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CONTRA COSTA-MORAGA 230 KILOVOLT (KV) RECONDUCTORING PROJECT (PROJECT)
Mitigation Monitoring and Reporting Program

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
Air Quality				
APM-AIR-01: Water or approved dust control products will be applied to all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads, and landing zones) at a rate that maintains the soil moisture content to control fugitive dust. Water will only be applied to graveled areas if dust is visible.	All exposed construction areas	Pacific Gas and Electric Company (PG&E) to apply water or approved dust control products, as required, to control fugitive dust	State Water Resources Control Board (State Water Board)	During construction
APM-AIR-02: Open-bodied trucks transporting bulk materials that may become airborne will be completely covered, unless the bulk material is wetted or there is at least 6 inches of freeboard from the top of the container.	All construction areas	PG&E to cover open-bodied trucks unless the material is wetted or at least 6 inches of freeboard is maintained	State Water Board	During construction
APM-AIR-03: A publicly visible sign with a dedicated hotline for receiving dust complaints will be posted adjacent to the project alignment. A designated contact will be responsible for checking the hotline daily for messages. Complaints will be responded to and corrective actions will be taken within 48 hours. The Bay Area Air Quality Management District's phone number will also be included on the sign.	Adjacent to the project alignment	PG&E to post a publicly visible sign and establish a dedicated hotline for receiving dust complaints; corrective actions to be taken within 48 hours	State Water Board	During construction
APM-AIR-04: All visible mud and dirt that is tracked out onto paved, public roadways will be cleaned up at the conclusion of each workday or at 24-hour intervals for operations that are continuous. Track-out will be cleaned up with a wet sweeper, vacuum device, or with hand tools, depending on the volume of material deposited and the time required to remove the material. Mud and dirt shall not be deposited into roadside ditches/swales and shall be contained within construction limits.	All paved, public roadways adjacent to construction areas	PG&E to clean up visible mud and dirt at the conclusion of each work day or at 24-hour intervals for continuous work as defined	State Water Board	During construction
APM-AIR-05: Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes, except where idling is required for the equipment to perform its task. Clear signage indicating the 5-minute idling restriction will be posted for construction workers at all active construction sites.	All construction areas	PG&E to limit idling time to 5 minutes as defined; signs indicating the idling restriction will be posted	State Water Board	During construction
APM-AIR-06: All construction equipment will be maintained and properly tuned in accordance with manufacturers' specifications or equivalent standard.	All construction areas	PG&E to maintain and properly tune equipment	State Water Board	During construction
Biological Resources				
APM-BIO-01: PG&E will submit the names and credentials of biologists proposed to perform pre-construction surveys and monitoring for listed species to the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for written approval.	All construction areas supporting suitable special-status species habitat	PG&E to submit resumes for proposed biologists to USFWS and CDFW for approval as defined; PG&E to verify that written approval is received prior to initiating pre-construction surveys and monitoring tasks	USFWS, CDFW	Prior to construction
		PG&E to repeat procedure if personnel changes are required	USFWS, CDFW	During construction

¹ Post construction activities will include restoration activities.

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APM-BIO-02: Prior to any project-related ground disturbance in areas that may support listed species, and if requested, PG&E will develop an Alameda whipsnake (AWS), California red legged frog (CRLF), and California tiger salamander (CTS) Relocation Plan that will specify the steps to capture and contain the species, as well as the criteria for selecting release sites. The AWS, CRLF, and CTS Relocation Plan will be submitted to the CDFW and USFWS for review and approval prior to its implementation. An approved biologist will survey portions of the temporary disturbance areas that may support listed animal species immediately prior to the onset of initial ground-disturbing construction activities and as appropriate during phased construction. If listed species are identified, agency notification protocols per APM-BIO-23 will be followed.	All construction areas that may support suitable habitat for AWS, CRLF, and CTS	PG&E to submit a Relocation Plan to USFWS and CDFW for concurrence as defined	USFWS, CDFW	Prior to construction
		PG&E to implement the Relocation Plan as defined in the event that species relocation (AWS, CRLF, or CTS) is required	USFWS, CDFW	During construction
		PG&E to implement the Relocation Plan as defined in the event that species relocation (AWS, CRLF, or CTS) is required	USFWS, CDFW	Post construction
APM-BIO-03: Surface-disturbing activities will be designed to minimize disturbance to rodent burrows that may provide suitable subterranean habitat for CRLF and CTS. Areas with a high concentration of burrows will be avoided by surface-disturbing activities to the extent feasible.	All construction areas containing suitable-sized burrows	PG&E to minimize burrow disturbance as defined	State Water Board	During construction
APM-BIO-04: Prior to any ground disturbance related to covered activities, a project biologist will conduct a pre-construction survey in areas identified in the planning surveys as supporting potential burrowing owl habitat. The surveys will establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls. On the parcel where the activity is proposed, the biologist will survey the proposed disturbance footprint and a 300-foot radius from the perimeter of the proposed footprint to identify occupied burrows and owls. All occupied burrows and burrowing owls will be identified and mapped. In the event that an occupied burrow is discovered within 300 feet of the construction areas, a 250-foot avoidance buffer will be implemented in the breeding season and a 160-foot avoidance buffer will be implemented during project construction in the non-breeding season. If it is not feasible to implement this avoidance buffer, a site-specific plan will be developed and CDFW will be consulted to determine if a reduced avoidance buffer is appropriate based upon 1) the type and duration of construction activities being conducted, 2) sensitivity or acclimation to disturbance, 3) the topography surrounding the burrow site, and/or 4) the implementation of additional protective measures. Seasonally appropriate avoidance buffers will be implemented until the burrow is determined to be inactive.	All construction areas supporting suitable burrowing owl habitat	PG&E to conduct pre-construction surveys prior to activities in construction areas supporting suitable burrowing owl habitat as defined	State Water Board, CDFW	Prior to construction
		PG&E to implement avoidance buffers as defined; if observance of avoidance buffer as described is not feasible, a site-specific plan will be submitted to CDFW	CDFW	During construction
APM-BIO-05: A USFWS/CDFW-approved biologist will conduct a protocol-level survey for Swainson's hawk within 0.25 mile of the construction areas within the range of the species prior to the start of construction. In the event that an active Swainson's hawk nest is discovered within 0.25 mile of the construction areas and overland access routes, a 0.25-mile avoidance buffer will be implemented during project construction. If it is not feasible to implement this avoidance buffer, the USFWS and CDFW will be consulted to determine if a reduced avoidance buffer is appropriate based upon local topography, the planned construction activities, and ongoing monitoring and/or the implementation of additional protective measures. Following consultation with the USFWS and CDFW, appropriate avoidance buffers will be implemented until the nest is determined to be inactive.	Within 0.25 mile of construction areas within suitable habitat for Swainson's hawk	PG&E to conduct pre-construction protocol-level surveys as defined prior to start of construction activities at each construction area	State Water Board, CDFW	Prior to construction
		PG&E to implement avoidance buffer as defined; PG&E to notify and consult with CDFW if observation of the specified avoidance buffer is infeasible	CDFW	During construction

