APPENDIX E. MITIGATION MONITORING PROGRAM

The California State Lands Commission (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the PG&E Gas Line 021G/R-708 Replacement Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a), and State CEQA Guidelines sections[1] 15074, subdivision (d), and 15097.

The Project authorizes PG&E (Applicant) to decommission and replace Project-related facilities located (in part) within CSLC Lease No. 5438-B.

1.1 PURPOSE

It is important that significant impacts from the Project are mitigated to the maximum extent feasible. The purpose of an MMP is to ensure compliance and implementation of MMs. This MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

1.2 ENFORCEMENT AND COMPLIANCE

The CSLC is responsible for enforcing this MMP. The Project Applicant is responsible for the successful implementation of and compliance with the MMs identified in this MMP. This includes all field personnel and contractors working for the Applicant.

1.3 MONITORING

CSLC staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions (e.g., City of Petaluma, Sonoma County, California Department of Fish and Wildlife). The CSLC or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. To confirm implementation and success of the MMs, an environmental monitor must be on-site during all Project activities with the potential to create significant environmental impacts or impacts for which

[1] The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

mitigation is required. Along with CSLC staff, the environmental monitor(s) are responsible for:

- Confirming that the Applicant has obtained all applicable agency reviews and approvals
- Coordinating with the Applicant to integrate the mitigation monitoring procedures during Project implementation
- Confirming that the MMP is followed

If a deviation from the MMP is necessary, the environmental monitor shall immediately submit a request to the CSLC staff or its designee for such deviation from the procedures identified in this MMP and shall not implement the request until CSLC staff or its designee approve the deviation and its correction.

Workforce Personnel. Implementation of the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. To facilitate successful implementation, relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.

General Reporting Procedures. A monitoring record form shall be provided to the Applicant, and once the Project is complete, a compilation of all monitoring record forms shall be submitted to CSLC staff. CSLC staff or its designated environmental monitor shall develop a checklist to track all procedures required for each MM and shall confirm that the timing specified for the procedures is followed. The environmental monitor shall note any issues that may occur and take appropriate action to resolve them.

Public Access to Records. Records and reports are open to the public and are to be provided upon request.

1.4 MITIGATION MONITORING PLAN

This section presents the MMs for Air Quality, Biological Resources, Cultural Resources, Cultural Resources – Tribal, Geology, Soils, and Paleontological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Recreation, Transportation, and Wildfire. All other environmental factors were found to have less than significant or no impacts; therefore, they are not included. The MMP includes the following information:

- **Potential Impact**

- **Mitigation Measure** (full text of the measure)
- **Monitoring/Reporting Action** (action to be taken by monitor or Lead Agency)
- **Effectiveness Criteria** (how the agency can know if the measure is effective)1
- **Responsible Party** (entity responsible to ensure MM compliance)
- **Timing** (Phase 1 and/or 2; before, during, or after construction; during operation; etc.)

1.4.1 AIR QUALITY

***Potential Impact:* Particulate matter criteria pollutant emissions**

MM AQ-1: Air Quality Construction Measures. PG&E shall implement the following Bay Area Air Quality Management District (BAAQMD) basic dust control practices:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at PG&E regarding dust complaints. This person shall

respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Monitoring/Reporting Action: Observation reports

Effectiveness Criteria: Reduced particulate matter emissions

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, during construction activities

1.4.2 BIOLOGICAL RESOURCES

Potential Impact: **Special-status wildlife species and habitats**

MM BIO-1: Environmental Training Program. An environmental training program shall be developed and presented by a qualified biologist, approved by CSLC staff. All contractors and employees involved with the Project shall be required to attend the training program prior to starting work on the Project. At a minimum, the program shall cover special-status species that could occur on the site, their distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and required Project avoidance, minimization, and mitigation measures.

Monitoring/Reporting Action: Signatures of trained employees for compliance

Effectiveness Criteria: All construction workers complete the program, special-status species avoidance

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, prior to Project construction activities

Potential Impact: **Special-status wildlife species**

MM BIO-2: Biological Monitoring. A qualified biological monitor, approved by CSLC staff, shall survey the onshore work area for sensitive species or other wildlife that may be present no more than 24 hours prior to the commencement of Project activities. In addition, the biological monitor shall monitor Project activities within surface water and sensitive habitats, and other activities that have the potential to impact special-status species on a daily basis once Project activity begins unless otherwise approved in writing. If at any time during Project activities any special-status wildlife species are observed within the Project area, work around the animal's immediate area shall be stopped or work shall be

redirected to an area within the Project area that would not impact these species until the animal is relocated by a qualified biologist. Listed species would be allowed to leave of their own volition, unless coordination with U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife (CDFW) provides authorization for relocation by a qualified biologist with appropriate handling permits. In consultation with CDFW, an escape ramp may be installed to facilitate exit for the species. Work would resume once the animal is clear of the work area. In the unlikely event a special-status species is injured or killed by Project-related activities, the biological monitor shall stop work, notify CSLC, and consult with the appropriate agencies to resolve the impact prior to re-starting work in the area.

