MITIGATION IMPLEMENTATION AND MONITORING PLAN ATLANTIC–DEL MAR REINFORCEMENT PROJECT

INTRODUCTION

Pacific Gas and Electric Company (PG&E) has proposed the Atlantic-Del Mar Reinforcement Project to respond to growth in electrical service demand and maintain system reliability. PG&E proposes to upgrade their existing 60 kV power line and associated substations that serve the City of Rocklin and south Placer County by adding an additional 60 kV power line between the Atlantic Substation in the City of Roseville and the Del Mar Substation in the City of Rocklin. The primary components of the project include constructing a new single-circuit 60 kV power line that would include approximately four miles (21,000 feet) of new 60 kV line on approximately 30 new tubular steel poles, installing a new 60 kV breaker at the Atlantic Substation, and installing a new switch at the Del Mar Substation. Construction is anticipated to commence in early 2002.

An Initial Study was prepared to assess the potential effects on the environment from the various components of the Proposed Project. The Initial Study was prepared based on information in the Proponent's Environmental Assessment (PEA), a project site visit, and supplemental research. The majority of the Proposed Project's impacts would occur during project construction, as a result of disturbance caused by construction activity. Within PG&E's Application, Applicant Proposed Measures addressing potentially significant impacts were proposed to reduce potentially adverse impacts related to project construction.

The purpose of this Mitigation Implementation and Monitoring Plan is to ensure that the Applicant Proposed Measures, as well as the Agency Recommended Mitigation Measures that PG&E has agreed to, are adequately implemented. This plan includes specific actions to be taken to implement each measure, information on monitoring requirements, and the timing of implementation (see Table C-1). This plan includes:

- The Agency Recommended Mitigation Measures, which PG&E must implement as part of the Proposed Project, followed by the Applicant Proposed Measures that PG&E has made part of the Proposed Project and is responsible for implementing;
- The actions required to implement these measures;
- Monitoring requirements; and
- Timing of implementation for each measure.

Construction field monitoring shall be carried out by a CPUC-designated environmental monitor to ensure that the measures are implemented. In all instances where non-compliance occurs, the CPUC's designated environmental monitor shall issue a warning to the construction foreman and PG&E's project manager. Continued non-compliance shall be reported to the CPUC's designated project manager. Any decisions to halt work due to non-compliance shall be made by the CPUC. The CPUC's designated environmental monitor shall keep a record of any incidents of non-compliance with mitigation measures. Copies of these documents shall be supplied to PG&E and the CPUC.

Table C-1 Mitigation Implementation and Monitoring Plan

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY RECOMMENDED MEASURES				
Aesthetics				
Visual impacts of overhead power line to Rocklin's Historic District.	**V-1**: The Proposed Project shall be installed underground within the Union Pacific railroad corridor from immediately south of Sunset Boulevard and east of the railroad ROW to a location at least 120 feet north of Midas Avenue also on the east side of the railroad ROW. PG&E shall consult with CPUC staff on the exact location of the transition structure north of Midas Avenue. In addition, the overhead line shall cross from the west side to the east side of the railroad in the vicinity of the tank farm, with the transition structure on the east side of railroad tracks. From this transition structure, the line would proceed underground along the east side of the railroad corridor to the transition structure located north of Midas Avenue. .	PG&E to implement measure as defined.	CPUC to verify project construction plans comply with measure.	Prior to construction
Air Quality				
Fugitive Dust and Equipment Exhaust Associated with Project Construction Activities.	**A-1:** PG&E shall implement PCAPCD Mitigation Measures No. 1 through 6 as described below. PG&E shall provide CPUC with documented compliance of how each PCAPCD Mitigation Measure is/will be complied with prior to the commencement of construction activities. 1. Construction equipment exhaust emissions shall not exceed PCAPCD Rule 202 Visible Emission limitations. 2. The applicant shall submit to the PCAPCD and receive approval of a Construction Emission/Dust Control Plan prior to groundbreaking. 3. The prime contractor shall submit to the PCAPCD a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. PCAPCD personnel, with assistance from the California Air Resources Board, will conduct initial Visible Emission Evaluations of all heavy-duty equipment on the inventory list. 4. An enforcement plan shall be established to weekly evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180 - 2194. An Environmental Coordinator, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified and the equipment must be repaired within 72 hours. 5. Construction contracts should stipulate that at least 20% of the heavy-duty off-road equipment included in the inventory be powered by CARB certified off-road engines, as follows: 175 hp B 750 hp — 1996 and newer engines 100 hp B 174 hp — 1997 and newer engines 50 hp B 99 hp — 1998 and newer engines In lieu of or in addition to this requirement, an applicant can use other measures to reduce particulate matter and nitrogen oxide emissions from their project through the use of emulsified diesel fuel and or particulate matter traps. The PCAPCD should be contacted to discuss this measure. 6. No open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped or delivered to waste-to-energy or composting facilities.	PG&E to provide documented compliance of how each PCAPCD is complied with prior to construction	CPUC site visit to verify compliance.	Prior to and During construction
Equipment Exhaust Associated with Concurrent Construction Activities.	**A-2:** PG&E shall schedule construction activities so that exhaust levels do not violate PCAPCD exhaust requirements. Prior to construction, PG&E shall submit to the CPUC the Construction Emission/Dust Control Plan, approved by PCAPCD as set out in Mitigation Measure A-1, that demonstrates how construction exhaust emission levels will be kept below the PCAPCD significance thresholds for exhaust emissions.	PG&E to implement measure as defined.	CPUC to verify that the subject constructed are not constructed concurrently.	During construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
	Biology			
Affect Sensitive Status Species	**B-1:** Floristic surveys of the project area, conducted in 2000, were not performed during the flowering period of two special status species with potential to occur along the right-of way. • Hispid bird's-beak (Cordylanthus mollis ssp. hispidus) has a low to moderate potential to occur in a small patch of saltgrass (Distichlis sp.) in a disturbed seasonal stream crossing north of Sunset Avenue. This species blooms from June to September. • Sanford's arrowhead (Sagittaria sanfordii) has a high potential to occur in suitable habitat along Antelope Creek and in a seasonal stream and small drainage north of Sunset Avenue. This species blooms from May to October. To prevent possible disturbance to these species, a qualified biologist, approved by the CPUC, will place flags (or direct installment of exclusion fencing) around the small patch of saltgrass (*Distichlis* sp.) and all suitable habitat of Hispid bird's-beak (*Cordylanthus mollis* ssp. *hispidus*) and Sanford's arrowhead (*Sagittaria sanfordii*) along Antelope Creek and the seasonal stream and small drainage north of Sunset Boulevard within 100 feet of any construction activity. Construction activities will subsequently be prohibited within this exclusion area.	PG&E to place flags or fencing around all suitable habitat; implement measure as defined.	CPUC to verify flag and/or fencing is in place prior to construction.	Prior to and during construction
Affect Sensitive Status Species during Nesting	**B-2**: Construction during the breeding season (February through September) should be avoided if practicable. If construction commences between February 15 and August 15, the following measures will apply to reduce the likelihood of impacting sensitive habitat or directly impacting birds that could be nesting: • A qualified biologist, approved by the CPUC, shall perform a survey of the construction area for nesting special status raptors within 30 days prior to construction. • Power line poles, access roads, and equipment staging areas shall be sited to avoid the vicinity of existing raptor nest trees to the greatest extent practicable. • If avoidance of active nests is not practicable, a construction-free buffer of at least 250 feet (or as specified by the appropriate resource agency) around the nest shall be maintained to protect breeding birds. If a special status raptor has an active nest in the project area, the biologist approved by the CPUC shall monitor the site during all construction activities to ensure there is no nest abandonment. In the event a Swainson's hawk nest is present, consultation and coordination with CDFG shall occur to determine appropriate actions. • Should nest abandonment occur during the breeding season, despite all efforts to minimize disturbance, and if the nestlings are still alive, the biological monitor(s) shall notify the appropriate agencies as soon as it becomes apparent that the nest has been abandoned.	PG&E to submit surveys to CPUC for review and approval 15 days prior to the start of construction; implement measure as defined.	CPUC to review survey report and monitor construction activities for compliance.	Prior to and during construction
