Mitigation Monitoring Plan

Pacific Gas & Electric Company (PG&E) proposes to construct and operate the Seventh Standard Substation Project ("Proposed Project"). An Initial Study was prepared to assess the Proposed Project's potential environmental effects. The Initial Study was prepared based on information in the Proponent's Environmental Assessment (PEA), project site visits, and supplemental research. The majority of the Proposed Project's impacts would occur during project construction. Within PG&E's application, Applicant Proposed Measures (APMs) were proposed to reduce potentially significant adverse impacts related to project construction and operation.

The purpose of this Mitigation Monitoring Plan is to ensure effective implementation of each APM, as well as the mitigation measures identified by the Initial Study and imposed by the CPUC as part of project approval.

This Mitigation Monitoring Plan includes:

- The Applicant Proposed Measures and mitigation measures that PG&E must implement as part of the Proposed Project;
- The actions required to implement these measures;
- The monitoring requirements; and
- The timing of implementation for each measure.

A CPUC-designated environmental monitor will carry out all construction field monitoring to ensure full implementation of all measures. In all instances where non-compliance occurs, the CPUC's designated environmental monitor will 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 will be made by the CPUC. The CPUC's designated environmental monitor will keep a record of any incidents of non-compliance with mitigation measures, APM, or other conditions of project approval. Copies of these documents shall be supplied to PG&E and the CPUC.

Project Variances. The CPUC along with its environmental monitors will ensure that any project variance or deviation from the procedures identified under the monitoring program is consistent with CEQA requirements; no project variance will be approved by the CPUC 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 or create a new impact, and that clearly and strictly complies with the intent of the mitigation measure. If a proposed change to the project has the potential for creating significant environmental effects, it will be evaluated to determine whether supplemental CEQA review is required. Any proposed deviation from the approved project, adopted mitigation measures, and Applicant Proposed Measures, and correction of such deviation, shall be reported immediately to the CPUC and the environmental monitor assigned to the construction spread for their review and approval. In some cases, a variance may also require approval by a CEQA responsible agency.

Dispute Resolution. It is expected that the Mitigation Monitoring Plan will reduce or eliminate many potential disputes. However, even with the best preparation, disputes may occur. In such event, the following procedure will be observed:

- **Step 1.** Disputes and complaints (including those of the public) should be directed first to the CPUC-designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- **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 Plan.
- **Step 3.** If a dispute or complaint regarding the implementation or evaluation of the Mitigation Monitoring Plan 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 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.

Parties may also seek review by the Commission through existing procedures specified in the CPUC 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.

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Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	Aesthetics		
Existing Visual Character	**V-1 Establish landscape plan and permanent vegetative screen.** PG&E shall coordinate with the City of Bakersfield to establish a landscape plan and permanent vegetative screen of sufficient height and density to provide for visual screening around the substation, consistent with safety, feasibility, security, and engineering requirements. PG&E shall consult the Bakersfield Planning Department to ensure compatibility of the Seventh Standard Road landscape elements at the discretion of the City of Bakersfield. In the future when the proposed residential subdivisions have been constructed adjacent to the substation, PG&E shall provide a water supply as necessary for landscaping survival. Plant materials selected for screening shall be acclimated to the environment of Bakersfield. Landscape screening shall be consistent with a landscape and maintenance plan developed by PG&E and submitted for review and approval by the City of Bakersfield. PG&E shall implement the landscape plan at a future date when new subdivisions have been constructed adjacent to the substation.	Establish landscape plan and retain and permanent vegetative screening	Prior to construction, during construction, and during operation when new subdivision have been constructed adjacent to the substation
Existing Visual Character	**V-2 Construct visually opaque gate at substation entrance.** PG&E shall install a visually opaque gate at the entrance road in order to obscure views through the gate down the entrance road to the substation site. Entrance gate design shall be consistent with the landscaping plan developed by PG&E and submitted for review and approval by the City of Bakersfield.	Review design of gate and perimeter wall and inspect after installation	Prior to construction and prior to operation; Perimeter wall to be constructed prior to occupancy of residences within 1,000 feet of the site
Light and Glare	**V-3 Shroud and minimize unnecessary sources of light.** PG&E shall design and install new permanent substation lighting such that light bulbs, lenses, and reflectors are not visible from public viewing areas; that lighting does not cause reflected glare; and that illumination of the project, vicinity, and nighttime sky is minimized. To achieve this, PG&E shall ensure that: • Lighting shall be designed so exterior light fixtures are hooded where possible, 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 source is shielded to prevent light trespass outside the project boundary. • All lighting shall be of minimum necessary brightness consistent with worker safety. • Where feasible and safe, lighting shall be kept off when the site is unoccupied in order to minimize nighttime sky illumination, and shall only be switched on during the nighttime in order to perform maintenance or outage repairs.	Inspect plans for permanent lighting and descriptions of fixtures, hoods, and shields and implementation of lighting	Prior to ordering permanent lighting and prior to and during operation
	Air Quality		
APM Air-1	If feasible, construction workers will carpool to the job site. Park and Ride locations are located on Weedpatch Highway in Bakersfield and in Delano off of State Route 99.	Minimize worker vehicle emissions	During construction