Monitoring/Reporting Action: Observation reports

Effectiveness Criteria: Special-status species avoidance

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, prior to the start and throughout Project construction activities

***Potential Impact:* Special-status fish and aquatic species and habitats**

MM BIO-3: Special-Status Fish Protection To avoid impacts on steelhead, longfin smelt, or ~~the species'~~ designated critical habitat, pipeline removal shall be conducted only during the National Marine Fisheries Service (NMFS) - recommended work window (June 15 to October 15) and shall comply with all NMFS-recommended measures for protection of fish species. The project shall adhere to the work period and all other requirements of the CDFW Lake and Streambed Alteration Agreement issued for the project.

MM BIO-4: Turbidity Monitoring Plan. The Applicant shall implement a Turbidity Monitoring Plan during all in-water work to define allowable turbidity thresholds and ensure that turbidity levels upstream and downstream of the Project area are compliant with regulatory requirements for protection of aquatic species. A qualified environmental monitor, approved by CSLC staff, shall be present during in-water work to regularly monitor turbidity levels upstream and downstream of in-water work activities. If the results of the turbidity monitoring plan detect a Project-related increase in turbidity that exceeds the allowable thresholds for increased turbidity, as defined by regulatory permits, work shall stop while corrective measures are implemented. Corrective measures may include the use of a turbidity curtain or other sediment control devices,

alteration to the timing and duration of in-water work and excavation, or minor modifications in methodology that result in reducing the in-water excavation.

Monitoring/Reporting Action: Submit plan to CSLC for review and approval at least 30 days prior to in-river work, and weekly monitoring results

Effectiveness Criteria: Minimized turbidity, no associated special-status fish and aquatic species injury or mortality

Responsible Party: PG&E and contractors

Timing: Phase 2, prior to the start of and throughout in-river construction work

Potential Impact: **Nesting birds**

MM BIO-5: ~~Nesting Bird Season Pre-Construction Surveys~~.Protection of Nesting Birds, Including Rail Species.

~~If Project-related vegetation removal and ground-clearing activities are scheduled between March 1 and August 1, then rail surveys will be conducted in suitable habitat for Ridgway's and black rails within 700 feet of the Project area in the season prior to planned work (January/February). If nesting rails are detected, work will be avoided within a 700-foot buffer around the nest area for the duration of nesting season.~~

a. Monitoring. A qualified biologist or biological monitor shall be present on-site to survey and monitor for Fully Protected species, including Ridgway's rail, California black rail and salt marsh harvest mouse (discussed below) during: a) all vegetation removal, b) the construction of exclusion fencing, and c) all work within 300 feet of tidal or pickleweed habitats. The qualified biologist or biological monitor shall have the authority to stop work if deemed necessary for any reason to protect these species, or any other special-status species.

b. High Tide Restrictions. No project activities shall occur within 50 feet of suitable rail habitat during extreme high tide events or when adjacent tidal marsh is flooded. Extreme high tides events are defined as a tide forecast of 6.5 feet or higher measured at the Golden Gate Bridge and adjusted to the timing of local high tides.

c. Avoidance and Surveys. Project activities within suitable rail breeding habitat or within 700 feet of such habitat shall be avoided during rail breeding season (January 15 – August 31 for Ridgway's, February 1 – August 31 for black rail) each year unless appropriately timed, yearly protocol level surveys are conducted and survey methodology and results are submitted to and accepted by CDFW. Surveys shall focus on suitable habitat that may be disturbed by project activities during the breeding

season to ensure that these species are not nesting in these locations. If breeding rails are determined to be present, no activities, visual disturbance (direct line of sight) and/or an increase in the ambient noise level shall occur within 700 feet of areas where rails have been detected during the breeding season. If surveys have not been conducted, all work shall be conducted 700 feet from suitable rail habitat during nesting season.

d. Other Nesting Bird Surveys. Other nesting bird pre-construction surveys shall be conducted within 1 week prior to the start of construction in potential nesting habitat within 350 feet of the Project area to identify nest sites, and a report shall be submitted to CSLC and CDFW for review within 1 week of pre-construction surveys, that outlines the surveys conducted, nest locations identified, and recommended nest protection buffers. Construction activities shall be prohibited within the established buffer zones until the young have fledged. If an active raptor or passerine bird nest is identified, an appropriate species-specific nest protection buffer shall be recommended based on a Nesting Bird Management Plan approved by the CDFW and site-specific conditions.