Affect Sensitive Status Species During Breeding	**B-3**: All tree removal or trimming shall occur between September 15 and March 15 to avoid the breeding season of birds protected by the Migratory Bird Treaty Act, and to discourage hawks from nesting in the vicinity of the proposed power line ROW. Prior to the beginning of construction (between March 15 and September 15), all trees within 250 feet of any construction activity shall be surveyed for active raptor nests by a qualified biologist approved by the CPUC. If active raptor nests are found within 250 feet of tree removal or trimming activity, protective fencing shall be erected around the tree at the dripline to prevent construction disturbance and intrusions to the nest area, and a construction-free buffer of at least 250 feet around the nest shall be maintained during the breeding season.	PG&E to submit surveys to CPUC for review and approval 30 days prior to the start of construction; implement measure as defined.	CPUC to review survey report and monitor construction activities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Affect Breeding Habitats of Sensitive Status Species	**B-4**: Before the spring breeding season (and prior to construction), a survey of the construction area for any denning activity shall be performed by a qualified biologist approved by the CPUC. Sensitive habitat, including burrows and dens, shall be avoided by moving the pole locations. If an active den is located within the construction zone, a biological monitor shall be present during construction activities. A buffer of at least 300 feet (or as specified by the appropriate resource agency) shall be maintained around known dens of the American badger during the breeding season (March through September) to avoid the direct loss of individuals or den abandonment. PG&E shall notify the CPUC and confer with USFWS to mitigate potentially significant impacts if construction is unavoidable within this buffer. Vehicular speed will be kept to 10 miles per hour in sensitive wildlife habitat along construction access roads and within the construction right-of-way.	PG&E to submit surveys to CPUC and USFWS for review and approval 30 days prior to start of construction; implement measure as defined.	CPUC to review document and consult with USFWS; if near an active den, a biological monitor will be present during construction.	Prior to and during construction
Affect Aquatic Habitat	**B-5:** No construction activities shall occur in or immediately adjacent to Antelope Creek. A buffer zone of 200 feet during the wet season (November through April) and 30 feet during the dry season (May through October) shall be established around Antelope Creek to protect the western pond turtle and the Chinook salmon. If work must be conducted within these buffer zones, PG&E shall notify the CPUC in writing prior to construction and shall negotiate with the appropriate resource agencies (i.e., the U.S. Fish and Wildlife Service and the California Department of Fish and Game) the type, timing, and duration of the work to mitigate any potential significant impacts.	PG&E to avoid buffer zone; implement measure as defined.	CPUC to review survey report and monitor construction activities for compliance.	Prior to and during construction
Affect Vernal Pool Habitat	**B-6:** To avoid potential construction impacts to vernal pool aquatic habitats, a buffer zone of 200 feet during the wet season (November through April) and 30 feet during the dry season (May through October) shall be established around the seasonal pools in the project area that contain protected species and could potentially be impacted by project activities. If work must be conducted within these buffer zones, PG&E shall notify the CPUC in writing prior to construction and shall negotiate with the appropriate resource agencies (i.e., the U.S. Fish and Wildlife Service and the California Department of Fish and Game) the type, timing, and duration of the work to mitigate any potential significant impacts. To avoid potential construction impacts to aestivation habitat, all of the proposed pole sites shall be surveyed to ensure that poles are placed in locations where aestivation habitat is absent.	PG&E to avoid buffer zone; implement measure as defined.	CPUC to review survey report and monitor construction activities for compliance.	Prior to and during construction
	B-6a: If PG&E cannot completely avoid direct (100-foot buffer) or indirect (250-foot buffer) impacts to vernal pool crustaceans, they will be required to comply with U.S. Army Corps of Engineers (USACE) 404 permitting/ U.S. Fish and Wildlife Service (USFWS) Section 7 process, if necessary, and any other applicable USFWS or USACE consultation requirements. Appropriate compensation to mitigate impacts will be determined by the USFWS. PG&E must provide the CPUC with a copy of the Biological Opinion from USFWS that indicates agreed-upon avoidance buffer zones, compensation for anticipated impacts, and/or measures to reduce impacts to less than significant.	Implement measure as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
	B-6b: PG&E shall initiate consultation with CDFG to determine if an "Incidental Take Permit" would be required for the project. PG&E shall provide documentation to the CPUC that either: (1) CDFG found that an Incidental Take Permit would be necessary for the project, or that (2) CDFG would not require that PG&E obtain an Incidental Take Permit. If an Incidental Take Permit is required, PG&E must provide all provisions of the permit to the CPUC prior to the commencement of construction and all said provisions shall be incorporated into the Mitigation Implementation and Monitoring Plan and implemented as stipulated.	Implement measure as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Affect Wetland Habitat	**B-7:** If the 200-foot disturbance free zones described in APM 7-2 cannot be adhered to and construction will occur in jurisdictional wetlands, PG&E must comply with applicable requirements of the U.S. Army Corps of Engineers.	PG&E to submit report to CPUC and USACE for review and approval; implement measure as defined.	CPUC to monitor construction activities for compliance; CPUC and USACE to review report.	Prior to and during construction
	B-7a: PG&E will be required to initiate U.S. Army Corps of Engineers (USACE) 404 permitting if any of the 'other waters of the U.S.' or associated wetlands, identified in the May 2002 Assessment of Biological Resources for PG&E's Atlantic Del-Mar Underground Evaluation in Rocklin, CA by Jones & Stokes are directly impacted by the project. Appropriate compensation for anticipated impacts to these waters and wetlands will be determined by the USACE for this project. PG&E must provide the CPUC with a copy of the 404 permit (or notice of authorization under a Nationwide Permit) that documents the agreed-upon compensation for impacts to these jurisdictional resources.	Implement measure as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
	B-7b: PG&E shall initiate consultation with CDFG to determine if a Streambed Alternation Agreement Permit would be required for the project. PG&E shall provide documentation to the CPUC that either: (1) CDFG found that a Streambed Alternation Agreement Permit would be required for the project, or (2) CDFG would not require that PG&E obtain a Permit. If a Streambed Alternation Agreement Permit is required, PG&E must provide all provisions of the Permit to the CPUC prior to the commencement of construction and all said provisions shall be incorporated into the Mitigation Implementation and Monitoring Plan and implemented as stipulated.	Implement measure as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