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APM Air-2	No vehicles will be allowed to idle unnecessarily. Certain diesel powered vehicles require extended warm-up times that limit their availability following their ignition. When these vehicles are needed for repetitive tasks, they may require more idling time to make them effective. A common sense approach to idling will be employed. If vehicles are not required for use immediately or continuously, the engine will be shut off.	Ensure engines are shut off when not in use	During construction
APM Air-3	Construction equipment will be properly tuned and maintained per manufacturing specifications.	Emissions from construction equipment exhaust are reduced.	During construction
APM Air-4	PG&E will use low-emission construction equipment where available and feasible.	Low emitting engines are used.	During construction
APM Air-5	The Seventh Standard Substation will be incorporated into PG&E's system-wide sulfur hexafluoride (SF_6) emissions reduction program.	Minimize SF_6 emissions and avoid leaks.	During construction and during operation
APM Air-6	Visible dust emissions may not exceed 20 percent opacity during periods when soil is being disturbed by equipment or wind at any time.	Minimize visible dust emissions	During construction
APM Air-7	Soil will be stabilized after normal working hours and on weekends by applying water to form a visible crust on the soil and restricting vehicle access. In addition, all disturbed areas, including storage piles which are not being actively utilized for construction purposes, shall be effectively stabilized of dust using water, chemical stabilizer/suppressant, and a cover such as a tarp or other suitable cover or vegetative ground cover. If trackout or carryout occur and extend more than 50 feet from the exit point onto a paved road, an appropriate cleaning device, such as a blower or PM10-efficient street sweeper must be used.	Ensure disturbed areas are stabilized to minimize dust emissions	During construction
APM Air-8	All land clearing, grubbing, scraping, excavation, land leveling, grading, and cut and fill shall be effectively controlled of fugitive dust emissions utilizing application of water by presoaking.	Water is applied to control fugitive dust	During construction
APM Air-9	When materials are transported off-site, all material shall be covered or effectively wet to limit visible dust emissions, and at least six inches of freeboard space shall be open from the top of the container.	Material in trucks is covered or effectively wet to limit dust emissions; six inches of freeboard space is open	During construction
APM Air-10	Vehicle speed should be limited to 15 miles per hour or less when traveling off of paved roads.	Vehicles obey speed limit	During construction