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APM-BIO-06: A qualified biologist will conduct a golden eagle survey within 1 mile of the construction areas prior to the start of construction at each area. In the event that an active golden eagle nest is discovered within 0.5 mile of the construction areas, a 0.5-mile avoidance buffer will be implemented during project construction. If it is not feasible to implement this avoidance buffer, the USFWS and CDFW will be consulted to determine if a reduced avoidance buffer is appropriate based upon local topography, the planned construction activities, and/or the implementation of additional protective measures. Following consultation with the USFWS and CDFW, appropriate avoidance buffers will be implemented until the nest is determined to be inactive.	Within 1 mile of all construction areas supporting suitable nesting habitat for golden eagle	PG&E to conduct pre-construction surveys as defined	State Water Board, USFWS	Prior to construction
		PG&E to implement avoidance buffer as defined; PG&E to notify and consult with USFWS if observance of the specified avoidance buffer is infeasible	USFWS	During construction
APM-BIO-07: Prior to any ground disturbance related to covered activities, a USFWS/CDFW-approved biologist will conduct a pre-construction survey in areas, which will be identified during the planning surveys, as supporting suitable breeding or denning habitat for San Joaquin kit fox (SJKF). The surveys will determine the presence or absence of suitable dens, and evaluate use by kit foxes in accordance with USFWS survey guidelines (USFWS 1999).	All construction areas that support potentially suitable breeding or denning habitat for SJKF within 250 feet	PG&E to conduct a pre-construction survey as defined prior to ground-disturbing activities; PG&E to submit survey findings	State Water Board, USFWS, CDFW	Prior to construction
APM-BIO-08: If a SJKF den is discovered in the proposed development footprint, the den will be monitored for 3 days by a USFWS/CDFW-approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used. If a natal or pupping den is found, USFWS and CDFW will be notified immediately. If SJKF activity is observed at the den during the initial monitoring period, the den will be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged.	All construction areas with potentially suitable SJKF den structures within 250 feet	PG&E to monitor potential SJKF dens as defined; PG&E to notify USFWS and CDFW within 24 hours if an occupied natal or pupping den is detected; PG&E to submit findings following the 5-day monitoring period as defined	State Water Board, USFWS, CDFW	Prior to construction at applicable locations
		PG&E to notify USFWS and CDFW within 24 hours if an occupied natal or pupping den is detected within 250 feet of the project area while construction is ongoing	USFWS, CDFW	During construction
APM-BIO-09: If SJKF dens are identified in the (250-foot) survey area from project-specific work areas, pull sites, and landing zones, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). No covered activities will occur within the exclusion zones. Exclusion zone radii for known dens will be at least 100 feet and will be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by SJKF.	All occupied SJKF dens within 250 feet of project area	PG&E to identify and demarcate exclusion zones for any detected SJKF occupied dens as defined	State Water Board, USFWS, CDFW	Prior to construction at applicable locations
		PG&E to maintain exclusion zone for any detected SJKF dens, as defined in measure	State Water Board, USFWS, CDFW	During construction
APM-BIO-10: During the pre-construction surveys, described in APM-BIO-11, a qualified biologist will identify potential San Francisco dusky-footed woodrat houses within 50 feet of project activities. At the discretion of a qualified biologist, an exclusion buffer will be established around any woodrat houses that can be avoided, and these exclusion zones will be flagged or fenced. If impacts to a woodrat house are unavoidable, PG&E will develop a Woodrat Plan, and will coordinate with the CDFW.	Within 50 feet of all construction areas supporting suitable structures for San Francisco dusky-footed woodrat	PG&E to survey for woodrat structures as defined	State Water Board	Prior to construction at applicable locations
		If woodrat structures are unavoidable, PG&E will develop and implement a woodrat plan	CDFW	Prior to construction at applicable locations
APM-BIO-11: Pre-construction surveys for special-status species will be conducted at project construction areas by a qualified biologist. These surveys will be conducted in locations with suitable special-status species habitat. Pre-construction surveys at construction areas that have a developed land cover type—as detailed in the Botanical Resource Survey Report, as well any construction areas that are located within urban, residential, paved, or gravel areas—will not be required and will be surveyed at the discretion of the PG&E Project Biologist and biological monitor.	All construction areas supporting suitable special-status species habitat	PG&E to conduct pre-construction surveys for special-status species as defined	State Water Board	Prior to construction at applicable locations

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APM-BIO-12: Special-status plant species that are located in close proximity to construction areas will be flagged and these areas will be avoided during construction. If these areas cannot be avoided, the appropriate agency will be contacted prior to any ground-disturbing activities in the construction area near the special-status plant occurrence. Applicable permit conditions required by these agencies, if necessary, will be incorporated into the project's post-construction revegetation activities. As feasible and as necessary to minimize direct impacts, special-status plant seeds may be collected during pre-construction surveys at the appropriate species-specific time frame and used during post-construction restoration activities. In addition, topsoil may be preserved and re-spread at the site following construction. If factors are present that preclude special-status seed collection and/or topsoil conservation, the appropriate agency will be consulted.	Areas of special-status plant occurrences in close proximity to construction areas	PG&E to demarcate and avoid special-status plant populations as defined prior to ground-disturbing activities; PG&E may collect seeds of special-status plant populations if individual plants are anticipated to be unavoidable during construction to utilize seed during restoration activities as defined	State Water Board	Prior to construction at applicable locations
		PG&E to notify USFWS and/or CDFW (based on listing status) if individual special-status plants cannot be avoided; PG&E to preserve topsoil in these areas	USFWS and/or CDFW	During construction
		PG&E to restore areas supporting special-status plant populations by re-spreading conserved topsoil and utilizing collected seed as appropriate and as defined	State Water Board	Post construction
APM-BIO-13: If work is scheduled to occur during the avian nesting season (March 1 through August 31), nest detection surveys will be conducted at minimum 15 days prior to initial work activities at designated construction areas and towers to determine nesting status in the area. Nest surveys will be accomplished by ground surveys and/or by helicopter and will support phased construction, with surveys scheduled to be repeated if construction lapses in a work area for 30 days between March and July. Nest surveys will follow standard biological survey methods, and survey effort will be tailored to detect specific species, with visits planned at appropriate timeframes/intervals to detect nesting activity. In addition, biologists monitoring construction will conduct nest surveys and/or nest monitoring in areas adjacent to ongoing construction. If nest are found, the project biologist shall establish an appropriate buffer to be in compliance with Migratory Bird Treaty Act and Fish and Game Code 3503. The project biologist shall perform at least two hours of pre-construction baseline monitoring of the nest to characterize "normal" bird behavior. The project biologist shall monitor the nesting birds and shall increase the buffer if the project biologist determines the birds are showing signs of unusual or distressed behavior by project activities. Abnormal nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed towards project personnel, standing up from a brooding position, and flying away from the nest. The project biologist shall have authority to order the cessation of all nearby project activities if the nesting birds exhibit abnormal behavior which may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established. To prevent encroachment, the established buffer(s) shall be clearly marked for avoidance. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the project biologist. Signs of nest abandonment as determined by the monitoring biologist, shall be reported to CDFW within 72 hours. Helicopter restrictions will include observance of appropriate buffers established by the project biologist and avoidance of hovering in the vicinity of active nest sites. Active nests (defined as the presence of chicks and/or eggs) that occur in developed areas will be considered in the context of the surrounding residential development, ongoing activities, and access constraints. Nest detection and nest monitoring surveys will not occur within private property areas with access restrictions, including within densely populated residential areas.	All construction areas with nesting habitat; exceptions include private property with access restrictions and densely populated residential areas	PG&E to implement measure as defined in the avian nesting season (March 1 through August 31)	State Water Board	Prior to construction at applicable locations
		PG&E to monitor active nest sites detected during nest surveys; PG&E to apply appropriate nest exclusion buffers; PG&E to notify CDFW within 72 hours of certain changes in nest status (nest failures or nest abandonment)	USFWS, CDFW	During construction