Monitoring/Reporting Action: Submit pre-construction survey report to CSLC and CDFW prior to ground disturbance during the nesting bird season, submit proposed buffers to CSLC and CDFW for review, monitoring

Effectiveness Criteria: Compliance with buffers

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, prior to the start and throughout Project construction activities. ~~conducted between March 1 and August 1~~

Potential Impact: **Western pond turtle**

MM BIO-6: Western Pond Turtle Pre-Construction Surveys. A qualified biologist, approved by CSLC, shall conduct pre-construction surveys for western pond turtle (WPT) and their nests 48 hours prior to ground disturbance to ensure that individuals are not present in the work areas on or adjacent to levee banks as well as the Pipe Staging Area. Prior to ground disturbance activities, a barrier, such as wildlife exclusion fencing, shall be placed around the excavation area to prevent WPT from moving into work areas. A qualified biological monitor shall be present to monitor project activities during all in-water work and initial ground disturbance that has the potential to impact special-status species. Should WPT be found within the work areas, a qualified biologist in consultation with CDFW shall relocate the species outside of work area barriers. If WPT nests are identified, a nest protection buffer area, as approved by CDFW, shall be

established around the nest(s). Construction activities shall be prohibited within the established buffer zone until the hatchlings emerge.

Monitoring/Reporting Action: Submit pre-construction survey report to CSLC prior to ground disturbance, CDFW consultation if needed, CDFW approval for nest protection buffer if needed, monitoring

Effectiveness Criteria: Barrier fencing in place if needed, WPT relocated as needed, nesting buffers established if needed, no WPT mortality

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, prior to the start and throughout construction in work areas on or adjacent to levee banks as well as the Pipe Staging Area.

Potential Impact: **Terrestrial Marsh Species**

MM BIO-7: Protection of Terrestrial Marsh Species, including Salt Marsh Harvest Mouse. PG&E shall ensure the implementation of the following measures:

- No project activities shall occur within 50 feet of tidal marsh habitat within two hours before and after an extreme high tide event (6.5 feet or higher measured at the Golden Gate Bridge and adjusted to the timing of local high tides) or when adjacent marsh is flooded unless exclusion fencing has been installed around the work area.
- ~~Work areas within 200 feet of tidal marsh shall be bordered by temporary exclusion fencing. The fence shall be made of a smooth material that does not allow the salt marsh harvest mouse to climb or pass through, of a minimum aboveground height of 30 inches, and the bottom shall be buried to a depth of at least 6 inches so that mice cannot crawl under the fence. Installation of the fence shall be monitored by a qualified biologist with experience with this species, who will check the fence alignment before vegetation clearing and fence installation to ensure no special-status species are present.~~
- Where tidal marsh habitat cannot be avoided and PG&E proposes vegetation removal, vegetation removal from the ground disturbance work area plus a 10-foot buffer around the area shall be implemented using hand tools or another method approved by USFWS and CDFW ~~and shall not be implemented using heavy equipment such as an excavator. Vegetation height within the buffer zone shall be maintained at or below 5 inches above ground. Vegetation removal in wetland habitat shall be conducted under the supervision of a qualified biologist(s) approved by CSLC~~.

- Prior to vegetation removal in Salt Marsh Harvest Mouse (SMHM) habitat, an approved qualified biologist or biological monitor, approved by CSLC and familiar with the species, shall walk through and inspect suitable habitat prior to vegetation removal and search for signs of harvest mice or other sensitive wildlife and plants. Following inspection, personnel, under the supervision of the qualified biologist, will disturb (e.g., flush) vegetation to force movement of SMHM into adjacent marsh areas. Flushing of vegetation will first occur in the center of the site then progress toward the two sides away from the open water areas or in this case, away from impacted habitat. Immediately following vegetation flushing, personnel, under the supervision of the qualified biologist or biological monitor, will remove vegetation with hand tools (e.g., weed-eater, hoe, rake, trowel, shovel, grazing) so that vegetation is no taller than 2 inches.
- After vegetation removal, an exclusion fence impermeable to mice shall be placed along the edge of the area removed of vegetation. The fence shall be made of a heavy plastic sheeting material that does not allow mice to pass through or climb, and the bottom shall be buried to a depth of 4 inches. Fence height shall be at least 12 inches higher than the highest adjacent vegetation with a maximum height of 4 feet. All supports for the exclusion fencing shall be placed on the inside of the work area. An approximately 2-foot-wide de-vegetated buffer shall be created along the habitat side of the exclusion fence.
- The exclusion fencing shall remain in operating condition throughout the duration of all project activities in salt marsh habitat. The qualified biologist or biological monitor shall inspect daily the integrity of the exclusion fencing to ensure there are no gaps, tears, or damage. Maintenance of the fencing shall be conducted as needed. Any necessary repairs to the fencing shall be completed within 24 hours.

Monitoring/Reporting Action: Observation reports

Effectiveness Criteria: Avoidance of special-status species

Responsible Party: PG&E and contractors

Timing: Phase 1 and 2, prior to the start of Project activities

Potential Impact: **Wetlands and Riparian habitat**

MM BIO-4: Turbidity Monitoring Plan (See above).