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Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Construction-Phase Air Quality	**AQ-1 Implement enhanced dust control measures in the event that occupied homes occur nearby**. PG&E shall implement enhanced dust control measures for construction of the proposed substation if new residential development includes homes within 200 feet of the substation site during any phase of substation construction. The enhanced dust control measures shall incorporate the applicant-proposed measure (APM Air-1) and the following additional measures: • limit the speeds of construction vehicles on unpaved surfaces to 15 miles per hour, • install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent, • increase watering or use a dust suppressant, as appropriate given surrounding uses, to control dust to less than 20 percent opacity when winds exceed 20 miles per hour, • limit size of area subject to excavation, grading, or other construction disturbance at any one time to avoid excessive dust, and • expeditiously remove the accumulation of mud or dirt from adjacent public streets when construction activities are occurring.	Emissions from construction equipment exhaust are reduced	During construction if occupied homes are within 200 feet of the substation site.
Construction-Phase Air Quality	**AQ-2 Minimize construction equipment exhaust by using Tier 1 engines.** All diesel fueled off-road construction equipment with engines 50 hp or larger shall at a minimum meet U.S. Environmental Protection Agency/California Air Resources Board (CARB) Tier 1 engine standards to the extent feasible. Records of equipment compliance shall be kept by the general construction contractor. This measure does not apply to equipment permitted by the local air quality district or certified through the CARB's Statewide Portable Equipment Registration Program. This also does not apply to any single specialized equipment items that will be used for less than five days total during the project construction.	Low emitting engines are used	During construction
Operation-Phase Air Quality	**AQ-3 Avoid sulfur hexafluoride emissions.** PG&E shall ensure that project equipment, specifically the circuit breakers at the Seventh Standard Substation, maintains a leakage rate of 0.5 percent per year or less for sulfur hexafluoride (SF_6). To accomplish this, PG&E shall include this limit as a performance specification for the circuit breakers that would be installed as part of the project. Maintenance, repair, and replacement of all circuit breakers shall be consistent with manufacturer's recommendations for achieving this performance specification, in accordance with PG&E's company-wide SF_6 reduction best management practices.	Potential for SF_6 leaks is minimized according to a leak reduction standard that would be consistent with the CARB Climate Change Scoping Plan.	Prior to construction and during operation
	Biological Resources		
APM Bio-1	If construction is to occur during the avian-nesting season (February 1 through August 31), a preconstruction migratory bird nesting and raptor survey will be performed by a qualified biologist one to three weeks prior to construction. If nesting raptors are identified in areas susceptible to disturbance from construction activities, a sufficient spatial buffer zone shall be employed during construction activities until nestlings have fledged.	Review survey results and ensure buffer zone established if necessary	During construction
APM Bio-2	All equipment shall be washed prior to entering the construction site for the first time to reduce the potential spread of noxious weeds.	Ensure vehicles are washed to minimize spread of weeds	During construction

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APM Bio-3	Impacts to the San Joaquin kit fox will be offset through mitigation to a mitigation fund as required by the City of Bakersfield, according to the Metropolitan Bakersfield Habitat Conservation Plan.	Payment of MBHCP fee	Prior to construction
APM Bio-4	Project vehicles will not exceed 20 mph off of paved roads. **Note: This measure is superseded by APM Air-10 above, which limits vehicles to 15 mph or less when traveling off of paved roads.	Vehicles obey speed limit	During construction
APM Bio-5	All excavated trenches over two feet in depth will be sloped or have escape ramps installed which are suitable for the escape of the kit fox. All trenches shall be inspected for wildlife prior to backfilling.	Inspect trenches for slopes or escape ramps; inspect for wildlife before backfilling	During construction
APM Bio-6	Any open-ended pipes shall be capped if left overnight or inspected for wildlife prior to moving them. If a San Joaquin kit fox is discovered in a pipe, then the pipe shall not be moved until the fox has escaped and the U.S. Fish and Wildlife Service (USFWS) has been consulted.	Ensure pipes are capped and/or inspected prior to being moved	During construction
APM Bio-7	All trash shall be properly contained, especially food-related items.	Trash is properly contained	During construction and during operation
APM Bio-8	No pets are allowed on the project site.	No pets onsite	During construction and during operation
APM Bio-9	The use of rodenticides and herbicides will be restricted. Label and other restrictions by the EPA, California Department of Food and Agriculture, and other State and Federal legislation will be followed. If rodent control is used, then zinc phosphide should be used.	Ensure rodent control is in accordance with regulations	During construction and during operation
APM Bio-10	Environmental awareness training will be conducted for all laborers by a person knowledgeable in kit fox biology. The training will explain measures to prevent impacts to the kit fox, as well as its protection under the Endangered Species Act.	Proof of completion of environmental awareness training for all laborers	Prior to construction and for all laborers prior to work
Special Status Animal Species	**B-1 Eliminate injury or mortality to kit foxes during construction.** PG&E shall implement the U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin kit fox Prior to or During Ground Disturbance (USFWS, 1999). PG&E shall provide the results of the surveys to the CPUC, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG) prior to ground disturbance.	U.S. Fish & Wildlife Service recommendations are implemented.	Prior to and during construction
Special Status Animal Species	**B-2 Eliminate injury or mortality to burrowing owl during construction.** PG&E shall implement the survey protocol and impact avoidance and mitigation measures presented in CDFG Staff Report on Burrowing Owl Mitigation (CDFG, 1995). PG&E shall provide the results of the surveys to the CPUC and CDFG prior to ground disturbance.	CDFG Staff Report survey protocol and impact avoidance and mitigation measures are implemented	Prior to construction and during construction