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APM-BIO-14: If construction activities are required within an established buffer zone buffer modifications shall be at the discretion of the project biologist based on: 1) the amount, type, and length of the planned disturbance, 2) the species' sensitivity to disturbance, 3) the nest site type, location, and specific landscape/topography conditions, and 4) nest concealment from project activities. Nests will be monitored during construction activities, to confirm that project activities are not resulting in impacts to nesting pairs or young. If the monitoring biologist determines that project activities are resulting in nest disturbance, work will not be allowed to continue within the established buffer zone until the young have fledged. Active nest site monitoring checks will be completed at minimum once per week in active areas of the project, with nest status updates prepared on a weekly basis. Nest monitoring will track, assess, and document nest phase (incubation/hatching/rearing/branching or fledging), and nest status (active, inactive, failed). All special-status avian species detections will be reported to applicable resource agencies.	Construction areas within established nest buffer zones	PG&E to monitor active nests as described at minimum once per week and provide nest status updates weekly; PG&E to report special-status avian detections to applicable resource agencies as defined	State Water Board, USFWS, CDFW	During construction
APM-BIO-15: Prior to construction, a qualified biologist or other qualified resource specialist will develop an environmental training for all project personnel, which shall cover all pertinent project APMs, permit conditions, and any other required environmental compliance measures. Training will be conducted by a qualified biologist or other qualified resource specialist. All project personnel will attend the training prior to entering the project work area. Upon completion of the training, crew members will sign a form stating that they attended the training and understand the material presented. This training may be combined with other environmental training for the project, such as cultural resource training. In the event that non-English-speaking crew members are employed during the project, an interpreter will be present during the environmental training, or training materials will be supplied in an alternate language.	Not Applicable	PG&E to provide environmental training as defined	State Water Board	Prior to construction
		PG&E to provide environmental training to any new worker assigned to the project following the initial training event	State Water Board	During construction
APM-BIO-16: Specific portions of the construction areas with sensitive species and/or habitats, as determined by a qualified biologist, will be clearly demarcated for avoidance. Crews will not enter demarcated areas without the prior approval and presence of a qualified biologist.	All construction areas	PG&E to demarcate any sensitive habitats as defined	State Water Board	Prior to construction at each applicable location
		PG&E to ensure that a biologist monitors any entry by construction personnel in marked sensitive areas as defined.	State Water Board	During construction
APM-BIO-17: Any potentially jurisdictional hydrologic feature in the vicinity of construction areas, with the exception of the drainage at Pull Site 63, the drainage at Crossing Structure 111A, and the wetland along the overland access route to Work Area 114, will be avoided, and will be flagged for avoidance prior to construction. If any of these features also provide suitable habitat for special-status vernal pool species, an additional 50-foot buffer around the hydrologic feature will be established. The boundary of this buffer will be demarcated within any project-specific construction areas and no ground-disturbing activities will occur within the buffer. Best management practices (BMPs) will be installed and maintained as necessary in accordance with the project Storm Water Pollution Prevention Plan (SWPPP). All conditions of the project's 401 Certification will be in effect and monitored by qualified monitors throughout the construction process.	All construction areas except Pull Site 63, Crossing Structure 111A, and the overland access route to Work Area 114	PG&E to mark avoidable hydrologic features and establish exclusion buffers as defined; PG&E to install appropriate BMP's in accordance with the SWPPP	State Water Board	Prior to construction at each applicable location
		PG&E to avoid ground-disturbing activities within any defined buffer zones; PG&E to ensure maintenance of BMPs and use qualified monitors to monitor conditions specific to the 401 Water Quality Certification	State Water Board	During construction
APM-BIO-18: Major ground disturbing work in suitable CRLF and CTS habitat will be conducted during the dry season—generally April 15 to October 31—to the extent feasible. If major ground disturbing work occurs within suitable habitat during the wet season—generally November 1 to April 14—exclusion fencing may be installed around the perimeter of pull sites and staging areas to exclude species from these areas. This fencing will be installed under the supervision of a biological monitor. The exclusion fencing will remain in place for the duration of the wet season or construction activities	All major ground-disturbance areas in potentially suitable CRLF and CTS habitat	PG&E to install amphibian exclusion fencing as necessary and as defined for work occurring between November 1 and April 14	State Water Board	Prior to construction at each applicable location