MM BIO-8: Avoidance and Minimization of Impacts on Wetlands. PG&E shall ensure the implementation of the following measures:

- Prior to construction, the Project biologist, approved by CSLC, shall flag wetland features next to and within work areas for avoidance. Where possible, no ground disturbing activities shall take place within 50 feet of a wetland. At the southern work area crews shall install plating or a temporary bridge to allow for travel across the ditch surrounding the farmed wetland.
- Permanent impacts on jurisdictional wetlands shall be mitigated by the creation, restoration, enhancement, or preservation of on- or off-site wetlands at an equal ratio, or as determined through permit requirements to be issued for the Project from the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW.
- Before construction begins, the Project engineer and a qualified biologist, approved by CSLC, shall identify locations for equipment and personnel access and materials staging that will minimize wetland vegetation disturbance. When heavy equipment is required, unintentional soil compaction shall be minimized by using equipment with a greater reach, low-pressure equipment, or construction mats. Vegetation clearing shall be limited to areas outside of marshland habitat to the greatest extent possible. For vegetation management activities occurring adjacent to wetland habitat, herbicides to be used shall be U.S. Environmental Protection Agency–certified for use in and adjacent to aquatic environments.
- No less than one month prior to construction, PG&E shall prepare a habitat restoration and monitoring plan for the restoration of temporary wetland impacts and submit it to the CSLC for review and approval. The plan shall describe requirements for any needed salvage and replanting protocols before and after construction is complete, to restore the wetland value to its original state prior to construction, based on the pre-construction surveys. The restoration plan shall be prepared in consultation with the nonprofit Petaluma Wetlands Alliance, the City of Petaluma, and CDFW.
- This plan shall include but not be limited to protocols for the replanting of wetland plants removed before or during construction, and management and monitoring of the plants to ensure successful replanting pursuant to the requirements of permits issued for the Project. The revegetation protocol shall use native species sourced from the local watershed or adjacent watersheds.
- The monitoring plan shall include annual monitoring by a qualified biologist of restored areas, to be submitted annually for 5 years unless otherwise approved in writing. The plan shall contain vegetation management protocols, monitoring protocols, performance criteria (i.e., success criteria), and an adaptive management plan if success criteria

are not being met. The adaptive management plan shall include interim thresholds for success including percent cover of wetland plants, and percent cover of weed species, to be assessed each year as well as alternative management approaches to undertake if thresholds are not met (e.g., weed control or additional replanting).

Monitoring/Reporting Action: Submit Habitat Restoration and Monitoring Plan to CSLC for review and approval at least 30 days prior to Phase 1 implementation, post-Project observations and report(s) to CSLC

Effectiveness Criteria: Avoidance and ~~R~~restoration of disturbed wetlands and riparian habitats

Responsible Party: PG&E and contractors

Timing: Phase 1 and Phase 2, prior to the start and throughout Project construction activities as well as post-Project monitoring

Other applicable mitigation measures for potential impacts to biological resources

MM HAZ-2: Inadvertent Release Contingency Plan; MM HYD-1: Stormwater Pollution Prevention Plan

1.4.3 CULTURAL / TRIBAL CULTURAL RESOURCES

Potential Impact: **Unknown cultural or tribal cultural resources**

MM CUL-1/TCR-1: Cultural Resources Awareness Training. Prior to Project implementation, a consultant and construction-worker cultural and tribal cultural resources awareness training program for all personnel involved in Project implementation shall be developed in coordination with the PG&E Cultural Resource Specialist (CRS), the qualified on-site archaeologists and the consulting Native American Tribe (Federated Indians of Graton Rancheria). The training will be conducted by the Project archaeologist and Tribal Representative(s) and must be provided to all Project employees, contractors, subcontractors, and other workers prior to their involvement in any ground-disturbing activities, with subsequent training sessions to accommodate new personnel becoming involved in the Project. Evidence of compliance with this mitigation measure shall be documented within pre-Project compliance documentation materials prior to Phase 1 and Phase 2 mobilizations throughout Project implementation.

The purpose of the training shall be to educate on-site construction personnel as to the sensitivity of archaeological and Tribal cultural resources in the Project area, including understanding the difference between non-Native archaeological resources (cultural resources) and resources that are Native American in nature (Tribal cultural resources). The training will also cover the requirements of the plan identified in MM CUL-2/TCR-2, including the possibility of exposing cultural or Tribal cultural resources, guidance on recognizing such resources, and direction on procedures if a potential resource is encountered. PG&E shall instruct all Project personnel that touching, collecting, or removing cultural materials from the property is strictly prohibited. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any find of significance to Native Americans, consistent with Native American tribal values and customs. The training shall include, at a minimum:

- A brief overview of the cultural sensitivity of the Project site and surrounding area
- What resources could potentially be identified during ground disturbance
- The protocols that apply in the event unanticipated cultural or tribal cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated
- Consequences in the event of noncompliance
- Safety procedures when working with monitors

