM and CPUC review and approve HPTP. • BLM conduct required Native American consultation. • BLM draft and negotiate appropriate agreement document for appropriate signatures (BLM, SHPOs, Advisory Council on Historic Preservation, Native American Tribes).
Effectiveness Criteria	Known archaeological resources are not adversely affected by construction activity.
Responsible Agency	BLM and CPUC.
Timing	Pre-construction.
Interpretation & Approach	None required.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

MITIGATION MEASURE	<p>— C-1d: Conduct data recovery to reduce adverse effects. If NRHP- and/or CRHR-eligible resources, as determined by the BLM and SHPO, cannot be protected from direct impacts of the Proposed Project, data-recovery investigations shall be conducted by the Applicant to reduce adverse effects to the characteristics of each property that contribute to its NRHP- and/or CRHR-eligibility. For sites eligible under Criterion (d), significant data would be recovered through excavation and analysis.</p>
	<p>— (C-1d) For properties eligible under Criteria (a), (b), or (c), data recovery may include historical documentation, photography, collection of oral histories, architectural or engineering documentation, preparation of a scholarly work, or some form of public awareness or interpretation. Data gathered during the evaluation phase studies and the research design element of the Historic Properties Treatment Plan (HPTP) shall guide plans and data thresholds for data recovery; treatment shall be based on the resource's research potential beyond that realized during resource recordation and evaluation studies. If data recovery is necessary, sampling for data-recovery excavations shall follow standard statistical sampling methods, but sampling shall be confined, as much as possible, to the direct impact area. Data-recovery methods, sample sizes, and procedures shall be detailed in the HPTP consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan) and implemented by the Applicant only after approval by the BLM and CPUC.</p>
	<p>— (C-1d) Following any field investigations required for data recovery, the Applicant shall document the field studies and findings, including an assessment of whether adequate data were recovered to reduce adverse project effects, in a brief field closure report. The field closure report shall be submitted to the BLM and CPUC for their review and approval, as well as to appropriate State repositories, local governments, and other appropriate agencies. Construction work within 100 feet of cultural resources that require data-recovery fieldwork shall not begin until authorized by the BLM or CPUC, as appropriate, to ensure that impacts to known significant archaeological deposits are adequately mitigated.</p> <p>Field closure report prior to construction within 100 ft of affected resource. Final report of data-recovery investigations within one year of completion of fieldwork.</p>
Location	Within 100 ft of resources identified in HPTP that require data-recovery mitigation.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM and CPUC review and approve field closure report of data-recovery fieldwork. • BLM and CPUC review and approve final report of data recovery, curation of artifacts and data, and dissemination of final report.
Effectiveness Criteria	Data-recovery investigations, curation, and reporting fulfill all requirements of the agreement document promulgated with the Advisory Council.
Responsible Agency	BLM and CPUC.
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>— C-1e: Monitor construction at known ESAs. The Applicant shall implement full-time archaeological monitoring by a professional archaeologist during ground-disturbing activities at all cultural resource Environmentally Sensitive Areas (ESAs). These locations and their protection boundaries shall be defined and mapped in the HPTP.</p> <p>Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historical and prehistoric resources that could be encountered within the project, and under direct supervision of a principal archaeologist. The qualifications of the principal archaeologist and archaeological monitors shall be approved by the BLM and CPUC.</p> <p>A Native American monitor may be required at culturally sensitive locations specified by the BLM following government-to-government consultation with Native American tribes. The monitoring plan in the HPTP shall indicate the locations where Native American monitors will be required and shall specify the tribal affiliation of the required Native American monitor for each location. The Applicant shall retain and schedule any required Native American monitors.</p>

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

	<p>— (C-1e) Compliance with and effectiveness of any cultural resources monitoring required by an HPTP shall be documented by the Applicant in a monthly report to be submitted to the BLM and CPUC for the duration of project construction. In the event that cultural resources are not properly protected by ESAs, all project work in the immediate vicinity shall be diverted to a buffer distance determined by the archaeological monitor until authorization to resume work has been granted by the BLM and CPUC.</p>
	<p>— (C-1e) The Applicant shall notify the BLM of any damage to cultural resource ESAs. If such damage occurs, the Applicant shall consult with the BLM and CPUC to mitigate damages and to increase effectiveness of ESAs. At the discretion of the BLM and CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection within or outside the license area, at the discretion of the BLM.</p>
Location	All locations identified in the HPTP.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM, and CPUC, as well as ABDSP and USFS, as appropriate, review and approve monthly monitoring reports. • BLM and CPUC receive and act on reports of failure of ESAs to protect cultural resources.
Effectiveness Criteria	Known archaeological resources are not adversely affected by construction activities.
Responsible Agency	BLM and CPUC.
Timing	During construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
MITIGATION MEASURE	<p>— C-1f: Train construction personnel. All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. The Applicant shall complete training for all construction personnel and retain documentation showing when training of personnel was completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that Environmentally Sensitive Areas (ESAs) must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the right-of-way by the Applicant, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order.</p>
	<p>— (C-1f) The following issues shall be addressed in training or in preparation for construction:</p> <ul style="list-style-type: none"> • All construction contracts shall require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources. • The Applicant shall provide training for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA, and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources.
Location	Entire project.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM and CPUC review and approve contract specifications. • BLM and CPUC review verification of required training. • BLM and CPUC receive prompt notification of new resource discoveries and violations.
Effectiveness Criteria	<ul style="list-style-type: none"> • Cultural resources are not adversely affected by construction activities. • All infractions are corrected.
Responsible Agency	BLM and CPUC.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

Timing	Pre- and during construction.
Interpretation & Approach	Will implemented with PAL-1e; fulfills MM CR-APM-1
MITIGATION MEASURE	— C-1g Avoid and protect Old Highway 80 (P-37-024023). A portion of the Interstate 8 Alternative would be constructed underground within Alpine Boulevard; from approximately MP 74.3 to MP 80 of this underground segment, Alpine Boulevard is also Old Highway 80. Construction impacts to contributing elements of this resource shall be minimized by avoidance of highway segments that retain integrity, as well as associated historic road signs and monuments located on the shoulder. If avoidance is not possible, affected segments shall be formally evaluated to assess their contribution to the NRHP eligibility of the resource as a whole. Additional protective measures are required to reduce adverse effects include formal documentation (<i>i.e.</i> , HABS/HAER), and interpretive signage.
Location	From approximately MP 18-74.3 to MP 18-80 of the Interstate 8 Alternative.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • CPUC and BLM review assessment of NRHP eligibility. • CPUC and BLM verify implementation of protective measures and/or interpretive signage
Effectiveness Criteria	Cultural resources are not adversely affected by construction activities.
Responsible Agency	BLM and CPUC.
Timing	Pre-construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	— C-2a: Properly treat human remains. All locations of known Native American human remains shall be avoided through project design and shall be protected by designation as ESAs. If the approved project route will affect sites known to contain human remains that cannot be avoided in their entirety during construction, the Applicant shall contact the California Native American Heritage Commission (NAHC). The NAHC will identify the Most Likely Descendant (MLD), within 48 hours, who will specify the preferred course of treatment in the event that additional human remains are discovered. The Applicant shall also contact the BLM (lead federal agency for the Proposed Project) and any additional land management agencies if the site is located on public lands administered by a State or federal agency other than the BLM. The Applicant shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains (see Section D.7.7). The Applicant shall assist and support the BLM in all required government-to-government consultations with Native Americans and appropriate agencies and commissions, as requested by the BLM. The Applicant shall comply with and implement all required actions and studies that result from such consultations.
	— (C-2a) If human remains are discovered during construction, all work shall be diverted from the area of the discovery and the BLM authorized officer shall be informed immediately. The Applicant shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains. The Applicant shall assist and support the BLM in all required government-to-government consultations with Native Americans and appropriate agencies and commissions, as requested by the BLM. The Applicant shall comply with and implement all required actions and studies that result from such consultations, as directed by the BLM.
	— (C-2a) Although subject to the recommendations of the MLD, it is likely that the human remains would be respectfully removed by the MLD and/or qualified archaeologists and reinterred in an area not subject to impacts from the Proposed Project. The reinterment location may be identified as a nearby locale within SDG&E ROW, or an off-site location may be selected. The Applicant shall assist and support the MLD in identifying, acquiring, and protecting the reinterment location.
Location	Entire project.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • Applicant, monitors, or construction personnel report discoveries to BLM and CPUC immediately. • BLM and CPUC conduct and document consultation with appropriate Native American tribes and agencies. • BLM and CPUC document final disposition or treatment of Native American human remains.
Effectiveness Criteria	Adverse effects to human remains are avoided or treated in accordance with federal and appropriate State law.
Responsible Agency	BLM and CPUC.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

Timing	Pre- or during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>— C-3a: Monitor construction in areas of high sensitivity for buried resources. The Applicant shall implement archaeological monitoring by a professional archaeologist during subsurface construction disturbance at all locations identified in the Historic Properties Treatment Plan (HPTP) as highly sensitive for buried prehistoric or historical archaeological sites or Native American human remains. These locations and their protection boundaries shall be defined and mapped in the HPTP. Intermittent monitoring may occur in areas of moderate archaeological sensitivity at the discretion of the BLM and CPUC. Monitoring shall be conducted in accordance with procedures detailed in Mitigation Measure C-1e</p> <p>— (C-3a) Upon discovery of potential buried cultural materials by archaeologists or construction personnel, or damage to an ESA, work in the immediate area of the find shall be diverted and the Applicant's archaeologist notified. Once the find has been inspected and a preliminary assessment made, the Applicant's archaeologist shall consult with the BLM or CPUC, as appropriate, to make the necessary plans for evaluation and treatment of the find(s) or mitigation of adverse effects to ESAs, in accordance with the Secretary's Standards, and as specified in the HPTP.</p>
Location	Areas of high sensitivity for buried resources per HPTP.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM, and CPUC, as well as ABDSP and USFS, as appropriate, review and approve monthly monitoring reports. • Applicant, monitors, or construction personnel report discoveries to BLM and CPUC immediately. • BLM and CPUC receive and act on reports of failure of ESAs to protect cultural resources.
Effectiveness Criteria	Adverse effects to buried archaeological resources are avoided or treated in accordance with federal and appropriate State law.
Responsible Agency	BLM and CPUC.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
MITIGATION MEASURE	<p>C-4a: Complete consultation with Native American and other Traditional Groups. The Applicant shall provide assistance to the BLM, as requested by the BLM, to complete required government-to-government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994 and Section 106 of the National Historic Preservation Act) and other Traditional Groups to assess the impact of the approved project on Traditional Cultural Properties or other resources of Native American concern, such as sacred sites and landscapes, or areas of traditional plant gathering for food, medicine, basket weaving, or ceremonial uses. As directed by the BLM, the Applicant shall undertake required treatments, studies, or other actions that result from such consultation. Written documentation of the completion of all pre-construction actions shall be submitted by the Applicant and approved by the BLM at least 30 days before commencement of construction activities. Actions that are required during or after construction shall be defined, detailed, and scheduled in the Historic Properties Treatment Plan and implemented by the Applicant, consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan).</p>
Location	Entire Project.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • Signature of agreement documents for treatment of TCPs. • Written documentation and approval by BLM and CPUC of completion of required treatment.
Effectiveness Criteria	TCPs and other resources of Native American concern are treated in accordance with agreements that are made during consultation.
Responsible Agency	BLM and CPUC.
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

MITIGATION MEASURE	<p>— C-5a: Protect and monitor NRHP- and/or CRHR-eligible properties. The Applicant shall design and implement a long-term plan to protect National Register of Historic Places (NRHP- and/or CRHR)-eligible sites from direct impacts of project operation and maintenance and from indirect impacts (such as erosion and access) that could result from the presence of the project. The plan shall be developed in consultation with the BLM to design measures that will be effective against project maintenance impacts, such as vegetation clearing and road and tower maintenance, and project-related vehicular impacts. The plan shall also include protective measures for NRHP- and/or CRHR-eligible properties within the transmission line corridor that will experience operational and access impacts as a result of the Proposed Project. Measures considered shall include restrictive fencing or gates, permanent access road closures, signage, stabilization of potential erosive areas, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting NRHP- and/or CRHR-eligible properties. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to NRHP- and/or CRHR-eligible properties. The plan shall be submitted to the BLM, CPUC, and other appropriate land-managing agencies for review and approval at least 30 days prior to project operation.</p> <p>— (C-5a) Monitoring of sites selected during consultation with BLM shall be conducted annually by a professional archaeologist for a period of five years. Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photo monitoring stations and written observations. A monitoring report shall be submitted to the BLM, CPUC, and other appropriate land-managing agencies within one month following the annual resource monitoring. The report shall indicate any properties that have been affected by erosion or vehicle or maintenance impacts. For properties that have been impacted, the Applicant shall provide recommendations for mitigating impacts and for improving protective measures. After the fifth year of resource monitoring, the BLM, CPUC, or other land-managing agency, as appropriate, will evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the BLM or CPUC may require that the Applicant revise or refine the protective measures, or alter the monitoring protocol or schedule. If the BLM does not authorize alteration of the monitoring protocol or schedule, those shall remain in effect for the duration of project operation.</p> <p>— (C-5a) If the annual monitoring program identifies adverse effects to National Register of Historic Places (NRHP- and/or CRHR)-eligible properties from operation or long-term presence of the project, or if, at any time, the Applicant, BLM, CPUC, or other appropriate land-managing agency become aware of such adverse effects, the Applicant shall notify the BLM and CPUC immediately and implement additional protective measures, as directed by the BLM and CPUC. At the discretion of the BLM and CPUC, such measures may include, but not be limited to refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection.</p> <p>30 days prior to and during project operation. During operation, annually for 5 years. Thereafter, on a schedule determined by BLM and CPUC and/or immediately upon discovery of adverse changes to NRHP or CRHR-eligible property.</p>
Location	All locations identified in long-term protection plan.
Monitoring/Reporting Action	BLM and CPUC review and approval of long-term protection plan; compliance with reporting and monitoring provisions in the approved protection plan. Following construction, annual site monitoring; immediate notification to BLM and CPUC of adverse changes.
Effectiveness Criteria	Known cultural resources are not affected by long-term project operation and adverse changes to NRHP and CRHR-eligible properties are mitigated.
Responsible Agency	BLM and CPUC.
Timing	Pre-, during and post construction.
Interpretation & Approach	None required.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

MITIGATION MEASURE	C-6a: Reduce adverse visual intrusions to historic built environment properties. All known historic built environment resources located within 0.5 miles of the Proposed Project shall be inventoried and subjected to a visual analysis to assess which resources would be subject to potential indirect visual intrusions resulting from the project. This inventory will supplement the analysis of built environment resources conducted for the EIS/EIR, and shall meet the requirements of Section 106 to inventory historic properties that could be adversely affected by the Proposed Project. The Applicant shall inventory potentially register-eligible built environment resources within an Area of Potential Indirect Effect established by the BLM and CPUC. A qualified (Secretary of the Interior Standards) professional shall assess the potential for visual intrusions on the qualities that qualify any historic properties within the APE for register eligibility. The results of this inventory shall be included in the HPTP. If any historic properties are identified that would be adversely affected by visual intrusions from the Proposed Project, the HPTP shall also specify mitigation measures that would be implemented to reduce adverse effects, such as screening the visual intrusion with vegetation, moving project towers to less conspicuous locations, if technically feasible, or altering towers to reduce any identified adverse effects. Selection of appropriate and effective treatments shall consider technical feasibility of the measures and potential impacts on other sensitive resources or land uses.
Location	All locations identified in HPTP. Mitigation Measures C-6b and V-3a in Anza-Borrego Link.
Monitoring/Reporting Action	BLM and CPUC review and approval of HPTP; compliance with reporting and monitoring provisions in the approved protection plan.
Effectiveness Criteria	Known historic built environment properties are not affected by construction and long-term project operation and adverse changes to NRHP and CRHR-eligible historic built environment properties are mitigated.
Responsible Agency	BLM and CPUC.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
MITIGATION MEASURE	C-6e: Reduce adverse visual intrusions to portions of Old Highway 80. Visual intrusion by the aboveground portion of this alternative, on portions of Old Highway 80 that retain integrity of setting shall be minimized by a combination of minimizing tower height and screening. . In addition, since segments of Old Highway 80 would be crossed by the overhead portion of the alternative, compensatory mitigation including new signage shall be employed. If this alternative is constructed, as part of the Historic Properties Treatment Plan (Mitigation Measure C-1c) SDG&E shall include a protection plan for Old Highway 80 that defines resources to be protected, includes input from visual resources specialists, and evaluates a menu of protection options.
Location	On portions of Old Highway 80 along the Interstate 8 Alternative.
Monitoring/Reporting Action	CPUC and BLM to review and comment on protection plan for Old Highway 80 submitted as part of the Historic Properties Treatment Plan (see Mitigation Measure C-1c).
Effectiveness Criteria	Adverse changes to visual qualities along Old Highway 80 are mitigated.
Responsible Agency	BLM and CPUC.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	C-6f: Reduce adverse visual intrusions to the Desert View Tower viewshed. Visual intrusion to the Desert View Tower viewshed, caused by the aboveground portion of this alternative shall be minimized by a combination of minimizing tower height, screening, and painting towers to match the surroundings. Specific measures to minimize visual effects to the Desert View Tower shall be developed in consultation with the owner of this resource. If this alternative is constructed, SDG&E shall develop a protection plan for the Desert View Tower viewshed that defines resources to be protected, includes input from visual resources specialists, and evaluates a menu of protection options. The report shall be provided to the CPUC and BLM for review and approval at least 60 days before the start of construction.
Location	Desert View Tower viewshed

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Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

Monitoring/Reporting Action	BLM and CPUC review and approve protection plan for Desert View Tower viewshed.
Effectiveness Criteria	Adverse changes to visual qualities of the Desert View Tower viewshed are mitigated.
Responsible Agency	BLM and CPUC.
Timing	Pre-construction.
Interpretation & Approach	8/31/09 Documentation shall be submitted in the form of certified mail attempt or other traceable format if it is found that the property owner will not cooperate.
CR-APM-1	Prior to construction, construction personnel shall be instructed on the protection and avoidance of cultural resources. To assist in this effort, the construction contract will address state and federal laws regarding antiquities, fossils, and plants and wildlife, including the collection and removal, as well as the importance of these resources and the purpose and necessity of protecting them. (SDG&E)
Location	Entire project area.
Timing	Pre-construction.
Interpretation & Approach	This requirement will be fulfilled under MM C-1f, training on protection of all types of cultural resources.
CR-APM-2	Archeological sites that are eligible or potentially eligible for the National Register will be flagged in the field and spanned or otherwise avoided through routing during construction activities to the extent feasible. Impact avoidance and APMs for cultural resources developed in consultation with appropriate land managing and regulatory (<i>e.g.</i> , park personnel and State Historic Preservation Office) and other interested parties will be implemented prior to and during construction. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-3	Any previously unidentified cultural resource (historic or prehistoric site or object) discovered by SDG&E or any person working on its behalf during construction on public or park land shall be immediately reported to the appropriate land manager or authorized park officer within 24 hours of discovery. Operations in the immediate area of the discovery shall be suspended until authorization to proceed is issued by the appropriate land manager or authorized park officer. An evaluation of the discovery will be made by the appropriate land manager, authorized park officer or SDG&E in consultation with the former to determine appropriate actions to prevent the loss of significant cultural or scientific values. SDG&E shall be responsible for the cost of evaluation. SDG&E will develop a treatment plan to mitigate the impacts. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-4	SDG&E will conduct maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, and reconstruction of a historical resource in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995 – Weeks and Grimmer). (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

CR-APM-5	<p>SDG&E will use the following as guidance in the implementation of the project:</p> <ol style="list-style-type: none"> 1. Preservation in-place is the preferred manner of mitigating impacts to archaeological sites. Preservation in-place maintains the relationship between the artifacts and the archaeological context to the extent feasible. Preservation may also avoid conflict with religious or cultural values of groups associated with the site. 2. Preservation in-place may be accomplished by, but is not limited to, the following: <ol style="list-style-type: none"> a. planning construction to avoid archaeological sites; or b. incorporation of sites within parks, green space, or other open space; or c. deeding the site into a permanent conservation easement. 3. When data recovery through excavation is the only feasible mitigation, a data recovery plan which makes provisions for adequately recovering the scientifically consequential information from and about the historical resources shall be prepared and adopted prior to any excavation being undertaken. Such study shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5, Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be appropriate. 4. Data recovery shall not be required for an historical resource if the lead agency through discussion and consultation with Indian Tribes, professional archaeologists and SHPO determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-6	<ol style="list-style-type: none"> 1. Historic property will be avoided and fenced or barricaded for protection. 2. Contributing portions and sensitive features of the historic property will be avoided and fenced or barricaded for protection. 3. If historic property cannot be avoided, an approved plan for recordation, relocation, or data recovery will be implemented. Recordation of buildings or structures may include Historic American Building Survey (HABS) or Historic American Engineering Record (HAER) documentation. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-7	<ol style="list-style-type: none"> 1. Erosion, sedimentation, or indirect displacement that could indirectly deteriorate historic property will be controlled by limitation of activities near property, stabilization of sediments or structures, and erosion control. 2. Protective measures will be implemented to minimize erosion and prevent invasion by aggressive weeds near historic property. 3. Control measures will be implemented to minimize vibration, dust, or fumes affecting property. 4. Protective barriers or materials will be used to minimize the effects of vibration, dust, fumes, or changes in vegetation. 5. Buildings or structures will be stabilized or rehabilitated to minimize deterioration that might be accelerated by construction or operations. 6. If deterioration cannot be avoided, SDG&E will implement an approved plan for recordation, relocation, or data recovery. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