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and will be repaired as necessary. A biological monitor will check the fence at regular intervals to ensure it is functioning properly and for the presence of special-status species. Fence inspection intervals will be based upon the planned construction activities at each site, recent and forecasted weather events, and the results of pre-construction surveys and previous fence checks. A biological monitor will check the fences daily during any rain events of 0.25 inch or greater and within 48 hours after a rain event of 0.25 inch or greater. If a required inspection cannot be conducted due to access restrictions or safety concerns, the inspection will be attempted the following day.		PG&E to arrange for necessary fence repairs; PG&E to ensure that a biological monitor checks fences at regular intervals as described; PG&E to remove amphibian exclusion fencing once construction concludes at a construction area or once seasonal exclusion fencing is no longer necessary	State Water Board	During construction
APM-BIO-19: A biological monitor will be present during initial ground-disturbing construction activities at each construction area. The biological monitor will have the authority to halt any work activity that might result in resource or protected species impacts. The biological monitor will have the authority to approve a crew to work without a biological monitor if work activities are determined to have a low potential to affect sensitive resources. Multiple biological monitors may be utilized, as necessary, to support multiple construction crews working simultaneously in sensitive habitats and/or in proximity to special-status species.	All ground-disturbing locations within construction areas	PG&E to ensure a biological monitor is present during initial ground-disturbing activities as described	State Water Board	During construction
APM-BIO-20: Major construction activities in sensitive habitat areas will cease 30 minutes before sunset and will not resume prior to 30 minutes after sunrise. In the event work needs to occur outside of these timeframes, such as work associated with an outage, the biological monitor will be consulted regarding additional measures to be implemented at the site. In addition, certain activities may occur at night for safety purposes, such as work along busy highways. Biological surveys by the approval of a qualified biologist may also occur outside of these timeframes.	All construction areas with major construction activities in sensitive habitats	PG&E to schedule construction activities to start 30 minutes after sunrise and halt 30 minutes before sunset; PG&E to consult biological monitor for work required outside of these timeframes as defined	State Water Board	During construction
APM-BIO-21: In accordance with the SWPPP, BMPs will be implemented to reduce the potential for erosion and sedimentation during construction. These BMPs may include, but are not limited to, the installation of erosion control fencing or straw wattles, covering soil piles with plastic, protecting storm drain inlets from runoff, and/or controlling vehicle track-out from the construction areas. Plastic monofilament netting (erosion control matting) will not be used; animals can become trapped in or injured by this type of erosion control material, and the plastic residue left by degradation of the material contributes pollution to the soil and water. Appropriate fiber netting or similar natural materials (such as coconut coir matting) will be used for erosion control or other purposes within sensitive areas to reduce the potential for entrapping amphibians.	All construction areas	PG&E to use and install BMPs in accordance with the project's SWPPP as defined	State Water Board	During construction
APM-BIO-22: Project-related vehicles will observe a maximum 15-mile-per-hour (mph) speed limit on all project access roads/routes and within work areas, pull sites, landing zones, and staging areas, except on city and county roads and state and federal highways, where the posted maximum speed limit will be observed.	All project access roads/routes and within work areas, pull sites, landing zones, and staging areas, except on city and county road and state and federal highways	PG&E to observe 15 mph speed limits specifically as defined	State Water Board	During construction

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APM-BIO-23: If a special-status species is identified on site, crews will immediately stop work and contact an on-site biological monitor and PG&E. Work will not proceed in the immediate area until the animal has traveled off of the site on its own or has been relocated by an approved biologist. If the identified special-status species is a federally and/or state-listed species the USFWS and/or CDFW (depending upon the listing status) will be notified within 24 hours of any encounter.	All construction areas	For any special-status species detection on site, a biological monitor and PG&E project personnel will be immediately contacted as defined; work will not occur in the immediate area; and if the species is listed under the Endangered Species Act (ESA) or California ESA (CESA), CDFW and/or USFWS will be notified within 24 hours of any encounter	State Water Board, USFWS, CDFW	During construction
		For any special-status species detection on site, a biological monitor and PG&E project personnel will be immediately contacted as defined; work will not occur in the immediate area; and if the species is listed under the ESA or CESA, CDFW and/or USFWS will be notified within 24 hours of any encounter	State Water Board, USFWS, CDFW	Post construction
APM-BIO-24: Any equipment or vehicles driven and/or operated within or adjacent to riparian and aquatic habitats will do so only on designated access routes or work areas. Any equipment or vehicles driven and/or operated within or adjacent to riparian and aquatic habitats will be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be harmful to aquatic life. All re-fueling and maintenance of vehicles and equipment will be conducted at a minimum distance of 100 feet from the edge of an aquatic feature to the extent feasible. If infeasible, appropriately-sized secondary containment will be utilized to contain any accidental spills or leaks. Clean-up materials will be kept on site to recover any accidental spills. Riparian and aquatic habitats will be protected from spills during construction by the protection measures specified in the SWPPP.	Construction areas within or adjacent to riparian and aquatic habitats	PG&E to stay on designated routes, check equipment daily, and conduct any refueling or maintenance activity a minimum of 100 feet from aquatic features as defined	State Water Board	During construction
APM-BIO-25: During any rain event of 0.25 inch or greater and for a period of 48 hours following a rain event of 0.25 inch or greater, a pre-construction survey by a biological monitor will be conducted immediately preceding any ground-disturbing construction or movement of equipment within 50 feet of any suitable CRLF or CTS habitat. A biological monitor will continue to monitor the work areas throughout the day during these timeframes (rain events of 0.25 inch or greater and for 48 hours following them).	All construction areas within 50 feet of suitable CRLF or CTS habitat	PG&E to ensure a biological monitor conducts a pre-construction survey immediately prior to ground disturbing activity or equipment operation during rain events defined as 0.25 inch or greater (and for 48 hours following a qualifying rain event) as defined	State Water Board	During construction
APM-BIO-26: During project activities, all small trash will be properly contained in covered or enclosed garbage receptacles and removed from the work area daily for disposal. All trash or garbage that may attract any wildlife, including scavengers and predators, will be securely contained at all times. All vehicles will carry and use trash bags. Following construction, all remaining large trash and construction debris (e.g., large shipping crates, large metal recycling containers, etc.) will be removed from the project area for recycling or disposal.	All construction areas	PG&E to dispose of trash properly as defined	State Water Board	During construction
		PG&E to dispose of trash properly as defined	State Water Board	Post construction