Monitoring/Reporting Action: Pre-Project training for contractors of cultural and tribal cultural resource sensitivity, training documented to CSLC

Effectiveness Criteria: Reduced potential impacts to unknown cultural and tribal cultural resources

Responsible Party: PG&E, contractors, and CSLC

Timing: Phases 1 and 2, prior to construction

Potential Impact: **Unknown cultural or tribal cultural resources**

MM CUL-2/TCR-2: Cultural and Tribal Cultural Resources Management and Treatment Plan (CRMTP). Prior to implementation of Phase 1 and Phase 2 activities, PG&E shall develop a comprehensive Cultural Resources Management and Treatment Plan (CRMTP) for review and concurrence by CSLC staff and the consulting tribe(s). No tribal cultural resources shall be collected, relocated, or otherwise impacted until the approved CRMTP is in place. The purpose of the CRMTP is to describe the procedures and

requirements for protection and treatment of both non-Native American archaeological or historic resources and Tribal cultural resources that may be discovered during Project implementation. The CRMTP shall be provided to the CSLC and representatives from the consulting Tribe (Federated Indians of Graton Rancheria) for review and concurrence at least 45 days before the start of construction. PG&E shall fully carry out, implement, and comply with the CRMTP throughout all phases of construction. The CRMTP shall include at a minimum:

- A description of the roles and responsibilities of cultural resources personnel, including the PG&E Cultural Resource Specialist (CRS), the qualified on-site archaeologists, and Tribal Representatives (who may also be monitors), and the reporting relationships with Project construction management, including lines of communication and notification procedures
- Description of how the monitoring shall occur and the frequency of monitoring, consistent with the recommendations submitted by the consulting tribe during consultation on the Project (pursuant to Public Resources Code Sections 21080.3.2 and 21082.3) and reflected in the criteria listed in these mitigation measures
- Description of what resources may be inadvertently encountered
- Description of procedures for halting work on the site, establishment of buffer zones around potential finds, and notification procedures
- Description of the respective authorities of the PG&E CRS, on-site archaeologist, and Tribal Representative(s) to evaluate and determine significance of discoveries, and authority to determine appropriate treatment, depending on whether the discovery is Native American in nature
- Provisions for treatment of tribal cultural resources and the recommended treatment protocols submitted by the consulting Tribe during consultation on the Project (pursuant to Public Resources Code Sections 21080.3.2 and 21082.3)
- Provisions for the culturally appropriate handling of Tribal cultural resources, if avoidance is infeasible, including procedures for temporary custody, processing materials for reburial, minimizing handling of cultural materials, and development of a reburial plan and agreement for returning materials to a suitable location in the Project area where they would not be subject to future disturbance
- Procedures for the appropriate treatment of human remains, pursuant to California Health and Safety Code section 7050.5 and California Public

Resources Code section 5097.98, which include procedures for determination of a most likely descendant by the Native American Heritage Commission

- A description of monitoring reporting procedures including the requirement that reports resulting from the Project be filed with the Northwest Information Center (NWIC) and the North Central Information Center (NCIC) and copies provided to CSLC, USACE, and the consulting Tribe (Federated Indians of Graton Rancheria), consistent with their geographic affiliation, within one year of Project completion

Monitoring/Reporting Action: Submit CRMTP to CSLC and California Native American tribe(s) for review and approval

Effectiveness Criteria: Approved CRMTP

Responsible Party: PG&E and CSLC

Timing: 45 days prior to Phase 1 construction implementation

Potential Impact: **Unknown cultural or tribal cultural resources**

MM CUL-3/TCR-3: Cultural Resources Construction Monitoring. In addition to providing the training required by MM CUL-1/TCR-1, the PG&E CRS, and/or their on-site archaeologist, shall provide monitoring during implementation of Phase 1 and Phase 2 activities, as may be specified in the CRMTP required by MM CUL-2/TCR-2. PG&E shall also retain a Federated Indians of Graton Rancheria Tribal Representative, if one is available, who will monitor all Project construction areas. Activities to be monitored include, but are not limited to, the Phase 1 horizontal directional drilling (HDD) bore pits excavated for the Northern and Southern Work Areas as well as terrestrial trenching for both Phase 1 and Phase 2. Both the archaeologist and the Tribal Monitor(s) shall have the authority to temporarily halt or redirect construction in the event that potentially significant cultural resources or tribal cultural resources are discovered during Project related activities. The work stoppage or redirection shall occur to an extent sufficient to ensure that the resource is protected from further impacts. Detailed monitoring procedures, including criteria for increasing or decreasing monitoring and the location and scope of monitoring activities agreed to by both PG&E CRS-designated on-site archaeologist and Tribal monitor(s), shall be outlined in the CRMTP identified in MM CUL-2/TCR-2. The Applicant shall provide a minimum 2-week notice to the on-site archaeologist and designated representatives from the consulting Tribe prior to all activities requiring monitoring and shall provide safe and reasonable access to the Project site. The monitor, if

available, shall work in collaboration with the inspectors, Project managers, and other consultants hired/employed by PG&E or the PG&E's Contractor.