	B-7c: Boring operations under wetlands shall be limited to daylight hours because of the difficulty in identifying the loss of bentonite or machine pressure without daylight. This shall be defined by the termination of drilling 30 minutes before dusk, and resumption of drilling at dawn. The contractor will make every effort to schedule drilling activities to be completed between dawn and 30 minutes to dusk. Should the drilling activities be within one hour of completion, 30 minutes before dusk, drilling activities may be allowed to continue for one more hour if the project environmental monitor determines that completing the drilling activities will result in less risk to the wetland area. In the event that the wetland is dry and the National Weather Service forecasts indicate no possibility of rain for a 24-hour period, this condition shall not apply. PG&E shall develop site specific Bore Plans for each proposed bore location that document the design, measures to minimize the risk of spills of all types, and contingency plans in the event of the release of drilling lubricants through fractures in the streambed or wetland ("frac-outs"). In substrates where frac-outs are likely to occur, the plan shall require boring in a manner that would reduce risk, such as using lower pressure and greater boring depths. The Bore Plan(s) shall be approved by the CPUC prior to the start of construction. Boring plans should include: ▪ A sketch of the construction site, including equipment staging areas, approximate location of drill entry and exit points, the approximate location of access roads in relation to the surrounding area, and conduit stringing areas (if required). ▪ Proposed depth of bore and statement of streambed/wetland condition (subsurface strata, percent of gravel and cobble, and estimated scour depth) that support the depth of the bore. ▪ Approximate length of bores (50-foot increments). ▪ Type and size of boring equipment to be used (categorized as mini, mid or maxi). ▪ Estimated time to complete bore. ▪ List of lubricants and horizontal directional drill additives to be used ▪ Name of Operator's agents and cell phone numbers. ▪ Location of disposal site and description of disposal arrangements. ▪ Frac-out prevention and contingency plan that includes: name(s) and phone numbers of biological monitor(s), third-party monitors, and crew supervisor(s); site-specific resources of concern (if applicable, include factors such as possible presence of sensitive species); monitoring protocols (include biological monitoring and frac-out monitoring; containment and clean-up plan (include staging location of vacuum trucks and equipment, equipment list, necessary hose lengths, etc. at each location). To prevent frac-outs, the following or similar prevention measures will be instituted: before thermal grout is pumped into the casing, thermal concrete of compressive strength 2,500 psi(same as the duct bank concrete) will be used to form concrete plugs at the casing ends to prevent escape of the grout during the pumping operation. Overflow standpipes will be directed into a sandbagged, fabric or plastic lined dam to prevent contamination of any surrounding areas. PG&E's biological monitor shall provide on-site training for the work crews to ensure protection of all stream and wetland zones. The contractor will provide continuous monitoring of the boring operation to ensure that adequate protection controls have been installed as specified in the bore plan. In addition, a contractor compliance inspector will be present during drilling operations. All field personnel will be briefed in their responsibility for timely reporting of frac-out releases to the monitor on site. PG&E's biological monitors shall inspect the route within 4 hours prior to the commencement of bore at the permitted sites for the presence of sensitive species. If sensitive species are found, work shall cease immediately and appropriate resource agencies shall be consulted in order to develop mitigation and new construction plans. Secondary containment will be utilized for any portable equipment brought onto the project site (i.e., portable pumps). Secondary containment will consist of spill basins large enough to contain the equipment. In addition, spill kits will be kept on site at all times for use in vehicle/equipment fuel or oil leaks. Spill kits will consist of a 5-gallon plastic bucket, 3-inch ring booms, and absorbent padding. Frac-out containment materials will also be kept on site.	Implement measure as defined. Submit Plan to CPUC for review and approval.	CPUC to review plan and monitor construction activ-ities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
	Cultural Resources			
Disturb Known Cultural Resources	**C-1:** No transmission towers, anchor points, or construction disturbance shall be placed within 15 feet of the boundaries of CA-Pla-841-H, Archaeological Site YH-2, Archaeological Site A-1, and Structure 5250 Front Street, Rocklin. The transmission towers shall also avoid, within 15 feet, the eleven features that accompany CA-Pla-841-H [Culvert RM-1, Feature RM-2, the Rocklin Passenger Depot (California Historical Landmark 780-2 and RM-3), Culvert RM-4, the Rocklin Roadhouse (C-Rocklin-B-10), Culvert-1, Culvert-2, Culvert-3, Culvert-4, Culvert-5, and the Railroad Bridge]. In addition, vehicles shall be restricted to existing access roads and/or shall not be permitted within 15 feet of the external boundaries of these resources. A cultural resource specialist shall approve all these locations and the specialist shall monitor all excavation. To prevent physical damage to the 18 identified resources, PG&E shall flag these sites, if within 100 feet of any work area as environmentally sensitive areas for at least 48-hours prior to construction work on the project. A cultural resource specialist approved by the CPUC shall install the flagging.	PG&E to flag and avoid cultural resources; implement measure as defined.	CPUC to verify flagging is in place prior to construction; monitor construction activities for compliance.	Prior to and during construction
Disturb Unknown Cultural Resources	**C-2**: PG&E shall develop and implement a *Cultural Resources Management Plan* (CRMP) for the project covering pre-construction, construction, and post-construction activities. PG&E shall submit the CRMP to the CPUC at least 30 days prior to construction for review and approval. The CRMP shall include procedures for pre-construction field survey, designation and avoidance of cultural resources areas, significance evaluation including potential testing and possible data recovery prior to construction, archaeological monitoring during construction, treatment of the unexpected discovery of cultural resources (including Native American burials), and treatment of significant sites that may be exposed during all phases of the project. The CRMP shall detail the qualifications of the Project Archaeologist, reporting requirements by the Project Archaeologist; designate a location for the curation of cultural materials collected during the project; and, specify that archaeologists and other discipline specialists meet any Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP). The CRMP shall include requirements detailing that prior to construction or ground-disturbing activities, PG&E shall (1) complete cultural resources training for all construction personnel; and, (2) insure that any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits. The CRMP shall include the requirement for and definition of a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential Environmentally Sensitive Areas (ESA) and anticipated procedures to treat unexpected discoveries. Construction personnel shall be trained regarding the recognition of possible buried prehistoric and historic resources during construction. PG&E shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials including Native American burials. Upon discovery of potential cultural resources during construction, work in the immediate area of the find shall be halted and PG&E's archaeologist and the CPUC Environmental Monitor shall be notified. Once the find has been identified, PG&E's archaeologist shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be important according to CEQA. A report on the find shall be submitted to the CPUC.	PG&E to submit report to CPUC 30 days prior to construction for review and approval; implement measure as defined.	CPUC to review report and monitor construction activities for compliance of the report.	Prior to and during construction
Recognition of Cultural Resources	**C-3**: Prior to the initiation of construction activities, PG&E shall provide all construction personnel with environmental training. Training shall describe the possible cultural resources in the project area and emphasize the importance of the cultural resource sites. Training shall also address the possibility that previously unidentified cultural resources may become apparent during ground-disturbing activities, and shall define procedures to be implemented if possible resources are discovered. The contents of the training course shall be provided to the CPUC for review and approval before the start of construction, and documentation regarding the specific construction personnel who have attended the training shall be provided to the CPUC.	PG&E to submit contents of training course and provide sign-in sheet to CPUC prior to construction; implement measure as defined.	CPUC to review and approve contents of training course.	Prior to construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Disturb Unknown Cultural Resources as a Result of Undergorund Power Line Excavation	**C-3a:** PG&E shall ensure that a Cultural Resources Specialist is on site to monitor all excavation activities associated with underground construction required by Mitigation Measure V 1. PG&E shall provide the CPUC with the resume of the Cultural Resources Specialist for approval prior to the commencement of construction. The Cultural Resources Specialist shall have the authority to stop construction if there is a perceived impact to Cultural Resources	Implement measure as defined.	CPUC to review and approve resume of PG&E-appointed Cultural Resources Specialist.	Prior to and during construction