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APM-BIO-27: No firearms will be permitted in the construction area, unless carried by authorized security personnel or law enforcement.	All construction areas	PG&E to prohibit firearms as defined	State Water Board	During construction
		PG&E to prohibit firearms as defined	State Water Board	Post construction
APM-BIO-28: Vegetation clearing will be confined to the minimal amount necessary to facilitate construction activities. In the event the vegetation has to be removed in special-status species habitat, a biological monitor will evaluate the areas prior to vegetation removal and the applicable APMs will be implemented.	All vegetated construction areas	PG&E to evaluate special-status species habitat prior to vegetation removal activities and conduct vegetation clearing as defined including implementation of applicable APMs	State Water Board	Prior to construction at each applicable location
		PG&E to conduct vegetation clearing as defined including implementation of applicable APMs	State Water Board	During construction
APM-BIO-29: Prior to construction, a qualified biologist will conduct a desktop habitat assessment within 100 feet of all construction areas to identify potential bat roosting habitat. Follow-up field checks may be conducted to verify desktop results. If construction activities occur within or adjacent to potential bat roosting habitat, focused surveys may be necessary prior to construction to determine roosting status. If an active bat roost is detected, avoidance buffers of up to 100 feet will apply; the size of the buffer zone may be modified at the biologist's discretion based on the species' sensitivity to disturbance. Monitoring checks will be conducted when construction activities occur in the vicinity of an identified roost. To the maximum extent feasible, tree-trimming and tree-removal activities in potential habitat areas will be scheduled during warmer days in the fall or early spring seasons (September 1 to October 15 or February 15 through March 31), outside of the bat breeding season for this region of the state, generally considered from April through August. If project activities cannot avoid impacting active roosts, PG&E will contact the CDFW to discuss implementing alternative measures.	Within 100 feet of all construction areas with suitable bat habitat	PG&E to conduct a desktop habitat assessment for special-status bats as defined	State Water Board	Prior to construction
		PG&E to conduct monitoring checks at any identified special-status bat roosts when construction activities occur in the vicinity of the roost; tree trimming and removal activities to be scheduled September 1 to October 15 or February 15 to March 31 as defined; CDFW to be contacted if impacts to active roost sites cannot be avoided	CDFW	During construction
APM-BIO-30: If initial planning surveys indicate suitable breeding or roosting habitat for Townsend's big-eared bat, a USFWS/CDFW-approved biologist will examine the site to determine if it is occupied by Townsend's big-eared bat. If occupied breeding or roosting habitat is identified, the project proponent will avoid and minimize impacts to the maximum extent practicable. Avoidance measures should include relocating impacts away from the occupied habitat or delaying the impacts until the bats vacate the site. Avoidance and minimization measures will be incorporated into the project design and other portions of the application package prior to submission for coverage under the Plan. If project does not fully avoid impacts to suitable habitat, pre-construction surveys will be required.	All construction areas in potentially suitable Townsend's big-eared bat breeding or roosting habitat	PG&E to assess/identify any potentially suitable Townsend's big-eared bat habitat, and examine any potential sites for the presence of this species as defined; PG&E to design and implement avoidance measures as necessary based on findings as described	State Water Board	Prior to construction
		PG&E to avoid and minimize impacts to maximum extent practicable as defined	State Water Board	During construction

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
APM-BIO-31: If the project does not avoid impacts to suitable habitat for Townsend's big-eared bat, a pre-construction survey is required to determine whether the sites are occupied immediately prior to construction or whether they show signs of recent previous occupation. Pre-construction surveys are used to determine what avoidance and minimization requirements are triggered before construction and whether construction monitoring is necessary.	All construction areas in suitable Townsend's big-eared bat breeding or roosting habitat	PG&E to conduct a pre-construction survey for Townsend's big-eared bat if it is determined that impacts are not avoidable	State Water Board	Prior to construction at each applicable location
APM-BIO-32: If an occupied Townsend's big-eared bat day roost or prior roosting evidence is discovered during pre-construction surveys, PG&E will consult with a recognized Townsend's big-eared bat expert if additional avoidance is required.	All construction areas in occupied Townsend's big-eared bat breeding or roosting habitat	PG&E to consult with a bat expert as defined if occupation is confirmed	State Water Board	Prior to construction at each applicable location
APM-BIO-33: The project will conform to the PG&E Valley Elderberry Longhorn Beetle Conservation Program and accompanying Programmatic Biological Opinion (File No. 1-1-01-F-0114). Pursuant to this program, crews will be familiar with the program.	All construction areas with presence of elderberry	PG&E to follow the USFWS/PG&E Programmatic Biological Opinion for Valley elderberry longhorn beetle	USFWS	During construction
APM-BIO-34: Smoking will only be allowed in enclosed vehicles to reduce the potential for fires. In enclosed company vehicles, no smoking will be allowed if a non-smoker is concurrently in the vehicle.	All construction areas	PG&E to implement smoking rules as defined	State Water Board	During construction
		PG&E to implement smoking rules as defined	State Water Board	Post construction
APM-BIO-35: To help prevent inadvertent entrapment of special-status species during the construction phase of a project, all excavated, steep-walled holes or trenches more than 6 inches deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or other material approved by the qualified biologist, suitable to provide an escape route. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals.	All excavated, steep-walled holes or trenches more than 6 inches deep in construction areas	PG&E to cover excavations or provide escape ramps as defined	State Water Board	During construction
APM-BIO-36: All pipes, culverts, and similar structures that are stored at the construction site will be capped or will be thoroughly inspected for trapped animals before being buried, re-capped, or moved.	All construction areas	PG&E to inspect pipes, culverts, and similar structures as defined	State Water Board	During construction
APM-BIO-37: Prior to movement or use, the area beneath all vehicles and equipment that have remained stationary for 5 minutes or longer will be inspected for the presence of special-status species. If an individual is discovered, equipment will not be moved until the animal has left voluntarily or is removed by a biologist authorized to do so.	All construction areas in special-status species habitat	PG&E to inspect stationary vehicles and equipment as defined	State Water Board	During construction
APM-BIO-38: Off-road equipment will be clean of mud, soil, and plant parts prior to being brought to the project. Off-road equipment moved from areas of known and targeted noxious weeds will be cleaned prior to being moved to another site not in the immediate vicinity. If on-road equipment is operated on contaminated, vegetated surfaces, the equipment will be cleaned prior to departing areas with known weed populations. Methods of on-site cleaning may include, but not be limited to, spraying equipment with air and/or water, driving equipment across rumble strips, and/or sweeping and brushing material from equipment.	All off-road construction areas	PG&E to remove mud, soil, and vegetative material from off-road equipment as defined	State Water Board	Prior to construction at each applicable location
		PG&E to clean off-road equipment between sites with identified target noxious weeds as defined	State Water Board	During construction
		PG&E to clean off-road equipment between sites with identified target noxious weeds as defined	State Water Board	Post construction