CR-APM-8	<ol style="list-style-type: none"> 1. In addition to the historic property itself, those elements of the landscape that are essential to the historic setting of the property will be avoided and protected to the extent feasible. 2. The location, appearance, or operational procedures of the undertaking will be modified to minimize intrusion on the historic setting (<i>e.g.</i>, qualifications on height, color, emissions, or operational noise levels). (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-9	<ol style="list-style-type: none"> 1. Permanent fencing or barriers will be installed, or access to the historic property will be controlled as deemed appropriate by the relevant agencies. 2. Use of access for construction or operation will be restricted. 3. Construction and maintenance personnel will be instructed in protection of sensitive properties. (SDG&E)
Location	Entire project area.
Timing	Pre, during and post construction.
Interpretation & Approach	None required.
CR-APM-10	<ol style="list-style-type: none"> 1. Project structures will be located so that conductors span linear historic property to the extent feasible. 2. Pipelines or conductors, placed underground, will bore under linear property to avoid disturbance or intrusion. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-11	SDG&E would implement its standard practices for cultural and paleontological resources on private lands (see Appendix D). (SDG&E)
Location	Entire project area on private lands.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
CR-APM-12	SDG&E will conduct cultural surveys for staging areas that have not yet been identified. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	PAL-1a: Inventory and evaluate paleontological resources in Final APE. Prior to construction, the Applicant shall conduct and submit to CPUC, BLM, and other involved land-managing agencies for approval an inventory of significant paleontological resources within the affected area based on field surveys of areas identified as marginal through high or undetermined paleontological sensitivity potential.
Location	All locations of marginal, moderate, and high paleontological sensitivity within the Final APE where ground-disturbing activities are anticipated.
Monitoring/Reporting Action	BLM and CPUC to review inventory and sensitivity findings.
Effectiveness Criteria	Identification and preliminary evaluation of all resources within potentially ground-disturbing activities.
Responsible Agency	BLM and CPUC.
Timing	Pre-construction.
Interpretation & Approach	None required.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

MITIGATION MEASURE	PAL-1b: Develop Paleontological Monitoring and Treatment Plan. Following completion and approval of the paleontological resources inventory and prior to construction, the Applicant shall prepare and submit to CPUC, BLM, and other involved land-managing agencies for approval a Paleontological Monitoring Treatment Plan (Plan). The plan shall be designed by a Qualified Paleontologist and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The qualified paleontologist shall have a Master's Degree or Ph.D. in paleontology, and shall have knowledge of the local paleontology and is familiar with paleontological procedures and techniques. The Plan shall identify construction impact areas of moderate to high sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sediments determined to have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist) Sediments with zero sensitivity will not require paleontological monitoring. The Qualified Monitor shall have a BA in Geology or Paleontology and a minimum of one year of monitoring experience in local sediments. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the Applicant on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and a Paleontological Collecting Permit (for work on lands administered by California Department of Parks and Recreation). Notices to proceed will be issued by the BLM, CPUC, and other agencies with jurisdiction, following approval of the Paleontological Monitoring and Treatment Plan.
Location	Entire project.
Monitoring/Reporting Action	BLM and CPUC review and approve treatment plan.
Effectiveness Criteria	BLM and CPUC approval of treatment plan.
Responsible Agency	BLM and CPUC.
Timing	Pre-construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	PAL-1c: Monitor construction for paleontology. Based on the paleontological sensitivity assessment and Paleontological Monitoring and Treatment Plan consistent with Mitigation Measure PAL-1b (Develop Paleontological Monitoring and Treatment Plan), the Applicant shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate to high paleontological sensitivity. Sediments of low, marginal undetermined sensitivity shall be monitored by a qualified paleontological monitor on a part-time basis (as determined by the Qualified Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Qualified Paleontologist
Location	Locations identified in paleontological treatment plan.
Monitoring/Reporting Action	Progress reporting to BLM and CPUC as identified in treatment plan.
Effectiveness Criteria	Discovery of significant fossil resources from all localities affected by construction.
Responsible Agency	BLM and CPUC.
Timing	During construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	PAL-1d: Conduct paleontological data recovery. If avoidance of significant paleontological resources is not feasible or appropriate based on project design, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by the Applicant, in accordance to the approved Treatment Plan per Mitigation Measure PAL-1b (Develop Paleontological Monitoring and Treatment Plan).

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Location	Locations identified in paleontological treatment plan.
Monitoring/Reporting Action	BLM and CPUC review and approve treatment plan. BLM and PCUC review and approval of final data-recovery report and disposition of fossils.
Effectiveness Criteria	Recovery of adequate samples of significant fossil resources from all localities affected by construction.
Responsible Agency	BLM and CPUC.
Timing	During construction; report within one year of data-recovery fieldwork.
Interpretation & Approach	None required.

MITIGATION MEASURE **PAL-1e: Train construction personnel.** Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. The Applicant 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. Training shall inform all construction personnel that Environmentally Sensitive Areas (ESAs) ESAs include areas determined to be paleontologically sensitive as defined on the paleontological sensitivity maps for the project, and must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the right-of-way by the Applicant, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources.
- The Applicant shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential ESAs, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils.
- Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and the Applicant's paleontologist notified. Once the find has been inspected and a preliminary assessment made, the Applicant's paleontologist will notify the BLM, CPUC, and other appropriate land managers and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure PAL-1b (Develop Paleontological Monitoring and Treatment Plan).

Location	Entire project.
Monitoring/Reporting Action	<ul style="list-style-type: none"> • BLM and CPUC review and approve contract specifications. • BLM and CPUC review verification of required training. • BLM and CPUC receive prompt notification of new resource discoveries and violations.
Effectiveness Criteria	Paleontological resources are not adversely affected by construction activity.
Responsible Agency	BLM and CPUC.
Timing	Pre- and during construction.
Interpretation & Approach	This MM will be fulfilled in conjunction with MM C-1f, training.

Table 9. Mitigation Measures and Applicant Proposed Measures – Cultural and Paleontological Resources

GEO-APM-9	If paleontological resources are encountered, appropriate field mitigation efforts would be implemented to protect the resources. For example, if significant resources are discovered, such as vertebrate fossils, construction would be stopped in the immediate area of the find while SDG&E and its designated paleontologist determine the appropriate method and schedule to recover or protect the resource. However, work may continue in areas outside the immediate area of the find with the approval of the paleontologist. When it is not feasible to avoid paleontological sites, SDG&E would consult with the appropriate federal, state, and resource agencies and specialists to either develop alternative construction techniques to avoid paleontological resources or develop appropriate APMs. Appropriate mitigation field measures may include actions such as protection-in-place by covering with earthen fill, removal and cataloguing, and/or removal and relocation. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

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Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 10. Mitigation Measures and Applicant Proposed Measures – Noise

MITIGATION MEASURE	<p>— N-1a: Implement Best Management Practices for construction noise. SDG&E shall comply with local noise rules, standards, and/or ordinances by implementing the following noise-suppression techniques and variance standards set by local authorities. SDG&E shall apply for and obtain a variance for construction activities that must occur outside of the daytime hours allowed by local ordinances or within 200 feet of noise-sensitive receptors forty-five days prior to construction.</p> <p>— (N-1a)At a minimum, SDG&E shall employ the following noise-suppression techniques to avoid possible violations of local rules, standards, and ordinances:</p> <ul style="list-style-type: none"> • Confine construction noise to daytime, weekday hours (<i>e.g.</i>, 7:00 a.m. to 7:00 p.m.) or an alternative schedule established by the local jurisdiction or land use manager • On construction equipment, use noise reduction features (<i>e.g.</i>, mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer • Install temporary sound walls or acoustic blankets to shield adjacent residences. These sound walls or acoustic blankets shall have a height of no less than 8 feet, a Sound Transmission Class (STC) of 27 or greater, and a surface with a solid face from top to bottom without any openings or cutouts • Route construction traffic away from residences and schools, where feasible • Minimize unnecessary construction vehicle use and idling time. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. A “common sense” approach to vehicle use shall be applied; if a vehicle is not required for use immediately or continuously for construction activities, its engine shall be shut off. (Note: certain equipment, such as large diesel-powered vehicles, require extended idling for warm-up and repetitive construction tasks.)
Location	Construction activity in all segments.
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E applies for and obtains local variance and implements Best Management Practices.
Effectiveness Criteria	Best Management Practices implemented.
Responsible Agency	CPUC; BLM El Centro Field Office.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>N-2a: Avoid blasting where damage to structures could occur. Blasting shall be managed with a plan for each site. The plan shall include the blasting methods, surveys of existing structures and other built facilities, and distance calculations to estimate the area of effect of the blasting. Blasting shall not be allowed where damage to vulnerable structures could occur, and a rock anchoring or mini-pile system shall be used if adjacent structures could be damaged as a result of blasting or any construction method used as an alternative to blasting. If any structure is inadvertently adversely affected by construction vibration, the structure shall be restored to conditions equivalent to those prior to blasting. SDG&E shall then fairly compensate the owner of any damaged structure for lost use. Forty-five days prior to construction for blasting plan.</p>
Location	Construction activity in all segments.
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E submits blasting plan, which identifies complete inspection and restoration process.
Effectiveness Criteria	Structures inspected and restored.
Responsible Agency	CPUC; BLM El Centro Field Office.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 10. Mitigation Measures and Applicant Proposed Measures – Noise

MITIGATION MEASURE	N-3a: Respond to complaints of corona noise. SDG&E shall respond to third-party complaints of corona noise generated by operation of the transmission line by investigating the complaints and by implementing feasible and appropriate measures (such as repair damaged conductors, insulators, or other hardware). As part of SDG&E's repair inspection and maintenance program, the transmission line shall be patrolled, and damaged insulators or other transmission line materials, which could cause excessive noise, shall be repaired or replaced.
Location	All overhead transmission line segments.
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E investigates noise complaints, implements feasible repairs, and maintains a repair inspection and maintenance program to manage corona noise.
Effectiveness Criteria	Corona noise is managed.
Responsible Agency	CPUC; BLM El Centro Field Office.
Timing	Post construction.
Interpretation & Approach	None required.
NOI-APM-1	Provide notice prior to construction by mail to all sensitive receptors and residences within 300 feet of construction sites, staging areas, and access roads. The announcement shall state specifically where and when construction will occur in the area. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. SDG&E would identify and provide a public liaison person before and during construction to respond to concerns of neighboring receptors, including residents, about noise construction disturbance. Procedures for reaching the public liaison officer via telephone or in person would be included in the above notices. SDG&E would also establish a toll free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Sunrise Powerlink Project
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Table 11. Mitigation Measures and Applicant Proposed Measures – Transportation and Traffic

MITIGATION MEASURE	T-1a: Restrict lane closures. SDG&E shall restrict all necessary lane closures or obstructions on major roadways associated with overhead or underground construction activities to off-peak periods in congested areas to reduce traffic delays. Lane closures must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., unless otherwise directed in writing by the responsible public agency issuing the encroachment permit.
Location	All areas requiring road or lane closure.
Monitoring/Reporting Action	Review plan for road or lane closure to make sure that it is outside periods of peak traffic volume
Effectiveness Criteria	Road or lane closures shall not be executed during periods of peak traffic volume. Only reasonable interference with traffic flow.
Responsible Agency	CPUC, BLM and affected agencies responsible for streets/highways and traffic
Timing	Pre-construction
Interpretation & Approach	None required.
MITIGATION MEASURE	T-4a: Ensure pedestrian and bicycle circulation and safety. Where construction will result in temporary closures of sidewalks and other pedestrian facilities, SDG&E shall provide temporary pedestrian access, through detours or safe areas along the construction zone. Where construction activity will result in bike route or bike path closures, appropriate detours and signs shall be provided.
Location	All locations where closures of sidewalks and other pedestrian facilities are expected during construction of the project
Monitoring/Reporting Action	Review and approve Construction Transportation Management Plan prepared by SDG&E for identified affected pedestrian facilities and the alternative facilities or detours that will be provided
Effectiveness Criteria	No interference with pedestrian/bicycle circulation or provision of detours
Responsible Agency	CPUC, BLM and the local jurisdictions
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	T-5a: Repair roadways damaged by construction activities. If damage to roads, occurs, SDG&E shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired at SDG&E's cost. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (<i>e.g.</i> , rolling dips) shall be protected by regarding and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.
Location	All roads used to access the construction sites
Monitoring/Reporting Action	Review documentation to ensure that SDG&E obtained permits for construction within each road ROW prior to construction. Verify that each affected roadway has been satisfactorily restored and/or reconstructed within 30 days of the end of the construction.
Effectiveness Criteria	Restoration/maintenance of roads to pre-construction conditions as determined by the affected public agency.
Responsible Agency	CPUC, BLM and affected jurisdictions
Timing	Post construction
Interpretation & Approach	None required.

Table 11. Mitigation Measures and Applicant Proposed Measures – Transportation and Traffic

MITIGATION MEASURE	T-7a: Notify public of potential short-term elimination of parking spaces. As required in Mitigation Measure L-1a, prior to any construction activity on major roadways, SDG&E shall notify the public of the potential for parking spaces to be temporarily eliminated and where temporary parking spaces will be relocated through multiple media such as local newspapers and on-site postings. The elimination and relocation of parking spaces must be in conformance with the requirements of agencies responsible for parking management.
Location	All locations where construction could significantly impact parking spaces.
Monitoring/Reporting Action	Copies of public notices; evidence of coordination with affected jurisdiction
Effectiveness Criteria	Alternative parking spaces are provided, if required
Responsible Agency	Imperial and San Diego Counties and local municipalities
Timing	Pre-construction in affected jurisdiction
Interpretation & Approach	None required.
MITIGATION MEASURE	T-9a: Prepare Construction Transportation Management Plan. SDG&E shall prepare a Construction Transportation Management Plan (CTMP) to address traffic and transportation issues related to project construction. The CTMP shall describe alternate traffic routes, timing of worker commutes and material deliveries, the need for lane and road closures, the use of helicopters, plans for construction worker parking and transportation to work sites, methods for keeping roadways clean, and other methods for reducing adverse construction-related traffic impacts on regional and local roadways. The plan must comply with the requirements of the respective county and must be submitted to the respective counties and Caltrans for approval prior to commencing construction activities.
Location	All locations where construction could significantly impact regional and local roadways.
Monitoring/Reporting Action	Review Construction Transportation Management Plan
Effectiveness Criteria	Traffic flows are generally maintained without severe congestion
Responsible Agency	CPUC, BLM, and the applicable local jurisdictions
Timing	Pre- and during construction
Interpretation & Approach	None required. Construction Transportation Management Plan will be known as the Traffic Control Plan.
MITIGATION MEASURE	T-11b: Consult with and inform U.S. Customs and Border Patrol. The Applicant shall consult with U.S. Customs and Border Patrol to determine where border patrol aircraft operate in the county. Prior to construction, the Applicant shall provide written notification to all border patrol aircraft working in the county and to the CPUC stating when and where the new transmission lines and towers will be erected. The Applicant shall also provide all border patrol aircraft, the U.S. Customs and Border Patrol, and the CPUC with aerial photos or topographic maps clearly showing the new lines and towers in relation to the U.S./Mexico border within the San Diego and Imperial Counties.
Location	Within the area of border patrol aircraft operations along the Interstate 8 Alternative and Modified Route D Alternative
Monitoring/Reporting Action	Evidence of notification and submittal of aerial photos and/or topographic maps to U.S. Customs and Border Patrol
Effectiveness Criteria	Evidence of notification and sharing of information about the location of the new lines and towers.
Responsible Agency	CPUC, U.S. Customs and Border Patrol
Timing	Pre-construction
Interpretation & Approach	8/31/09 – When considering aerial marking requests, the consideration for safety should be considered as overriding visual concerns
T-APM-2a	Required permits for temporary lane closures will be obtained from the County of Imperial, County of San Diego, CALTRANS, and California State Parks (if applicable). (SDG&E)
Location	Entire project area.

Table 11. Mitigation Measures and Applicant Proposed Measures – Transportation and Traffic

Timing	Pre- and during construction.
Interpretation & Approach	None required.
T-APM-2b	Detour plans will be submitted to the counties, CALTRANS, and/or California State Parks as part of the permit requirements. Within the ABDSP, a Right-of-Entry permit is required for any construction and maintenance activities that would occur outside of existing easements, including access roads (would not need ROE for access road maintenance if practical rights of ingress and egress are granted in easements). SDG&E will provide California State Parks a request in writing for maintenance or other earth-disturbing activities. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
T-APM-4a	SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The counties and cities will then notify respective police, fire, ambulance and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
T-APM-5a	SDG&E will consult with the Imperial County Office of Education, Borrego Springs Unified School District, Warner Unified School District, Julian Union School District, and the Julian Union High School District at least one month prior to construction to coordinate construction activities adjacent to school bus stops. If necessary, school bus stops will be temporarily relocated or buses will be rerouted until construction in the vicinity is complete. SDG&E will also consult with Imperial Valley Transit and the Metropolitan Transit System at least one month prior to construction to reduce potential interruption of transit services.
Location	Entire project area within school districts.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
T-APM-6a	Parking is permissible on Imperial County-maintained roadways when vehicles are within 18 inches of the curb; or if no curb is present, vehicles must not be more than 18 inches away from the right-hand edge of the roadway's boundary. Vehicles must also be parallel to the roadway when parked, unless otherwise indicated. Parking is prohibited where signage indicates no parking. Parking shall comply within the County of Imperial ordinances whenever possible or as indicated in an approved traffic control plan. (SDG&E)
Location	Entire project area within Imperial County.
Timing	During construction.
Interpretation & Approach	None required.
T-APM-6b	Parking on San Diego County-maintained roads and highways is not permissible by law unless otherwise noted at specific locations. Parking is prohibited where signage and painted curbs indicates no parking. Where the project crosses major roadways, parking shall be prohibited in the project work area. Parking shall comply within the County of San Diego Department of Public Works Traffic Guidelines, 2001 whenever possible or as indicated in an approved traffic control plan. (SDG&E)
Location	Entire project area within San Diego County.
Timing	During construction.
Interpretation & Approach	None required.
T-APM-8a	Required permits for entering railroad right-of-way will be obtained from Union Pacific Railroad, San Diego & Arizona Eastern Railroad and the U.S. Gypsum Mine. (SDG&E)
Location	Along railroad right-of-way.
Timing	Pre- and during construction.
Interpretation & Approach	None required.

Table 11. Mitigation Measures and Applicant Proposed Measures – Transportation and Traffic

T-APM-9a	Eligible and Officially Designated Scenic Highways are located within Imperial and San Diego Counties. The California Public Utilities Code Section 320 requires that all new or relocated utility facilities within 1,000 feet of an Officially Designated Scenic Highway be undergrounded where feasible. SDG&E will bury all new or relocated utilities where feasible to avoid possible revocation of SR78 as an Officially Designated Scenic Highway within the ABDSP. (SDG&E)
Location	Entire project area along eligible and designated Scenic Highways.
Timing	Pre- and during construction.
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
T-APM-10a	SDG&E or its construction contractor shall provide at all times the ability to quickly lay a temporary steel plate trench bridge upon request in order to ensure driveway access to businesses and residences, and shall provide continuous access to properties when not actively constructing the underground cable alignment. (SDG&E)
Location	Entire project area.
Timing	During construction.
Interpretation & Approach	None required.

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Table 12. Mitigation Measures and Applicant Proposed Measures – Public Health and Safety

MITIGATION MEASURE	P-1a: Implement Environmental Monitoring Program. An environmental monitoring program will be implemented by SDG&E or its contractors to ensure that the plans defined in HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (storage and disposal of hazardous and solid waste) are followed throughout the period of construction. SDG&E will designate an Environmental Field Representative who will be on site to observe and document adherence to the plan for all construction spreads.
Location	All locations along the proposed and alternative routes.
Monitoring/Reporting Action	Review documentation of training
Effectiveness Criteria	Training and monitoring programs educate project staff and workers regarding all regulatory plan requirements.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	P-1b: Maintain emergency spill supplies and equipment. Hazardous material spill kits will be maintained onsite by SDG&E or its contractors for response to small spills. This shall include materials such as oil-absorbent material, tarps, and storage drums to be used to contain and control any minor releases. Emergency spill supplies and equipment will be kept adjacent to all areas of work and in staging areas, and will be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials will be provided in the project's Spill Response Plan defined in HS-APM-3.
Location	All locations along the proposed and alternative routes.
Monitoring/Reporting Action	Observe construction sites and activities for compliance
Effectiveness Criteria	Emergency spill supplies are available at the construction sites
Responsible Agency	CPUC, BLM
Timing	During construction
Interpretation & Approach	None required.
MITIGATION MEASURE	— P-2a: Test for residual pesticides/herbicides on currently or historically farmed land. In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing plan shall be prepared in consultation with the County Agricultural Commission, and conducted by an appropriate California licensed professional and sent to a California Certified laboratory. Samples shall be tested at a California Certified Laboratory. A report documenting the areas proposed for sampling, and the process used for sampling, testing shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction. Results of the laboratory testing and recommended resolutions for handling and excavation of material found to exceed regulatory requirements shall be submitted to the CPUC and BLM (if on BLM land) 30 days prior to construction.
	— (P-2a) Excavated materials containing elevated levels of pesticide or herbicide will require special handling and disposal according to procedures established by the regulatory agencies. Effective dust suppression procedures will be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California (DTSC or RWQCB) and the appropriate county (San Diego or Imperial) shall be contacted by SDG&E or its contractor to plan handling, treatment, and/or disposal options.
Location	All proposed and alternative route segments that are within or immediately adjacent to agricultural uses.
Monitoring/Reporting Action	Observe construction sites and activities for compliance

Table 12. Mitigation Measures and Applicant Proposed Measures – Public Health and Safety

Effectiveness Criteria	Excavated soils containing pesticides and herbicides are properly handled and disposed of.
Responsible Agency	CPUC, BLM, appropriate local and State regulatory agencies.
Timing	Pre-construction
Interpretation & Approach	Soils will be disposed of at locations approved by SDG&E appropriate local/state authorities and manifested as required by local, state and federal laws and ordinances. SDG&E requirements for waste disposal will meet or exceed State requirements for waste disposal facilities. Due to property rights, soil sampling may not be completed prior to start of construction. A plan for meeting this mitigation measure by conducting the sampling and testing just prior to start of construction will be submitted for review and approval by the appropriate agencies prior to starting construction.
MITIGATION MEASURE	P-3a: Appoint individuals with correct training for sampling, data review, and regulatory coordination. In the event that potential contaminated soil or groundwater is encountered, samples shall be collected by an OSHA-trained individual with a minimum of 40-hour hazardous material site worker training. Laboratory data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer and/or SDG&E's Field Environmental Representative and they shall coordinate with the appropriate regulatory agency (RWQCB or local CUPA agency) if contamination is confirmed to determine the suitable level of worker protection and the necessary handling and/or disposal requirements.
Location	All proposed and alternative route segments that have potential for discovery of unknown contamination.
Monitoring/Reporting Action	Observe construction sites and activities for compliance and review weekly reports.
Effectiveness Criteria	Excavated soils containing industrial contaminants are properly handled and disposed of.
Responsible Agency	CPUC, BLM, and RWQCB or local CUPA.
Timing	During construction
Interpretation & Approach	None required.
MITIGATION MEASURE	P-3b: Documentation of compliance with measures for encountering unknown contamination. If during grading or excavation work, the contractor observes visual or olfactory evidence of contamination in the exposed soil a report of the location and the potential contamination, results of laboratory testing, recommended mitigation (if contamination is verified), and actions taken shall be submitted to the CPUC and BLM for each event. This report shall be submitted within 30 days of receipt of laboratory data.
Location	All proposed and alternative route segments that have potential for discovery of unknown contamination.
Monitoring/Reporting Action	Observe construction sites and activities for compliance and review incident reports.
Effectiveness Criteria	Excavated soils containing industrial contaminants are properly handled and disposed of.
Responsible Agency	CPUC, BLM.
Timing	During construction
Interpretation & Approach	None required.

