

APPENDIX E - MITIGATION MONITORING PROGRAM

Humboldt Bay Harbor, Recreation and Conservation District (HBHRCD) is the lead agency under the California Environmental Quality Act (CEQA) for the PG&E Pipeline Maintenance Project - R-354, R-519, and RT-102 (Project). In conjunction with approval of this Project, the HBHRCD adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) and applicant proposed mitigation measures (AMMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a), and State CEQA Guidelines sections 15074, subdivision (d), and 15097.

E.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/AMMs; this MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs/AMMs.

E.2 ENFORCEMENT AND COMPLIANCE

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

E.3 MONITORING AND REPORTING

Environmental Monitors. To confirm implementation and success of the MMs/AMMs, an environmental monitor will provide on-going or periodic Project oversight of all Project activities with the potential to create significant environmental impacts or impacts for which mitigation is required. 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

The environmental monitor shall immediately report any deviation from the procedures identified in this MMP to HBHRCD staff or its designee. HBHRCD staff or its designee shall approve any deviation and its correction.

Workforce Personnel. Implementation of the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs/AMMs 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 submitted to the Applicant, and once the Project is complete, a compilation of all the logs shall be submitted to HBHRCD staff. HBHRCD 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.

E.4 MITIGATION MONITORING TABLE

To assure that the MMP is effectively implemented, Table E-1 establishes a framework that the HBHRCD will use to implement the adopted MMs/AMMs and the monitoring and reporting of implementation. Table E-1 presents the mitigation monitoring program for Air Quality; Biological Resources; Cultural Resources; Geology, Soils, and Paleontological Resources; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; and Noise. All other environmental factors were found to have less than significant or no impacts; therefore, they are not included in the table. The table lists the following information by column:

- Potential Impact
- Mitigation Measure (full text of the measure)
- Location (where impact occurs and where MM should be applied)
- Monitoring/Reporting Action (action to be taken by monitor or Lead Agency)
- Timing (before, during, or after construction, during operation, etc.)
- Responsible Party (entity responsible to ensure MM compliance)
- Effectiveness Criteria (how the agency can know if the measure is effective)