Monitoring/Reporting Action: CRS/on-site archaeologist and California Native American tribe(s) monitors present during ground disturbance

Effectiveness Criteria: Discovery and identification of unknown cultural or tribal resources, if present

Responsible Party: PG&E and CSLC

Timing: Phases 1 and 2, during construction

Potential Impact: **Unknown cultural or tribal cultural resources**

MM CUL-4/TCR-4: Discovery of Previously Unknown Cultural Resources or Tribal Cultural Resources. If any potential Tribal cultural resources, archaeological resources, other cultural resources, or articulated or disarticulated human remains are discovered by the Tribal Monitor(s), designated on-site archaeologist, or other Project personnel during construction activities, all work shall cease within 100 feet of the find, or a distance agreed upon by the on-site archaeologist and Tribal Monitor(s) based on the project area and nature of the find. Work stoppage shall remain in place until the Tribal Monitor, PG&E CRS, and the designated on-site archaeologist have jointly determined the nature of the discovery, and the significance of the discovery has been determined by either the archaeologist/cultural resources specialist (for cultural resources) or the Tribal monitor (for tribal cultural resources), as detailed in the CRMTP identified in MM CUL-2/TCR-2. Tribal cultural resources shall not be photographed nor be subjected to any studies beyond such inspection as may be necessary to determine the nature and significance of the discovery. If the discovery is confirmed as potentially significant or a tribal cultural resource, an Environmentally Sensitive Area (ESA) will be established using fencing or other suitable material to protect the discovery during subsequent investigation. No ground-disturbing activities shall be permitted within the ESA until the area has been cleared for construction. The exact location of the resources within the ESA must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism.

Impacts to previously unknown significant cultural and Tribal cultural resources shall be avoided through preservation in place if feasible. If the on-site archaeologist or Tribal monitor, as appropriate, determines that damaging effects on the cultural or Tribal cultural resource can be avoided in place, then work in the area may resume provided the area of the discovery remains clearly

marked for no disturbance. Title to all archaeological sites, historic or cultural resources, and Tribal cultural resources on or in the tide and submerged lands of California is vested in the State and under CSLC jurisdiction. The final disposition of archaeological, historical, and Tribal cultural resources recovered on State lands under CSLC jurisdiction must be approved by the CSLC.

Monitoring/Reporting Action: Tribal Monitor, PG&E CRS and the designated on-site archaeologist to evaluate the find and report to CSLC

Effectiveness Criteria: ESA established for potentially significant find(s)

Responsible Party: PG&E, contractors, and CSLC

Timing: Phases 1 and 2, during construction activities

Potential Impact: **Unanticipated discovery of human remains**

MM CUL-5/TCR-5: Unanticipated Discovery of Human Remains. If human remains or associated grave goods (e.g., non-human funerary objects, artifacts, animals, ash or other remnants of burning ceremonies) are encountered, all ground disturbing activities shall halt within 100 feet of the discovery or other agreed upon distance based on the project area and nature of the find; the remains will be treated with respect and dignity and in keeping with all applicable laws including California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98. If representatives are not already on site when a discovery is made, the Project archaeologist or their designated on-site cultural resources specialist, Tribal Representative(s), PG&E, and CSLC shall be notified immediately. The archaeologist shall contact the County Coroner within 24 hours. If human remains are determined by the County Coroner to be of Native American origin, the County Coroner shall notify the Native American Heritage Commission within 24 hours of this determination, and the Native American Heritage Commission shall identify a Most Likely Descendent. No work is to proceed in the discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented. Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq. The reburial plan described in the CRMTP identified in MM CUL-2/TCR-2 shall include specific details about temporary custody of remains, reburial location, confidentiality, and recordation in the California Historic Resources Inventory System.

Monitoring/Reporting Action: Notifications/Consultations with County Coroner and NAHC (if applicable), copy to CSLC

Effectiveness Criteria: Reduced impacts to human remains (if found)

Responsible Party: PG&E, contractors, and CSLC

Timing: Phases 1 and 2, during construction activities

1.4.4 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

Applicable mitigation measures for potential impacts to geology, soils, and paleontological resources

MM HYD-1: Stormwater Pollution Prevention Plan

1.4.5 HAZARDS AND HAZARDOUS MATERIALS

Potential Impact: **Water or soil contamination**

MM HAZ-1: Project Work and Safety Plan. A Project Work and Safety Plan (PWSP) shall be submitted to CSLC staff and all other pertinent agencies for review and approval at least 30 days prior to the implementation of the Project that includes both phases. The PWSP shall include the following information (at a minimum):