Table 12. Mitigation Measures and Applicant Proposed Measures – Public Health and Safety

MITIGATION MEASURE	<p>P-7a: Evaluate contaminated sites. SDG&E shall implement the following steps, at locations where excavation or significant ground disturbance will occur; all steps be completed at least 60 days prior to project construction, to prevent mobilization of contaminants and exposure of workers and the public:</p> <ul style="list-style-type: none"> • Step 1. Investigate the site to determine whether it has a record of hazardous material contamination which would affect construction activities. This investigation should be performed as a Phase I–Environmental Site Assessment (Phase I ESA). If contamination is found that could potentially affect the health and safety of workers or the public during construction of the Proposed Project, proceed to Step 2. • Step 2. Perform a characterization study of the site to determine the nature and extent of the contamination present at the location before construction activities proceed within the project ROW near the suspect site. • Step 3. Determine the need for further investigation and/or remediation of the soil or groundwater conditions at or near the contaminated site, <i>i.e.</i>, within areas of ground disturbance for the Proposed Project. (For example, if there would be little or no contact with contaminated materials, industrial cleanup levels would likely be applicable. If site activities would involve human contact with the contaminated materials, such as would be the case with excavation of contaminated materials during project construction, then Step 4 shall be completed. If no human contact is anticipated, then no further mitigation would be required for the location.) • Step 4. If it is determined that disturbance or excavation of soils or groundwater with contamination would accompany construction at the site, undertake a Phase II Environmental Site Investigation (Phase II ESI) involving sampling and further characterization of potentially contaminated areas with the project ROW or reroute the line away from the contamination area. Should further investigation reveal high levels of hazardous materials, mitigate health and safety risk according San Diego County CUPA or RWQCB regulations or requirements. This would include site-specific Health and Safety Plans, Work Plans, and/or Remediation Plans.
Location	All proposed and alternative route segments that have identified contaminated sites with 0.25 miles of the alignment.
Monitoring/Reporting Action	Review Phase I and Phase II reports, and any other site characterization reports generated.
Effectiveness Criteria	Sites with environmental contaminants are avoided or if crossed, excavated soils containing contaminants are properly handled and disposed of.
Responsible Agency	CPUC, BLM, and RWQCB or local CUPA.
Timing	Pre-construction
Interpretation & Approach	None required.
HS-APM-1	All personnel involved in using hazardous materials shall be trained in the proper use and safety procedures for the chemical and provided with the necessary Personal Protection Equipment (PPE). A Hazardous Communication (HAZCOM) Plan with Material Safety Data Sheets on all hazardous materials used for the project shall be developed. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-2	Only personnel trained in refueling vehicles would be allowed to perform this operation. All refueling operation shall be in designated areas or preformed by assigned vehicles. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-3	All applicable environmental safety plans associated with hazardous materials shall be developed for the project. These plans include but are not necessary limited to Hazardous Material Business (HMB) Plan; HAZCOM Plan; Spill Response Plan; 90-days temporary storage and disposal (TSD) facility permit; and Spill Prevention Control and Countermeasure (SPCC) Plan (only if storage is over 1,350 gallons at one location). (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.

Table 12. Mitigation Measures and Applicant Proposed Measures – Public Health and Safety

Interpretation & Approach	Hazardous Material Business Plan — Will be developed for any area within a Segment that meets the criteria requiring this Plan. Hazardous Communication Plan — Will be developed by the Contractor and SDG&E Safety Representatives, assurance of implementation by SDG&E, for hazards within a Segment. Spill Response Plan — Spill Response information will be included in either a HMBP or a SPCC within a Segment that meets the criteria requiring these Plans. 90-days temporary storage and disposal (TSD) — this is not applicable as SDG&E and its contractor will not create a TSDF. Any hazardous waste will be removed and disposed of per local, State and Federal Regulations. Spill Prevention Control and Countermeasure (SPCC) Plan — will be developed for any area within a Segment that meets the criteria (1,320 gallons of petroleum products) requiring this Plan.
HS-APM-4	SDG&E will develop a site specific blasting plan blasting of tower footing is required. A California licensed Blasting Contractor shall be used for all blasting operation. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-5	All Government Code §65962.5 sites or other known contamination sites along the transmission line ROW or such sites that would affect construction work shall be investigated to determine potential impacts to the project. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-6	An Unexploded Ordnance (UXO) investigation of known and potential areas used by the military along the ROW shall be undertaken by a trained contractor. If UXO are found, they shall be removed by trained personnel. (SDG&E)
Location	Entire project area in areas of known or potential UXO use areas.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-7	All personnel involved in excavation and grading or for ROW clearing shall be trained to recognize UXO and/or potential soil, surface water, and groundwater potential contamination sites. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-8	SDG&E will assign Environmental Field Representative and/or General Contractor assigned Health & Safety Officer to the project. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-9	SDG&E will contact airport representative and/or Federal Aviation Administration Authorities regarding work within all existing and proposed transmission line corridors within 2 miles of an airport. (SDG&E)
Location	Entire project area within 2 miles of an airport.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-10	All hazardous waste and solid waste shall be stored and disposed of in accordance with federal, State, and local regulations. Whenever feasible, hazardous material minimization methods shall be employed and all hazardous materials recycled. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.

Table 12. Mitigation Measures and Applicant Proposed Measures – Public Health and Safety

Interpretation & Approach	None required.
HS-APM-11	SDG&E will develop project-specific Fire Prevention and Response Plan (FPRP), which will be developed and reviewed by pertinent regulatory authorities. A project Fire Marshal shall be assigned to enforce all provisions of the FPRP as well as performing all other duties related to fire prevention activities for the Proposed Project. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	Plan is Fire Plan for Construction, Operations and Maintenance
HS-APM-12	A Traffic Control Plan (TCP) shall be developed that addresses all roadway crossings that would be used by the project and could interfere with emergency vehicles. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-14	All construction workers shall undergo environmental training regarding potential exposure in accordance with federal, State, or local regulations. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-15	If during excavation soil or groundwater contamination is suspected (<i>e.g.</i> , unusual soil discoloration or strong odor), the contractor or subcontractor shall immediately stop work and notify the General Contractor's assigned Health & Safety Officer and/or SDG&E's Field Environmental Representative. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-16	If soil or groundwater contamination is suspected, work near the immediate excavation site shall be terminated, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the General Contractor's assigned Health & Safety Officer and/or SDG&E's Field Environmental Representative. Preliminary samples of the soil, groundwater, or material shall be taken by an OSHA trained individual. These samples shall be sent to a California Certified Laboratory for characterization. Work outside the immediate excavation site may continue as determined by the General Contractor's assigned Health and Safety Officer and/or SDG&E's Field Environmental Representative. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
HS-APM-17	If the sample testing determines that contamination is not present, work would be allowed to proceed at the immediate excavation site. However, if contamination is found above regulatory limits, the regulatory agency (<i>e.g.</i> , RWQCB or CUPA) responsible for responding to and for providing environmental oversight of the region shall be notified in accordance with State or local regulations. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	PS-1a: Limit the conductor surface electric gradient. As part of the design and construction process for the Proposed Project, the Applicant shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.
Location	Along the overhead route segment
Monitoring/Reporting Action	Review construction design plans to ensure consistency with IEEE Radio Noise Design Guide.
Effectiveness Criteria	The potential for magnetic field interference of electronic equipment is reduced.

Table 12. Mitigation Measures and Applicant Proposed Measures – Public Health and Safety

Responsible Agency	CPUC
Timing	Pre-construction.
Interpretation & Approach	None required.
MITIGATION MEASURE	PS-1b: Document and resolve electronic interference complaints. After energizing the transmission line, SDG&E shall respond to and document all radio/television/equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by SDG&E to the CPUC for resolution.
Location	Along the overhead route segment
Monitoring/Reporting Action	Review documentation provided.
Effectiveness Criteria	All radio/television/equipment interference disputes are resolved.
Responsible Agency	CPUC
Timing	Post construction
Interpretation & Approach	None required.
MITIGATION MEASURE	PS-2a: Implement grounding measures. As part of the siting and construction process for the Proposed Project, SDG&E shall identify objects (such as fences, metal buildings, and pipelines) within and near the right-of-way that have the potential for induced voltages and shall implement electrical grounding of metallic objects in accordance with SDG&E's standards. The identification of objects shall document the threshold electric field strength and metallic object size at which grounding becomes necessary.
Location	Along the entire transmission line route
Monitoring/Reporting Action	Review documentation provided; verify that necessary grounding measures are installed.
Effectiveness Criteria	The potential for impacts associated with induced currents and voltages on objects near the energized transmission line are reduced.
Responsible Agency	CPUC
Timing	During construction and post construction pre-energizing the line.
Interpretation & Approach	None required.

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MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

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Table 13. Mitigation Measures and Applicant Proposed Measures – Air Quality

MITIGATION MEASURE	AQ-1a: Suppress dust at all work or staging areas and on public roads. SDG&E shall: (a) pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas if construction activity causes persistent visible emissions of fugitive dust beyond the work area; (b) pre-water sites for 48 hours in advance of clearing; (c) reduce the amount of disturbed area where possible; (d) all dirt stock-pole areas should be sprayed daily as needed; (e) cover loads in haul trucks or maintain at least six inches of free-board when traveling on public roads; (f) pre-moisten, prior to transport, import and export dirt, sand, or loose materials; (g) sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets or wash trucks and equipment before entering public streets; (h) plant vegetative ground cover in disturbed areas as soon as possible following construction; (i) apply chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands that are unused for four consecutive days); and (j) prepare and file 30 days in advance of construction with the ICAPCD, SDAPCD, BLM, and CPUC a Dust Control Plan that describes how these measures would be implemented and monitored at all locations of the project. The Dust Control Plan shall identify nearby sensitive receptors, such as land uses that include children, the elderly, the acutely ill and the chronically ill, and specify the means of minimizing impacts to these populations (for example, by locating equipment and staging areas away from sensitive receptors). Also, see U.S. Fish and Wildlife Conservation Measure G-CM-24.
Location	All areas including work areas and staging areas.
Monitoring/Reporting Action	Review Dust Control Plan. Verify local air district concurrence with the Plan. Inspect activities for dust control.
Effectiveness Criteria	Dust emissions are reduced. Effectiveness can be monitored by monitoring implementation of the control measures.
Responsible Agency	CPUC, BLM, and affected local air districts
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	AQ-1b: Use low-emission construction equipment. SDG&E shall maintain construction equipment per manufacturing specifications and use low-emission equipment described here. All off-road and portable construction diesel engines not registered under the CARB Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Sec. 2423(b)(1) unless that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. If any engine larger than 100 hp does not meet Tier 1 standards, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless the engine manufacturer indicates that the use of such devices is not practical for that particular engine type. SDG&E shall substitute small electric-powered equipment for diesel- and gasoline-powered construction equipment where feasible.
Location	All areas.
Monitoring/Reporting Action	Inspect construction equipment, Portable Equipment Registration Program records, and manufacturer certifications.
Effectiveness Criteria	Engine exhaust emissions are reduced. Effectiveness can be monitored by monitoring implementation of the control measure.
Responsible Agency	CPUC and BLM
Timing	During construction
Interpretation & Approach	None required.

Table 13. Mitigation Measures and Applicant Proposed Measures – Air Quality

MITIGATION MEASURE	AQ-1h: Obtain NOx and particulate matter emission offsets. SDG&E shall obtain and hold for the duration of construction NOx emission reduction credits or fund incentive programs approved by ICAPCD and SDAPCD at sufficient levels to offset the construction emissions of NOx that exceed the ozone nonattainment area federal General Conformity Rule applicability threshold. SDG&E shall secure 99 tons per year of NOx reductions and 276 tons per year of particulate matter reductions in Imperial County, and SDG&E shall secure 212 tons per year of NOx reductions in San Diego County to satisfy this requirement. The emission reduction credits or incentive program shall comply with ICAPCD and SDAPCD rules and regulations, and the credits or reductions shall be obtained by SDG&E prior to commencing construction.
Location	All areas.
Monitoring/Reporting Action	As required in General Conformity Final Analysis as Approved by BLM.
Effectiveness Criteria	NOx and particulate matter emissions fully offset.
Responsible Agency	CPUC, BLM, and affected local air districts
Timing	Pre- and during construction
Interpretation & Approach	These air emission calculations are based on the Projects original Proposed Route. They will be updated and submitted to the CPUC for review and approval. Once approved by the CPUC, the updated calculations will be utilized for meeting this measure.
MITIGATION MEASURE	AQ-4a: Offset construction-phase greenhouse gas emissions with carbon credits. SDG&E shall create greenhouse gas emission reductions or obtain and hold for the duration of project construction sufficient carbon credits to fully offset construction-phase greenhouse gas emissions. During construction SDG&E shall report to the CPUC quarterly the status of efforts to create reductions or obtain banked credits and the quantity of construction-phase greenhouse gas emissions offset by credits. At a minimum, SDG&E shall create or obtain and hold carbon credits to offset 55,000 tons of carbon dioxide emissions for each of the two years of construction. Carbon Reduction Tons (CRTs) verified according to the rules of the California Climate Action Registry may be retired by SDG&E to satisfy this requirement.
Location	All areas.
Monitoring/Reporting Action	Review SDG&E holdings of carbon credits.
Effectiveness Criteria	Greenhouse gas emissions fully offset.
Responsible Agency	CPUC and BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	AQ-4b: Offset operation-phase greenhouse gas emissions with carbon credits. SDG&E shall create greenhouse gas emission reductions or obtain and hold for the life of the project sufficient carbon credits to fully offset greenhouse gas emissions caused by activity to support transmission line operation, maintenance, and inspection activities. To determine the quantity of carbon credits that must be created or obtained and held each year, SDG&E must develop a complete GHG inventory annually for project-related operational emissions. SDG&E shall follow established methodologies to report and inventory indirect GHG emissions from energy imported and consumed to support operation of the Proposed Project and indirect GHG emissions from transmission and distribution losses associated with the Proposed Project. SDG&E shall report to the CPUC annually the status of efforts to obtain banked credits and the quantity of greenhouse gas emissions offset by credits. Established methodologies for determining project-related emissions include the current California Climate Action Registry (CCAR) General Reporting Protocol, and the Power/Utility Reporting Protocol appendix to the General Reporting Protocol. Carbon Reduction Tons (CRTs) verified according to the rules of the California Climate Action Registry may be retired by SDG&E to satisfy this requirement.
Location	All areas.
Monitoring/Reporting Action	Review SDG&E holdings of carbon credits.
Effectiveness Criteria	Greenhouse gas emissions fully offset.
Responsible Agency	CPUC and BLM

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Table 13. Mitigation Measures and Applicant Proposed Measures – Air Quality

Timing	Post construction
Interpretation & Approach	None required.
MITIGATION MEASURE	AQ-4c: Avoid sulfur hexafluoride emissions. SDG&E shall identify sulfur hexafluoride (SF ₆) leaks and establish a strategy for replacing leaking equipment to reduce SF ₆ leaks. To accomplish this, SDG&E shall develop and maintain a record of SF ₆ purchases, an SF ₆ leak detection and repair program using laser imaging leak detection and monitoring no less frequently than quarterly, an SF ₆ recycling program, and an employee education and training program for avoiding or eliminating SF ₆ emissions caused by the Proposed Project. The SF ₆ leak detection and repair program shall be provided to the CPUC and BLM 90 days prior to project construction. Prior to construction, SDG&E shall also become a Partner in the U.S. EPA's SF ₆ Emissions Reduction Partnership for Electric Power Systems. SDG&E shall also report SF ₆ emissions from the Proposed Project to the California Climate Action Registry according to CCAR methodologies or alternate methodology approved by the California Air Resources Board. To develop a complete GHG inventory, SDG&E shall follow established methodologies to report indirect GHG emissions from energy imported and consumed to support operation of the Proposed Project and indirect GHG emissions from transmission and distribution losses associated with the Proposed Project.
Location	All areas.
Monitoring/Reporting Action	Review strategies for replacing leaking equipment, leak detection and repair, recycling, and education.
Effectiveness Criteria	SF ₆ emissions are avoided.
Responsible Agency	CPUC and BLM
Timing	Pre- and post construction
Interpretation & Approach	7/2/09: This MM only applies to areas where SF-6 would occur — substations. At this time SDG&E is a member of the California Climate Action Registry and will continue this participation. The U.S. EPA's SF ₆ Emissions Reduction Partnership for Electric Power Systems and the California Climate Action Registry serve different purposes; SDG&E would need to join the former even though they are a member of the latter.
AQ-APM-1	For activities in Imperial County, the project will comply with ICAPCD Rule 800 (Fugitive Dust Requirement for Control of Fine Particulate Matter [PM10]). A Dust Control Plan for construction activities would be filed with the ICAPCD. (SDG&E)
Location	Entire project area in Imperial County.
Timing	Pre- and during construction
Interpretation & Approach	None required.
AQ-APM-2	<ol style="list-style-type: none"> 1. Prohibit construction grading on days when the wind gusts exceed 25 mph to the extent feasible to control fugitive dust. 2. All trucks hauling soil and other loose material will be covered or maintain at least two feet of freeboard. 3. Snow fence-type windbreaks will be erected in areas identified as needed by SDG&E. 4. Vehicle speeds will be limited to 15 mph on unpaved (no gravel or similar surfacing material) roads. 5. Unpaved roads will be treated by watering as necessary. 6. Soil stabilizers will be applied to inactive construction areas on an as-needed basis. 7. Exposed stockpiles of soil and other excavated materials will be contained within perimeter silt fencing, watered or treated with soil binders, as necessary. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	Item 2 of this measure applies to transportation of hazardous waste materials.
AQ-APM-3	To minimize mud and dust from being transported onto paved roadway surfaces, pave, gravel, use rattle plates 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. SDG&E will implement this measure where applicable and not conflicting with other requirements. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction

Table 13. Mitigation Measures and Applicant Proposed Measures – Air Quality

Interpretation & Approach	None required.
AQ-APM-4	If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Proposed Project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the project's construction schedule. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
AQ-APM-5	To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as a part of pre-construction conferences. Those briefings will include discussion of a "common sense" to vehicle use. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.

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Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

MITIGATION MEASURE	H-1a: Prepare Substation Grading and Drainage Plan; construct during the dry season. Prior to construction of new substations, a grading and drainage plan, with SWPPP for construction and post-construction BMPs (as defined by the RWQCB), shall be prepared and submitted to the CPUC and RWQCB for review and approval. All grading for the substation shall occur either during the dry season months, or a settling pond shall be installed on the construction site with sufficient capacity to contain expected runoff during a rainfall event. In addition, for construction during a rainfall event, construction shall cease when rutting occurs in greater than 10% of the road or when rills more than 10 feet in length develop and lead off the road surface in the work area. Approved drainage control and erosion control BMPs shall be in place prior to the normal onset of winter rains.
Location	All new substations
Monitoring/Reporting Action	Subdivision grading and drainage plan prepared by Applicant and approved by CPUC and RWQCB prior to construction. CPUC construction monitoring to verify compliance.
Effectiveness Criteria	Construction and BMPs in place prior to onset of winter rainy season, and kept operating as long as needed. Mitigation measure is effective if water quality near the project is maintained.
Responsible Agency	CPUC, BLM, or other responsible/cooperating agencies
Timing	Pre- and during construction
Interpretation & Approach	Because the approved project traverses through two watersheds and is governed by multiple RWQCBs, the State Water Resources Control Board (SWRCB) has taken jurisdiction with the understanding that it will engage the RWQCBs as it sees appropriate. Therefore, the grading and drainage plan described in Mitigation Measure H-1a above will be submitted to the CPUC and the SWRCB and/or the RWQCB for review and approval.
MITIGATION MEASURE	H-1a (CC): Construct during the dry season. All construction of the Chocolate Canyon Option shall occur during the dry season months. Approved drainage control and erosion control BMPs shall be in place prior to the normal onset of winter rains. Implement the City of San Diego Source Water Protection Guidelines for New Development (2004) that describes procedures for minimizing the adverse water quality effect of new development near water supply reservoirs such as El Capitan. These guidelines specify best management practice procedures to be used by the development, which would include the Chocolate Canyon Option.
Location	Chocolate Canyon Option
Monitoring/Reporting Action	Construction of Chocolate Canyon Option occurs only during dry season months. CPUC construction monitoring to verify compliance.
Effectiveness Criteria	Construction and BMPs in place prior to onset of winter rainy season, and kept operating as long as needed. Mitigation measure is effective if water quality near the Chocolate Canyon Option is maintained.
Responsible Agency	CPUC, BLM, or other responsible/cooperating agencies
Timing	Pre- and during construction
Interpretation & Approach	The wet season for this area is defined as November through March. This measure applies to ground disturbing activities within Chocolate Canyon. The installation of the transmission structures and wire stringing may occur throughout the year without restriction from the wet season provided proper BMPs are installed as required by the SWPPP.
MITIGATION MEASURE	— H-1k: Comply with Forest Service conditions. Where the power line crosses Forest Service property, the following conditions, or others defined by the Forest Service, based on consultation, shall be complied with: <ul style="list-style-type: none"> • The Forest Service reserves the right, after notice and opportunity for comment, to modify project conditions, if necessary, to respond to any Final Biological Opinion issued for this project by the United States Fish and Wildlife Service, NOAA Fisheries, or any Certification or permit issued for this project by the State Water Resources Control Board or Army Corps of Engineers.

Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

— (H-1k)

- Within one year of license issuance, or prior to any ground disturbing activities, the Licensee shall file with the California Public Utilities Commission a plan approved by the Forest Service for hazardous substances storage, spill prevention, and spill cleanup for project facilities on or directly affecting National Forest System Lands. In addition, during planning and prior to any new construction or maintenance not addressed in an existing plan, the Licensee shall notify the Forest Service, and the Forest Service shall make a determination whether a plan approved by the Forest Service for oil and hazardous substances storage and spill prevention and cleanup is needed.
 - At a minimum, the plan must require the Licensee to (1) maintain in the project area, or at an alternative location approved by the Forest Service, a cache of spill cleanup equipment suitable to contain any spill from the project; (2) to periodically inform the Forest Service of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the project area; (3) to inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill affecting National Forest System lands, and Licensee adjoining property when such spill could reasonably be expected to affect National Forest System lands, and (4) provide annually to the Forest Service a list of Licensee project contacts.
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— (H-1k)

- The Licensee shall confine all vehicles being used for project purposes, including but not limited to administrative and transportation vehicles and construction and inspection equipment, to roads or specifically designed access routes, and approved construction and staging areas, as identified in a Road and Traffic Management Plan developed by the Licensee. The Forest Service reserves the right to close any and all such routes where damage (impacts beyond the expected and approved disturbance) is occurring to the soil or vegetation, or, if requested by Licensee, to require reconstruction/construction by the Licensee to the extent needed to accommodate the Licensee's use. The Forest Service agrees to provide notice to the Licensee and the Public Utilities Commission prior to road closures, except in an emergency, in which case notice will be provided as soon as practicable.
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— (H-1k)

- During planning and before any new construction or non-routine maintenance projects with the potential for causing erosion and/or stream sedimentation on or affecting National Forest System Lands, the Licensee shall file with the Public Utilities Commission an Erosion Control Measures Plan that is approved by the Forest Service. The Plan shall include measures to control erosion, stream sedimentation, dust, and soil mass movement attributable to the project.

The plan shall be based on actual-site geological, soil, and groundwater conditions and shall include:

1. A description of the actual site conditions
2. Detailed descriptions, design drawings, and specific topographic locations of all control measures
3. Measures to divert runoff away from disturbed land surfaces
4. Measures to collect and filter runoff over disturbed land surfaces
5. Revegetating disturbed areas in accordance with current direction on use of native plants and locality of plant and seed sources
6. Measures to dissipate energy and prevent erosion
7. A monitoring and maintenance schedule.

Upon Commission approval, the Licensee shall implement the plan.

— (H-1k)

- Ground disturbing activities may proceed only after appropriate NEPA analysis and documentation completion. If the licensee proposes new activities to the Public Utilities Commission not previously addressed in the Commission's NEPA analysis processes, the licensee, in consultation with the Forest Service, shall determine the scope of work, and the potential project related effects and whether additional information is required to proceed with the planned ground disturbing activity. The licensee shall enter into a cost recovery agreement with the Forest Service under which the licensee shall fund the Forest Service staff time required for staff activities related to the analysis, documentation and administration of the proposed activities.
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Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

	<p>— (H-1k) The Licensee shall within 6 months after license issuance file with the Public Utilities Commission a Water Resources Management Plan that is approved by the Forest Service, for the purpose of controlling and monitoring the project-related effects to water resources on National Forest System lands, which are related to the Licensee’s activities. The purpose of the plan is to protect groundwater related surface water and other groundwater-dependent resources.</p>
	<p>— (H-1k) Within one year of license issuance the Licensee shall file with the Public Utilities Commission a plan approved by the Forest Service for the management of groundwater and the associated surface waters on or affecting National Forest System lands. The purpose of the plan shall be to reduce the potential for groundwater extraction or contamination and related effects to surface water resources.</p>
Location	Forest Service Land
Monitoring/Reporting Action	Applicant to prepare and execute an agreement with the U.S. Forest Service prior to construction. Compliance with the agreement to be verified through monitoring by the Forest service and CPUC during construction.
Effectiveness Criteria	Compliance with the executed agreement.
Responsible Agency	CPUC and U.S. Forest Service
Timing	Pre- and during construction
Interpretation & Approach	<p>"Within one year of license issuance . . ." 8/6/09, USFS defined that this phrase is in reference to their Record of Decision and issuance of a Special Use Permit for the LEAPS project and will be updated in the USFS Record of Decision for this project when issued.</p> <p>Erosion Control Measures Plan — 8/6/09, USFS agreed that it is acceptable to include the Erosion Control Measures Plan in the SWPPP as long as all requirements defined in the MM are included in the SWPPP. In addition, a separate SWPPP document does not have to be prepared for USFS lands only. The SWPPP can cover USFS lands as well as other agency and private lands.</p>
MITIGATION MEASURE	H-1I: Construction on Forest Service land to be subject to an approved, site-specific SWPPP and Sediment-Control Plan. A site-specific sediment control plan and SWPPP shall be prepared for construction within the National Forest. These plans shall identify and characterize potentially affected water resources and provide site-specific remedies to minimize project-related sedimentation, as well as provide post-construction remediation and monitoring details. The sediment control plan shall include construction in the dry period, as well as construction by helicopter in areas where terrain is steep and the potential consequences of sedimentation severe. These plans shall be submitted to the Forest Service and CPUC for review and approval prior to construction.
Location	Forest Service Land
Monitoring/Reporting Action	Applicant to prepare a site-specific SWPPP and sediment-control plan to be reviewed and approved by the Forest Service and CPUC prior to construction. CPUC and Forest Service to verify compliance through construction monitoring.
Effectiveness Criteria	Compliance with approved SWPPP and sediment-control plan.
Responsible Agency	CPUC and U.S. Forest Service.
Timing	Pre- and during construction
Interpretation & Approach	7/2/09, it was agreed with USFS and CPUC that the specific SWPPPs will include an Erosion Control Plan and can cover both USFS and other agency and private lands within one document.
MITIGATION MEASURE	H-2d: Maintain vehicles and equipment. All vehicles and equipment, including all hydraulic hoses, shall be maintained in good working order so that they are free of any and all leaks that could escape the vehicle or contact the ground. A vehicle and equipment maintenance log shall be updated and provided to CPUC and BLM once monthly during project construction.
Location	Entire project area
Monitoring/Reporting Action	Vehicle equipment and maintenance log updated and provided to CPUC and BLM once monthly during construction
Effectiveness Criteria	Vehicles and equipment do not leak hazardous materials
Responsible Agency	CPUC and BLM
Timing	During construction
Interpretation & Approach	None required.

Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

MITIGATION MEASURE	H-4b: Avoid blasting where damage to groundwater wells or springs could occur. Blasting shall be managed with a Blasting Plan for each site. The Plan shall include the blasting methods, distance calculations to estimate the area of effect of the blasting, and surveys for wells and springs within the blast influence area (no less than ½ mile from the blasting location). Blasting shall not be allowed where damage to wells or springs could occur according to the Applicant's Blasting Plan, and a rock anchoring or mini-pile system shall be used if these resources could be damaged as a result of blasting or any earthworking method used as an alternative to blasting. Where inadvertent damage to wells within an EPA-designated Sole Source Aquifer occur as a result of earthwork, the Applicant shall compensate the landowner in the form of well repair or replacement, and shall provide the landowner with a water storage tank and sufficient potable water within 48 hours and throughout the interim between damage and repair or replacement. Where inadvertent damage to other wells or springs occurs as a result of earthwork, the Applicant shall compensate the landowner in the form of remedial cash payment, repair, or replacement, as appropriate. The burden of proof of no impact shall rest with the Applicant.
Location	Entire project above designated groundwater basins
Monitoring/Reporting Action	Applicant to prepare a blasting plan, including well survey.
Effectiveness Criteria	Avoidance of blasting where damage to wells or springs could occur, and use of rock anchoring or mini-pile system in its place
Responsible Agency	CPUC
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	H-5a: Install substation runoff control. The pad for new substations shall be constructed with a pervious and/or high-roughness (for example gravel) surface where possible to ensure maximum percolation of rainfall after construction. Detention/retention basins shall be installed to reduce local increases in runoff, particularly on frequent runoff events (up to 10-year frequency). Downstream drainage discharge points shall be provided with erosion protection and designed such that flow hydraulics exiting the site mimics the natural condition as much as possible. A drainage design hydrologic and hydraulic analysis shall be provided to the CPUC for review and approval prior to the initiation of construction.
Location	New substations.
Monitoring/Reporting Action	Applicant to provide CPUC with a drainage plan for new substations showing compliance with this mitigation measure. CPUC monitor to verify compliance during construction.
Effectiveness Criteria	No increase in runoff from new substations.
Responsible Agency	CPUC
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	H-6a: Scour protection to include avoidance of bank erosion and effects to adjacent property. A determination of towers requiring scour protection under WQ-APM 10 shall be made during the design phase by a registered professional engineer with expertise in river mechanics. All towers within the project shall be reviewed by the river mechanics engineer and the foundations of those towers determined to be subject to scour or lateral movement of a stream channel shall be protected by burial beneath the 100-year scour depth, setbacks from the channel bank, or bank protection as determined by the river mechanics engineer. An evaluation shall also be made regarding the potential for the tower and associated structures to induce erosion onto adjacent property. Should the potential for such erosion occur, the tower location shall be moved to avoid this erosion, or erosion protection (such as rip rap) provided for the adjacent property. This evaluation, and associated scour/erosion protection design plans, shall be submitted to the CPUC for review and approval 60 days prior to the initiation of construction of the towers.
Location	Stream crossings entire project.

Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

Monitoring/Reporting Action	Applicant to provide CPUC with an engineering report, sealed by a civil engineer registered in the State of California, demonstrating which towers may reasonably be subject to erosion during the life of the project. The report shall also provide plans for protection from scour, as well as an engineering demonstration that the tower and associated structures will not induce erosion onto adjacent property. CPUC monitor to verify compliance during construction.
Effectiveness Criteria	Towers to withstand scour with no adverse effect on adjacent property.
Responsible Agency	CPUC
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	H-7a: Develop Hazardous Substance Control and Emergency Response Plan for project operation. SDG&E shall prepare and implement a Hazardous Substance Control and Emergency Response Plan for project operation, and a copy shall be kept onsite at substations. This plan shall include definition of an emergency response program to ensure quick and safe cleanup of accidental spills, including prescriptions for hazardous-material handling to reduce the potential for a spill during construction. The plan will identify areas where refueling and vehicle-maintenance activities and storage of hazardous materials, if any, will be permitted. These directions and requirements will also be reiterated in the project SWPPP. SDG&E shall submit this Response Plan to the CPUC and BLM for review and approval at least 60 days before construction.
Location	Entire project.
Monitoring/Reporting Action	Applicant to provide CPUC with a Hazardous Substance Control and Emergency Response Plan for project operations, for review and approval, prior to completion of construction. This plan to include monitoring and reporting protocols and responsibilities.
Effectiveness Criteria	Implementation of a Hazardous Substance Control and Emergency Response Plan for project operations.
Responsible Agency	CPUC
Timing	During construction
Interpretation & Approach	7/2/09 A draft Hazardous Waste Contingency Plan will be submitted which will include an emergency response program. Additionally, Construction SWPPPs will reiterate emergency response for quick, safe clean-up of spills, etc.
MITIGATION MEASURE	H-8a: Bury power line below 100-year scour depth. At locations where the buried power line is to be at or adjacent to a stream bed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour which, for purposes of this mitigations measure, also includes lateral (streambank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing. During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event. Plans for burying the line below the 100-year scour depth, or otherwise protecting the line from erosion, shall be submitted to CPUC for review and approval prior to construction. Engineering evaluation, and associated scour protection design plans, shall be submitted to the CPUC for review and approval 60 days prior to the initiation of construction. Compliance to be ensured during construction.
Location	Underground stream crossings
Monitoring/Reporting Action	Applicant to provide CPUC with an engineering report, sealed by a civil engineer registered in the State of California, demonstrating which crossings may be subject to scour. The report shall also provide plans for burying the line below the 100-year scour depth, or otherwise protecting the line from erosion. CPUC to review and approve the report, then monitor to verify compliance during construction.
Effectiveness Criteria	Underground crossings to be protected from scour.
Responsible Agency	CPUC
Timing	Pre- and during construction
Interpretation & Approach	None required.

Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

WQ-APM-1	All construction and maintenance activities shall be conducted in a manner that minimizes disturbance to riparian/wetland vegetation, drainage channels, and intermittent and perennial stream banks to the extent feasible. (SDG&E)
Location	Entire project area.
Timing	Pre-, during and post construction
Interpretation & Approach	None required.
WQ-APM-2	To the extent feasible, structures shall be placed so as to avoid sensitive features such as water-courses, or to allow conductors to clearly span the features, within limits of safety and standard structure design. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-3	Specific sites as identified by authorized agencies (<i>e.g.</i> , fragile watersheds) where construction equipment and vehicles are not allowed shall be clearly marked on-site before any construction or surface disturbing activities begin. Construction personnel shall be trained to recognize these markers and understand the equipment movement restrictions involved. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-4	<ol style="list-style-type: none"> 1. Adequate distance from stream banks and beds will be maintained during construction activities. 2. Construction activities will use existing bridges to cross major streams and culverts in most dry intermittent streams. 3. Surface water, riparian areas and floodplains will be spanned where feasible. 4. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented. 5. Storm Water Best Management Practices (BMPs) for construction will be implemented per the requirements of the project's SWPPP. 6. Silt fencing, straw mulch, straw bale check dams would be installed as appropriate to contain sediment within construction work areas and staging areas. Where soils and slopes exhibit high erosion potential, erosion control blankets, matting, and other fabrics and/or other erosion control measures. 7. The potential for increased sediment loading will be minimized by limiting road improvements to those necessary for project construction, operation and maintenance. 8. Upland pull sites will be selected to minimize impacts to surface waters, riparian areas, wetlands and floodplains. 9. Structures will not be placed in streambeds or drainage channels to the extent feasible. (SDG&E) <p>Also, see U.S. Fish and Wildlife Conservation Measure G-CM-2.</p>
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-5	Any stream crossings will be constructed at low flow periods and, if necessary, a site-specific mitigation and restoration plan would be developed. (SDG&E)
Location	Entire project area along stream crossings.
Timing	Pre- and during construction
Interpretation & Approach	None required.

Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

WQ-APM-6	<ol style="list-style-type: none"> 1. Designated surface water protection areas (source water) will be avoided. 2. There will be no diversions, detention, retention or consumption of surface waters for the project. 3. Prior to construction, interviews would take place with affected landowners regarding location of water supply wells located on their property. 4. SDG&E will negotiate with affected landowner to provide alternative water supplies in the event a supply well or springs dry up directly caused by project activities. Negotiation shall be by either a remedial cash payment to the landowner or by SDG&E contracting for the drilling of a replacement well. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-8	<ol style="list-style-type: none"> 1. In no case will groundwater removed during construction be discharged to surface waters or storm drains without first obtaining any required permits. 2. If dewatering is necessary, the water will be contained and sampled to determine if contaminants requiring special disposal procedures are present. 3. If the water tests sufficiently clean and land application is determined feasible per applicable SWRCB and RWQCB requirements, the water would be directed to relatively flat upland areas for evaporation and infiltration back to the water table, used for dust control, or used as makeup for a construction process (e.g., concrete production). 4. Water determined to be unsuitable for land application or construction use would be disposed of in another appropriate manner, such as treatment and discharge to a sanitary sewer system in accordance with applicable permit requirements or hauled offsite to an approved disposal facility. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-9	Storage of fuels and hazardous materials will be prohibited within 200 feet of groundwater supply wells and within 400 feet of community or municipal wells. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-10	At locations where the project would cross below or pass adjacent to streams with erodible bed or banks, the burial depth shall be extended below the estimated 100-year depth of scour for that stream, or located at a sufficient distance from the bank as to avoid erosion that can reasonably be expected to occur during the life of the project. (SDG&E)
Location	Entire project area at locations that would cross below or pass adjacent to streams.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-11	Groundwater levels along the underground portion of the project will be tested by drilling pilot borings. The location, distribution, or frequency of such tests shall be determined to give adequate representation of the conditions. Locations where groundwater depth is less than eight feet below ground surface shall be identified prior to excavation activities and avoided, where possible. Avoidance is especially recommended where shallow groundwater flow direction is not parallel to the orientation of the alignment. Where avoidance is not possible, SDG&E shall consider constructing underground facilities in a shallower excavation, depending upon requirements of the underground method or existing underground facilities and other practical concerns. SDG&E shall document results of test drilling in a letter report to the CPUC construction starts and shall propose specific measures to minimize the impact on groundwater. (SDG&E)
Location	Entire project area along underground portions of the project.
Timing	Pre- and during construction
Interpretation & Approach	None required.

Table 14. Mitigation Measures and Applicant Proposed Measures – Hydrology and Water Resources

WQ-APM-13	Hazardous materials will not be disposed of onto the ground, the underlying groundwater, or any surface water. Totally enclosed containment will be provided for trash. Petroleum products and other potentially hazardous materials would be removed to a hazardous waste facility permitted or otherwise authorized to treat, store, or dispose of such materials. In the event of a release of hazardous materials to the ground, it will be promptly cleaned up in accordance with applicable regulations. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-14	Secure any required General Permit for Storm Water Discharges Associated with Construction Activity (NPDES permit) authorization from the State Water Resources Control Board and/or the RWQCB to conduct construction-related activities to build the project and establish and implement a SWPPP during construction to minimize hydrologic impacts. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-3.
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-15	To the extent feasible, where the construction of access roads would disturb sensitive features such as streambeds, the route of the access road would be adjusted to avoid such impacts. Whenever practicable, construction and maintenance traffic would use existing roads or cross-country access routes (including the ROW) which avoid impacts to the sensitive feature. To minimize ground disturbance, construction traffic routes will be clearly marked with temporary markers such as easily visible flagging. Construction routes, or other means of avoidance, must be approved by the appropriate agency or landowner before use. Where it is not feasible for access roads to avoid streambed crossings, such crossings would be built at right angles to the streambeds whenever feasible. Where such crossings cannot be made at right angles, SDG&E would limit roads constructed parallel to streambeds to a maximum length of 500 feet at any one transmission line crossing location. Such parallel roads would be constructed in such a manner that minimizes potential adverse impacts on waters of the U.S. or waters of the state. Streambed crossings or roads constructed parallel to streambeds would require review and approval of necessary permits from the ACOE, CDFG, and SWRCB/RWQCB. (SDG&E)
Location	Entire project area along access roads.
Timing	Pre- and during construction
Interpretation & Approach	None required.
WQ-APM-16	If sensitive water resource features contain riparian areas, habitats of endangered species, streambeds, cultural resources, and wetlands which cannot be avoided, a qualified biological contractor shall conduct site-specific assessments for each affected site. These assessments shall be conducted in accordance with ACOE wetland delineation guidelines, as well as CDFG streambed and lake assessment guidelines, and shall include impact minimization measures to reduce wetland impacts to a less than significant effect (<i>e.g.</i> , through creation or restoration of wetlands). Though construction or maintenance vehicle access through shallow creeks or streams is allowed, staging/storage areas for equipment and materials shall be located outside of riparian areas. Construction of new access through streambeds that require filling for access purposes would require a Streambed Alteration Agreement from the CDFG and/or consultation/approval with the ACOE and SWRCB/RWQCB. Where filling is required for new access, the installation of properly sized culverts and the use of geo-textile matting should be considered in the CDFG/ACOE consultation process. (SDG&E)
Location	Entire project area.
Timing	Pre-, during and post construction
Interpretation & Approach	None required.

Sunrise Powerlink Project
MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

Note: In this table, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or timing. A measure that has been subdivided is identifiable by its measure number preceded by a dash, with subsequent tasks shown in parentheses, *e.g.*, — (A-1a). A row with a measure number preceded by a dash and/or in parentheses does not contain the entire measure, only a specific task.

Table 15. Mitigation Measures and Applicant Proposed Measures – Geology, Mineral Resources, and Soils

MITIGATION MEASURE	G-2a: Protect desert pavement. Grading for new access roads or work areas in areas covered by desert pavement shall be avoided or minimized. If avoidance of these areas is not possible, the desert pavement surface shall be protected from damage or disturbance from construction vehicles by use of temporary mats on the surface. A plan for identification and avoidance or protection of sensitive desert pavement shall be prepared and submitted to the CPUC and BLM for review and approval at least 60 days prior to start of construction.
Location	All project locations where desert pavement occurs.
Monitoring/Reporting Action	Review plan and ensure that it is implemented in the field.
Effectiveness Criteria	Construction activities do not damage desert pavement.
Responsible Agency	CPUC, BLM, USFWS
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	G-3a: Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design. The design-level geotechnical studies to be performed by the Applicant shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. 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. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and ASTM standards for field and laboratory testing. Study results and proposed solutions shall be provided to the CPUC and BLM for review and approval at least 60 days before final project design.
Location	All project locations where permanent project structures will be installed.
Monitoring/Reporting Action	Review study results. Ensure that study recommendations are implemented during construction.
Effectiveness Criteria	Project structures are not damaged by problematic soils.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	G-4a: Reduce effects of groundshaking. The design-level geotechnical investigations performed by the Applicant shall include site-specific seismic analyses to evaluate the peak ground accelerations for design of project components. Based on these findings, project structure designs shall be modified/strengthened, as deemed appropriate by the project engineer, if the anticipated seismic forces (high calculated peak vertical and horizontal ground accelerations due to severe groundshaking) are found to be greater than anticipated wind load stresses on project structures. Study results and proposed design modifications shall be provided to the CPUC and BLM for review and approval at least 60 days before final project design.
Location	All project locations where seismically induced groundshaking would potentially occur.
Monitoring/Reporting Action	Review study results. Ensure that study recommendations are implemented during construction.
Effectiveness Criteria	Project structures are not damaged by liquefaction or lateral spreading.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.