Table E-1. Mitigation Monitoring Program

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
|-----------------------------------|---|-------------------|-------------------------------|---|-------------------|-------------------------|
| Air Quality | | | | | | |
| Construction Air Emissions | <p>AMM AQ-1: Dust Control Measures. Dust generated by excavation activities will be kept to a minimum with a goal of retaining dust on the Project sites.</p> <ul style="list-style-type: none"> • The area disturbed by clearing, earth moving, or excavation operations will be minimized to prevent excessive amounts of dust. • Pre-grubbing/excavation activities will include watering the area to be grubbed or excavated before the commencement of operations. • Fugitive dust produced during grading, excavation, and construction activities will be controlled by the following activities: <ol style="list-style-type: none"> a. All trucks will be required to cover their loads as required by California Vehicle Code §23114. b. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, will be treated to prevent fugitive dust. Treatment will include, but not be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as | All Project Sites | Onsite monitor to verify | Implementing AMM will reduce emissions from construction equipment and vehicles | Applicant | Throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <p>appropriate. Watering will be done as often as necessary.</p> <ul style="list-style-type: none"> During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations will be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. Adjacent streets and roads will be monitored for track out and swept as needed to prevent offsite migration of fugitive dust. | | | | | |
| Construction Air Emissions | <p>MM AQ-1: ROG and NOX Reduction Measures. The following measures shall be implemented to mitigate ROG and NOx emissions from motor vehicles:</p> <ul style="list-style-type: none"> Minimize vehicle and equipment idling time. Maintain vehicle and equipment engines in good condition and in proper tune as per manufacturers' specifications. Use alternatively fueled vehicles and construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible. | All Project Sites | Onsite monitor to verify | Implementing AMM will reduce emissions form construction equipment and vehicles | Applicant in coordination with NCUAQMD | Throughout construction |
| Biological Resources | | | | | | |
| Special-Status Species | <p>AMM BIO-1: Special-Status Fish Avoidance Work Window. Construction activities in surface water or on the banks of Freshwater Slough, Ryan</p> | All Project Sites | Onsite monitor to verify | Implementing MM will reduce potential for | Applicant | Throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | Slough, and Ryan Creek will be conducted within the agency approved aquatic work windows for minimization of impacts to special-status fish species (July 1 to October 15). In-water work will be prioritized for occurrence in August and September, when water temperature is high, dissolved oxygen is low and aquatic conditions are least favorable for salmonid occurrence at the R-354 and R-519 sites. In-water work for the RT-102 site will be prioritized for occurrence in July before salmonids move upstream. This coincides with the timeframes when the aquatic work area at each pipeline maintenance site is least likely to support special-status fish species. | | | impacts to special-status species | | |
| Special-Status Species and Habitat | AMM BIO-2: Turbidity Monitoring. A Turbidity Monitoring Plan will be implemented during all in-water work to ensure that turbidity levels upstream and downstream of the Project site are compliant with regulatory requirements. The Turbidity Monitoring Plan will be submitted to the District for review and approval prior to the start of construction activities. Increases in turbidity shall not exceed 15 Nephelometric Turbidity Units (NTU) above baseline levels, as measured at an established turbidity monitoring station 300 feet downstream from the work site, during in-water work, unless agency permit conditions provide different thresholds. Additional measures will be implemented to reduce turbidity levels if determined to be necessary based on site conditions at the time of construction and the influence of in-water work on ambient turbidity levels in proximity to the Project site. Following are the additional measures proposed for further reduction of the impact: | All Project Sites | Onsite monitor to verify Preparation of a Turbidity Monitoring Plan | Implementing MM will reduce potential for impacts to special-status species habitat | Applicant | Prior to and throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
|------------------|---|----------|-------------------------------|------------------------|-------------------|--------|
| | <ul style="list-style-type: none"> • To the extent feasible, construction activities that could cause increases in turbidity will be scheduled during low tide events. • Turbidity curtains may be installed around in-water work areas if determined to be necessary based on results of turbidity monitoring. • Turbidity curtains, if determined to be necessary, will be installed at low tide when water levels are at their lowest to avoid entrapment of fish. • A qualified biological monitor will be present to monitor project activities during all in-water work and initial ground disturbance that has the potential to impact special-status species. The biological monitor will implement the Turbidity Monitoring Plan and will determine if the use of a turbidity curtain is needed based on turbidity monitoring conducted during in-water work. If a turbidity curtain is used, the biological monitor will ensure the turbidity curtain is installed during low tide conditions to exclude fish from the in-water work area. If special-status fish species are observed in the work area during installation of the turbidity curtain, the fish will be allowed to leave of their own volition prior to installation of the turbidity curtain. Applicable agencies would be notified if special-status fish species are observed and cannot self-relocate during curtain installation. | | | | | |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| Special-Status Species and Habitat | AMM BIO-3: Environmental Training Program. An environmental training program will be developed and presented by a qualified biologist. All contractors and employees involved with the Project will be required to attend the training program. At a minimum the program will cover special-status species that could occur on the sites, 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. | All Project Sites | Onsite monitor to verify | Implementing MM will educate construction workers regarding special-status species and habitat | Applicant | Prior to and throughout construction |