- Contact information
- Safety Data Sheets (SDS) that contains information on potential hazardous materials and chemicals on site
- Hazardous Spill Response and Contingency Plan
- Emergency Action Plan
- Summary of the Project HDD Execution Plan
- Project Management Plan
- Site Safety Plan, including measures for proper handling of hazardous materials including, but not limited to soils containing residual pesticides
- Permit Condition Compliance Matrix

Monitoring/Reporting Action: Submission of PWSP to CSLC at least 30 days prior to Phase 1 implementation~~CSLC review and approval of PWSP 30 days prior to Phase 1 implementation~~, documentation including emergency agency notification, on-site spill response team to verify, CSLC-approved monitor to ensure compliance

Effectiveness Criteria: Reduced risks of water or soil contamination

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, prior to and throughout Project activities

Potential Impact: **Drilling fluid migration**

MM HAZ-2: Inadvertent Release Contingency Plan. PG&E and/or its selected contractor shall submit an Inadvertent Release Contingency Plan to CSLC for review and approval. The draft Inadvertent Release Contingency Plan (contained in the HDD Execution Plan) shall be finalized at least 30 days prior to construction and implemented during HDD construction. The Final Inadvertent Release Contingency Plan shall contain measures to detect and address any inadvertent drilling fluid migration outside of the HDD drill hole, including measures to limit the potential for drilling fluid release (frac-out) into the Petaluma River.

Monitoring/Reporting Action: Submit Inadvertent Release Contingency Plan to CSLC for review and approval, monitoring during HDD activities

Effectiveness Criteria: Mitigation of drilling fluid migration (if occurs)

Responsible Party: PG&E and HDD drilling contractor

Timing: Phase 1, prior to and during HDD drilling activities

Potential Impact: **Existing pipeline/utility disturbance in riverbed**

MM HAZ-3: Pre- and Post-Project Bathymetric and Surficial Features Multi-Beam Debris Survey. Pre- and post-Project Bathymetric and Surficial Features Multi-Beam Debris Surveys of the riverbed shall be conducted using a vessel equipped with a multi-beam sonar system. The pre-Project survey, used in conjunction with previously collected data, shall serve to fully identify pre-Project bottom contours, debris, and any exposed utilities, and a copy of the survey shall be submitted to CSLC staff for review 30 days prior to Project implementation. A post-Project Bathymetric and Surficial Features Multi-Beam debris survey shall also be performed, and the results compared to the initial baseline survey. Any anomalous objects that were not already found and identified in the pre-Project survey and that remain unidentified during the bathymetric and debris surveys shall be positively identified using methods such as divers or ROV. All Project-related debris shall be recovered. A Project close-out report with drawings shall be submitted to the CSLC within 60 days of work completion.

Monitoring/Reporting Action: Pre-Project and post-Project geophysical debris survey results submitted to CSLC

Effectiveness Criteria: Avoidance of pipelines, utilities, and debris as well as removal of all Project-related debris

Responsible Party: PG&E and contractors

Timing: ~~Phase 2,~~ 30 days prior to Phase 2 construction implementation, and 60 days after Project completion

Potential Impact: **Asbestos exposure**

MM HAZ-4: Asbestos Handling Procedures. PG&E shall inform construction personnel of the potential presence of asbestos-containing material (ACM) at the Project site prior to their assignment. After exposing the existing pipeline for removal, and prior to the start of cutting and tie-in activities, a certified asbestos inspector/consultant shall test whether the coating consists of ACM greater than 1 percent by weight. If testing reveals the coating contains ACM less than 1 percent by weight, the pipeline segment shall be treated as normal construction waste and no additional measures are required. If testing reveals the coating contains ACM equal to or greater than 1 percent by weight, the materials shall be controlled by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of BAAQMD Rule 2, and in accordance with applicable worker safety regulations. All ACM removed from the pipeline segment(s) shall be labeled, transported, and disposed of at a verified and approved ACM disposal facility.

Monitoring/Reporting Action: Inspections and testing (if necessary) for asbestos. Lab report results to CSLC, with abatement plan if required

Effectiveness Criteria: Proper containment of ACM

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, during all pipeline removal and tie-in activities

1.4.6 HYDROLOGY AND WATER QUALITY

Potential Impact: **Runoff and sedimentation**

MM HYD-1: Stormwater Pollution Prevention Plan. PG&E and/or their selected contractor shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) consistent with the Statewide NPDES Construction General Permit (Order No. 2022-0057 DWQ, or current effective order). The SWPPP shall be

provided to CSLC at least 30 days prior to construction ground disturbing activities. At a minimum, the SWPPP shall include measures to:

- Establish standard best management practices, such as the use of silt fencing and straw wattles within the disturbance footprints at each terrestrial excavation location.
- Install and maintain fiber rolls and sediment basins (as applicable) to limit unauthorized discharges of pollutants into surface waters.
- Preserve existing vegetation, and establish effective soil cover to the extent feasible (e.g., through geotextiles, straw mulch, native species hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water.
- Establish good housekeeping measures such as: daily site clean-up/trash removal; covering spoils piles; limiting construction vehicle/equipment storage and maintenance to specified areas; and maintaining hazardous materials handling procedures to prevent the release of wastes and hazardous materials used at the site.
- Limit fugitive dust in a manner that maintains adequate soil moisture while also not generating conditions of puddling or runoff.
- Implement spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill.