Disturb Unknown Paleontological Resources	**C-4**: Prior to construction, PG&E shall develop a Paleontological Resources Monitoring Plan (PRMP) for review and approval by the CPUC, which shall address the treatment of paleontological resources discovered during transmission line construction. The PRMP shall identify specific areas with high sensitivity for paleontological resources and shall define procedures for evaluation of resources found during construction. It shall define procedures for actions to be taken if paleontological resources are found during construction, procedures for fossil recovery, a data recovery program, and a qualified curation facility. A qualified paleontologist approved by the CPUC shall prepare the PRMP; it shall include procedures for significance testing and data recovery. The PRMP shall defer to the Cultural Resources Monitoring Plan (see Mitigation Measure C-1) if paleontological resources are found with archaeological resources. The PRMP shall include a requirement for training of construction workers on why vertebrate fossils are important and what they look like. The training shall explain prohibitions against collecting fossils found during construction.	PG&E submit report to CPUC for review and approval 30 days prior to construction; implement measure as defined.	CPUC to review report and monitor construction activities for compliance of the report.	Prior to and during construction
Hazards & Hazardous Materials				
Power Line Accident at the Tank Farm	**HM-1:** PG&E shall site all power poles and/or underground transition structures at least 200 feet away from the nearest petroleum products storage tank at the Kinder Morgan tank farm.	PG&E to implement as defined.	CPUC to verify project construction plans comply with measure.	Prior to construction
Encounter Contaminated Material	**HM-2:** PG&E shall conduct an updated review of regulatory databases and Central Valley Regional Water Quality Control Board (CVRWQCB) files to identify current potentially contaminated properties on or adjacent to the proposed power line route or the existing substation sites. PG&E or it's contractor shall assign trained personnel during active excavation in the vicinity of any of sites identified in Table VII-1 or potential new sites discovered as a result of the updated review of databases to observe visual evidence of contamination and perform monitoring with appropriate testing equipment (e.g., photoionization or flame ionization detectors). If field evidence of contamination is observed during excavation, sampling and direct laboratory testing shall be conducted as necessary. Alternately, subsurface sampling and laboratory analysis would be performed prior to excavation, to determine subsurface conditions and appropriate actions. Personnel conducting soil sampling and field analysis should meet the Federal OSHA requirement for 40-Hour Training for Hazardous Waste Operations and Emergency Response and be familiar with the calibration and operation of the testing equipment. The monitoring personnel shall have authority to implement a health and safety plan that complies with applicable OSHA requirements and is approved by a certified industrial hygienist. The health and safety plan shall present specific alternatives for action to be taken in the event contaminated soils are encountered. The plan shall specify procedures for monitoring, identifying, handling, and disposing of hazardous waste.	PG&E to submit contingency plan and updated site list to CPUC 30 days prior to construction for review and approval; implement measure as defined.	CPUC to review report and monitor construction activities for compliance with the report.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
	Hydrology and Water Quality			
Erosion Associated with Trenching Activities	**H-1:** All refueling, lubrication, and other machinery or vehicular maintenance activities required during construction of the project shall be performed at least 100 feet from any tributary or stream channel, or slough. PG&E shall submit its Hazardous Substance Control and Emergency Response Plan (HSCERP), as described in APM 10-8, to the CPUC for review and approval prior to the commencement of construction. The plan shall describe specific measures, such as the use of drip sheets, to minimize spillage of fuels and lubricants.	PG&E to submit HSCERP to CPUC 30 days prior to construction for review and approval; implement measure as defined.	CPUC to review report and monitor construction activities for compliance with the report.	Prior to and during construction
	H-2: Trenched spoils shall be removed to an off-site location, and/or temporarily collected and placed in a controlled area surrounded by siltation fencing, hay bales, or a similarly effective erosion control technique that prevents the transport of sediment. Upon completion of trenching activities, excavated soil shall be replaced and graded to match the surroundings. Surplus soil shall be transported from the site and disposed of in a CPUC approved manner. Open portions of the trench shall be covered when not under active construction. Standard erosion and dust control practices shall be used during construction according to PG&E's Best Management Practices (Applicant Proposed Measure APM 10-1) to protect biological and hydrological resources.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	During construction
Impacts to Groundwater Hydrology	**H-3**: Groundwater levels along the underground transmission line route shall be tested by drilling pilot borings. The location, distribution, or frequency of such tests shall be determined to give adequate representation of the conditions along the underground line. Suitable testing locations (for example at 1,000 or 1,500 ft intervals) shall be determined by a qualified geologist approved by the CPUC. Locations where groundwater depth is less than 8 ft deep shall be identified prior to trenching activities and avoided, where possible, for the underground route. Avoidance is especially recommended where shallow groundwater flow direction is not parallel to the orientation of the underground line. Where avoidance is not possible, PG&E Co. shall consider construction in a wider, shallower trench, depending upon structural requirements of the underground method and other practical concerns. PG&E Co. shall document results of test drilling in a letter report to the CPUC at least 30 days before construction starts and shall propose specific means to minimize the impact on groundwater if shallow groundwater is found. These measures must be approved by the CPUC prior to the start of construction of the underground segment. This measure can be eliminated if information on local groundwater levels is obtained that indicates that groundwater depth is over 8 feet below the ground surface.	PG&E to implement measure as defined.	CPUC review groundwater level documentation.	Prior to construction
	Noise			
Construction Equipment Noise	**N-1:** PG&E or its construction contractor shall provide advance notice, between two and four weeks prior to construction, by mail to all sensitive receptors and residences that would be within 300 feet of construction. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than 7 days occur, an additional notice shall be made, either in person or by mail. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. The notice shall also advise the recipient on how to inform the Applicant/contractor if specific noise or vibration sensitive activities are scheduled so that construction can be rescheduled, if necessary, to avoid a conflict and a reasonable deadline for such contact shall be stated. PG&E shall also publish a notice of impending construction in local newspapers, stating when and where construction will occur.	PG&E to provide notice to CPUC for review and approval, and provide documentation of mailing and publishing; implement measure as defined.	CPUC to review notice and documentation of mailing and publishing.	Prior to construction
Noise Construction Disturbance	**N-2**: PG&E shall 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 shall be included in notices distributed to the public in accordance with Mitigation Measure N-1. PG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers (procedures to be approved by the CPUC).	PG&E to provide notice and procedures for responding to callers to CPUC for review and approval;	CPUC to review notice; verify toll-free number; and review procedures for responding to callers.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
	Transportation/Traffic			
Traffic Impacts Associated with Lane Closures	**T-1*:*** PG&E shall develop and implement detailed Traffic Control Plans (TCPs) for the entire route at all locations where construction activities would interact with the existing transportation system. Input and approval from the City of Rocklin Public Works Department shall be obtained as required; copies of all required approval letters from City of Rocklin Public Works Department must be provided to the CPUC prior to the start of construction. The TCP shall define the use of flag persons, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH).	Implement measure as defined. Submit Plans to CPUC for review and approval.	CPUC to review plans and monitor construction activities for compliance.	Prior to and during construction
	APPLICANT PROPOSED MITIGATION MEASURES			
	Aesthetics			
Landscaping and Reflection and Contrast Reduction	**APM 5-1:** Pacific Gas and Electric Company has agreed to the City of Rocklin's requests to implement the following visual mitigation measures to further ensure that the project will not negatively impact the existing visual environment within the City of Rocklin. These measures include: • Landscaping around poles, where possible; • Use of non-reflective wires; and • Use of gray self-weathering steel poles.	PG&E to implement as defined.	CPUC to verify implementation.	Prior to and during construction
	Air Quality			
Construction Fugitive Dust and Equipment Exhaust	**APM 6-1 through 6-3:** These APMs are superceded by Agency Recommended Mitigation Measure A-1 (see above).			