| Nesting Birds | AMM BIO-4: Nesting Bird Surveys. Vegetation removal and ground-clearing activities will be scheduled prior to the initiation of nesting activity (March) or after fledging (August). If construction activities cannot be scheduled within the timeframe above, pre-construction surveys will be conducted between March 1 and August 15 in potential nesting habitat to identify nest sites. If a nest of a passerine bird species protected by the MBTA is observed during surveys, a 100-foot buffer around the nest will be established. Alternatively, consultation with CDFW should be conducted to determine whether reduced buffer zones are appropriate based on nesting phenology, site conditions, and recommendation(s) of a biological monitor. All construction activities will be prohibited in the established buffer zone until the young have fledged. | R-354 and RT-102 Project Sites | Onsite monitor to verify | Implementing MM will reduce the potential for impacts to nesting bird species and habitats | Applicant | Prior to and throughout construction |
| Special-Status Species | AMM BIO-5: Western Pond Turtle Measures. To reduce the likelihood of impact to WPT, the applicant will implement the measures below: | R-519 and | Onsite monitor to verify | Implementing MM will reduce potential for | Applicant | Prior to and throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <ul style="list-style-type: none"> A qualified biologist will conduct preconstruction surveys for turtles and their nests 48 hours prior to ground disturbance. If nests are located, the nest site plus a 50-foot buffer around the nest site will be fenced or flagged to avoid impacts to the eggs or hatchlings. Construction at the nest site and within the buffer area will be delayed until the young leave the nest (this could be a period of many months) or as otherwise advised and directed by CDFW. Prior to ground disturbance activities, a barrier, such as wildlife exclusion fencing, will be placed around the excavation area to prevent WPT from moving into the work areas. A qualified biological monitor will be present to monitor Project activities during all in-water work activities and initial ground disturbance that has the potential to impact special-status species. If WPT is observed within the work area during construction, the biologist will relocate WPTs the shortest distance possible to a location that contains suitable habitat and would not be affected by Project activities. | RT-102 Project Sites | | impacts to special-status species and habitat | | |
| Special-Status Species | <p>AMM BIO-6: Northern Red Legged Frog Measures. To reduce the likelihood of impact to NRLF, the applicant will implement the measures below:</p> <ul style="list-style-type: none"> Wetted channel segments, areas of riparian scrub, and other Environmentally Sensitive | R-519 and RT-102 Project Sites | Onsite monitor to verify | Implementing MM will reduce potential for impacts to special-status species and habitat | Applicant | Prior to and throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <p>Areas near the Project site, but outside the construction impact area, will be staked and flagged to avoid encroachment by equipment and construction crews. Environmentally Sensitive Areas within the construction impact area that can be avoided by equipment and crews will also be staked and flagged to minimize effects of construction.</p> <ul style="list-style-type: none"> • Prior to ground disturbance activities, a barrier, such as wildlife exclusion fencing, will be placed around the excavation area to prevent NRLF from moving into work areas. • A NRLF survey of the Project site will be conducted 48 hours prior to ground disturbance. If any life stage of the NRLF is found, and these individuals are likely to be killed or injured by work activities, a qualified biologist will relocate NRLF the shortest distance possible to a location that contains suitable habitat and would not be affected by activities associated with the proposed Project. • A qualified biological monitor will be present to monitor Project activities during all in-water work and initial ground disturbance that has the potential to impact special-status species. If NRLF is observed within the work area during construction, the biologist will relocate NRLFs the shortest distance possible to a location that contains | | | | | |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <p>suitable habitat and would not be affected by activities.</p> <ul style="list-style-type: none"> • During Project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas. • All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. Prior to the onset of work, PG&E will ensure that the construction contractor has a plan in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. • The number of access routes, size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact to NRLF habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable. | | | | | |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <ul style="list-style-type: none"> Tightly woven fiber netting or similar material will be used for erosion control or other purposes at the Project site to ensure that the NRLF do not get trapped. Coconut coir matting is an acceptable erosion control material. No plastic mono-filament matting will be used for erosion control. If bullfrogs, non-native fish, or non-native crawfish are observed during construction, they will, to the extent practicable, be humanely dispatched by a qualified biologist. To ensure that diseases are not conveyed between work sites by the biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. | | | | | |