Measure	Location	Implementation Action	Monitoring Agency	Timing¹
APM-BIO-39: Following construction, areas that are disturbed would be revegetated by reseeding with an appropriate seed mix, as necessary, to restore the area to pre-construction conditions. To avoid introducing invasive or exotic plant species, the seed mix will be reviewed using the California Invasive Plant Council's Inventory Database. The revegetation approach would be based on agency permit requirements, the type of vegetation disturbed, the intensity of the disturbance, and input from landowners, as applicable. In addition, areas that require extensive cut and fill would be recontoured to allow the pre-construction hydrologic conditions to be maintained. SWPPP BMPs would be implemented to reduce erosion after construction is completed.	All construction areas requiring restoration activities	PG&E to implement revegetation and restoration activities to restore disturbed sites to pre-existing conditions as defined	State Water Board, USFWS, CDFW	Post construction
APM-BIO-40: During recontouring activities, soils would be compacted to the minimal amount required to conform to construction and geotechnical standards, where appropriate.	All construction areas requiring recontouring	PG&E to proceed with recontouring activities as defined	State Water Board	During construction
APM-BIO-41: To the extent any of the previous measures conflict with requirements in subsequently issued resource agency permits, the resource agency permit requirements will supersede these measures.	All construction areas	PG&E to implement measure as defined	State Water Board	Prior to construction
		PG&E to implement measure as defined	State Water Board	During construction
		PG&E to implement measure as defined	State Water Board	Post construction
APM-BIO-42: To minimize impacts such as soil compaction and vegetation disturbance when equipment or vehicles must operate within wetlands associated with access road Work Area 114, appropriate crossing methods and BMPs will be developed by PG&E and approved by the appropriate permitting agencies prior to installation.	Access road to Work Area 114 within wetlands	PG&E to develop BMPs and crossing methods and submit plan as defined	State Water Board, appropriate agencies	Prior to construction at each applicable location
APM-BIO-43: A stream crossing at Pull Site 63 will be subject to temporary project impacts due to installation, operation, removal, and remediation of the pull site. Impacts associated with Pull Site 63 will be minimized by use of appropriate BMPs, minimization of the linear extent of the impact along the stream channel, and minimization of time of operation at the site. Crossing details and BMPs will be subject to agency review before installation. Appropriate revegetation of adjacent reaches of the stream will be conducted to restore the riparian vegetation removed as part of the reconductoring project.	Stream crossing at Pull Site 63	PG&E to minimize impacts as defined	State Water Board, appropriate agencies	During construction
		PG&E to restore riparian vegetation as defined	State Water Board, CDFW	Post construction
APM-BIO-44: A channel crossing will be subject to temporary project impacts due to the installation and removal of Crossing Structure 111A. Appropriate BMPs for operations in or near aquatic resources will be used. Installation and removal of the crossing structure will be conducted in a manner that does not destabilize the channel or affect the quality of the water carried by the channel.	Crossing Structure 111A	PG&E to install appropriate BMPs as defined	State Water Board, CDFW	Prior to construction at each applicable location
		PG&E to remove BMPs as defined	State Water Board, CDFW	During construction
APM-BIO-45: No dogs or any other pets under control of construction personnel will be allowed in the construction area. Presence of land owners' or managers' ranch dogs or livestock on agricultural lands as part of normal ranching operations are not subject to this prohibition.	All construction areas	PG&E to prohibit dogs or any other pets as defined	State Water Board	During construction
		PG&E to prohibit dogs or any other pets as defined	State Water Board	Post construction
Cultural Resources				
APM-CUL-01: Prior to construction, a qualified archaeologist or other similarly qualified resource specialist will develop an environmental training for all project personnel. The training will include information on the protection of archaeological and paleontological resources and the procedures to be implemented if archaeological remains or fossil remains are encountered by ground-disturbing activities, and shall cover all pertinent project APMs and Mitigation Measures, permit conditions, and any other required environmental compliance measures related to cultural resource protection. Training will be conducted by a qualified archaeologist or other similarly qualified resource specialist. All project personnel will attend the training prior to entering the project work area. This training may be combined with other environmental training for the project, such as biological resource training.	Not Applicable	PG&E to provide cultural resource training as defined	State Water Board	Prior construction
		PG&E to provide cultural resource training to any new worker assigned to the project following the initial training event	State Water Board	During Construction

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
<p>APM-CUL-02: In the event that a previously unidentified archaeological or paleontological resource is uncovered during construction, all ground-disturbing work will be temporarily halted or diverted away from the discovery to another location at a minimum distance of 100 feet. PG&E's Cultural Resources Specialist or designated representative will inspect the discovery and determine whether further investigation is required.</p> <ul style="list-style-type: none"> - If a previously unidentified archaeological resource is discovered, but can be avoided and no further impacts will occur, the resource will be documented on the appropriate California Department of Parks and Recreation records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, PG&E will evaluate the significance of the resource and implement data recovery excavation or other appropriate treatment measures in coordination with the landowner, as recommended by a qualified archaeologist. - If a previously unidentified paleontological resource is discovered, but can be avoided and no further impacts will occur, the resource will be documented in the appropriate paleontological resource records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, PG&E will evaluate the significance of the resource and implement data recovery excavation or other appropriate treatment measures in coordination with the landowner, as recommended by a qualified paleontologist. 	All construction areas	PG&E to stop all ground-disturbing work within 100 feet of the resource; PG&E Cultural Resource Specialist or designated representative to inspect the discovery and implement the measure as defined	State Water Board	During construction
<p>APM-CUL-03: Prior to the start of construction, a qualified paleontologist will investigate the actual and likely impacts resulting from construction activities and determine the depths of impact in the formations with moderate and high sensitivity, and will develop a monitoring program if conditions and construction activities warrant one. The monitoring program will require that a Paleontological Monitor will be present during all construction-related excavations except pole auguring (including mass grading, earth-moving and trenching below 3 feet of surface, or at a depth otherwise determined by a qualified paleontologist) in formations where there would be high potential to disturb sensitive resources as determined by the qualified paleontologist. Construction-related activities within formations with moderate sensitivity may require the presence of a Paleontological Monitor up to three times per week, depending on the work being conducted and the potential for impacts to sensitive resources, as determined by the qualified paleontologist. All scientifically significant fossils salvaged during construction monitoring will be prepared for curation, identified to element and the lowest possible taxonomic level, and transferred to an approved paleontological repository for permanent storage with the permission of the landowner. The results of the paleontological monitoring program will then be detailed in a Final Paleontological Monitoring Report.</p>	All construction areas with moderate and high paleontological sensitivity	PG&E to investigate the actual and likely impacts resulting from construction and determine the depths of impacts; PG&E to develop a monitoring program if warranted	State Water Board	Prior to construction at each applicable location
		PG&E to have a paleontological monitor present during all applicable construction-related excavations, earth-moving and trenching activities below 3 feet of surface or as determined by a qualified paleontologist; PG&E to have a paleontological monitor present in areas of moderate sensitivity as determined by the qualified paleontologist; PG&E to handle scientifically significant fossils as defined	State Water Board	During construction
		PG&E to prepare a Final Paleontological Monitoring Report	State Water Board	Post construction
<p>APM-CUL-04: In the unlikely event that Native American human remains are discovered during construction, work will be halted within 100 feet of the find and PG&E's Cultural Resource Specialist will be notified. PG&E's Cultural Resource Specialist will be responsible for contacting the county coroner.</p>	All construction areas	PG&E to halt construction within 100 feet of a Native American human remain discovery; PG&E's Cultural Resource Specialist to be notified; PG&E's Cultural Resource Specialist to contact the county coroner	State Water Board	During construction