	Biological Resources			
Standard Construction Practice to Avoid or Minimize Impacts to Biological Resources	**APM 7-1:** As part of Pacific Gas and Electric Company's standard construction practice, the following mitigation measures will be incorporated into the project and will be implemented to avoid or minimize impacts to biological resources: • An ongoing environmental education program for construction crews will be conducted before beginning the site work and during construction activities. Sessions will include information about the federal and state Endangered Species Acts, the consequences of noncompliance with these acts, identification of sensitive species and wetland habitats, and review of mitigation requirements. • Vehicles will be restricted to established and identified roadways. • Sensitive resource areas, such as rare plant populations, habitat for listed species, and active nests in the project vicinity, will be mapped and marked in the field. • If sensitive species are located prior to or during construction, Pacific Gas and Electric Company will consult with the USFWS and CDFG to coordinate avoidance measures. • A biological monitor will be onsite during any construction activity near sensitive habitat to ensure implementation of, and compliance with, mitigation measures. The monitor will have the authority to stop activities and determine alternative work practices in consultation with construction personnel, if construction activities are likely to impact sensitive biological resources. • Photo documentation of preconstruction habitat conditions at all tower and pull-site locations within sensitive habitat will occur prior to the start of work, as well as immediately after construction activities. • Pacific Gas and Electric Company will make diligent efforts to protect the existing plant community and wetlands and to keep temporary impacts to a minimum. However, temporary impacts to habitat will be addressed through a revegetation/restoration plan. • Trash dumping, firearms, open fires (e.g., barbecues), hunting, and pets will be prohibited in the project area.	PG&E to implement as defined.	CPUC to verify implementation.	Prior to, during and after construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Wetlands and Riparian Habitat	**APM 7-2:** To ensure avoidance of wetland habitat (includes vernal pools, artificial seasonal pools, freshwater marsh, and other natural wetlands, riparian vegetation, and perennial and ephemeral streams) the following mitigation measures will be implemented: • Rubber-tired construction vehicles will be used on the site and no new roads will be excavated, with the exception of a small pad at the base of the tower west of Antelope Creek. Where holes are augered for poles located within the 250-foot buffer zone of vernal pools and other seasonal pools, runoff will be contained and care will be taken to prevent cast-off of excavated soil. For other aquatic habitats (i.e., perennial and ephemeral streams, wetlands, and quarry ponds) poles are located within 200 feet of these habitats, and care will be taken to prevent cast-off of excavated soil. Once the seated pole has been back-filled, any excess excavated soils will be moved away from the stream or wetland. • All vehicle and equipment access into the site will be limited to marked access routes to avoid entering streams, wetlands, vernal, and seasonal pools. Wetland habitat will be marked with flagging by a qualified biologist. When possible, indirect impacts to vernal pools and seasonal pools will be avoided by maintaining a disturbance-free zone of 250 feet from the edge of all wetland habitats. For other aquatic habitats (perennial and ephemeral streams, wetlands, and quarry ponds) indirect impacts will be avoided when possible, by maintaining a disturbance-free zone of 200 feet from the edge of all aquatic habitat during the wet season (November through April) and 30 feet during the dry season (May through October). • Riparian vegetation along the Antelope Creek corridor and the unnamed ephemeral streams that occur in the project area will be marked as Environmentally Sensitive Areas (ESA's) prior to construction and under the supervision of a qualified biologist. • Prior to construction, silt fencing will be installed in areas where any soil disturbance within 100 feet of the Antelope Creek corridor, or within 50 feet of any of the ephemeral streams or pools is anticipated. The disturbed area will be restored to a pre-existing grade and any bare soil will be covered with certified weed-free straw or wood chips immediately following construction. • Refueling or equipment repair will occur outside the defined project area.	PG&E to identify construction boundaries; implement as defined.	CPUC to verify silt fencing is in place prior to construction; verify implementation of measure during construction.	Prior to and during construction
Native Trees	**APM 7-3:** • Permits will be obtained as necessary from the City of Roseville and City of Rocklin for the removal or trimming of native oaks or other native trees. A complete tree survey will be conducted by a qualified biologist or forester, and will include a list and location of all trees to be removed or trimmed. Any oaks or other native trees removed, or trimmed in excess of 20 percent of the tree canopy, will be mitigated to be consistent with local tree protection ordinances. • Any oaks or other native trees over six inches diameter-at-breast-height that are not slated for removal and are within pole laydown areas will be protected. Placement of temporary fencing at the dripline of the tree prior to construction to protect the resource from direct impacts will be implemented.	PG&E to install fencing and submit survey report to CPUC for review and approval 30 days prior to construction and provide documentation to CPUC that permits are obtained.	CPUC to review survey report and monitor construction activities for compliance.	Prior to and during construction
Noxious Weeds	**APM 7-4:** Construction vehicles will avoid disturbing or driving through significant populations of noxious and invasive exotic species. Flagging will identify these areas to be avoided.	PG&E to install flagging prior to construction	CPUC to verify implementation	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Interruption of Breeding and Nesting Activities of Avian Species	**APM 7-5:** "Take" of individual animals will be avoided by conducting preconstruction surveys before the spring breeding season (and prior to start of construction). A qualified biologist will perform a survey of the construction area for potential avian species within 30 days prior to construction, if scheduled during the breeding season. It is expected that if construction occurs in suitable habitat before the onset of the breeding season, the construction disturbance would cause bird species to seek alternate sites for breeding and nest construction. The following measures will reduce the likelihood of impacting sensitive habitat or directly impacting birds that could be nesting: • To the extent possible, power line towers and access roads will avoid sensitive habitat; • To the extent possible, construction during the breeding season (February through September) will be avoided. If avoidance of active nests is not possible, a construction-free buffer of at least 250 feet around the nest will be maintained to protect breeding birds. In the unlikely event a Swainson's hawk nest is present, consultation will occur with CDFG; • In the event a nesting raptor is identified in the project vicinity, a biologist will monitor the site during construction activities to ensure there is no nest abandonment; and • Should nest abandonment occur during the breeding season, despite efforts to minimize disturbance, and if the nestlings are still alive, the biological monitor(s) will notify the appropriate agencies.	PG&E to complete and submit the survey to CPUC 30 days prior to construction for review and approval	CPUC to review report and monitor construction activ-ities for compliance	Prior to and during construction
Trimming or Removal of Nest Trees	**APM 7-6:** • When feasible, all tree removal or trimming will occur between September 15 and March 15 to avoid the breeding season of birds protected by the Migratory Bird Treaty Act, and to discourage hawks from nesting in the vicinity of the proposed power line ROW. • Prior to the beginning of construction (between March 15 and September 15), all trees within 250 feet of any construction activity will be surveyed for active raptor nests by a qualified biologist. If active raptor nests are found within 250 feet of potential construction activity, flagging will be erected around the tree at the dripline to prevent construction disturbance and intrusions on the nest area.	PG&E to submit surveys to CPUC for review and approval 30 days prior to the start of construction; implement measure as defined.	CPUC to review survey report and monitor construc-tion activities for compliance.	Prior to and during construction
Interruption of Breeding/Denni ng Activities of Sensitive Wildlife Mammals	**APM 7-7:** Before the spring breeding season (and prior to construction), a survey of the construction area for any denning activity will be performed by a qualified biologist. It is expected that if construction occurs in suitable habitat before the onset of breeding season, the construction disturbance would cause mammal species to seek alternate sites for breeding and denning; • To the extent possible, sensitive habitat, including burrows, will be avoided by moving the location of the transmission pole. Some flexibility exists in the exact placement of these features along the route; • If an active den is located within the construction zone, a biological monitor will be present during construction activities; • If possible, a buffer of at least 300 feet will be maintained around known dens of the American badger during the breeding season (March through September) to avoid the direct loss of individuals. PG&E will consult with USFWS if construction must occur within this buffer; and • Vehicular speed will be kept to 20 miles per hour in sensitive wildlife habitat.	PG&E to submit surveys to CPUC for review and approval 30 days prior to the start of construction implement measure as defined.	CPUC to review survey report and monitor construc-tion activities for compliance	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Potential Loss of VELB Habitat	**APM 7-8:** • Two elderberry shrubs are located outside the ROW; • Fencing or flagging will identify all areas to be avoided during construction activities. The avoidance area will be photographed and flagged prior to construction. Signs will be installed at 50-foot intervals along the edge of the avoidance area, according to USFWS 1999 guidelines; • Towers will be constructed no closer than 100 feet to the existing shrubs; • A qualified biologist will monitor both elderberry shrubs during construction; • Informal consultation with the USFWS will occur prior to construction; and • Should impacts occur to the elderberry shrubs, the USFWS will be notified immediately.	PG&E to install fencing; implement measure as defined.	CPUC to inspect area, verify that flagging is in place prior to during construction.	Prior to and during construction
Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, and California Linderiella Fairy Shrimp	**APM 7-9:** Pacific Gas and Electric Company will comply with Endangered Species Act requirements for mitigating impacts to these species. Where possible, a 250-foot buffer zone around pools in the project vicinity that have the potential to support vernal pool fairy shrimp, vernal pool tadpole shrimp, and California Linderiella shrimp will be fenced. This will prevent impacts to these species. Where construction activities must occur within 250 feet of a pool potentially supporting these species, the following precautions (in consultation with the USFWS) will be taken: • A biological monitor approved by the USFWS will be present during construction activities and will have the authority to halt work to ensure that unnecessary impacts do not occur; • Adequate fencing will be placed and maintained around the vernal pool habitat; • Construction personnel will be provided environmental training that includes a description of the species involved, the importance of avoiding impacts, and the measures that they must follow while working within 250 feet of vernal pools; • Runoff from the construction activities will be prevented from draining into the pool; and • Activities that could interfere with protection of the vernal pools will be prohibited. These include alteration of existing topography; use as a staging or laydown area; building new roads; burning, burying, or leaving behind wastes; alteration of any native vegetation; and use of pesticides.	PG&E to consult with USFWS and provide CPUC with documentation of consultation; install fencing and avoid buffer zone; approved biological monitor on site during construction; implement as defined.	CPUC verify consultation with USFWS, monitor construction activ-ities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
California Red-legged Frog	**APM 7-10:** To avoid construction impacts to potential aestivation or foraging habitat, the proposed pole site in the general vicinity of potential CRLF habitat will be placed where aestivation habitat is absent. Excavation and other construction activities will not occur in wetlands identified as suitable foraging habitat. If construction activities are necessary inside the wet and dry season buffer zones, avoidance and minimization measures by the USFWS will likely be required, including the following: • Prior to the initial site investigation and subsequent ground-disturbing activities, a qualified biologist will instruct all project personnel in recognition of CRLF and their habitat. Workers will be informed about the presence of CRLF and their habitat, and that unlawful "take" of the animal or destruction of its habitat is a violation of the federal Endangered Species Act. The biologist will instruct all construction personnel regarding the life history of CRLF, the importance of marshes/wetlands to the frog, and the terms and conditions of the Biological Opinion; • A qualified biologist will be present during construction activities to monitor and determine the extent of potential ground-disturbing activities within 30 feet of suitable habitat; • Between November 1 and April 30, ground-disturbing activities will not occur within 30 feet of suitable habitat; • Between May 1 and October 31, equipment will not be allowed within 30 feet of suitable habitat until a qualified biologist inspects the site to ensure the route is clear of CRLF; • Clearing of wetland vegetation will be confined to the minimal area necessary. Excavation activities will be accomplished by using equipment located on and operated from the side of the drainage with the least interference practical for emergent vegetation; • If a CRLF is encountered during excavations, activities will cease until the frog is removed and relocated by a USFWS approved biologist; and • After completion of construction activities, any debris will be removed and, wherever feasible, disturbed areas will be restored to preconstruction conditions.	PG&E to implement measure as defined	CPUC to monitor construction activities for compliance	Prior to and during construction
California Tiger Salamander (CTS)	**APM 7-11:** To avoid potential construction impacts to aestivation habitat, all of the proposed pole sites will be surveyed to ensure that poles are placed in locations where aestivation habitat is absent. Measures described above to protect the vernal pool tadpole shrimp, the vernal pool fairy shrimp, and the California linderiella fairy shrimp will minimize potential impacts to the salamander. Additional measures include: • If a CTS is encountered during excavations, activities will cease until the salamander is removed and relocated by a biologist approved by CDFG; • After completion of construction activities, any construction debris will be removed and, wherever feasible, disturbed areas will be restored to preconstruction conditions.	PG&E to submit survey; avoid buffer zone; and implement measure as defined.	CPUC to review survey report and monitor construction activities for compliance.	Prior to and during construction
Central Valley Fall-Run Chinook Salmon	**APM 7-12:** • No construction activities will occur in or immediately adjacent to Antelope Creek; • A buffer zone of 200 feet during the wet season (November through April) and 30 feet during the dry season (May through October) will be established around Antelope Creek to protect this species; and • If work must be conducted in buffer zones, the type and duration of the work will be negotiated with the appropriate resource agency prior to construction in the area.	PG&E to avoid buffer zone or provide documentation that the appropriate resource agency has been consulted.	CPUC to monitor construction activities for compliance, review documentation.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Foothill Yellow-legged Frog	**APM 7-13:** • No construction activities will occur in or immediately adjacent to Antelope Creek; • A buffer zone of 200 feet during the wet season (November through April) and 30 feet during the dry season (May through October) will be established around Antelope Creek to protect this species; and • If work must be conducted in buffer zones, the type and duration of the work will be negotiated with the appropriate resource agency prior to construction in the area.	PG&E to avoid buffer zone or provide documentation that the appropriate resource agency has been consulted.	CPUC to monitor construction activities for compliance, review documentation.	Prior to and during construction
Western Pond Turtle	**APM 7-14:** • No construction activities will occur in or immediately adjacent to Antelope Creek; • A buffer zone of 200 feet during the wet season (November through April) and 30 feet during the dry season (May through October) will be established around Antelope Creek to protect this species; and • If work must be conducted in buffer zones, the type and duration of the work will be negotiated with the appropriate resource agency prior to construction in the area.	PG&E to avoid buffer zone or provide documentation that the appropriate resource agency has been consulted.	CPUC to monitor construction activities for compliance, review documentation.	Prior to and during construction
Western Spadefoot Toad	**APM 7-15:** To avoid potential construction impacts to aquatic habitats, a buffer zone of 200 feet during the wet season (November through April) and 30 feet during the dry season (May through October) will be established around the seasonal pools in the project area that contain this species (those between MP 0.80 and MP 1.00) and could potentially be impacted by project activities. If work must be conducted in buffer zones, the type and duration of the work will be negotiated with the appropriate resource agency prior to construction in the area. To avoid potential construction impacts to aestivation habitat, all of the proposed pole sites will be surveyed to ensure that poles are placed in locations where aestivation habitat is absent.	PG&E to avoid buffer zone or provide documentation that the appropriate resource agency has been consulted.	CPUC to monitor construction activities for compliance, review documentation.	Prior to and during construction
Vernal Pool Plant Species	**APM 7-16:** To ensure that indirect impacts to special-status vernal pool plant species does not occur during annual inspection of the power line, inspection vehicles will remain on existing access roads and avoid entering streams, wetlands, vernal, and seasonal pools.	PG&E inspection vehicles to remain on existing roads.	CPUC to monitor construction activities for compliance	During operations
Oak Tree Trimming During Operations	**APM 7-17:** Any oak tree trimming required for compliance with CPUC General Order 95 will also be conducted in accordance with Rocklin and Roseville tree ordinances.	PG&E to comply with CPUC General Order 95.	CPUC to monitor construction activities for compliance.	During construction and operations
Cultural Resources				
Disturb Cultural and Paleontological Resources	**APM 8-1 through 8-7:** These APMs are superceded by Agency Recommended Mitigation Measures C-1 through C-4 (see above).			