| Raptor Nesting | <p>AMM BIO-7: Raptor Nesting Surveys. Tree removal and ground-clearing activities will be scheduled prior to the initiation of nesting activity (March 1) or after fledging (August 15). If tree removal must be done outside of the window above, a qualified biologist will conduct pre-construction surveys between March 1 and August 15 in potential nesting habitat to identify nest sites. If an active raptor nest is observed during surveys, a 350-foot protective buffer around the nest will be established. Alternatively, consultation with CDFW may be conducted to determine whether reduced buffer zones are appropriate based on nesting phenology, site conditions, and recommendation(s) of a biological monitor. All construction activities will be prohibited in the</p> | R-519 and RT-102 Project Sites | Onsite monitor to verify | Implementing MM will reduce the potential for impacts to nesting raptor species and habitats | Applicant | Prior to and throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | established buffer zone until the young have fledged. | | | | | |
| Special-Status Plant Species | MM BIO-1: Special-Status Plant Restoration / Mitigation. Permanent impact to special-status plants (CRPR List 1 or 2 species) shall be mitigated through replacement on a 1:1 basis within suitable habitat adjacent to the permanent impact area (if approved by landowner) or at an alternate mitigation site near the project site as determined to be suitable by a qualified botanist (e.g., the Dead Mouse Marsh mitigation site located adjacent to the R-354 site or the tidal marsh area on south side of Freshwater Slough). Areas where temporary impacts to special-status plants occur shall be restored to pre-existing conditions upon completion of the Project. A Special-status Plant Restoration / Mitigation Plan shall be prepared that provides for plant salvage and transplantation and/or seed collection and replanting, as appropriate and establish performance criteria and monitoring to ensure a minimum of 1:1 replacement of special-status plant species permanently affected or restoration to pre-project conditions for temporary impacts, as applicable based on specific impacts. If a suitable replacement location for special-status species affected by permanent Project impacts cannot be identified, collected seed could be provided to a seed bank for long-term storage and preservation of genetic diversity for the species. The Special-status Plant Restoration / Mitigation Plan shall be submitted to the District for review and approval at least 60 days prior to the start of construction activities. | R-354 and R-519 Project Sites | Preparation of a Special-status Plant Restoration / Mitigation Plan | Implementing MM will mitigate impacts to special-status plant species | Applicant | Prior to and Post construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| Native Tree | MM BIO-2: Native Tree Replacement. PG&E shall obtain a CDP for the pipeline maintenance projects. Mitigation for removal of native riparian trees shall include replacement of native trees measuring 12-inches dbh or larger at a 3:1 ratio or other ratio as required by conditions of the CDP or other regulatory permits. In addition, a Tree Protection Zone shall be established around trees to be preserved in order to avoid root compaction during construction by limiting heavy equipment in root zones. The Tree Protection Zone shall limit excavation or other ground disturbance to areas outside the dripline and root zone of trees remaining onsite. | R-519 and RT-102 Project Sites | Onsite monitor to verify | Implementing MM will reduce the potential for impacts to native trees | Applicant | Prior to and throughout construction |
| Regulatory Permits | MM BIO-3: Wetland Permitting and Restoration/Mitigation. PG&E shall obtain all necessary regulatory permits for impacts to waters of the U.S. and wetlands, including the ACOE, CCC, NCRWQCB, and CDFW prior to Project implementation. The Project shall comply with all permit conditions. Compensatory mitigation must be consistent with the regulatory agency standards pertaining to mitigation type, location, and ratios. <ul style="list-style-type: none"> • Compensatory mitigation is required for permanent impacts to aquatic resources. The proposed Project involves permanent impacts to 0.06-acre of Federal waters of the U.S. and wetlands (ACOE jurisdiction), 0.06-acre of waters of the State (RWQCB jurisdiction), 0.07-acre of Section 1600 stream features (CDFW jurisdiction), and 0.08-acre of State defined wetlands (CCC jurisdiction). The applicant may satisfy all or | RT-102 Project Site | Obtain all necessary regulatory permits for impacts to waters of the U.S. and wetlands, including the ACOE, CCC, NCRWQCB, and CDFW Preparation of a Mitigation Plan | Implementing MM will ensure compliance with regulatory agencies | Applicant | Prior to construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <p>a portion of the compensatory mitigation through on- or offsite wetland creation, conservation easement, contribution to in-lieu habitat fund, or contribution to a regional wetland project. The Mitigation Plan shall be submitted to the permitting agencies for review and approval prior to the start of construction activities. The current conceptual mitigation plan for this Project involves eradication of invasive dense flowered cord grass and restoration of approximately 17 acres of native tidal salt marsh and approximately 1.5 acres of freshwater marsh at the Park Street Marsh (also known as Dead Mouse Marsh) to compensate for the permanent impacts to Federal and State jurisdictional aquatic resources. The Park Street Marsh is located in the same watershed as all of the pipeline maintenance sites and immediately adjacent to the R-354 Project site. The Conceptual Mitigation Plan shall receive agency approval prior to its use as compensatory mitigation for wetland impacts. The regulatory agencies have reviewed the conceptual mitigation proposal and provided preliminary approval to proceed with the development of the Conceptual Mitigation Plan into a formal mitigation proposal.