Table 15. Mitigation Measures and Applicant Proposed Measures – Geology, Mineral Resources, and Soils

MITIGATION MEASURE	G-4b: Conduct geotechnical investigations for liquefaction. Because seismically induced liquefaction-related ground failure has the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by the Applicant shall include investigations designed to assess the potential for liquefaction to affect the approved project and all associated facilities, specifically at tower locations in areas with potential liquefaction-related impacts. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables to allow ground deformations without damage to structures. Study results and proposed solutions to mitigate liquefaction shall be provided to the CPUC and BLM for review and approval at least 60 days before final project design.
Location	All project areas where liquefaction would potentially occur.
Monitoring/Reporting Action	Review study results. Ensure that study recommendations are implemented during construction.
Effectiveness Criteria	Project structures are not damaged by liquefaction or lateral spreading.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	G-5a: Minimize project structures within active fault zones. Prior to final project design SDG&E shall perform a geologic/geotechnical study to confirm the location of mapped traces of active and potentially active faults crossed by the project route. For crossings of active faults, the project design shall be planned so as not to locate towers or other project structures on the traces of active faults and in addition project components shall be placed as far as feasible outside the areas of mapped fault traces. Compliance with this measure shall be documented to the CPUC and BLM in a report submitted for review and approval at least 60 days prior to the start of construction.
Location	All Project locations that would cross active faults.
Monitoring/Reporting Action	Review report. Ensure that that the recommendations of the report are implemented during construction.
Effectiveness Criteria	Project structures are not damaged by surface fault rupture.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	G-6a: Conduct geotechnical surveys for landslides and protect against slope instability. The design-level geotechnical surveys conducted by the Applicant shall perform slope stability analyses in areas in areas of planned grading and excavation that cross and are immediately adjacent to hills and mountains. These surveys will acquire data that will allow identification of specific areas with the potential for unstable slopes, landslides, earth flows, and debris flows along the approved transmission line route and in other areas of ground disturbance, such as grading for access and spur roads. The investigations shall include an evaluation of subsurface conditions, identification of potential landslide hazards, and provide information for development of excavation plans and procedures. If the results of the geotechnical survey indicate the presence of unstable slopes at or adjacent to Proposed Project structures, 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, work areas, and project structures during and after construction, and to minimize potential for damage to project facilities. These design measures shall include, but are not limited to, retaining walls, visquene, removal of unstable materials, and avoidance of highly unstable areas. SDG&E shall document compliance with this measure prior to the final project design by submitting a report to the CPUC for review and approval at least 60 days before construction. The report shall document the investigations and detail the specific support and protection measures that will be implemented.
Location	All Project locations where slope instability would potentially occur.
Monitoring/Reporting Action	Review study results. Ensure that study recommendations are implemented during construction.

Table 15. Mitigation Measures and Applicant Proposed Measures – Geology, Mineral Resources, and Soils

Effectiveness Criteria	Project structures are not damaged by slope instability.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.
MITIGATION MEASURE	G-9a: Coordinate with quarry operations. SDG&E shall coordinate with operations and management personnel, and with BLM, to determine status of and plans for active quarries adjacent to or crossed by project alignments. SDG&E shall develop a plan to avoid or minimize interference with mining operations in conjunction with mine/quarry operators prior to construction, and submit it for review and approval to the BLM and CPUC. If mine operators are out of compliance with BLM lease requirements, SDG&E shall coordinate with all parties to resolve the situation and shall demonstrate compliance with this measure prior to the start of construction by submitting the plan to the CPUC and BLM for review at least 60 days prior to the start of construction. If active mining areas require a reroute of the existing SWPL or the Interstate 8 Alternative route, SDG&E shall provide a detailed map documenting proposed new tower and access road location(s), as well as a summary of environmental impacts that would occur (biological and cultural resources surveys must be completed).
Location	All Project locations that would cross active and potentially active quarries, specifically the Interstate 8 Alternative.
Monitoring/Reporting Action	Verify coordination has taken place and an agreement has been reached.
Effectiveness Criteria	Project does not interfere with mining operations.
Responsible Agency	CPUC, BLM
Timing	Pre- and during construction
Interpretation & Approach	None required.
GEO-APM-1	No widening or upgrading of existing access roads will be undertaken where soils are very sensitive to disturbance, except repairs, widening or upgrades necessary to make roads passable. (SDG&E)
Location	Entire project area along existing access roads.
Timing	Pre- and during construction
Interpretation & Approach	
GEO-APM-2	<ol style="list-style-type: none"> 1. Vehicle and construction equipment use will be restricted to access roads and areas in the immediate vicinity of construction work sites to help reduce soil disturbance. 2. In agricultural areas, topsoil would be left in roughened condition. 3. When practical, construction activities will be avoided on wet soil to reduce the potential for soil compaction, rutting, and loss of soil productivity. 4. Disturbed areas will be returned to their pre-construction contours and allowed to re-vegetate naturally, or will be reseeded with an appropriate seed mixture if necessary. 5. Affected landowners having property directly impacted by the project will be compensated to disc or till soil upon construction completion. 6. Construction of access roads in inaccessible terrain will be reduced by using helicopters to place structures in select locations. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
GEO-APM-3	Structure placement in areas of high shrink/swell potential will be avoided where possible. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
GEO-APM-4	Structures will be placed in geologically stable areas, avoiding fault lines, brittle surface rock and bedrock, etc. (SDG&E)

Table 15. Mitigation Measures and Applicant Proposed Measures – Geology, Mineral Resources, and Soils

Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
GEO-APM-5	Project construction activities shall be designed and implemented to avoid or minimize new disturbance, erosion on manufactured slopes, and off-site degradation from accelerated sedimentation. Maintenance of cut and fill slopes created by project construction activities would consist primarily of erosion repair. Where re-vegetation is necessary to improve the success of erosion control, planting or seeding with native seed mix would be done on slopes. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measure G-CM-21.
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
GEO-APM-6	In areas where ground disturbance is substantial or where re-contouring is required (<i>e.g.</i> , marshaling yards, tower sites, spur roads from existing access roads), surface restoration will occur as necessary for erosion control and re-vegetation. The method of restoration will normally consist of returning disturbed areas back to their original contour, reseeding (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches for erosion control. Potential for erosion will be minimized on access roads and other locations primarily with water bars. The water bars will be constructed using mounds of soil shaped to direct the flow of runoff and prevent erosion. Soil spoils created during ground disturbance or re-contouring shall be disposed of only on previously disturbed areas, or used immediately to fill eroded areas. Cleared vegetation can be hauled off-site to a permitted disposal location, or may be chipped or shredded to an appropriate size and spread in disturbed areas of the ROW with the approval of the biological monitor. To limit impact to existing vegetation, appropriately sized equipment (<i>e.g.</i> , bulldozers, scrapers, backhoes, bucket-loaders, etc.) will be used during all ground disturbance and re-contouring activities. (SDG&E)
	Also, see U.S. Fish and Wildlife Conservation Measures G-CM-22 and G-CM-23.
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
GEO-APM-8	During construction, SDG&E would remove or stabilize boulders uphill of structures that pose potentially high risk of landslide damage to those structures and would position structures to span over potential landslide areas to the greatest extent feasible. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.

Sunrise Powerlink Project
MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

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Table 16. Mitigation Measures and Applicant Proposed Measures – Socioeconomics

MITIGATION MEASURE	S-2a: Notify public of utility service interruption. Prior to construction in which a utility service interruption is known to be unavoidable, SDG&E shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the CPUC and BLM.
Location	Locations where existing utility services would have planned interruption of services.
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E posted notices/flyers and that copies have been submitted to the CPUC and the BLM.
Effectiveness Criteria	Residents and landowners are informed of planned outages.
Responsible Agency	CPUC; BLM.
Timing	Pre-construction
Interpretation & Approach	None required.
MITIGATION MEASURE	S-2b: Protect underground utilities. Prior to construction of the underground transmission line, SDG&E shall submit to the CPUC and BLM written documentation, including evidence of review by the appropriate jurisdictions, including the following: <ul style="list-style-type: none"> • Construction plans designed to protect existing utilities and showing the dimensions and location of the finalized alignment • Records that the Applicant provided the plans to affected jurisdiction for review, revision and final approval • Evidence that the project meets all necessary local requirements • Evidence of compliance with design standards • Copies of any necessary permits, agreements, or conditions of approval • Records of any discretionary decisions made by the appropriate agencies.
Location	Along the entire route, especially during underground construction where existing utility services would potentially be disrupted or a collocation accident would potentially occur.
Monitoring/Reporting Action	CPUC/BLM shall monitor to verify that SDG&E provides the CPUC with documentation
Effectiveness Criteria	Minimal disruption of existing utilities
Responsible Agency	CPUC; BLM
Timing	Pre-construction
Interpretation & Approach	None required.
MITIGATION MEASURE	S-3a: Recycle construction waste. To comply with the Integrated Waste Management Act of 1989, during project construction SDG&E and/or its construction contractor shall recycle a minimum of 50 percent of the waste generated during construction activities. In unincorporated San Diego County, to comply with the construction and demolition debris ordinance, SDG&E and/or its construction contractor shall recycle a minimum of 90 percent of inerts and 70 percent of all other materials, and submit all applicable plans and documentation. Following the completion of construction activities, SDG&E shall provide the CPUC and BLM with documentation from the recycling and landfill facilities used to show that the amount of waste recycled was 50 percent or more in Imperial Valley and incorporated San Diego County, and 90 percent of inerts and 70 percent of all other materials in unincorporated San Diego County.
Location	All project locations
Monitoring/Reporting Action	CPUC/BLM shall monitor to verify that SDGE provides the CPUC with documentation from the recycling and landfill facilities
Effectiveness Criteria	Recycle a minimum of 50 percent of the waste generated during construction activities.
Responsible Agency	CPUC; BLM
Timing	During construction

Table 16. Mitigation Measures and Applicant Proposed Measures – Socioeconomics

Interpretation & Approach	None required.
MITIGATION MEASURE	S-3b: Use reclaimed water. To the extent feasible, SDG&E shall coordinate with local water districts in advance in order to efficiently obtain reclaimed or potable water for delivery to the construction sites and to meet any restrictions imposed by them. The Applicant shall provide a letter describing the availability of reclaimed water and efforts made to obtain it for use during construction to the CPUC and BLM a minimum of 60 days prior to the start of construction.
Location	All project locations
Monitoring/Reporting Action	CPUC/BLM shall monitor to verify that SDG&E provides the CPUC with documentation
Effectiveness Criteria	Use of reclaimed water (recommended but not required for implementation)
Responsible Agency	CPUC; BLM
Timing	Pre- and during construction
Interpretation & Approach	7/2/09: Reclaimed water will be used when feasible. Written description (letter) regarding availability will be submitted to describe feasibility of use.
PSU-APM-1	SDG&E has and will continue to coordinate with all utility providers with facilities located within or adjacent to the Proposed Project to ensure that design does not conflict with other facilities. In the event of a conflict, the project will be aligned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. Alternately, the other existing facilities may be relocated. Long-term operations and maintenance of the project will be negotiated through easement, purchased right-of-way, franchise agreement, or joint use agreement. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction.
Interpretation & Approach	None required.
PSU-APM-2	Underground Service Alert would be notified a minimum of 48 hours in advance of earth-disturbing activities in order to identify any buried utility lines. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.
PSU-APM-3	SDG&E will coordinate construction schedules, lane closures, and other activities with installation of the project with emergency and police services to ensure that disruption to response times and access is minimized. (SDG&E)
Location	Entire project area.
Timing	Pre- and during construction
Interpretation & Approach	None required.

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Table 17. Mitigation Measures and Applicant Proposed Measures – Fire and Fuels Management

MITIGATION MEASURE	<p>— F-1a: Develop and implement a Construction Fire Prevention Plan. SDG&E shall develop a multi-agency Construction Fire Prevention Plan for the SRPL and monitor construction activities to ensure implementation and effectiveness of the plan. Plan reviewers shall include: CPUC, CAL FIRE, San Diego and Imperial Counties, BLM, CNF, and City fire agencies. SDG&E shall provide a draft copy of this Plan to each listed agency at least 90 days before the start of any construction activities. Comments on the Plan shall be provided by SDG&E to all other participants, and SDG&E shall resolve each comment in consultation with CAL FIRE. The final Plan shall be approved by CAL FIRE at least 30 days prior to the initiation of construction activities. SDG&E shall fully implement the Plan during all construction and maintenance activities.</p> <p>— (F-1a) All construction work on the SRPL shall follow the Construction Fire Prevention Plan guidelines and commitments, and Plan contents are to be incorporated into the standard construction contracting agreements for the construction of the SRPL. Primary Plan implementation responsibility shall remain with SDG&E.</p> <p>— (F-1a) At a minimum, Plan contents shall include the requirements of Title 14 of the California Code of Regulations, Article 8 #918 "Fire Protection" (Refer to Section D.15.3), all components of the Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007) in Appendix 3D, and the elements listed below:</p> <ul style="list-style-type: none"> • During the construction phase of the project, SDG&E shall implement ongoing fire patrols during the fire season as defined each year by local, State, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. • Fire Suppression Resource Inventory – In addition to CCR Title 14, 918.1(a), (b), and (c), SDG&E shall update in writing the 24-hour contact information and onsite fire suppression equipment, tools, and personnel list on quarterly basis and provide it to the CPUC, BLM, and to State and federal fire agencies. • During Red Flag Warning events, as issued daily by the National Weather Service in SRAs and Local Responsibility Areas (LRA), and when the USFS Project Activity Level (PAL) is Very High on CNF (as appropriate), all construction and maintenance activities shall cease. Exception for transmission line testing: A transmission line may be tested, one time only, if the loss of another transmission facility could lead to system instability or cascading outages. Utility and contractor personnel shall be informed of changes to the Red Flag event status and PAL as stipulated by CAL FIRE and CNF. • All construction crews and inspectors shall be provided with radio and cellular telephone access that is operational along the entire length of the approved route to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon ignition. • Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect. • Each member of the construction crew shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 yards of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Plan.
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CPUC, CAL FIRE, San Diego and Imperial Counties, BLM, CNF, and City fire agencies will review SDG&E's Construction Fire Prevention Plan and ensure its implementation.
Effectiveness Criteria	Approval and implementation of the Plan Quarterly updates to agencies Work stoppage during Red Flag Warnings and Very High PAL

Table 17. Mitigation Measures and Applicant Proposed Measures – Fire and Fuels Management

Responsible Agency	CPUC, CAL FIRE, San Diego and Imperial Counties, BLM, CNF, and City fire agencies.
Timing	Pre-construction
Interpretation & Approach	Red Flag warning. On 7/2/09 Construction will cease only in those areas where the Red Flag warning applies. Plan is Fire Plan for Construction, Operation and Maintenance.
MITIGATION MEASURE	F-1b: Amend and implement Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007). The draft SDG&E Plan and final Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007) are presented in Appendix 3D. The Amended Plan shall, at a minimum, include all of the provisions of the Final Plan and the Construction Fire Plan (per Mitigation Measure F-1a). The plan shall be revisited and updated once every five years to incorporate new regulations, practices, technologies, and fire science research. SDG&E shall submit the Plan for review and comment by the following agencies at least 90 days prior to energizing the Proposed Project: CPUC, BLM, U.S. Forest Service, and ABDSP, and shall submit the Plan (with agency comments incorporated) for review and approval by Cal Fire at least 90 days prior to energizing the Proposed Project.
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CPUC, BLM, CAL FIRE, U.S. Forest Service, and ABDSP will review and comment and CAL FIRE will approve the SDG&E Fire Plan for Electric Standard Practice. CPUC and BLM will verify adoption of plan.
Effectiveness Criteria	Approval and implementation of the Plan Quarterly updates to agencies Work stoppage during Red Flag Warnings and Very High PAL
Responsible Agency	CPUC, BLM, CAL FIRE, U.S. Forest Service, and ABDSP
Timing	Post construction, pre-energizing the line.
Interpretation & Approach	The name of the draft SDG&E Plan and final Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007) has been changed to the SDG&E Wildland Fire Prevention & Fire Safety Plan (ESP 113.1) Reference to ABDSP is not applicable to FESSR.
MITIGATION MEASURE	— F-1c: Ensure coordination for emergency fire suppression. SDG&E shall ensure that personnel, construction equipment, and aerial operations do not create obstructions to firefighting equipment or crews. The following provisions shall be defined based on consultation with fire agencies.
	— (F-1c) Onsite SDG&E and contracted personnel shall coordinate fire suppression activities through the active Fire Incident Commander, and emergency ingress and egress to construction-related access roads shall remain unobstructed at all times.
	— (F-1c) Construction in the work area shall cease in the event of a fire within 1,000 feet of the work area. The work area includes the transmission right-of-way (ROW), construction laydown areas, pull sites, access roads, parking pads, and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. SDG&E shall contact CAL FIRE and CNF dispatch two days prior to helicopter use and shall provide dispatch centers with radio frequencies being used by the aircraft, aircraft identifiers, the number of helicopters that will be used while working on or near SRA and CNF lands at any given time, and the flight pattern of helicopters to be used. Should a wildfire occur within one (1) mile of the work area, upon contact from the CAL FIRE Incident Commander and/or Forest Aviation Officer, helicopters in use by SDG&E shall immediately cease construction activities and not restart aerial operations until authorized by the appropriate fire agency.
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CAL FIRE and CNF will ensure SDG&E: (1) coordinates fire suppression activities through the active Fire Incident Commander, (2) keeps emergency ingress and egress to construction-related access roads unobstructed at all times, (3) ceases work in the event of a fire, (4) contacts CAL FIRE and CNF prior to helicopter use.

Table 17. Mitigation Measures and Applicant Proposed Measures – Fire and Fuels Management

Effectiveness Criteria	<ul style="list-style-type: none"> • Access roads unobstructed at all times • Work stops in the event of fire • Pre-reporting of helicopter use • Cessation of helicopter use in the event of fire
Responsible Agency	CPUC; BLM, CAL FIRE, CNF
Timing	During construction
Interpretation & Approach	None required.
MITIGATION MEASURE	F-1d: Remove hazards from the work area. The Applicant shall clear dead and decaying vegetation from the work area prior to starting construction and/or maintenance work. The work area includes only those areas where personnel are active or where equipment is in use or stored, and may include portions of the transmission right-of-way (ROW), construction laydown areas, pull sites, access roads, parking pads, and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. Cleared dead and decaying vegetation shall either be removed or chipped and spread onsite in piles no higher than six (6) inches.
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CPUC/BLM monitor SDG&E work areas.
Effectiveness Criteria	Work areas remain clear of brush and dead and decaying vegetation
Responsible Agency	CPUC; BLM
Timing	Pre-, during and post construction
Interpretation & Approach	None required.
MITIGATION MEASURE	F-1e: Contribute to defensible space grants fund. SDG&E shall contribute an annual sum to a fund that shall be distributed as homeowner grants for the creation of defensible space around homes, to promote compliance with PRC 4291, and to facilitate firefighting efforts and reduce structure damage from wildfires potentially ignited by the transmission line. The dollar value of the contribution is \$2000 (2008USD) per home determined to be affected through Fire Behavior Model analysis (Table D.15-25). Grants from the fund shall be distributed to those homeowners at highest risk of sustaining structure damage from an ignition-related to the transmission line, as demonstrated by the Fire Behavior Trend Model results. Grants may alternatively be used toward retrofitting rooftops with fire-proof materials, fire shutters, double pane windows, cave boxing, removal of attic vents and/or installation of alternatives, automatic or remotely-operated water sprinklers and automatic or remotely-operated generator-supported water systems, and removal or replacement of wood fencing and decks with fire-resistant materials, at the discretion of the homeowner and under advisement by the agencies. The mechanism for grants distribution shall be determined through agency negotiations and detailed in the Memorandum of Understanding (Mitigation Measure F-3b).
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CPUC/BLM verifies SDG&E contributes sum to fund.
Effectiveness Criteria	Annual contributions are made according to MOU and Table D.15-25 (see below)
Responsible Agency	CPUC/BLM
Timing	Post construction
Interpretation & Approach	None required.
MITIGATION MEASURE	— F-2a: Establish and maintain adequate line clearances. The Applicant shall establish adequate conductor clearances prior to energizing the project by removing all vegetation from within 15 radial feet of new and relocated overhead 69 kV, 230 kV, and 500 kV conductors under maximum sag and sway. Only trees and vegetation with a mature height of 15 feet or less shall be permitted within the ROW, except where the transmission line spans a canyon. In addition, tree branches that overhang the ROW within 15 horizontal feet of any conductor shall be trimmed or removed, as appropriate, including those on steep hillsides that may be many vertical feet above the facility. Cleared vegetation shall either be removed or chipped and spread onsite in piles no higher than six (6) inches.

Table 17. Mitigation Measures and Applicant Proposed Measures – Fire and Fuels Management

	<p>— F-2a During the life of the project, the Applicant shall maintain adequate conductor clearances by inspecting the growth of vegetation along the entire length of the overhead transmission line at least once each spring and documenting the survey and results in a report submitted to the CPUC before June 1 of each year. Conductor clearance of 15 radial feet under maximum sag and sway shall be maintained at all times.</p> <p>Maximum sag and sway shall be computed based on ambient temperatures of no less than 120 degrees Fahrenheit and wind gusts of no less than 100 miles per hour.</p>
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E established adequate conductor clearance.
Effectiveness Criteria	Adequate (15 foot) conductor clearance is maintained
Responsible Agency	CPUC; BLM
Timing	Post construction, prior to energizing the project and for the life of the project.
Interpretation & Approach	None required.
MITIGATION MEASURE	<p>F-2b: Install existing conductors on steel poles. Where construction of the Proposed Project or an alternative would result in the relocation of existing 69 kV transmission lines, these lines shall be relocated onto non-specular steel poles using vertical conductor construction. Also, all existing 69 kV or distribution lines with poles located within 100 feet of the Proposed Project or alternative shall be reconstructed so the existing conductors are on non-specular steel poles using vertical conductor construction to eliminate pole combustion hazard potential, increase wind loading capacity, and reduce mid-line slap ignition potential. Steel poles shall be finished to give the appearance of wood poles. This measure shall not apply to conductors that would be underbuilt on steel poles or lattice towers or installed underground. The vertical conductor construction requirement shall not apply to isolated towers that would be adjacent to existing structures with horizontal conductor construction, and shall apply to sets of four or more sequential towers.</p>
Location	Milepost MRD-9 through MRD-31
Monitoring/Reporting Action	CPUC/BLM monitor verifies that SDG&E installs exiting conductors on steel poles.
Effectiveness Criteria	Existing conductors are installed on steel poles, and wood poles are removed
Responsible Agency	CPUC; BLM
Timing	During construction
Interpretation & Approach	Replacement of wood poles to steel poles will occur on all overhead electrical facilities within 100 feet of the proposed alignment edge of right of way for those adjacent structures that could come in conflict with the conductor of the new structure alignment if the adjacent structures were to fall over for one reason or another. If the adjacent structures do not pose a threat of falling into the new alignment conductors due to topography differences or other design constraints, then there will be no need to change the wood poles to steel poles.
MITIGATION MEASURE	<p>F-2c: Perform climbing inspections. The Applicant shall perform climbing inspections on 10 percent of project structures annually, such that every project structure has been climbed and inspected at the end of a 10-year period, for the life of the project. In addition, the Applicant shall keep a detailed inspection log of climbing inspections, and any potential structural weaknesses or imminent component failures shall be acted upon immediately. The inspection log shall be submitted to CPUC for review on an annual basis.</p>
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	Inspection log is provided to CPUC annually
Effectiveness Criteria	Climbing inspections are performed on 10 percent of structures annually
Responsible Agency	CPUC; BLM
Timing	Post construction
Interpretation & Approach	None required.