Geology				
Soils and Ground Shaking	**APM 9-1:** The proposed project's construction and operations will incorporate measures to minimize potential soil and geologic impacts. In addition, underground and overhead structures will be built to the design specifications set out in General Order 95 and the Institute of Electrical and Electronics Engineers, Inc. Standard 693 to withstand potential seismic ground shaking. Pacific Gas and Electric Company's standard procedures incorporate Best Management Practices, which include removal of excavated materials where required, and the use of erosion control measures, such as straw bales, silt fences, and seeding with vegetative cover to protect biological resources.	PG&E to implement Best Management Practices.	CPUC monitor construction activities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Hydrology, Water Quality, and Public Health Hazards				
Best Management Practices	**APM 10-1:** Pacific Gas and Electric Company will implement Best Management Practices (BMPs) at pole construction locations, equipment laydown areas, and cable pull-sites, to minimize the potential for erosion and sedimentation of waterways. Special attention will be given to construction activities near Antelope Creek. Erosion control measures will be performed to protect the waterways, such as straw bales, silt fences, and seeding with vegetative cover to protect biological resources. These additional mitigation measures will further reduce any potential impacts to hydrology and resulting from hazardous materials to a less than significant level.	PG&E to implement Best Management Practices.	CPUC to monitor construction activities for compliance.	Prior to and during construction
No new roads	**APM 10-2:** No new roads will be constructed to access pole locations.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance	Prior to, during, and after construction
Bermed Areas for Excess Water and Liquid Concrete	**APM 10-3:** Excess water and liquid concrete that escapes the pole foundation pours will be directed to bermed areas adjacent to the borings where the water will infiltrate or evaporate and the concrete will remain and begin to set. Once the excess concrete has been allowed to set up (but before it is dry), it will be removed and recycled or transported to an approved landfill for disposal.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	During and after construction
Rocklin and Roseville Fire Departments will Review Construction Methods, etc.	**APM 10-4:** Should the project schedule require construction during the fire season, the Rocklin and Roseville Fire Departments will review the specific construction methods and equipment, and identify any additional requirements that will minimize the potential for wildfires, such as: • Any motor, engine, welding equipment, cutting torch, grinding device or equipment from which a spark, fire or flame may originate will not be used without first (a) clearing away all flammable material for a distance of 10 feet, and (b) having on hand a round-point shovel with an overall length of not less than 46 inches and a fire extinguisher or water-filled backpack pump fully equipped and ready to use. This does not apply to power saws and other portable tools powered by a gasoline-fueled internal combustion engine (Public Resources Code 4427). • Any portable gasoline-powered tool (chainsaws, etc.) will not be used within 25 feet of any flammable materials without providing one round-point shovel with an overall length of not less than 46 inches or a fire extinguisher having a minimum rating of 2-BC. The fire tools must be unobstructed and within 25 feet of the tool operation at all times (PRC 4431). Motor vehicles will not be parked or operated outside of cleared work areas except for the specific purpose of clearing vegetation.	PG&E to submit documentation to the CPUC that Rocklin and Roseville Fire Departments concur with the project's specific construction methods	CPUC to review documentation and monitor construction activities for compliance.	Prior to and during construction
Welding Procedures	**APM 10-5:** Pacific Gas and Electric Company's standard procedures are to select a welding site that is void of native combustible material and/or clear the site of such material to minimize the fire hazard. All welding on supporting structures will be performed during fabrication of the poles at the fabricator's yard. Prior to performing welding at the substations, Pacific Gas and Electric or its contractor will obtain a welding permit.	PG&E to provide proof that a welding permit has been obtained and implement as defined.	CPUC to review documentation and monitor construction activities for compliance.	Prior to, during, and after construction
Construction Equipment Requirements	**APM 10-6:** Construction equipment will meet the following requirements: • The exhausts of all equipment powered by gasoline, diesel, or other hydrocarbon fuel will be equipped with effective spark arrestors; • The spark arrestor will be designed to prevent the escape from the exhaust of carbon or other flammable particles over 0.0232 inches. Motor trucks, truck tractors, buses, and passenger vehicles (except motorcycles) will not be subject to this provision if their exhaust systems are equipped with mufflers (PRC 4442); and • In addition to the requirements of PRC 4427 described above, all welding rigs will be equipped with a minimum of one 20 lb. or two 10 lb. fire extinguishers, and a minimum of 5 gallons of water in a fire-fighting apparatus.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction and during operations.

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
1994 Uniform Fire Code Section 1109.5	**APM 10-7:** In accordance with the most recent edition of the 1994 Uniform Fire Code Section 1109.5, and as part of standard construction practice, Pacific Gas and Electric Company will inform its field personnel that lighted matches, cigarettes, cigars or other burning objects will not be discarded in such a manner that could cause ignition of other combustible material.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction and during operations.
Hazardous Substance Control and Emergency Response Plan	**APM 10-8:** Pacific Gas and Electric Company will prepare a Hazardous Substance Control and Emergency Response Plan (HSCERP) that will include preparations for quick and safe cleanup in the event of an accidental release of hazardous material. The plan will prescribe BMPs for reducing the potential for significant impacts to surface and ground water in the unlikely event of an oil or other liquid spill, including: • Prescribing methods for safe collection and disposal of hazardous substances generated during construction activities • An emergency response program to ensure quick and safe cleanup of accidental chemical spills The plan will identify areas where refueling and vehicle maintenance activities, temporary storage of unused concrete, and storage of hazardous materials will be permitted, and how these materials will be managed. Adherence to the HSCERP when managing hazardous materials will reduce the potential for impact to less than significant levels.	PG&E to submit plan to CPUC for review and approval 30 days prior to construction.	CPUC to review plan and monitor construction activities for compliance.	Prior to and during construction
Avoid Sites Known for Hazardous Material Re\leases	**APM 10-9:** Construction and other earth moving activities in the vicinity of sites known or suspected of being associated with releases of hazardous material will be avoided, where possible, to prevent the spread of contamination and the risk of worker exposure.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
Pole Placement over Landfill Waste and Notification of Release	**APM 10-10 and 10-11:** These APMs are superceded by Agency Recommended Mitigation Measure HM-1 (see above).			