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Other Protected Animal Species	**B-3 Comply with MBTA/Protect nesting birds.** In order to comply with the Migratory Bird Treaty Act (MBTA) and relevant sections of the CDFG Code, any vegetation clearing would take place prior to February 1 and after August 31. If this is not feasible, a survey shall be conducted for nesting birds within the project area. Should an active nest be discovered, a qualified biologist shall establish an appropriate buffer zone (in which construction activities are not allowed) to avoid disturbance in the vicinity of the nest. • Construction activities shall not commence until the biologist or monitor has determined that the nestlings have fledged or that construction activities will not affect adults or newly fledged young; OR • The biologist or monitor shall develop a monitoring plan that permits the activity to continue in the vicinity of the nest while monitoring nesting activities to ensure that nesting birds are not disturbed.	Survey for nesting birds and establish buffer zone if necessary to minimize impacts to nesting birds and comply with MBTA	Prior to construction and during construction
Other Protected Animal Species	**B-4 Incorporate APLIC design guidelines for raptor protection.** Design, install, and maintain distribution lines and all electrical components in accordance with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* to reduce the likelihood of electrocutions of large birds. Specifically, the phase conductors should be separated by a minimum of 60 inches. Where adequate separation is not feasible, bird perch diverters and/or specifically designed avian protection materials should be used to cover electrical equipment (APLIC, 2006).	Comply with APLIC guidelines to protect raptors	Prior to construction, during construction and during operation
MBHCP Compliance	**B-5 Provide Metropolitan Bakersfield Habit Conservation Plan (MBHCP) mitigation fees for permanent loss of San Joaquin kit fox habitat.** PG&E shall purchase compensatory habitat for permanent impacts to 4.9 acres of San Joaquin kit fox habitat. Payment shall be made to the County Building Inspection Division at the time the grading permit is issued. PG&E shall provide proof of payment to the CPUC prior to the start of construction.	Payment of MBHCP fee	Prior to construction
MBHCP Compliance	**B-6 Conduct environmental clearance surveys for San Joaquin kit fox dens.** Pursuant to the requirements of the MBHCP, PG&E shall conduct a San Joaquin kit fox clearance survey to determine whether any San Joaquin kit fox dens are on site prior to construction and the results submitted to USFWS, CDFG, and CPUC for review. If a den is identified, the monitoring and excavation provisions in the MBHCP shall be adhered to. Copies of any survey results and forms submitted to USFWS and CDFG shall be submitted to the CPUC prior to the start of construction.	Review surveys and ensure compliance with MCHCP provisions	Prior to construction

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	Cultural Resources		
APM Cult-1	If human remains are discovered within the project area during any phase of construction, work within 50 feet of the remains will be suspended immediately and PG&E and/or their representative will immediately notify the respective county coroner. If the remains are determined by the coroner to be Native American, the Native American Heritage Commission (NAHC) will be notified within 24 hours, and the guidelines of the NAHC will be adhered to in the treatment and disposition of the remains. PG&E will also retain a professional archaeological consultant with Native American burial experience who will conduct a field investigation of the specific site and consult with the Most Likely Descendant identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the Most Likely Descendant including the excavation and removal of human remains. PG&E or its appointed representative will implement any mitigation before the resumption of activities at the site where the remains were discovered.	No damage from human remains results from the project. Any discovered cultural resources are treated according to agency-approved mitigation and in compliance with State and federal regulations.	During construction
APM Pal-1	If paleontological remains are discovered during construction, construction will cease or be directed away from the discovery, and the potential resource will be evaluated by a qualified paleontologist. The paleontologist will recommend appropriate procedure methods.	Construction personnel sign an environmental training attendance sheet. No damage to paleontological resources results from project construction.	During construction
Previously-Unidentified Archaeological Resources	**C-1 Avoid previously-unidentified archaeological resources**. If previously unidentified archaeological resources are unearthed during construction activities, construction would be halted in that area and directed away from the discovery until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve, or recover the resources.	Construction personnel sign an environmental training attendance sheet. No damage to archaeological resources results from project construction.	During construction
	Hazards and Hazardous Materials		
APM Haz-1	Emergency-spill response and clean up kits will be onsite where they are immediately available to respond to an accidental release of a hazardous fluid or material.	Ensure spill-response kits are onsite and accessible	During construction and during operation
APM Haz-2	A water truck shall be onsite, as deemed necessary by the foreman, during dry conditions to prevent the ignition of a wildfire. The work site shall be sprayed a minimum of three times per day.	Ensure water truck is onsite during dry conditions and site is watered at least 3 times a day.	During construction