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
Hazards and Hazardous Materials				
APM-HAZ-01: PG&E will implement fire prevention practices in accordance with its BMPs manual and fire prevention plan, such as keeping appropriate firefighting equipment on site; ensuring consistent access to firefighting equipment; maintaining firefighting equipment in operating condition; ensuring access to a temporary or permanent water supply; locating internal, combustible, engine-powered equipment away from combustible materials, and allowing smoking only in designated areas.	All construction areas	PG&E to implement fire prevention practices	State Water Board	During construction
APM-HAZ-02: PG&E will prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan for the project, including construction areas on the power line and for the substations to be provided in the SWPPP.	All construction areas and substations	PG&E to prepare a SPCC	State Water Board	Prior to construction
		PG&E to implement the SPCC	State Water Board	During construction
		PG&E to implement the SPCC	State Water Board	Post construction
APM-HAZ-03: As applicable, PG&E employees who work in the construction areas and substations will follow PG&E's training requirements of PG&E's Hazardous Material Business Plan (HMBP).	All construction areas and substations	PG&E to implement the HMBP	State Water Board	During construction
APM-HAZ-04: PG&E will include in the construction contracts the appropriate language pertaining to handling hazardous materials and spills, in accordance with applicable federal, state, and local laws, rules, and regulations.	All construction areas	PG&E to hazardous materials handling and spill language in construction contracts	State Water Board	Prior to construction
APM-HAZ-05: PG&E will notify Chevron's consultant SAIC and coordinate excavation of auger holes for crossing structure towers in the area near known or suspected abandoned pipelines with SAIC staff.	Crossing structure towers in areas near known or suspected abandoned pipelines	PG&E to notify SAIC and coordinate crossing structure installation	State Water Board	Prior to construction at each applicable location
Hydrology and Water Quality				
APM-HYD-01: Any potential wetland or water features in the vicinity of construction areas—with the exception of the drainage between the two areas that comprise Pull Site 63, the drainage that is located at Crossing Structure 111A, and the wetland located along the overland access route to Work Area 114—will be flagged for avoidance. The approved crossings and/or boundaries of approved disturbance within the three hydrologic features where avoidance is not feasible will be marked with signs or other highly visible marking. Construction activities and vehicle traffic within these features will be limited to the areas of permitted disturbance.	Potential wetland or water features in the vicinity of construction areas with the exception of the drainage between the two areas that comprise Pull Site 63, the drainage that is located at Crossing Structure 111A, and the wetland located along the overland access route to Work Area 114	PG&E to flag potential wetland or water features in the vicinity of construction areas for avoidance	State Water Board	Prior to construction at each applicable location
		PG&E to limit construction activities and vehicle traffic to areas of permitted disturbance	State Water Board	During construction

Measure	Location	Implementation Action	Monitoring Agency	Timing¹
APM-HYD-02: Any equipment or vehicles driven and/or operated within or adjacent to riparian and aquatic habitats will be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be harmful to aquatic life. All re-fueling and maintenance of vehicles and equipment will be conducted at a minimum distance of 100 feet from the edge of an aquatic feature to the extent feasible. If infeasible, appropriately sized secondary containment will be utilized to contain any accidental spills or leaks. Cleanup materials will be kept on site to recover any accidental spills. Riparian and aquatic habitats will be protected from spills during construction by the protection measures specified in the SWPPP.	All construction areas within or adjacent to riparian or aquatic habitats	PG&E to check equipment or vehicles daily for leaks; PG&E to refuel and maintain all vehicles and equipment at least 100 feet from the edge of aquatic features; if this buffer is not feasible secondary containment will be used; PG&E to keep cleanup materials on site; PG&E to protect riparian and aquatic habitats from spills by implementing the SWPPP	State Water Board	During construction
APM-HYD-03: In accordance with the SWPPP, BMPs will be implemented to reduce the potential for erosion and sedimentation during construction. These BMPs may include, but are not limited to: the installation of erosion control fencing or straw wattles, covering soil piles with plastic, protecting storm drain inlets from runoff, and/or controlling vehicle track-out from the action area. Plastic monofilament netting (erosion control matting) will not be used in suitable habitat for listed amphibians and reptiles because these species can become trapped in this type of erosion control material. Tightly woven fiber netting or similar natural materials (such as coconut coir matting) will be used for erosion control or other purposes within these areas to reduce the potential for entrapping amphibians and reptiles.	All construction areas	PG&E to implement BMPs in accordance with the SWPPP	State Water Board	During construction
		PG&E to implement BMPs in accordance with the SWPPP	State Water Board	Post construction
APM-HYD-04: If warranted to prevent erosion, geotechnical fabric and gravel may be applied within construction areas. Depending on the design of the temporary bridge to be installed at Pull Site 63, geotechnical fabric may be applied along the width of the bridge during construction to prevent erosion into the stream channel and to stabilize the bank. These materials will be removed following construction.	All construction areas	PG&E to apply geotechnical fabric and gravel, as appropriate	State Water Board	During construction
		PG&E to remove geotechnical fabric and gravel if previously applied	State Water Board	Post construction
Mineral Resources				
APM-MIN-01: PG&E will provide advance coordination with Clayton Quarry for accessing Work Area 60 and Crossing Structures 111 and 111A through the quarry’s driveway.	Work Area 60 and Crossing Structures 111 and 111A	PG&E to provide advance coordination with Clayton Quarry	State Water Board	Prior to construction at each applicable location
Noise				
APM-NOI-01: Unless otherwise warranted by emergency conditions or construction safety, construction activities will be limited to the following hours, by location: <ul style="list-style-type: none">- City of Antioch: between 7:00 a.m. and 6:00 p.m. on weekdays; between 8:00 a.m. and 5:00 p.m. on weekdays within 300 feet of occupied dwellings; and between 9:00 a.m. and 5:00 p.m.on weekends and holidays, regardless of the distance from the occupied dwellings- City of Concord: between 7:30 a.m. and 6:00 p.m. on weekdays, and between 8:00 a.m. and 5:00 p.m. on weekends- City of Clayton: between 7:00 a.m. and 10:00 p.m. daily- City of Walnut Creek: between 7:00 a.m. and 6:00 p.m. on non-holiday weekdays- City of Lafayette: between 7:00 a.m. and 10:00 p.m. on weekdays and Saturdays- City of Orinda: between 8:00 a.m. and 6:00 p.m. on weekdays, and between 10:00 a.m. and 5:00 p.m. on Saturdays	All construction areas	PG&E to limit construction hours as defined	State Water Board	During construction