Table 17. Mitigation Measures and Applicant Proposed Measures – Fire and Fuels Management

MITIGATION MEASURE	<p>F-3a: Contribute to Powerline Firefighting Mitigation Fund. The Applicant shall contribute an annual sum to local, State, and federal fire protection districts in the project vicinity through the mechanism of a new Powerline Firefighting Mitigation Fund, which shall be organized and carried out by SDG&E, and shall be subject to the oversight of the CPUC for the life of the Fund. Funding shall be used toward fire prevention measures and protection equipment and services, as appropriate to each jurisdiction. An increase in funding for fire prevention and suppression services and equipment will increase the probability of a fire being successfully contained, especially during normal weather conditions, and will therefore partially mitigate the significant barrier the transmission line poses to firefighting operations. The annual sum shall be based on an equivalent fuelbreak mitigation (presented as Mitigation Measure F-3a in the Draft EIR/EIS), which is an alternative means of partially mitigating the significant effect that the presence of the transmission line on firefighting operations, but which would be jurisdictionally infeasible. This shall be \$1,000 per acre for the first year plus \$250 per acre for each subsequent year for the life of the project (in 2008 United States Dollars), based on the number of miles of Wildfire Containment Conflict listed in Table D.15-26 (see below).</p> <p>Should CAL FIRE wish to take over administrative authority for the Powerline Firefighting Mitigation Fund, an administrative transfer shall not be in violation of Mitigation Measure F-3a.</p>
Location	Fund contribution based on miles of Wildfire Containment Conflict
Monitoring/Reporting Action	SDG&E provides proof of annual payment. CPUC, BLM, and U.S. Forest Service will ensure SDG&E contributes annually to the fund and shall have oversight for the life of the fund. The funds shall be used toward fire prevention measures and protection equipment and services.
Effectiveness Criteria	Annual sum is paid to Powerline Firefighting Mitigation Fund.
Responsible Agency	CPUC; BLM, U.S. Forest Service
Timing	Pre-, during and post construction
Interpretation & Approach	Reference to ABDSP is not applicable to FESSR.
MITIGATION MEASURE	<p>F-3b: Prepare and implement a Multi-agency Fire Prevention MOU. A Memorandum of Understanding (MOU) for the SRPL shall be created and implemented between SDG&E and the CAL FIRE San Diego Unit, Cleveland National Forest, and other agencies as appropriate using the existing Southwest Powerlink MOU as a template. The MOU shall be adopted prior to energizing the new transmission line. The purpose of this Multi-agency Fire Prevention MOU is to efficiently coordinate all aspects of agency and utility fire prevention plans and practices. The MOU shall integrate the following components of the utility fire plan with existing agency fire plans: fire prevention, firefighter safety, emergency communication, firefighter training of both ground and aerial utility personnel, and others as appropriate. Financial commitments of each participating organization to pre-fire planning, preparedness, and prevention programs shall be stipulated in the MOU. The MOU shall stipulate the mechanism for defensible space grants distribution (Mitigation Measure F-1e). This MOU shall be periodically reviewed and updated at a minimum of once every five years to accommodate changes in regulations and environmental conditions. A community education and outreach program on the fire prevention plans and practices implemented by the MOU shall be adopted.</p> <p>A key element of the MOU shall be ensuring immediate transmission line de-energizing during fire emergencies and ensuring adequate and immediate communication to fire agencies of line de-energizing. SDG&E shall provide all appropriate local, State, and federal fire dispatching agencies with an on-call contact person (Fire Coordinator) who has the authority to shut down the line in areas affected by a fire. The transmission line shall be de-energized prior to and during fire suppression activities within 1,000 feet of the transmission corridor to maintain firefighter safety, and re-energizing shall require notification of all fire agencies.</p>
Location	Along entire Proposed Project and Alternatives
Monitoring/Reporting Action	CPUC/BLM monitor verifies that MOU is created and implemented between SDG&E and the CAL FIRE San Diego Unit, Cleveland National Forest, and other agencies as appropriate.
Effectiveness Criteria	MOU is drafted, agreed upon, and reviewed every five (5) years
Responsible Agency	CPUC; BLM
Timing	Pre-, during, and post construction.
Interpretation & Approach	8/31/09: De-energizing of the transmission line will be conducted in coordination with fire agencies.

Table 18. Mitigation Measure F-1e Compliance Contributions

Segment Identification	Homes at Risk	Annual Contribution Per Home	Total Annual Contribution for 2008 (USD)
Final Environmentally Superior Southern Route Alternative	1,300	\$2,000	\$2,600,000

- a To be determined through Fire Behavior Trend Modeling Analyses that shall be performed by SDG&E should any of these future routes be constructed.
- b No additional homes would be placed at risk should this alternative be selected in addition to the primary route to which this alternative would connect.

Table 19. Mitigation Measure F-3a Compliance Locations

Segment Identification	Location of Significant Conflict	Length of Significant Conflict (miles)	Area of Significant Conflict (acres)
Final Environmentally Superior Southern Route Alternative	MRD 11-13, MRD 23-26.5, and MP just before 131-133	6.5	236

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

Project Construction Phase

G-CM-1 A qualified biologist³ will monitor all work areas to ensure that all impacts occur within designated limits. Monitoring entails communicating with contractors, taking daily notes, and ensuring that the requirements of the Conservation Measures are met by being present during construction activities including all initial grubbing and clearing of vegetation. The qualified biologist will conduct monitoring for any area subject to disturbance from construction activities. The qualified biologist will perform periodic inspections of construction once or twice per week, as defined by the Wildlife Agencies (the Service and CDFG, collectively), depending on the sensitivity of the resources. The qualified biologist will send weekly monitoring reports to the CPUC and BLM and will record any reduction or increase in construction impacts so that compensation requirements can be revised accordingly. The final impact calculations will be submitted to the CPUC, BLM, USFS (for sections of the Project that require monitoring on National Forest lands), and Wildlife Agencies for review and approval.

- SDG&E, its contractors and subcontractors, and their respective project personnel, will refer all environmental issues, including wildlife relocation, sick or dead wildlife, hazardous waste, or questions about environmental impacts to the qualified biologist. Experts in wildlife handling (*e.g.*, Project Wildlife) may need to be brought in by the qualified biologist for assistance with wildlife relocations.
- The qualified biologist will have the authority to issue stop work orders if any part of the Conservation Measures are being violated. The qualified biologist will immediately notify the CPUC, BLM, USFS and Wildlife Agencies of any significant events discovered during the monitoring. Reinitiation of work following a stop work order will only occur when the CPUC, BLM, USFS, and Wildlife Agencies are satisfied that the impacts have been fully documented, that compensation for these impacts will be made, and that any additional protection measures they deem necessary will be undertaken.

G-CM-2 Throughout the construction process all crews will use the SDG&E Water Quality Construction Best Management Practices Manual (BMPs) (SDG&E 2002). Following are some of the general guidelines:

- Construction activities will use existing bridges to cross major streams and culverts in most dry intermittent streams;
- Surface water, riparian areas, and floodplains will be spanned where feasible; A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented; Storm Water BMPs for construction will be implemented per the requirements of the project's SWPPP;
- Silt fencing, straw mulch, and straw bale check dams will be installed as appropriate to contain sediment within construction work areas and staging areas. Where soils and slopes exhibit high erosion potential, erosion control blankets, matting, and other fabrics and/or other erosion control measures will be implemented.
- The potential for increased sediment loading will be minimized by limiting road improvements to those necessary for project construction.
- Upland pull sites will be selected to minimize impacts to surface waters, riparian areas, wetlands, and floodplains; and
- Structures will not be placed in streambeds or drainage channels to the extent feasible.

G-CM-3 SDG&E will secure any required General Permit for Storm Water Discharges Associated with Construction Activity (National Pollutant Discharge Elimination System (NPDES permit) authorization from the State Water Resources Control Board and/or the Regional WQCB to conduct construction-related activities to build the project and establish and implement a SWPPP during construction to minimize hydrologic impacts.

G-CM-4 Prior to construction, all of SDG&E's contractors, subcontractors, and project personnel will receive training regarding the appropriate work practices necessary to effectively implement the Conservation Measures and to comply with the applicable environmental laws and regulations including appropriate wildlife avoidance and impact minimization procedures, the importance of these resources, and the purpose and necessity of protecting them.

G-CM-5 In addition to regular watering to control fugitive dust created during clearing, grading, earth-moving, excavation, and other construction activities, which could interfere with plant photosynthesis, a 24 km (15 mi) per hour speed limit will be observed on dirt access roads to reduce dust and allow reptiles and small mammals to disperse.

G-CM-6 The area limits of project construction and survey activities will be predetermined based on the temporary and permanent disturbance areas noted on the final design engineering drawings, with activity restricted to and confined within those limits. In addition, survey personnel will keep survey vehicles on existing roads. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate limits of survey or construction activity where any sensitive biological resources or wildlife habitats occur. Any impacts associated with unauthorized activity (*e.g.*, exceeding approved construction limits) will be mitigated at a 5:1 ratio (5.5:1 in Flat-tail Horned Lizard (FTHL) Management Area (MA)). Restoration of the unauthorized impacts will be credited at a 1:1 ratio (*i.e.*, offset by in-place habitat restoration); the remaining 4:1 (or 4.5:1 in FTHL MA) will be acquired offsite.

³ A qualified biologist or biological monitor must have (1) a bachelor's degree with an emphasis in ecology, natural resource management, or related science; (2) previous experience with applying the terms and conditions of a biological opinion; and (3) approval of the Service if conducting focused or protocol surveys for federally listed species.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-7 During project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat will require prior approval from the project biological monitor in conformance with the Conservation Measures. Hiking off roads or paths for survey data collection is allowed year-round as long as applicable Conservation Measures to minimize impacts are met.

G-CM-8 Stringing of new wire and reconductoring for the project will be allowed year round in sensitive habitats if the conductor is not allowed to drag on the ground or in brush and all vehicles used during stringing remain on project access roads. Where stringing requires that conductor drop within brush or drag on or through the brush or ground or vehicles leave project access roads, SDG&E will perform a site survey(s), to determine presence or absence of nesting migratory birds (including the three federally listed bird species subject to this consultation) or other listed species in the work area. Details of protocol survey requirements are outlined in the species-specific measures below. SDG&E will submit results of this survey(s) to the Wildlife Agencies, prior to dropping wire in brush, dragging wire on the ground or through brush, or taking vehicles off project access roads.

G-CM-9 Project personnel will not deposit or leave any food or waste in the project area, and no biodegradable or non-biodegradable debris will remain in the ROW following completion of construction. All refuse will be placed in appropriate wildlife-proof containers and removed from job sites daily.

G-CM-10 Repairs may be required during the construction of the project to address emergency situations (*e.g.*, downed lines, slides, slumps, major subsidence, etc.) that potentially or immediately threaten the integrity of the project facilities. During emergency repairs, all Conservation Measures will be followed to the fullest extent practicable. Once the emergency has been abated, any unavoidable environmental damage will be reported to the project biological monitor, who will promptly submit a written report of such impacts to the Wildlife Agencies and any other government agencies having jurisdiction over the emergency actions. If required by the government agencies, the biological monitor will develop a reasonable and feasible mitigation plan consistent with the Conservation Measures and any permits previously issued for the project by the governmental agencies.

G-CM-11 In areas designated as sensitive by SDG&E or the Wildlife Agencies, to the extent feasible, structures and access roads will be designed to minimize impacts to sensitive features. These areas of sensitive features include, but are not limited to, high-value wildlife and plant habitats, sensitive vegetation communities, and habitat occupied by listed species. If the sensitive features cannot be completely avoided or spanned, structures and access roads will be placed to minimize the disturbance to the extent feasible. When it is not feasible to avoid constructing poles or access roads in designated sensitive areas, SDG&E will perform a site survey to determine presence or absence of endangered species in sensitive habitats as required in G-CM-32 below. SDG&E will submit results of this survey to the Wildlife Agencies prior to constructing structures or access roads.

G-CM-12 In construction areas where grading or re-contouring is not required, vegetation will be left in place wherever possible to avoid excessive root damage and allow for re-sprouting. Only the minimum amount of vegetation necessary for the construction of structures and facilities will be removed. Topsoil located in areas containing sensitive habitat will be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation. Topsoil located in developed or disturbed areas is excluded from this measure. Disturbed soils will be restored based on a Habitat Restoration Plan per G-CM-16.

G-CM-13 Night lighting within the project area adjacent to preserved habitat will be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat to the maximum extent practicable. Vehicle traffic associated with project activities may not exceed 24 km (15 mi) per hour to prevent mortality of nocturnal wildlife species that may be moving about.

G-CM-14 To the extent practicable, surface-disturbing components of the project will be located in previously disturbed areas or where habitat quality is poor to minimize disturbance of vegetation and soils.

G-CM-15 Temporary construction mats may be used to minimize vegetation and soil disturbance only where deemed appropriate by the qualified biologist. The construction mats will not be left on the ground for more than three weeks. Use of construction mats will be considered a temporary impact to vegetation and will be incorporated into the Habitat Restoration Plan per conservation measure G-CM-16.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-16 SDG&E will prepare and implement a Habitat Restoration Plan, approved by the CPUC, BLM, USFS, and Wildlife Agencies, for all temporarily impacted project areas. The Habitat Restoration Plan must be approved in writing by the above-listed agencies prior to the initiation of any vegetation disturbing activities. Restoration involves recontouring the land, replacing the topsoil (if it was collected), planting seed and/or container stock, and maintaining (*i.e.*, weeding, replacement planting, supplemental watering, etc.) and monitoring the restored area for a period of five years (or less if the restoration meets all success criteria). The compensation ratios listed in Table 2 will apply to impacts from emergency repairs during the construction phase. In cases where the impacts to sensitive vegetation communities occur on lands previously preserved to offset impacts from other projects, the mitigation ratios will be doubled, as is standard practice in San Diego County.

- Areas to be restored will include all areas temporarily impacted by construction, such as tower construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations where towers are removed. Restoration of some habitats in temporarily impacted areas may not be possible if those areas are subject to vegetation management to maintain proper clearance between transmission lines and vegetation. In those instances, impacts will be considered permanent, and the compensation will consist of offsite land acquisition and preservation. Where onsite restoration is planned, SDG&E will identify a qualified habitat restoration specialist to be approved by the CPUC, BLM, USFS, and Wildlife Agencies. The habitat restoration specialist will prepare and implement the Habitat Restoration Plan. Hydroseeding, drill seeding, or an otherwise proven restoration technique will be used on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC, BLM, USFS, and Wildlife Agencies to restore the area to its original condition. The Habitat Restoration Plan will incorporate the measures identified in the May 25, 2006, Memorandum of Understanding (MOU) among Edison Electric Institute, USFS, BLM, Service, National Park Service, and Environmental Protection Agency (EPA) (Edison Electric Institute *et al.* 2006), where applicable.
 - For restoration of temporary impacts to desert scrub and dune habitats, a separate Habitat Restoration Plan will be developed for desert vegetation communities and incorporate Desert Bioregion Revegetation/Restoration Guidance measures. These measures generally include alleviating soil compaction, returning the surface to its original contour, pitting or imprinting the surface to allow small areas where seeds and rain water can be captured, planting seedlings that have acquired the necessary root mass to survive without watering, planting seedlings in the spring with herbivory cages, broadcasting locally collected seed immediately prior to the rainy season, and covering the seeds with mulch.
 - The restoration of habitat will be maintained and monitored for five years after installation by an experienced, licensed habitat restoration contractor, or until established success criteria identified in the Restoration Plan (*e.g.*, specified percent cover of native and nonnative species, species diversity, and species composition as compared with an undisturbed reference site) are met. Maintenance, monitoring, and reporting will be conducted following a prescribed schedule to assess progress and identify potential problems with the restoration. Remedial action (*e.g.*, additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) will be taken by an experienced, licensed Habitat Restoration Contractor during the maintenance and monitoring period if necessary to ensure the success of the restoration. If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring will extend beyond the five-year period until the criteria are met or unless otherwise approved by the CPUC, BLM, USFS and Wildlife Agencies. For areas where habitat restoration cannot meet restoration requirements, as determined by the habitat restoration specialist in coordination with the CPUC, BLM, USFS (for sections of the project with restoration on National Forest lands), and Wildlife Agencies, off-site purchase and dedication of habitat will be provided at the ratios provided in Table 2.
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Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-17 SDG&E will purchase/dedicate suitable habitat for preservation, at ratios identified in Table 2, to offset permanently impacted areas. A Habitat Management Plan(s) will be required for all offsite parcels and must be approved, in writing, by the CPUC, BLM, USFS, and Wildlife Agencies prior to the initiation of any vegetation clearing activities. The Habitat Management Plan(s) shall include, but will not be limited to:

- Legal descriptions of all parcels approved by the CPUC, BLM, USFS, and Wildlife Agencies;
- Management specifications including, but not limited to, regular biological surveys to compare with baseline; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports to the CPUC, BLM, USFS, and Wildlife Agencies;
- Baseline biological data for all parcels;
- Designation of a land management entity approved by the CPUC, BLM, USFS, and Wildlife Agencies to provide in-perpetuity management;
- A Property Analysis Record (PAR) prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan; and
- Designation of responsible parties and their roles (*e.g.*, provision of endowment by the applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity).

All off-site compensation parcels will be approved by the CPUC, BLM, USFS, and Wildlife Agencies and must be acquired or their acquisition must be assured through a mechanism such as a performance bond prior to ground disturbing activities. To demonstrate that such parcels will be acquired, SDG&E will submit a Habitat Acquisition Plan at least 120 days prior to any ground disturbing activities. The Plan will be submitted to the CPUC, BLM, Wildlife Agencies, and USFS for review and approval and will include, but not be limited to: legal descriptions and maps of all parcels proposed to be acquired; acquisition schedule that includes phasing relative to impacts; timing of conservation easement recording; initiation of habitat management activities relative to acquisition; and assurance mechanisms (*e.g.*, performance bonds to assure adequate funding) for any parcels not actually acquired prior to vegetation disturbing activities. SDG&E will fully fund an endowment for in-perpetuity management of all parcels acquired to off-set the permanent impacts of this project. The endowment will be based on the PAR included in the Habitat Management Plan(s) for these parcels and will be fully funded within three (3) months of the approval of the Habitat Management Plan(s).

G-CM-18 To reduce adverse impacts from unnatural wildfire (type conversion, proliferation of exotic weed species), SDG&E will re-seed disturbed areas after a transmission line-caused fire. Should a fire occur and be determined by the CPUC's Consumer Protection and Safety Division (CPSD) or the California Department of Forestry and Fire Protection (CAL FIRE) to be caused by the SRPL Project, SDG&E will re-seed all natural areas — both public and private — that are burned as a result of the project-caused fire. Re-seeding will be required for areas that have been burned within the minimum 10-year period required for arid chaparral to establish an adequate seed bank and thereby resist vegetation type conversion. A re-seeding plan will be developed with input from Cal Fire, the USFS, BLM, CPUC and Wildlife Agencies. Seeds shall be raked into the soil to avoid seed predation, and reseeded will be carried out once to coincide with the rainy season (October 1 through April 1) to increase the likelihood of germination success. SDG&E will provide a written report documenting all re-seeding activities to the BLM, CPUC, USFS, and Wildlife Agencies. SDG&E will make a good faith effort to obtain approval to re-seed on private lands as appropriate, and documentation of this good faith effort will be submitted to the above mentioned agencies upon request. Specific re-seeding requirements stipulated in this conservation measure will be subject to approval and modification by any public landowning agency.

G-CM-19 SDG&E will prepare and implement a Raven Control Plan, approved by the Wildlife Agencies, for portions of the SRPL Project route. The raven control plan will include the use of raven perching and nesting deterrents. The plan will identify the purpose of conducting raven control; provide training in how to identify raven nests and how to determine whether a nest belongs to a raven or a raptor species; describe the seasonal limitations on disturbing nesting raptors; describe raven control methods to be employed along the route; and describe procedures for documenting the activities on an annual basis.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-20 SDG&E will prepare and implement a comprehensive, adaptive Weed Control Plan for pre-construction and long-term invasive weed abatement. The Weed Control Plan will be approved by the BLM, USFS, and Wildlife Agencies before implementation. Where SDG&E owns the ROW property, the Weed Control Plan will include specific weed abatement methods, practices, and treatment timing developed in consultation with the San Diego County Agriculture Commissioner's Office and the California Invasive Plant Council (Cal-IPC). On the ROW easement lands administered by public agencies (BLM, USFS, and Wildlife Agencies), the Weed Control Plan will incorporate all appropriate and legal agency stipulated regulations. The Weed Control Plan will be submitted to the ROW landholding public agencies for final authorization of weed control methods, practices, and timing prior to implementation of the Weed Control Plan on public lands. ROW easements located on private lands will include adaptive provisions for the implementation of the Weed Control Plan. Prior to implementation, SDG&E will work with the landowners to obtain authorization of the weed control treatment that is required. Developed land will be excluded from weed control.