</p> <ul style="list-style-type: none"> Standard best management practices, such as the use of silt fencing and straw wattle, shall be implemented within the disturbed area on each Project site to minimize | | | | | |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | <p>erosion, increased turbidity, and sedimentation to Ryan Creek, Ryan Slough, and Freshwater Slough during the Project site restoration phase of the Project.</p> <ul style="list-style-type: none"> Construction vehicles and equipment shall be repaired and refueled a minimum of 100 feet from wetlands to the maximum extent feasible. If refueling or repairing equipment or vehicles in close proximity to wetlands is unavoidable, appropriate secondary spill containment shall be used to prevent spills in sensitive habitats. After maintenance activities are complete, the Project site and all disturbed areas shall be seeded or hydroseeded with a native seed mix appropriate for the region. Restoration within grazed pasturelands shall involve seeding or other restoration consistent with landowner right-of-way agreements. | | | | | |
| Special-Status Species and Habitat | MM BIO-4: Channel Diversion Plan. A Project-specific Creek Diversion Plan shall be prepared if diversion of the intermittent tributary stream (Channel 1) is necessary to divert flows around the construction site. The Diversion Plan shall provide methods for diverting surface flow around the construction site. Pumps shall be fitted with screens meeting CDFW criteria to prevent entrainment or impingement of aquatic species. The Creek Diversion Plan shall allow diverted surface flows to outfall into Ryan Creek and the outfall location shall have erosion protections. The Diversion Plan shall be submitted to the District for | RT-102 Project Site | Onsite monitor to verify Preparation of a Diversion Plan | Implementing MM will reduce the potential for impacts to special-status species and habitat | Applicant | Prior to and throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | review and approval prior to the start of construction activities. | | | | | |
| Cultural Resources | | | | | | |
| Disturbance of Archaeological Resources | MM CUL-1: Cultural Resources Monitoring (R-354 Project site only). Project-related ground disturbance within the portions of the R-354 Project site that have a Highest or High potential for buried cultural resources shall be monitored by a qualified Archaeologist and a representative from a California Native American tribe that is culturally-affiliated to the R-354 Project site. Monitoring shall ensure that previously unidentified buried cultural resources are not inadvertently exposed or damaged. | R-354 Project Site | Onsite monitor to verify | Implementing MM will reduce the potential impacts to cultural archaeological resources | Applicant | Throughout construction |
| Disturbance of Archaeological Resources | MM CUL-2: Worker Education Awareness Program. A Worker Education Awareness Program (WEAP) shall be implemented for the Project. Prior to any Project-related ground disturbance, the Applicant shall provide an initial sensitivity training session to all Project employees, contractors, and subcontractors, with subsequent training sessions to accommodate new personnel. The program may be presented with other environmental or safety awareness and education programs, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist. The WEAP shall address specific procedures to be followed in the event of an inadvertent discovery, the types of potential cultural resources, and the consequences in the event of noncompliance. | All Project Sites | Onsite monitor to verify | Implementing MM will educate construction workers regarding archaeological resources | Applicant | Prior to and throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| Disturbance of Archaeological Resources | MM CUL-3: Treatment of Unknown Cultural Resources. Should a cultural resource be inadvertently discovered during ground-disturbing activities, the Tribal Historic Preservation Officers (THPO) appointed by the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe shall be immediately notified and a qualified archaeologist with local experience retained to consult with the HBHRCD, the three THPOs, the Permittee and other applicable regulatory agencies to employ best practices for assessing the significance of the find, developing and implementing a mitigation plan if avoidance is not feasible, and reporting in accordance with HBHRCD's Standard Operating Procedures (SOP) (Appendix D). | All Project Sites | Onsite monitor to verify | Implementing MM will reduce the potential impacts to cultural archaeological resources | Applicant | Throughout construction |
| Disturbance of Human Remains | MM CUL-4: Unanticipated Discovery of Human Remains. Should human remains be inadvertently discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, the HBHRCD and County Coroner contacted, and the HBHRCD's SOP (Appendix D) shall be followed, consistent with state law. | All Project Sites | Onsite monitor to verify | Implementing MM will reduce the potential impacts to cultural archaeological resources | Applicant | Throughout construction |
| Geology, Soils, and Paleontological Resources | | | | | | |
| Erosion Control | AMM GEO-1: Erosion Control Plan. Construction activities will be conducted in accordance with a Project Erosion Control Plan that includes best management practices intended to reduce the potential for erosion or significant runoff of soils from the Project site. These | All Project Sites | Onsite monitor to verify Preparation of an Erosion Control Plan | Implementing MM will reduce the potential of erosion | Applicant | Throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | measures shall be included on a reference sheet with all Project plans. | | | | | |