Monitoring/Reporting Action: SWPPP submitted to CSLC, observation reports

Effectiveness Criteria: Minimize erosion, siltation, and turbidity

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, during all Project construction activities

Other applicable mitigation measures for potential impacts to hydrology and water quality

MM HAZ-2: Inadvertent Release Contingency Plan, MM BIO-4: Turbidity Monitoring Plan

1.4.7 RECREATION

Potential Impact: **Interaction with Recreational vessels**

MM REC-1: Increased Services to Area Parks and Trails. At least 30 days before the closure of Shollenberger Park, PG&E shall submit a plan for temporarily

increased services at Petaluma-area parks and trails to CSLC, the City of Petaluma Parks and Recreation Department, and the Petaluma Wetlands Alliance~~Sonoma County Regional Parks~~. The plan shall cover the duration of the closure of Shollenberger Park and shall identify PG&E's commitments (financial or otherwise) to ensure that substantial deterioration to trails and other facilities does not occur as a result of displaced visits from Shollenberger Park. The Plan shall also identify the available put-in and take-out locations for river recreation and boating during Phase 2 river closure. The plan (to be finalized with consultation of City of Petaluma and the Petaluma Wetland Alliance ~~County Parks~~) may identify but not be limited to the following elements:

- Financial contribution toward repair or maintenance of the trails at Alman Marsh and/or Ellis Creek Water Recycling Facility
- Increased restroom servicing schedules
- Increased solid waste and recycling service
- Increased provision of pet waste bags and waste receptacles
- Signage to manage increased parking pressure and notify the public of alternate park locations, as well as put-in and take-out locations for river recreation and boating.

Monitoring/Reporting Action: Review closure plan

Effectiveness Criteria: Reduction of potential impact to park users and recreational users

Responsible Party: PG&E and contractors

Timing: Phase 1, at least 30 days prior to closure of Shollenberger Park

Potential Impact: **Interaction with recreational vessels**

MM REC-2: Advance Notice to Mariners. All in-water activity shall be described in a Local Notice to Mariners to be submitted to the U.S. Coast Guard at least 15 days prior to Phase 2 activities. The Notice shall include:

- Type of operation (i.e., dredging, diving operations, construction).
- Location of operation, including latitude and longitude and geographical position, if applicable.
- Duration of operation, including start and completion dates (if these dates change, the U.S. Coast Guard needs to be notified).
- Vessels involved in the operation.
- VHF-FM radio frequencies monitored by vessels on the scene.

- Point of contact and 24-hour phone number.
- Chart Number for the area of operation.

Monitoring/Reporting Action: Publication of notice

Effectiveness Criteria: Reduction of potential impact to recreational vessels

Responsible Party: PG&E and contractors

Timing: Phase 2, at least 15 days prior to vessel departure to Project area

1.4.8 TRANSPORTATION

Potential Impact: **Traffic impacts**

MM T-1: Traffic Control Plan. Before the start of Project construction activities, a traffic control plan shall be submitted to CSLC and the City of Petaluma for review and approval. The plan shall include measures such as appropriate signage, traffic cones, and flaggers to allow for emergency vehicle and property access during Project construction.

Monitoring/Reporting Action: Review Control Plan, documentation within compliance monitoring sheets

Effectiveness Criteria: Minimized risks with associated traffic congestion and vehicle conflicts

Responsible Party: PG&E and contractors

Timing: Phase 2, prior to Project construction activities

Other applicable mitigation measures for potential impacts to transportation

MM REC-2: Advance Notice to Mariners

1.4.9 WILDFIRE

Potential Impact: Wildfire

MM WF-1: Site-Specific Wildfire Safety Plan. 30-days prior to start of Project construction activities, PG&E and/or its contractors shall prepare and submit a site-specific safety plan to CSLC and the City of Petaluma Fire Department for review and approval. The plan shall identify marshlands as potentially high fire risk areas due to the difficulty of fighting fires in such areas. Among other elements, the plan shall include construction fire prevention measures such as using spark arrestors, prohibiting the dragging of chains or materials from trucks,

limiting hot work during high winds, and prohibiting smoking by workers or visitors to the site. The plan shall also identify immediate actions to take in the event of an ignition to prevent the uncontrolled spread of a fire.

Monitoring/Reporting Action: Review Safety Plan; Documentation within compliance monitoring sheets

Effectiveness Criteria: Minimized risks of wildfire

Responsible Party: PG&E and contractors

Timing: Phases 1 and 2, 30 days prior to Project construction activities

Other applicable mitigation measures for potential impacts to wildfire

MM T-1: Traffic Control Plan