The Weed Control Plan will include the following:

- A pre-construction weed inventory will be conducted by surveying the entire ROW and areas immediately adjacent to the ROW (where access and permission can be secured), as well as at all ancillary facilities associated with the Project, for weed populations that: (1) are considered by the San Diego County Agriculture Commissioner as being a priority for control and (2) aid and promote the spread of wildfires (such as cheatgrass [*Bromus tectorum*], Saharan mustard [*Brassica tournefortii*] and medusa head [*Taeniatherum caput-medusae*]). These populations will be mapped and described according to density and area covered. These plant species will be treated (where access and permission can be secured) prior to construction or at a time when treatments will be most effective based on phenology according to control methods and practices for invasive weed populations designed in consultation with the San Diego County Agriculture Commissioner's Office and Cal-IPC, as appropriate.
- For areas directly impacted by the Project, a pre-construction weed inventory will be conducted for those weed populations rated 'High' or 'Moderate' for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006). These weed species will be treated prior to construction or at a time when treatments will be most effective based on phenology according to control methods and practices for invasive weed populations designed in consultation with Cal-IPC.
- Weed control treatments will include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the San Diego County Agriculture Commissioner and the ROW easement land-holding agencies where appropriate. The application of herbicides will be in compliance with all State and Federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the San Diego County Agriculture Commissioner. The timing of the weed control treatment will be determined for each plant species in consultation with the PCA, the San Diego County Agriculture Commissioner, and Cal-IPC with the goal of controlling populations before they start producing seeds.
- For the lifespan of the project (*i.e.*, as long as the project is physically present), long-term measures to control the introduction and spread of noxious weeds in the project area will be taken as follows:
 - The survey areas described above would be surveyed annually to monitor previously-identified and treated populations and to identify new invasive weed populations. The treatment of weeds will occur on a minimum annual basis, unless otherwise approved by the PCA, the San Diego County Agriculture Commissioner, and Cal-IPC.
 - During project construction, all seeds and straw materials will be certified weed free, and all gravel and fill material will be certified weed free by the San Diego County Agriculture Commissioner's Office.
 - During project construction, vehicles and all equipment will be washed (including wheels, undercarriages, and bumpers) at an off-site washing facility (*e.g.*, a car wash or truck wash) immediately before project construction begins and prior to returning to project construction should equipment be used in a different construction area. In addition, tools such as chainsaws, hand clippers, pruners, etc. will be washed at an off-site washing facility immediately before project construction begins and prior to returning to project construction should tools be used in a different construction area. Vehicles, tools, and equipment will be washed at an off-site washing facility should these vehicles, tools, and equipment have been used in an area where invasive plants have been mapped during the pre-construction weed control inventory and as directed by the biological construction monitor, prior to entering a project area free of populations of invasive plants (as determined by the pre-construction weed control inventory). All washing will take place where rinse water is collected and disposed of in either a sanitary sewer or landfill; an effort will be made to use wash facilities that use recycled water. A written daily log will be kept for all vehicle/equipment/tool washing that states the date, time, location, type of equipment washed, methods used, and staff present. The log will include the signature of a responsible staff member. Logs will be available to the CPUC, BLM, USFS (for Project sections within National Forest lands), Wildlife Agencies, and biological monitor for inspection at any time and will be submitted to the CPUC on a monthly basis during construction.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-21 Project construction activities will be designed and implemented to avoid or minimize new disturbance, erosion on manufactured slopes, and off-site degradation from accelerated sedimentation. Where revegetation is necessary to improve the success of erosion control, planting or seeding with native seed mix, approved by the Wildlife Agencies, will be done on slopes. In addition to the measures above, the following erosion control procedures will be implemented:

- Vehicle and construction equipment use will be restricted to access roads and areas in the immediate vicinity of construction work sites to help reduce soil disturbance.
- In agricultural areas, topsoil will be left in roughened condition.
- When practical, construction activities will be avoided on wet soil to reduce the potential for soil compaction, rutting, and loss of soil productivity.
- Disturbed areas will be returned to their pre-construction contours and allowed to revegetate naturally, or will be reseeded with an appropriate seed mixture if necessary.

Construction of access roads in inaccessible terrain will be reduced by using helicopters to place structures in select locations.

G-CM-22 In areas where ground disturbance is substantial or where re-contouring is required (*e.g.*, marshaling yards, tower sites, spur roads from existing access roads), surface restoration will occur as necessary for erosion control and revegetation. The method of restoration will normally consist of returning disturbed areas back to their original contour, reseeding (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches for erosion control. Potential for erosion will be minimized on access roads and other locations primarily with water bars. The water bars will be constructed using mounds of soil shaped to direct the flow of runoff and prevent erosion. Soil spoils created during ground disturbance or recontouring will be disposed of only on previously disturbed areas, or used immediately to fill eroded areas. Cleared vegetation can be hauled off-site to a permitted disposal location, or may be chipped or shredded to an appropriate size and spread in disturbed areas of the ROW with the approval of the biological monitor.

G-CM-23 To limit impact to existing vegetation, appropriately sized equipment (*e.g.*, bulldozers, scrapers, backhoes, bucket-loaders, etc.) will be used during all ground disturbance and re-contouring activities.

G-CM-24 To suppress dust during Project construction, SDG&E will prepare and file with the Imperial County Air Pollution Control District, San Diego Air Pollution Control District, BLM, and CPUC, a Dust Control Plan. The Dust Control Plan will include a description of how the plan will be implemented and monitored at all locations of the project and contain the following measures:

- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas if construction activity causes persistent visible emissions of fugitive dust beyond the work area;
- Pre-water sites for 48 hours in advance of clearing activities;
- Reduce the amount of disturbed area where possible;
- Spray all dirt stock-pole areas daily as needed;
- Cover loads in haul trucks or maintain at least 15.24 cm (six in) of free-board when traveling on public roads;
- Pre-moisten, prior to transport, import and export dirt, sand, or loose materials;
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets or wash trucks and equipment before entering public streets;
- Plant vegetative ground cover in disturbed areas as soon as possible following construction; and
- Apply chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands that are unused for four consecutive days)

In addition to the Dust Control Plan, the following dust reduction measures will be implemented:

- Prohibit construction grading on days when the wind gusts exceed 40.2 km per hour (25 mph), to the extent feasible, to control fugitive dust;
- All trucks hauling soil and other loose material will be covered or maintain at least 0.61 m (two feet) of freeboard;
- Snow fence-type windbreaks will be erected in areas identified as needed by SDG&E;
- Vehicle speeds will be limited to 24.1 km per hour (15 mph) on unpaved (no gravel or similar surfacing material) roads;
- Unpaved roads will be treated by watering as necessary;
- Soil stabilizers will be applied to inactive construction areas on an as-needed basis; and
- Exposed stockpiles of soil and other excavated materials will be contained within perimeter silt fencing, watered, treated with soil binders, or covered as necessary.

G-CM-25 Except when not feasible due to physical or safety constraints, all project vehicle movement will be restricted to existing access roads and access roads constructed as a part of the project and determined and marked by SDG&E in advance for the contractor, contractor-acquired accesses, or public roads.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-26 All limits of construction will be delineated with orange construction fencing. During and after construction, entrances to access roads will be gated to prevent the unauthorized use of these roads by the general public. Signs prohibiting unauthorized use of the access roads will be posted on these gates.

G-CM-27 To the extent feasible, access roads will be built at right angles to the streambeds and washes. Where it is not feasible for access roads to cross at right angles, SDG&E will limit roads constructed parallel to streambeds or washes to a maximum length of 500 ft at any one transmission line crossing location. Such parallel roads will be constructed in a manner that minimizes potential adverse impacts on "waters of the U.S." or waters of the state. Culverts will be installed where needed for right angle crossings, but rock crossings will be utilized across most right angle drainage crossings. All construction activities will be conducted in a manner that will minimize disturbance to vegetation, drainage channels, and stream banks (*e.g.*, structures will not be located within a stream channel, construction activities will avoid sensitive features). Up to 30 days prior to construction in streambeds and washes, SDG&E will perform a pre-activity survey(s) to determine the presence or absence of threatened or endangered riparian species. Details of protocol survey requirements are listed in the species-specific measures below.

G-CM-28 To limit new or improved accessibility into the area, SDG&E shall coordinate with the authorized officer for the applicable Federal, State, or local land owner/administrator at least 60 days before construction in order to determine if gates shall be installed on existing and new access roads, especially trails that will be used as access roads, to prevent unauthorized vehicular access to the ROW. Gate installation shall be required at the discretion of the land management agency. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. SDG&E shall document its coordination efforts with the administering agency of the road/trail and provide this documentation to the CPUC, BLM, and all affected jurisdictions 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on these gates.

G-CM-29 To control unauthorized use of project access roads by off-road vehicle enthusiasts, SDG&E shall provide funding to land management entities responsible for areas set aside for habitat conservation to provide for off-road vehicle enforcement patrols. The responsible land management entities will formulate what funding is reasonable to control unauthorized use of project access roads.

G-CM-30 To limit new or improved accessibility into the area, all new access roads or spur roads constructed as part of the project that are not required as permanent access for future project maintenance and operation will be permanently closed. Where required, roads will be permanently closed, with the concurrence of the underlying landowner and the governmental agency having jurisdiction, using the most effective feasible and least environmentally damaging methods (*e.g.*, stockpiling and replacing topsoil or rock replacement) appropriate to that area. All permanently closed access roads and spur roads will be restored with native vegetation following closure.

G-CM-31 Mowing shall be used when permanent access is not required since, with time, total re-vegetation is expected. If mowing is in response to a permanent access need, but the alternative of grading is undesirable because of downstream siltation potential, it should be recognized that periodic mowing will be necessary to maintain permanent access. In such instances, SDG&E will mow at least once every two years. The project biological construction monitor will conduct checks on mowing procedures to ensure that mowing for temporary or permanent access roads is limited to a 4-m-wide (14-foot-wide) area on straight portions of the road and a 5-6-m-wide (16 to 20-ft-wide) area at turns, and that the mowing height is no less than 10 cm (4 in) from finished grade.

G-CM-32 Prior to construction activities, SDG&E will conduct on-the-ground surveys (following Service protocols where they exist) for the following listed species where such surveys had not been conducted in 2007 and 2008, or for those species for which surveys in 2007 and 2008 were not reliable due to lack of sufficient rainfall.

- San Diego Thornmint (*Acanthomintha ilicifolia*)
- San Bernardino Bluegrass (*Poa atropurpurea*)
- Willowy Monardella (*Monardella viminea*)
- Quino Checkerspot Butterfly (*Euphydryas editha quino*)
- Arroyo Toad (*Bufo californicus*)
- Southwestern Willow Flycatcher (*Empidonax traillii extimus*)
- Least Bell's Vireo (*Vireo bellii pusillus*)
- Coastal California Gnatcatcher (*Poliophtila californica californica*)
- Stephen's Kangaroo Rat (*Dipodomys stephensi*)

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-33 Prior to construction, plant population boundaries designated as listed or proposed by the Wildlife Agencies and other resources designated as listed or proposed by SDG&E and other resource agencies will be clearly delineated with visible flagging or fencing, which will remain in place for the duration of construction. Flagged areas will be avoided to the extent practicable during construction activities in that area. Where these areas cannot be avoided, focused surveys for covered plant species will be performed. Notification of presence of any covered plant species to be removed in the work area will occur within ten (10) working days prior to construction activity, during which time the Wildlife Agencies may remove such plant(s) or recommend measures to minimize or reduce the impact. If neither the Service nor CDFG has removed such plant(s) within ten (10) working days following written notice, SDG&E may proceed with work. In such cases, SDG&E will move plants to a nursery and hold them for up to one year while the Wildlife Agencies determine a specific relocation program.

G-CM-34 To offset the loss of native trees or native tree trimming, SDG&E shall (1) acquire and preserve habitat where the trees occur and/or (2) restore (*i.e.*, planting) trees on land that will not be subject to vegetation clearing (either in SDG&E's ROW and/or on land acquired and preserved). Any land to be used for this compensation shall be approved by the CPUC, BLM, USFS (for loss of trees on National Forest lands), and Wildlife Agencies. For habitat acquisition and preservation, the compensation ratios shall follow those in Table 2.

For all trimmed native trees, the trees shall be monitored for a period of three years. If a trimmed tree declines or suffers mortality during that period, the tree shall be replaced in-kind (by species) at a 2:1 or 5:1 ratio as recommended by the CDFG (see below). If a tree does not decline or suffer mortality, no compensation shall be required.

For restoration (planting trees), these guidelines, based on recommendations from the CDFG, shall be followed:
Native trees that are removed shall be replaced in-kind (by species) as follows:

- Trees less than 12.7 cm (5 in) diameter at breast height (DBH) shall be replaced at 3:1
- Trees between 13 and 31 cm (5 and 12 in) DBH shall be replaced at 5:1
- Trees between 31 and 91cm (12 and 36 in) DBH shall be replaced at 10:1
- Trees greater than 91 cm (36 in) DBH shall be replaced at 20:1

Native trees that are trimmed shall be replaced in-kind (by species) as follows:

- Trees less than 30 cm (12 in) DBH shall be replaced at 2:1
- Trees greater than 30 (12 in) DBH shall be replaced at 5:1

All native tree restoration shall be maintained and monitored for a minimum of 10 years. The restoration shall be directed according to a Habitat Restoration Plan approved by the CPUC, BLM, USFS, and Wildlife Agencies.

G-CM-35 Plant species identified as rare by the land managing agency will be salvaged where avoidance is not feasible. Generally, salvage may include removal and stockpiling for replanting on site; removal and transplanting out of surface disturbance area; removal and salvage by private individuals; and removal and salvage by commercial dealers; or any combination. Plant or wildlife species will not be collected except by biological monitors specifically directed by the Wildlife Agencies to do so.

G-CM-36 No wildlife, including rattlesnakes, may be harmed except to protect life and limb. Firearms will be prohibited in all Project areas except for those used by security personnel.

G-CM-37 Feeding of wildlife by SDG&E personnel or contractors is prohibited.

G-CM-38 To minimize harassment or killing of wildlife and to prevent the introduction of destructive animal diseases to native wildlife populations, Project personnel are not allowed to bring pets into any project area.

G-CM-39 All steep-walled trenches or excavations used during construction will be covered at all times except when being actively utilized. If the trenches or excavations cannot be covered, exclusion fencing (*i.e.*, silt fencing) will be installed around the trench or excavation, or it will be covered to prevent entrapment of wildlife. Open trenches, or other excavations that could entrap wildlife will be inspected by the qualified biologist a minimum of three times per day and immediately before backfilling. Should a dead or injured listed species be found in a trench or excavation or anywhere in the construction zone or along an access road, the qualified biologist will contact the CPUC, BLM, USFS, and Wildlife Agencies within 48 hours of detection. The qualified biologist will report the species found, the location of the finding, the cause of death (if known), and will submit a photograph and any other pertinent information. Construction holes left open over night will be covered. Covers will be secured in place nightly, prior to workers leaving the site, and will be strong enough to prevent livestock or wildlife from falling through and into a hole. Holes and/or trenches will be inspected prior to filling to ensure absence of mammals and reptiles. Excavations will be sloped on one end to provide an escape route for small mammals and reptiles.

G-CM-40 Employees and contractors will look under vehicles and equipment for the presence of wildlife before movement. If wildlife is observed, no vehicles or equipment will be moved until the animal has left voluntarily or is removed by the qualified biologist.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-41 The applicant will ensure that the following conditions are implemented during project construction:

- Disposal or temporary placement of excess fill, brush or other debris will not be allowed in waters of the United States or their banks;

All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas outside of waters of the United States within the fenced project impact limits. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the United States, and will be shown on the construction plans. Fueling of equipment will take place within existing paved areas or designated fueling areas designed to contain fuel drips greater than 30.5 m (100 ft) from waters of the United States. Contractor equipment will be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" will be designated on construction plans and/or within the stormwater pollution prevention plan.

G-CM-42 A minimum of a 30.5-m (100-ft) riparian buffer will be maintained between all construction/staging areas, except where the access roads cross riparian areas.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

Operations and Maintenance Phase

General Conservation Measures G-CM 2, G-CM 4, G-CM-5, G-CM-8 to G-CM-10, G-CM-12 to G-CM-16, G-CM-21, G-CM-23, G-CM-25, and G-CM-31 to G-CM-41 will also be implemented during the O&M phase of the SRPL Project.

G-CM-43 A qualified biologist employed by SDG&E will be present during maintenance involving ROW repair requiring ground disturbance (*i.e.*, grading/repair of access road and work areas and spot repair of areas subject to flooding or scouring). The qualified biologist will send annual monitoring reports of maintenance activities to the CPUC, BLM, and USFS (for sections of the project that require monitoring of maintenance activities on National Forest lands) that describe the types of maintenance that occurred, at what locations they occurred, and whether or not there were impacts that required mitigation.

G-CM-44 The area limits of Project maintenance and survey activities will be predetermined based on the temporary and permanent disturbance areas noted on the final design engineering drawings, with activity restricted to and confined within those limits, within SDG&E's ROW. In addition, survey personnel would keep survey vehicles on existing roads. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate limits of survey or maintenance activity where any sensitive biological resources or wildlife habitats occur.

G-CM-45 SDG&E will purchase/dedicate suitable habitat for preservation to offset areas permanently impacted by O&M activities. The preservation for O&M activities will be at the same ratios provided in Table 2 for construction activities. A Habitat Management Plan(s) will be required for all off-site parcels and must be approved in writing by the CPUC, BLM, USFS, and Wildlife Agencies. SDG&E may choose to establish conservation banks or purchase conservation credits from existing conservation banks, other than the conservation bank established for SDG&E's Subregional Plan (SDG&E 1995), to provide an efficient process to offset the anticipated minor impacts resulting from O&M activities.

G-CM-46 All O&M activities will be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and stream banks. Up to 30 days prior to O&M activities in streambeds and washes, SDG&E would perform a pre-activity survey(s) to determine the presence or absence of threatened or endangered riparian species. Details of protocol survey requirements are listed below in the species-specific measures.

G-CM-47 As part of the environmental training program, field crews will be trained to recognize the importance of invasive plant species control, and will be informed of the measures designed to control the spread of invasive species. Deliberate introduction of invasive plants or animals into any project site is prohibited. Heavy equipment will be inspected for invasive plant seeds or other plant material prior to entering an access road or a project site. Any plant seeds or other plant material discovered on heavy equipment will be manually removed. All seeds and straw materials used during O&M activities will be certified weed free, and all gravel and fill material would be certified weed free by the San Diego County Agriculture Commissioner's Office.

G-CM-48 Access roads shall be maintained once every two years. If this schedule is not adhered to, loss of habitat due to maintenance of access roads will be considered a new permanent impact and compensated according to the ratios provided in Table 2.

G-CM-49 Brush clearing around any project facilities (*e.g.*, structures, substations) for fire protection, visual inspection, or project surveying in areas that have been previously cleared or maintained within a two-year or shorter period would not require a pre-activity survey. In areas not cleared or maintained within a two-year period, brush clearing will not be conducted during the breeding season (March through August) without a pre-activity survey for vegetation containing active nests, burrows, or dens. The pre-activity survey performed by the on-site biological resource monitor will make sure that the vegetation to be cleared contains no active migratory bird nests, burrows, or active dens prior to clearing. If occupied migratory bird nests are present, fire protection or visual inspection brush clearing work will be avoided until after the nesting season, or until the nest becomes inactive. If no nests are observed, clearing may proceed. Where burrows or dens are identified in the reconnaissance-level survey, soil in the brush clearing area will be sufficiently dry before clearing activities occur to prevent mechanical damage to burrows that may be present.

Table 20. U.S. Fish and Wildlife Service General Conservation Measures

G-CM-50 Brush clearing and other construction activities will occur outside the general avian breeding season. All vegetation clearing, except tree trimming or removal, will take place between September 16 and February 14 (*i.e.*, outside of the general avian breeding season of February 15 through September 15), when feasible. Tree trimming or removal will only take place between September 16 and December 31 (*i.e.*, outside the raptor breeding season of January 1 through September 15). For brush clearing and/or other construction activities that cannot occur outside the above-listed breeding seasons, a qualified biologist will work with a qualified acoustician to determine if a the construction activity will meet or exceed the 60 dB(A) Leq hourly noise threshold where nesting territories of the gnatcatcher and vireo occur. If the noise threshold will not be met or exceeded at the edge of their nesting territories, then brush clearing and/or other construction activities may proceed. If the noise threshold will be met or exceeded at the edge of their nesting territories, pre-construction surveys for nests of these species will be conducted by a qualified biologist (Service-approved biologist for gnatcatcher, vireo, and flycatcher) within 91 m (300 ft) of the construction area no more than seven days prior to initiation of construction that will occur between February 15 and August 31 for the gnatcatcher, March 15 and September 15 for the vireo, April 15 and September 15 for the flycatcher.

If active nests are found, work may proceed provided that methods, determined by the qualified acoustician to be effective, are implemented to reduce noise below the threshold. These methods include, but are not limited to, turning off vehicle engines and other equipment whenever possible and/or installing a protective noise barrier between a nesting territory and maintenance activities. If the qualified acoustician determines that no methods will reduce noise to below the threshold, maintenance will be deferred until the nestlings have fledged or the nest has failed, as determined the qualified biologist. Where noise-reducing methods are employed, active nests will be monitored by the qualified biologist on a weekly basis until maintenance is complete or until the nestlings fledge or fails, whichever comes first. The qualified biologist will be responsible for documenting the results of the pre-maintenance nest surveys and the nest monitoring and for reporting these results to the CPUC, BLM, USFS, and Wildlife Agencies.

G-CM-51 Maintenance activities will occur outside the general avian breeding season, where feasible. For other maintenance activities that cannot occur outside the above-listed breeding seasons, SDG&E will follow the requirements in G-CM-50 for noise reduction at nest sites.

Table 21. U.S. Fish and Wildlife Service Species Specific Conservation Measures

Project Construction Phase

San Diego Thornmint

SS-CM-1 No impacts will occur to the thornmint population at and adjacent to MP 116 or to any thornmint occurrences between MP 114 and 119. To ensure the avoidance of impacts, SDG&E will consult with the Service regarding the final design and siting of all permanent and temporary impacts (*e.g.*, towers, pads, access roads, staging areas, pull down areas, helipads, and fuel modification zones) between MP 114 and MP 119. In other areas where suitable thornmint habitat (*i.e.*, gabbro and calcareous soils and a slope of 0 to 25 percent) exists, the area to be impacted will be surveyed for thornmint before any impacts may occur, per G-CM-32. All permanent and temporary impact areas will be sited at least 100 feet away from any known thornmint occurrences. SDG&E will implement the Weed Control Plan described in G-CM-20 to ensure that intact thornmint populations are not impacted by non-natives that could be introduced by this project.