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
APM-NOI-02: Equipment will be positioned within designated work areas, pull sites, landing zones, and staging areas to maximize the distance from residences and to maintain safe and effective operation, while also maintaining consistency with biological resource requirements.	All work areas, pull sites, landing zones, and staging areas	PG&E to position construction equipment as defined	State Water Board	During construction
APM-NOI-03: All internal combustion engine-driven equipment will be equipped with exhaust mufflers that are in good condition and that meet or exceed the manufacturers' specifications. All equipment will be maintained and well-tuned according to PG&E's standards.	All construction areas	PG&E to ensure mufflers are installed on all equipment; PG&E to maintain all vehicles	State Water Board	During construction
APM-NOI-04: Where work areas are located within 80 feet of residences or schools, a temporary and approximately 3-foot-tall noise barrier will be placed between sensitive receptors and stationary pieces of noise-generating equipment that are unable to move under their own power while they are in use.	All work areas within 80 feet of residences or schools	PG&E to install a temporary 3-foot-tall noise barrier between schools and equipment as defined	State Water Board	During construction
APM-NOI-05: Helicopters will maintain a height of at least 500 feet when passing above residential areas, except when they are at construction areas or actively assisting with construction activities.	All residential areas except when helicopters are at construction areas or actively assisting with construction activities	PG&E to ensure that helicopters maintain a height of at least 500 feet as defined	State Water Board	During construction
APM-NOI-06: If construction during hours outside of those allowed by local ordinances (as described in APM-NOI-01) is necessary and PG&E has advance notice of the need, PG&E would follow established protocols by providing advance notice to all property owners within 300 feet of construction activities. If PG&E must unexpectedly extend construction hours due to a construction safety or emergency situation, PG&E will complete the work and terminate activities as quickly as is safely possible.	All construction areas where construction will occur outside of the hours allowed by APM-NOI-01	PG&E to provide advance notice to all property owners within 300 feet of construction activities if advanced notice is available	State Water Board	Prior to construction at each applicable location
		PG&E to complete work and terminate activities as quickly as is safely possible if advanced notice is not available	State Water Board	During construction
APM-NOI-07: PG&E will coordinate with the landowners in the vicinity of Tower 98 to develop alternative construction scenarios to facilitate the required tower modification at this location. Potential scenarios may include, but will not be limited to, the use of helicopters to perform all modifications, the use of overland access routes to deliver materials to Tower 98 and the use of helicopters to perform the tower modifications, and the use of overland access routes to deliver materials to Tower 98 and ground-based crews to perform the tower modification. The State Water Board will be notified of the agreed-upon construction scenario prior to construction.	Tower 98	PG&E to coordinate with landowners to develop alternative construction scenarios; PG&E to notify the State Water Board of the agreed-upon construction scenario	State Water Board	Prior to construction
Public Services				
APM-PS-01: At least 24 hours prior to implementing any road or lane closure, PG&E will coordinate with applicable emergency service providers in the project vicinity, including, as appropriate to the location: Contra Costa County Fire Protection District, East Contra Costa Fire Protection District, Moraga-Orinda Fire District, Antioch Police Department, Clayton Police Department, Concord Police Department, Lafayette Police Department, Moraga Police Department, Orinda Police Department, and Walnut Creek Police Department. PG&E will provide emergency service providers with information regarding the road or lanes to be closed; the anticipated date, time, and duration of closures; and a contact telephone number.	All construction areas that require road or lane closure	PG&E to coordinate with applicable emergency service providers at least 24 hours prior to implementing any road or lane closures; PG&E to provide emergency service providers with information regarding the road or lane closure	State Water Board, applicable emergency service providers	Prior to construction at each applicable location

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
Recreation				
APM-REC-01: In locations where closures or access restrictions within state, regional, or local recreational facilities are required, PG&E will coordinate with the appropriate agency at least 2 weeks in advance of construction activities to develop a plan for project work within these facilities. This coordination will include providing each facility with a description of the planned construction activities and schedule within the facility, and any planned closures or access restrictions to the facility. If requested, PG&E will post notices at key entrances to each facility to alert recreational users of the planned activities. The State Water Board will be notified of the agreed-upon construction scenario with each facility prior to construction.	Areas where recreational facilities will be closed or will experience access restrictions	PG&E to coordinate with the appropriate agencies 2 weeks in advance of construction areas; PG&E to provide a description of planned construction planned construction activities and schedule within the facility, and any planned closures or access restrictions to the facility; PG&E to post notices at key entrances if requested; PG&E to notify the State Water Board of the agreed-upon construction scenario	State Water Board, applicable recreational facility agency	Prior to construction at each applicable location
APM-REC-02: In order to prevent non-project personnel from entering construction areas within recreational facilities, the boundaries of these areas will be clearly demarcated using fencing or other highly visible material. The demarcation will be checked regularly and maintained as needed for the duration of use within the recreational facilities. Signs will be posted at regular intervals along this boundary instructing non-project personnel to avoid entering the active construction site.	Construction areas within recreational facilities	PG&E to demarcate construction areas and post signs at regular intervals	State Water Board	Prior to construction at each applicable location
		PG&E to check the demarcation regularly and maintain as needed	State Water Board	During construction
Traffic and Transportation				
APM-TRA-01: PG&E will contact a railroad representative at least 2 months prior to conductor pulling activities to coordinate crossing structure locations and to prevent service interruption. The crossing structures will be installed in coordination with a railroad representative, if requested.	Crossing structure locations at and conductor pulling activities over railroads	PG&E to contact railroad representative at least 2 months prior to conductor pulling activities; coordinate crossing structure locations with the railroad representative to prevent service interruption	State Water Board; applicable railroad agency	Prior to construction at each applicable location
APM-TRA-02: PG&E will comply with requirements of Title 14 of the Code of Federal Regulations (CFR) and the Federal Aviation Administration (FAA) regarding helicopter use, including preparation of a Helicopter Lift Plan if required.	All construction areas requiring helicopter use	PG&E to comply with Title 14 of the CFR and FAA; PG&E to prepare a Helicopter Lift Plan, if required	State Water Board	Prior to construction at each applicable location
		PG&E to comply with Title 14 of the CFR and FAA; PG&E to implement the Helicopter Lift Plan, if required	State Water Board	During Construction
APM-TRA-03: Overland access routes will be demarcated and non-project-related personnel would be kept out of the overland access routes, pull sites, landing zones, and work areas, if warranted for safety.	Overland access routes, pull sites, landing zones, and work areas	PG&E to demarcate overland access routes	State Water Board	Prior to construction at each applicable location
		PG&E to keep non-project-related personnel out of construction areas	State Water Board	During construction

Measure	Location	Implementation Action	Monitoring Agency	Timing ¹
APM-TRA-04: To ensure traffic safety where temporary closures of public roads or lanes are necessary but local encroachment permits do not apply, PG&E will coordinate the traffic control measures with the appropriate local agency prior to the road and/or lane closures. PG&E will implement the traffic control measures during the temporary road and/or lane closures.	Temporary road or lane closures along public roads where local encroachment permits do not apply	PG&E to coordinate traffic control measures with the appropriate local agency	State Water Board; applicable local agency	Prior to construction at each applicable location
		PG&E to implement traffic control measures during the temporary road/lane closures	State Water Board; applicable local agency	During construction