| Seismic Impacts | MM GEO-1: Preliminary Soils and Geologic Investigation Report. In accordance with the California Building Code, all Project improvements shall be evaluated in a preliminary soils and geologic investigation report. This report shall provide appropriate design features to mitigate the potential for seismic impacts. | All Project Sites | Preparation of Preliminary Soils and Geologic Investigation Report | Implementing MM will reduce potential for seismic impacts | Applicant | Throughout construction |
| Disturbance of Archaeological and Paleontological Resources | MM GEO-2: Protection of Archaeological and Paleontological Resources. In accordance with the Humboldt County General Plan (2017), the following mitigation measure shall be provided on all Project development plans for protection of archaeological and paleontological resources: “The project site is not located within an area where known archaeological or paleontological sites have been identified. However, as there exists the possibility that undiscovered archaeological or paleontological resources may be encountered during construction activities, the following post-review, inadvertent archaeological discovery measures are required under State and Federal laws: If archaeological or paleontological resources are encountered, all ground disturbing work at the find location plus a reasonable buffer zone must be immediately suspended and a qualified professional contacted to analyze the significance of the find and formulate further mitigation (e.g., project relocation, excavation plan, and protective cover) in consultation with culturally affiliated tribes or other descendant groups, where applicable. Pursuant to California Health and Safety Code §7050.5, if human remains are encountered, all | All Project Sites | Onsite monitor to verify | Implementing MM will reduce the potential impacts to archaeological and paleontological resources | Applicant | Throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | ground-disturbing work must cease, and the County Coroner contacted. The applicant and successors in interest are ultimately responsible for ensuring compliance with this condition.” | | | | | |
| Greenhouse Gas Emissions | | | | | | |
| Greenhouse Gas Emissions | Implement MM AQ-1: ROG and NO_x Reduction Measures (see above) | | | | | |
| Hazards and Hazardous Materials | | | | | | |
| Accidental Release of Hazardous Materials | AMM HAZ-1: Oil Spill Response and Contingency Plan. PG&E or its primary contractor will prepare a Project-specific OSRCP that clearly identifies the responsibilities of Project contractors and PG&E personnel. The OSRCP will list and identify the location of oil spill response equipment and response times for deployment. Contracts with off-site spill response companies will be in-place and will provide additional containment and clean-up resources as needed. The OSRCP will be submitted to the Humboldt Bay Harbor Recreation and Conservation District staff at least 60 days prior to commencement. | All Project Sites | Onsite monitor to verify Preparation of an Oil Spill Response and Contingency Plan | Implementing MM will reduce potential of release of oil or contaminants | Applicant | Prior to and throughout construction |
| Asbestos | AMM HAZ-2: Testing for Asbestos Containing Materials. Project materials having the potential to contain asbestos shall be tested prior to handling/disposal to avoid exposure of persons or the environment to ACM. | R-354 and R-519 Project Sites | Onsite monitor to verify | Implementing MM will reduce potential of release of asbestos | Applicant | Prior to start of construction |
| Accidental Release of Hazardous Materials | MM HAZ-1: Use and Storage of Lubricating Oils, Hydraulic Fluids, and Waste Oils. PG&E shall ensure that all Project contractors maintain good housekeeping practices to avoid washing of | All Project Sites | Onsite monitor to verify | Implementing MM will reduce potential of | Applicant | Throughout construction |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
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| | lubricants or other hydrocarbon from the work sites into adjacent water courses. All lubricating oils, hydraulic fluids, waste oils and related materials shall be stored in contained areas. | | | release of oil or contaminants | | |
| Accidental Release of Hazardous Materials | MM HAZ-2: Fueling. To reduce incidental fueling spills, the contractor shall ensure that equipment shall be refueled at designated areas in accordance with best management practices (BMPs) in areas with secondary containment. | All Project Sites | Onsite monitor to verify | Implementing MM will reduce potential of release of fuel | Applicant | Throughout construction |
| Asbestos | MM HAZ-3: Handling and Disposal of Asbestos Containing Materials (If Found). If asbestos containing materials are detected in the pipeline coating materials, handling and removal of these materials shall be performed utilizing a certified asbestos abatement contractor to ensure proper handling and disposal for protection of the environment. | R-354 and R-519 Project Sites | Onsite monitor to verify | Implementing MM will reduce potential of release of asbestos | Applicant | Throughout construction |
| Airport Notification | MM HAZ-4: Murray Field Airport Notification. At least two weeks prior to initiation of Project activities at the R-354 Project site, PG&E will provide notification to the Humboldt County Airports Department regarding Project activities. Notification will be sent to: Humboldt County, 1106 2nd St. Eureka, CA 95501. (707) 839-5401. | All Project Sites | Onsite monitor to verify | Implementing MM will ensure effective coordination and response | Applicant | Prior to start of construction |
| Hydrology and Water Quality | | | | | | |
| Hydrology and Water Quality | Implement AMM GEO-1: Erosion Control Plan (see above) | | | | | |
| | Implement AMM HAZ-1: Oil Spill Response and Contingency Plan (see above) | | | | | |
| | Implement MM HAZ-1: Use and Storage of Lubricating Oils, Hydraulic Fluids, and Waste Oils (see above) | | | | | |
| | Implement MM HAZ-2: Fueling (see above) | | | | | |