SS-CM-2 Impacts to San Diego thornmint will first be avoided where feasible, and where not feasible due to physical or safety constraints, impacts will be compensated through salvage and relocation via a restoration program, at a 1:1 ratio, and/or off-site acquisition and preservation of habitat, at a 2:1 ratio, containing the plant. The CPUC, BLM, USFS and Wildlife Agencies will decide whether the applicant can restore San Diego thornmint populations or will acquire habitat with San Diego thornmint (locations to be approved by the CPUC, BLM, USFS and Wildlife Agencies). A qualified biologist will prepare a Restoration Plan that will indicate where restoration will take place. The restoration plan will identify the goals of the restoration, responsible parties, methods of restoration implementation, maintenance and monitoring requirements, final success criteria, and contingency measures. The applicant will work with the CPUC, BLM, Wildlife Agencies, and USFS until a plan is approved by all parties.

Quino Checkerspot Butterfly

SS-CM-3 A biologist permitted by the Service will delineate suitable/occupied habitat areas that will be impacted by project construction. Suitable habitat is defined as areas containing the primary constituent elements (PCEs) as outlined in the January 17, 2008, proposed revision to critical habitat (73 FR 3328) (see the "Status of the Species/Critical Habitat" section below for a discussion of the PCEs for Quino). Occupied Quino habitat is defined as contiguous suitable habitat containing the PCEs within 2 kilometers of a known Quino occurrence ("habitat-based population distribution") (73 FR 3328). Delineated suitable/occupied habitat and the results of the Quino protocol presence/absence surveys will be submitted to the Service for review and approval before an incidental take permit may be issued for this species. Impacts to Quino habitat will be determined by the amount of suitable/unoccupied habitat and/or occupied habitat that is proposed to be impacted indirectly and directly.

SS-CM-4 A pre-construction, Service protocol presence/absence survey for the adult Quino will be conducted within the delineated suitable/occupied habitat in the construction zone. Any surveys will be conducted in a year where Quino is readily observed at Service Quino-monitored reference sites to determine what areas are occupied by Quino (*i.e.*, any suitable habitat within 1 km (0.6 mi) of a current Quino sighting is considered occupied) and what areas are not occupied. The biologist will record the precise locations of Quino larval host plants and nectar sources within the construction zone (and 10 meters beyond) using GPS technology.

- If the protocol pre-construction Quino survey is determined by the Service to be conclusive, then areas found to be unoccupied by Quino will not require species-specific compensation.
- If the Service determines that the protocol pre-construction survey is not conclusive for determining Quino absence (due to limited detectability per the 2002 protocol, for example), then all suitable habitat areas will be considered potentially occupied. SDG&E will avoid siting any permanent or temporary impacts within 1 km (1 mi) of any known or newly discovered Quino occurrences. If the SDG&E believes that impacts to Quino are unavoidable, it will provide evidence to such an effect to the Service for review and approval. Any approved impacts to Quino occupied or Quino suitable habitat will require compensation as follows. If construction occurs outside the larvae and adult activity season (June 1 through October 15), stays at least 10 m (33 ft) away from all host plant locations, and does not impact suitable habitat then no compensation is required (Service 2007a). If construction occurs between October 16 and May 31, is within 10 m (33 ft) of host plant locations, or removes suitable habitat then, (1) temporary impacts to the habitat will be mitigated at 2:1 through 1:1 on-site restoration of temporarily disturbed areas and 1:1 offsite acquisition and preservation of an equal sized, contiguous area of Quino-occupied habitat, and (2) permanent impacts will be compensated through 3:1 off-site acquisition and preservation of Quino-occupied habitat (or Quino-designated critical habitat for impacts to designated critical habitat). Any acquired habitat will be approved by the CPUC, BLM, USFS, and Wildlife Agencies. A Service approved biologist will be present during all construction activities in potentially occupied habitat to monitor and assist the construction crews to ensure impacts occur only as allowed. This same compensation will apply where the protocol pre-construction survey was conclusive for determining that the Quino is present and where construction will occur in designated critical habitat. Impacts to Quino critical habitat must be off-set within the same Critical Habitat Unit where the impacts occur.
- If host plant mapping is not possible during the pre-construction survey (*e.g.*, drought prevents plant germination), then all suitable habitat (*i.e.*, non-excluded habitat per the 2002 protocol) will be considered occupied by the Quino and compensated under the assumption that Quino is present.

Table 21. U.S. Fish and Wildlife Service Species Specific Conservation Measures

SS-CM-5 Any Service-approved restoration of impacted habitat will be conducted in areas with appropriate topographical and biological features to be determined by the Service, BLM, USFS and SDG&E. The details of the restoration shall be based on Appendix II of the Recovery Plan for the Quino Checkerspot Butterfly (Service 2003a) and described in a plan to be reviewed and approved by the Service. The restoration plan shall include, but not be limited to: (1) larval host plants (local stock, if possible) to be planted; (2) nectar resources; (3) irrigation needs and/or other establishment procedures; (4) timeline for implementation; (5) success criteria; (6) contingency measures for success criteria that are not met; (7) weed control measures; (8) monitoring program; and (9) implementation schedule. The restoration plan will be prepared and submitted to the Service prior to commencement of ground disturbance associated with the proposed project. The proposed project will not commence until the restoration begins. The restoration plan actions will be completed no later than completion of project construction. Success criteria will be modeled on undisturbed native plant communities in the vicinity of the proposed project and sites within the area known to be occupied by Quino.

SS-CM-6 Due the extreme importance of the Quino population located in the Jacumba Unit of Quino critical habitat, SDG&E will consult with the Service regarding the final design and siting of all permanent and temporary impacts (*e.g.*, towers, pads, access roads, staging areas, pull down areas, helipads, and fuel modification zones) within Quino critical habitat. SDG&E will work with the Service to ensure that no larvae or adults within critical habitat will be impacted by this project.

SS-CM-7 No new construction will occur during the Quino flight season within 1 km (1 mi) of any known or newly discovered Quino occurrence. If it is not feasible to construct outside of the flight season in these instances, SDG&E must obtain written consent from the Service to proceed with construction.

Arroyo Toad

SS-CM-8 A pre-construction, Service protocol, survey will be conducted for the arroyo toad by a biologist approved by the Service to handle the toad) in all areas of the project located within suitable arroyo toad breeding habitat.

- The removal of toad riparian breeding habitat will occur from October through December to minimize potential impacts to breeding adults (including potential sedimentation impacts to toad eggs) and dispersing juveniles.
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Table 21. U.S. Fish and Wildlife Service Species Specific Conservation Measures

SS-CM-9 SDG&E will develop an arroyo toad translocation monitoring program to be implemented during all construction activities that have the potential to adversely affect the arroyo toad. This program will be coordinated with the Service, USFS, and BLM and finalized prior to initiation of construction activities. The program will include the following requirements:

- Prior to clearing, grubbing, and construction activities, Service-permitted biologists will monitor arroyo toad breeding activity in those project areas containing or adjacent to breeding habitat. The biologists will determine when egg clutches or larvae are no longer present in the waterway (generally late May at lower elevation, June at higher elevation). When sign of breeding is no longer evident, an exclusionary fence will be installed and clearance surveys initiated.
- Prior to clearing, grubbing, and grading activities, arroyo toad temporary exclusionary fence will be constructed along the perimeter of the project footprint within or immediately adjacent to arroyo toad habitat (breeding and aestivation). The intent of the fence is to fully contain the area(s) to be impacted and to remove and exclude arroyo toads. Exclusionary fence in aestivation habitat will not be installed prior to May 1. The Service-permitted biologist will be present during the exclusionary fence installation, reconfigurations, breach repairs, and weekly during the breeding season. The fence will consist of fabric or plastic at least 0.6 m (2 ft) high, staked firmly to the ground with the lower 0.3 m (1 ft) of material stretching outward along the ground and secured with a continuous line of gravel bags. No digging or vegetation removal will be associated with the installation of the fence and all materials shall be removed when the Project is complete. The removal of some vegetation, without disturbing the soil, within the project footprint to aid in the observance and collection of arroyo toads is acceptable. All fencing materials (*i.e.*, mesh, stakes, etc.) will be removed following construction. Ingress and egress of construction equipment and personnel will be kept to a minimum, but when necessary, equipment and personnel will use a single access point to the site. This access point will be as narrow as possible and will be closed off by exclusionary fencing when personnel are not on the project site.
- Prior to clearing, grubbing, and grading activities, but after exclusionary fencing has been installed, Service-approved biologists will perform a minimum of three nighttime surveys inside the exclusionary fence and remove all arroyo toads found within its perimeter. The approved biologist will continue until there have been two consecutive nights without arroyo toads inside the fencing. Any breach in the exclusionary fence during times when arroyo toads area active above ground, will result in repeating the 3-day minimum clearance surveys for that particular area.
- If conditions do not occur that result in sufficient arroyo toad emergence and movement, a Service-approved biologist will attempt to elicit a response from the arroyo toads during nights late in the known breeding season, with temperatures above 50°F, by spraying the area inside the exclusionary fence with water to a depth of approximately 2 to 5 cm (1 to 2 in) to simulate a rain event.
- Whether or not a simulated precipitation event is done, arroyo toads found within the project footprint will be captured and translocated by Service-approved biologists to the closest area of suitable habitat. The Service-approved biologist will coordinate with the appropriate property owner(s) and the Service on where the arroyo toads will be placed.
- Service-approved biologists will maintain a complete record of all arroyo toads encountered and moved from harms way during translocation efforts. The date and time of capture, sex, physical dimensions, and coordinates/specific location of capture will be recorded and provided to the Service, within 30 days of the completion of translocation. In addition to reporting on the translocation effort, monthly reports (including photographs of impact areas) will be submitted to the Service during construction activities within areas demarcated by arroyo toad exclusion fencing. The monthly reports will document general compliance with all applicable conditions and report all incidents not in compliance with this biological opinion. The reports will also outline the duration of arroyo toad monitoring, the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers, locations, sex, observed behavior, and remedial measures employed to avoid, minimize, and mitigate impacts to arroyo toads. All field notes and other documentation generated by the Service-approved biologist will be made available upon request to the Service.
- To avoid transferring disease or pathogens between aquatic habitats during surveys and handling of arroyo toads, the approved biologists will follow the Declining Amphibian Population Task Force's Code of Practice (DAPTF, 1991) or newer version when available.
- After the clearance surveys outlined above have been completed, daily surveys will be conducted each morning prior to the continuation of construction activity. Any toads found will be relocated per the translocation plan.
- The applicant will submit, in writing, the names, any permit numbers, résumés, and at least three references (of people who are familiar with the relevant qualifications of the proposed biologist), of all biologists who might need to handle, move, or monitor arroyo toads for the proposed project. This information will be submitted to the Service for approval at least 15 days prior to the initiation of any arroyo toad surveys. Proposed activities will not begin until an authorized biologist has been approved by the Service.

SS-CM-10 To offset the loss of occupied and suitable arroyo toad habitat within the project area, and to offset indirect effects of the project on arroyo habitat, SDG&E will develop and implement an arroyo toad predator control program on USFS lands. The scope and methods for this program will be developed in consultation with the Service and USFS.

Table 21. U.S. Fish and Wildlife Service Species Specific Conservation Measures

SS-CM-11 Compensation for the loss of arroyo toad-occupied habitat will be implemented as follows. Permanent impacts to occupied arroyo toad breeding habitat will include 3:1 off-site acquisition and preservation of occupied arroyo toad breeding habitat. Permanent impacts to occupied upland burrowing habitat will include 2:1 off-site acquisition and preservation of occupied upland burrowing habitat. Temporary impacts to occupied breeding habitat will include 1:1 on-site restoration and 2:1 off-site acquisition and preservation of occupied breeding habitat. Temporary impacts to occupied upland burrowing habitat will include 1:1 on-site restoration and 1:1 off-site acquisition and preservation of occupied upland burrowing habitat. Any acquired habitat will be approved by the CPUC, BLM, USFS, and Wildlife Agencies.

SS-CM-12 To avoid and minimize impacts to arroyo toads, access road construction and use, with the exception of emergency situations, will occur during daylight hours (from 2 hours after sunrise to 2 hours before sunset) when amphibian movement is less frequent.

SS-CM-13 No construction activities will take place during the arroyo toad breeding season (March 15-July 31) within suitable arroyo toad breeding habitat.

SS-CM-14 To avoid long-term impacts to wildlife movement, including, but not limited to arroyo toad movement on the project site, all temporary arroyo toad exclusion fencing and temporary construction fencing will be removed at the conclusion of construction activities.

SS-CM-15 Towers, pads, pull stations, access roads, staging areas, and fly yards will not be located within suitable/potential arroyo toad upland aestivation and riparian breeding habitat to the extent feasible. In cases where the applicant determines it is not feasible to fully avoid suitable/potential arroyo toad habitat, the applicant will consult with the Service to identify a site for the above-listed features that would avoid and minimize impacts to suitable/potential arroyo toad upland aestivation and riparian breeding habitat to the maximum extent.

Least Bell's Vireo

SS-CM-16 During construction, all grading or brushing taking place within riparian habitats occupied by the vireo will be conducted outside the vireo breeding season (defined as March 15 through September 15). When conducting all other construction activities during the breeding season within 152 m (500 ft) (Service 2007b) of occupied or suitable habitat, a biologist approved by the Service will survey for vireos within 10 days prior to initiating activities in an area. The results of the survey will be submitted to the Wildlife Agencies for review and approval prior to initiating any construction activities.

- During construction, if vireos are present, a Service-approved biologist will survey daily for nesting vireos within 152 m (500 ft) of the construction area, for the duration of the activity in that area during the breeding season. If an active nest is located, a 91-m (300-ft) no-construction buffer zone will be established around each nest site; however, there may be a reduction of this buffer zone depending on site-specific conditions or the existing ambient level of activity. SDG&E will contact the Wildlife Agencies to determine the appropriate buffer zone. No construction will take place within this buffer zone until the nest has fledged or is no longer active. If construction must take place within the buffer, a qualified acoustician will monitor noise as construction approaches the edge of the occupied vireo habitat as directed by the permitted biologist. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that construction activities are disturbing nesting activities, the biologist will have the authority to halt construction and will consult with the Wildlife Agencies, BLM and USFS, to devise methods to reduce the noise and/or disturbance. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nesting birds and the activities, and working in other areas until the young have fledged. The Service-approved biologist will monitor the nest daily until activities are no longer within 91-m (300 ft) of the nest, or the fledglings become independent of their nest or the nest has failed.
- Impacts to aquatic resources under the jurisdiction of the Corps of Engineers, Regional Water Boards, State Water Board, and CDFG will be avoided to the extent feasible. The avoidance of these resources will further minimize impacts to vireo.

SS-CM-17 To avoid impacts to vireo, towers, pads, pull stations, access roads, staging areas, and fly yards will be located outside of riparian vegetation, including occupied vireo habitat, where feasible. If avoidance is not feasible, compensation for the loss of suitable vireo habitat will be implemented as follows. Permanent impacts to suitable habitat will include 3:1 offsite acquisition and preservation of occupied habitat. Temporary impacts to occupied habitat will include 1:1 on-site restoration and 2:1 offsite acquisition and preservation of occupied habitat. Any acquired habitat will be approved by the CPUC, BLM, USFS, and Wildlife Agencies.

SS-CM-18 To minimize adverse impacts from loss of occupied habitat in the Cleveland National Forest, and to minimize predation and parasitism, SDG&E will develop and implement a brown-headed cowbird (*Molothrus ater*) trapping program, in consultation with the USFS.

Table 21. U.S. Fish and Wildlife Service Species Specific Conservation Measures

California Gnatcatcher

SS-CM-19 All brushing or grading taking place within occupied habitat of the gnatcatcher (defined as within 152 m (500 ft) of any gnatcatcher sightings (Service 2007b)) during construction will be conducted outside of the gnatcatcher breeding season (February 15 through August 31). When conducting all other construction activities during the gnatcatcher breeding season, within occupied habitat, the following avoidance measures will apply.

- Vegetation clearing outside of the breeding season (October 1 through February 14) will take place in the presence of a biological monitor approved by the Service. The monitor will walk ahead of vegetation removal equipment and ensure that gnatcatchers are not killed or injured as a direct result of vegetation removal activities. The monitor will have the authority to halt/suspend all activities until appropriate corrective measures have been completed. The monitor will also be required to report violations immediately to the Service and CDFG. This measure is required for construction activities only.
- A Service-approved biologist will survey for gnatcatchers within 10 days prior to initiating activities in an area. The results of the survey will be submitted to the Wildlife Agencies for review and approval prior to initiating any construction activities. If gnatcatchers are present, a Service-approved biologist will survey for nesting activity approximately once per week within 152 m (500 ft) of the construction area for the duration of the activity.
- If an active nest is located, a 91-m (300-ft) no-construction buffer (Service 2007b) will be established around each nest site; however, there may be a reduction of this buffer zone depending on site-specific conditions or the existing ambient level of activity. The applicant will contact the Wildlife Agencies to determine the appropriate buffer zone. To the extent feasible, no construction will take place within this buffer zone until the nest is no longer active. However, if construction must take place within the 91-m (300-ft) buffer, a qualified acoustician will monitor noise as construction approaches the edge of the occupied gnatcatcher habitat as directed by the permitted biologist. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that the activities in general are disturbing the nesting activities, the biologist will have the authority to halt construction and will consult with the Wildlife Agencies to devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nesting gnatcatchers and the activities, and working in other areas until the young have fledged.

SS-CM-20 Compensation for the loss of occupied gnatcatcher habitat will be implemented as follows. Permanent impacts to occupied habitat will include 2:1 offsite acquisition and preservation of occupied habitat. Temporary impacts to occupied habitat will include 1:1 onsite restoration and 1:1 off-site acquisition and preservation of occupied habitat. Impacts to occupied gnatcatcher designated critical habitat must be compensated within the same Critical Habitat Unit where the impacts occurred. Any acquired habitat will be approved by the CPUC, BLM, USFS, and Wildlife Agencies.

SS-CM-21 Compensation for the loss of unoccupied designated critical habitat for the gnatcatcher will be implemented as follows. Permanent impacts to unoccupied designated critical habitat will include 2:1 offsite acquisition and preservation of designated critical habitat. Temporary impacts to unoccupied designated critical habitat will include 1:1 onsite restoration. Any acquired habitat will be approved by the CPUC, BLM, USFS, and Wildlife Agencies.

Peninsular Bighorn Sheep

SS-CM-22 Construction activities (including the use of helicopters) in bighorn sheep designated critical habitat will be limited to outside the lambing season (January 1 through June 30) and the period of greatest water need (June 1 through September 30) as defined in the Recovery Plan. Construction activities in designated critical habitat may occur during the lambing season and/or period of greatest water need if prior approval is obtained from the Wildlife Agencies.

SS-CM-23 Compensation for the loss of occupied bighorn sheep habitat will be implemented as follows. Permanent impacts to designated critical habitat will include 5:1 offsite acquisition and preservation of critical habitat. Temporary impacts to designated critical habitat will include 1:1 on-site restoration and 2:1 offsite acquisition and preservation of critical habitat. Any acquired habitat will be approved by the CPUC, BLM, and Wildlife Agencies.

SS-CM-24 A biological consultant approved by the Wildlife Agencies will be retained by SDG&E to collect data on bighorn sheep movements in the area during the construction phase. Prior to construction the biologist shall submit a bighorn sheep monitoring plan that meets the approval of the Wildlife Agencies. Helicopters shall follow regular flight corridors coinciding with the ROW to the maximum extent possible and avoid low-flying "short-cuts" or sight-seeing trips away from the project site. Helicopters shall avoid flying within 0.6 mi (1 km) of bighorn sheep water sources. Helicopter landing areas, vehicle parking sites, and fly yards shall be cited at least 0.6 mi (1 km) from bighorn sheep water sources and other key resource areas identified by the biologist. When bighorn sheep are detected within the I-8 Island, construction operations shall cease until bighorns leave the area as verified by the biologist.

Table 21. U.S. Fish and Wildlife Service Species Specific Conservation Measures

SS-CM-25 To help reconnect desert bighorn sheep subpopulations and at least partially offset impacts to the overall population caused by the project, SDG&E will:

- Fund the design and construction of an overpass or underpass (for sheep), or tunnel (for vehicles) to facilitate desert bighorn sheep movement across a highway at a location determined by the Service (in coordination with CDFG). Tunnel or overpass design must be approved by the Wildlife Agencies, and construction of the facility will be completed prior to connecting and energizing the proposed project to the grid.
- Fund, design, and construct a system of fences to prevent bighorn sheep from crossing on the surface of westbound Interstate 8. The fencing shall be designed in consultation with Caltrans and the Wildlife Agencies to facilitate bighorn sheep movement through/across the island using structures currently present, such as the bridges spanning Devil's Canyon, and the culverts/low bridge along eastbound Interstate 8.
- Fund removal of tamarisk, fountain grass, other invasive species, and hazardous fences for the life of the project in the action area, and install and maintain water sources per direction and at locations specified by the Wildlife Agencies for the life of the project.
- Fund a minimum 10-year-long program to monitor the effects of the project on bighorn sheep behavior, movements, and dispersal in the area from Carrizo Gorge south to the international boundary (10 years is needed to measure the influence of the project while factoring in rainfall cycles, vegetative productivity, and drought). This program will be designed and implemented by the Wildlife Agencies following construction. Funding for the project will be provided prior to completion of project construction and is estimated to cost \$150,000 per year in 2008 dollars.
- The project proponent will provide sufficient funds to CDFG, or a third party designated by CDFG, to ensure five complete biennial aerial surveys from Carrizo Gorge to the international boundary, for the 10-year period beginning with the scheduled 2010 CDFG survey.
- Water used for operation and maintenance purposes will not be obtained from water sources used by bighorn sheep or other wildlife.

Operations and Maintenance Phase

Species-Specific Conservation Measures SS-CM-1 to SS-CM-23 will also be implemented during the O&M phase of the SRPL Project.

Quino Checkerspot Butterfly

SS-CM-26 If access roads in Quino-occupied or suitable habitat are maintained (*i.e.*, regraded) and vegetation around structures is cleared at least once every two years, then no additional compensation will be required for this ongoing maintenance. If more than two years pass without re-grading or clearing, then the maintenance will be considered a new impact to Quino and would be compensated based on SS-CM-2.

SS-CM-27 Some O&M activities associated with the project may need to be conducted on emergency basis. Under these circumstances, no pre-activity survey will be conducted and no Quino adult surveys will be conducted. SDG&E may take action immediately and must contact the Service within 24 hours after undertaking the activity to provide information on the location and emergency nature of the activity. Unavoidable impacts that occurred during emergency O&M activities will be mitigated at a 2:1 ratio.