Use of Approved Landfill	**APM 10-12:** Excavation spoils will be disposed of at an approved landfill.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
Environmental Training Program	**APM 10-13:** An environmental training program will be established to communicate environmental concerns and appropriate work practices, including erosion control methods, fire prevention, and spill prevention and response measures, to all field personnel.	PG&E to submit contents of training course to CPUC for review and approval.	CPUC to review contents of training course and monitor construction activities for compliance.	Prior to and during construction
Reduce Fire Hazard by Removal of Objects Within 10 Feet of Wires	**APM 10-14:** Pacific Gas and Electric Company's standard procedures are to clear potential proximate objects, such as trees, during construction and maintenance clearance for the life of the power line to reduce the fire hazard potential. Routine maintenance will include the clearing of all vegetation within a radial distance of 10 feet of wires (Public Resources Code [PRC] 4293) to minimize fire and other hazards. PRC 4293 also requires the removal or trimming of hazardous trees that are dead, decayed, diseased, or leaning into the line. Clearing of vegetation consistent with Section 4293 and California Department of Forestry guidelines will reduce the threat of fire during construction and operation of the project.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
National Electric Safety Code Requirements	**APM 10-15:** The National Electric Safety Code requires that power lines be designed so no more than 5 milliamperes of short-circuit current will flow through a person's body when contacting a large metal object beneath a power line. As is standard with all utility power line projects, adherence to this requirement (by identifying and grounding affected metallic buildings and structures) will reduce potential impacts from induced voltages to a less than significant level.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
General Order 95	**APM 10-16:** Pursuant to standard design practices and General Order 95, Pacific Gas and Electric Company takes into account normal and unusual structural loads, such as ice and wind that can cause the conductors to break. Pacific Gas and Electric Company installs high-speed relay equipment that senses a broken line condition and actuates circuit breakers to de-energize the line in about one-tenth of a second. This procedure has proven to be a reliable safety measure and reduces the risk of fire or electrical shock to a less than significant level.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
Minimum distances between Equipment at the Substations	**APM 10-17:** A minimum distance of 25 feet between transformers and circuit breakers will be maintained to reduce the potential for fires at the Atlantic or Del Mar Substations. A minimum distance of 50 feet will be maintained between oil-filled equipment and ignition sources**.** When construction is complete, the Atlantic and Del Mar Substations will be equipped with automated central alarm systems, which will immediately alarm in the unlikely event of a fire at either substation.	PG&E to avoid buffer zone and implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
Spill Prevention, Countermeasure, and Control Systems	**APM 10-18:** The existing Spill Prevention, Countermeasure, and Control (SPCC) containment systems will be used at the Atlantic and Del Mar Substations to retain any release in the event of a catastrophic failure of oil-filled electrical equipment during equipment removal or installation. Catch basin capacities will be maintained at levels sufficient to contain the amount of insulating oil that could be released in the event of a sudden accidental spill. Oil-absorbent material, tarps, and storage drums will be used to contain and control any minor releases. Pacific Gas and Electric Company will revise their SPCC plans for the Atlantic and Del Mar Substations if there are significant future changes in the amount of oil used. The plans will include engineered methods for containing and controlling any oil release, and preparations for a quick and safe cleanup. The plans will be submitted to Placer County for review.	PG&E to submit plan to CPUC and Placer County for review and approval 30 days prior to project operations, implement as defined.	CPUC and Placer County to review plan and CPUC to verify compliance.	Prior to and during operations
Noise				
Techniques to Minimize Construction Noise	**APM 12-1:** The following noise and vibration suppression techniques will be employed to minimize (to the extent possible) the impact of temporary construction noise and vibration on nearby sensitive receptors: • Equipment exhaust stacks/vents will be directed away from buildings. • Truck traffic will be routed away from noise-sensitive areas, where feasible. • Temporary sound barriers or sound curtains will be employed, if necessary, under the following conditions: - The other noise reduction methods are not effective or possible - Construction will occur within 100 feet of businesses - Sensitive receptors will be exposed to construction noise for more than one day • Construction techniques, including, but not limited to, non-vibratory means of compressing the soil, will be used where possible to reduce noise and vibration levels to the extent possible and to ensure that the determined construction criteria are not exceeded.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	During construction

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
	Transportation and Traffic			
Road Closure Timing	**APM 14-1:** The timing of temporary road closures will be coordinated with Rocklin and Roseville Public Works Departments, the CHP, and Caltrans.	PG&E to provide documentation of coordination and implement as defined	CPUC to review documentation and monitor construction activities for compliance.	Prior to and during construction
Flagger Control	**APM 14-2:** Pacific Gas and Electric Company will maintain the maximum amount of travel-lane capacity possible when working adjacent to or crossing roadways during non-construction periods. A contract traffic management company will be deployed by Pacific Gas and Electric Company (or its contractor) to provide flagger control to maintain traffic flows and manage traffic control during temporary closures. Construction activities in road rights-of-ways will be subject to the conditions of encroachment permits from the cities of Rocklin and Roseville, and from the California Department of Transportation.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
Coordination with UPRR	**APM 14-3:** Pacific Gas and Electric Company will maintain, at a minimum, the UPRR safety and engineering guidelines when installing power line within the railroad ROW. All construction crews and project personnel will be trained on UPRR safety guidelines prior to commencing work in the railroad ROW. Construction activities will be conducted in coordination with UPRR so as not to impact scheduled commuter train routes and to avoid delays on freight train services out of the Roseville switching station.	PG&E to provide documentation of coordination and implement as defined.	CPUC to review documentation and monitor construction activities for compliance.	Prior to and during construction
	Public Services, Utilities and Service Systems			
Conduct Surveys and contact USA	**APM 15-1:** Pacific Gas and Electric Company will conduct surveys to locate underground and overhead utilities, and all utilities encountered by project facilities will be put on the construction plan maps. During construction, before any ground disturbance occurs, Underground Service Alert (USA) will be contacted to verify the location of existing underground utilities, in order to insure that they are avoided.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction
Routine Measures to Protect Existing Utilities and RR	**APM 15-2:** In addition, other measures routinely implemented by Pacific Gas and Electric Company include: • Pacific Gas and Electric Company's technicians will locate Pacific Gas and Electric Company's underground distribution gas lines. • Representatives from all non-Pacific Gas and Electric Company aerial and underground utilities crossed by the project will be notified in advance that construction will be occurring near their lines. • Representatives from the utilities will provide the location of non-Pacific Gas and Electric Company underground utilities. Representatives from these utilities will be requested to be on-site for monitoring during construction. • Where the project crosses or is adjacent to live, overhead electric lines, signs will be installed warning equipment operators of the presence of the line. • Pacific Gas and Electric Company will locate poles and install conductors at a safe distance from intersecting transmission line structures, conductors, and telephone wires in accordance with the distances specified in the CPUC General Order No. 95. • During stringing, temporary crossing structures will be installed at major roads, railroad crossings, and in the vicinity of other lines to prevent accidental contact during conductor installation.	PG&E to implement as defined.	CPUC to monitor construction activities for compliance.	Prior to and during construction