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Hazards and Hazardous Materials	**H-1 Control release of residual herbicides, pesticides, and/or fumigants.** PG&E shall analyze soil samples in construction areas where the land has historically or is currently being farmed to verify and delineate the possibility of and extent of herbicide, pesticide, and/or fumigant contamination of the underlying soils. Samples shall be collected by properly trained personnel and submitted to a State-approved laboratory for analysis. Any soil with pesticide, herbicide, or fumigant concentration levels that exceed California State Title 26 threshold limits would be classified as hazardous material. PG&E shall implement appropriate handling and disposal procedures for any excavated materials containing elevated levels of contaminants. Prior to disturbing additional contaminated soil, PG&E shall prepare and submit a health and safety plan that is approved by a certified industrial hygienist to address handling, treatment, and/or disposal options. Personnel working around, handling, and disposing of contaminated soil shall meet the federal Occupational Health and Safety Administration (OSHA) requirement for the 40-hour Hazardous Waste Operations and Emergency Response Standard. The investigation results, and health and safety plan if needed, shall be submitted for review and approval by the appropriate regulatory agencies (i.e., Department of Toxic Substances Control and/or Regional Water Quality Control Board). PG&E shall submit to the CPUC copies of correspondence with regulatory agencies including the health and safety plan and any approvals.	Collect and analyze soil samples and, if contamination is discovered, ensure that construction activities are conducted according to a health and safety plan approved by regulatory agencies.	Prior to construction and during construction
	Hydrology and Water Quality		
APM Hydro-1	PG&E will develop a Storm Water Pollution Prevention Plan for the project to prevent sedimentation of waterways resulting from the release of sediment from the construction site.	Ensure a SWPPP is developed and sedimentation is minimized	Prior to construction
	Noise		
APM Noise-1	Construction will occur during daylight hours (7 a.m. to 6 p.m.).	Construction is scheduled during daylight hours.	During construction
APM Noise-2	Construction equipment will use noise reduction devices that are no less effective than those originally installed by the manufacturer.	Noise-related complaints from nearby residents are minimized.	During construction
Construction Noise	**N-1 Avoid unnecessary construction traffic noise.** Where feasible, construction traffic shall be routed to avoid noise-sensitive areas, such as residences, schools, religious facilities, hospitals, and parks.	Noise-related complaints from nearby residents are minimized.	During construction
Noise to Planned Residences	**N-2 Construct wall to obstruct noise.** PG&E shall design and construct an eight-foot-high prefabricated concrete perimeter wall enclosing the western side of the substation site to shield noise-sensitive areas, such as residences. The wall shall be built and completed before occupancy of residences within 1,000 feet of the site.	Operational noise to nearby residents is minimized.	Prior to occupancy of residences within 1,000 feet of the site

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	Traffic/Transportation		
Construction Traffic	**T-1 Reduce impacts during periods of peak traffic.** To the extent feasible, truck traffic would be scheduled for off-peak hours to reduce impacts during periods of peak traffic on Seventh Standard Road.	Schedule truck deliveries during off-peak hours.	During construction
Construction Traffic	**T-2 Stagger truck traffic during grading and site-preparation.** To the extent feasible, truck traffic would be staggered throughout the 40-day grading and site preparation construction phase.	Stagger truck traffic to minimize impacts on local roadways.	During construction (grading and site preparation)

Note: Applicant Proposed Measures (APMs) appear in the Proponent's Environmental Assessment (A.09-03-004).
Source: PG&E, 2009.