| Potential Impact | Mitigation Measure (MM) | Location | Monitoring / Reporting Action | Effectiveness Criteria | Responsible Party | Timing |
|--------------------------------------|--|-------------------|--|---|-------------------|--------------------------------------|
| Dewatering | AMM HYD-1: Dewatering Plan. The Applicant will prepare a Dewatering Plan that describes the proposed treatment methods to be utilized prior to the discharge of groundwater from the proposed excavation at the R-519 Project site so that the discharged water will meet or exceed water quality standards adopted by the NCRWQCB. Discharge of the water will be conducted as to not cause erosion at the discharge point. The Dewatering Plan will be submitted to the District for review and approval prior to the start of construction activities. | All Project Sites | Onsite monitor to verify Preparation of a Dewatering Plan | Implementing MM will reduce potential for erosion and siltation impacts | Applicant | Prior to and throughout construction |
| Noise | | | | | | |
| Short-Term Construction Noise | MM N-1: Scheduling. Work involving heavy equipment at the R-519 site shall be conducted during the hours of 7 a.m. to 10 p.m. to the extent feasible. | All Project Sites | Onsite monitor to verify | Implementing MM will reduce noise impacts during A.M. and P.M. peak periods | Applicant | Throughout construction |
| Short-Term Construction Noise | MM N-2: Advance Notification. Adjacent residents shall be given advanced written notification of proposed construction activities, scheduling, and hours of construction. Signage shall also be posted at the Project sites to notify the general public. | All Project Sites | Onsite monitor to verify | Implementing MM will ensure effective coordination and response | Applicant | Prior to and throughout construction |