

Exhibit 2 to the Statement of Decision  
and Resolution of Approval

Mitigation Monitoring and Reporting  
Program

# **TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDIATION PROJECT**

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## Mitigation Monitoring and Reporting Program

The California Department of Toxic Substances Control (DTSC) has prepared a subsequent environmental impact report (SEIR) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.). The SEIR evaluates the reasonably foreseeable and potentially significant adverse environmental impacts associated with the Pacific Gas and Electric (PG&E) Topock Compressor Station (Station) Final Groundwater Remediation Project (Project). The Project involves consideration and potential approval by DTSC of the Final Groundwater Remedy for the treatment of contaminated groundwater at the Station. (Public Resources Code, Section 21166; CEQA Guidelines, Section 15162.)

This SEIR is tiered off a prior EIR, the Topock Compressor Station Groundwater Remediation Project Final Environmental Impact Report (Groundwater FEIR), which provided a programmatic and, in certain instances, a project-level analysis for the conceptual technical methods selected for the final remedy that would remediate contaminated groundwater in and around the Station. After certifying the Groundwater FEIR in January 2011, DTSC adopted the preferred remedy, identified as Alternative E—In Situ Treatment with Freshwater Flushing, and adopted findings, a statement of overriding considerations, and a Mitigation Monitoring Reporting Program (MMRP, herein referred to as the 2011 MMRP). The proposed Project would implement the chosen 2011 remedy through the Final Groundwater Remedy.

Mitigation measures that were approved by DTSC in the 2011 MMRP were related to the design, construction, operation, and decommissioning phases of the remedy. Through the development of this Final SEIR, many of the 2011 MMRP measures have been revised to reflect current conditions, changes to the Project, or otherwise new information. Some of the 2011 EIR mitigation measures have been fulfilled. Consequently, the mitigation measures presented in this MMRP reflect those revisions that have been made through the CEQA process.

Appendix GWMM to the Final SEIR includes the detailed strikeout/underline changes that have been made to the mitigation measures since 2011. Additionally, implementation of some of the mitigation measures in the 2011 MMRP had been undertaken in the years since its adoption, during the multiyear development of the Final Remedy Design which was completed in November 2015. PG&E has provided quarterly mitigation monitoring compliance reports documenting progress in compliance with the 2011 MMRP through the design process beginning in the first quarter of 2013. All mitigation monitoring compliance reports are on file at DTSC's Cypress Office. The 2011 MMRP measures that have been completed as of December 2017 have been indicated as such in this MMRP. These are primarily related to the preparation of various planning and resource studies that are now part of the Final Remedy Design.

CEQA requires a public agency to adopt a reporting or monitoring program at the time of project approval to ensure that all adopted mitigation measures are properly implemented (Public Resources Code, Section 21081.6; CEQA Guidelines, Section 15097). As a result, DTSC will adopt this updated MMRP for the Final SEIR if it also approves the Project. Accordingly, this MMRP resulting from the Final SEIR for the Final Groundwater Remediation Project supersedes and incorporates where appropriate the relevant measures from the 2011 MMRP. It is intended that this MMRP will serve as the enforcement document for all activities associated with the Final Groundwater Remediation Project to be undertaken by PG&E and its contractors, as overseen by DTSC moving forward.

The MMRP is presented in tabular format (Table 1). The table columns contain the following information:

**Mitigation Number:** Lists the mitigation measures by number, as designated in the Final SEIR, and by environmental resource issue area.

**Mitigation Measure:** Provides the text of the mitigation measures (by environmental resource issue area), as provided in the Final SEIR, each of which has been adopted and incorporated into the Project. Each mitigation measure indicates in its title whether it is a new mitigation measure since the 2011 Groundwater FEIR or a new mitigation measure that has been required by this Final SEIR. Those measures that have been completed since 2011 are indicated as such.

**Timing/Schedule:** Lists the trigger and/or time frame in which the mitigation is expected to take place.

**Implementation Responsibility:** Identifies the entity responsible for implementation of the mitigation measure, subject to DTSC oversight.

**Completion of Implementation:** DTSC is ultimately responsible for ensuring these mitigation measures are implemented. The “Action” column is to be used by DTSC to describe the action(s) taken to complete implementation. The “Date Completed” column is to be used to indicate when implementation of the mitigation measure has been completed. The DTSC, at their discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors. However, DTSC still maintains overall responsibility for implementation of mitigation adopted or incorporated into the Project.

**TABLE 1  
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
AES-1	<p><b>Substantial Adverse Effects on Scenic Vistas (Groundwater FEIR Measure with Revisions).</b></p> <p>The proposed Project, including the Future Activity Allowance, shall be designed and implemented to adhere to the design criteria presented below:</p> <ol style="list-style-type: none"> <li>a. Existing mature plant specimens (i.e., medium- to large-sized trees, large or prominent shrubs, and tall predominately herbaceous) shall be protected in place during construction, operation, and decommissioning phases consistent with CUL-1a-5. The identification of plant specimens that are determined to be mature and retained shall occur as part of the design phase and mapped/identified by a qualified plant ecologist or biologist and integrated into the final design and project implementation consistent with CUL-1a-5.</li> <li>b. Revegetation of disturbed areas within the riparian vegetation along the Colorado River shall occur concurrently with construction operations. Plans and specifications for revegetation shall be developed by a qualified plant ecologist or biologist before any riparian vegetation is disturbed and shall be implemented consistent with CUL-1a-5. The revegetation plan shall include specification of maintenance and monitoring requirements, which shall be implemented for a period of 5 years after project construction or after the vegetation has successfully established, as determined by a qualified plant ecologist or biologist.</li> <li>c. Plant material shall be consistent with surrounding native vegetation.</li> <li>d. The color of the wells, pipelines, reagent storage tanks, control structures, and utilities shall consist of muted, earth-tone colors that are consistent with the surrounding natural color palette. Matte finishes shall be used to prevent reflectivity. Integral color concrete should be used in place of standard gray concrete.</li> <li>e. The final revegetation plans and specifications shall be reviewed and approved by an architect, landscape architect, or allied design professional licensed in the State of California to ensure that the aesthetic mitigation design objectives and criteria are being met. Planting associated with biological mitigation may contribute to, but may not fully satisfy, visual mitigation.</li> <li>f. The requirements of the <i>Aesthetics and Visual Resources Protection and Revegetation Plan</i> (C/RAWP Appendix N) shall be implemented throughout the construction, operation and maintenance, and decommissioning phases of the Project, including but not limited to replacement planting procedures (see Section 4.3), maintenance and adaptive management (see Section 5.2), and photo-monitoring (see Section 5.3). These measures apply to new Project components added as part of the Future Activity Allowance, should</li> </ol>	<p>During project construction and operation and maintenance. Maintenance and monitoring plan will be implemented for 5 years after construction or until vegetation has successfully established, as determined by a qualified plant ecologist or biologist</p>	<p>PG&amp;E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.</p>		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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AES-2	<p>they be visible from Key View 5 or any of the other key views identified in the SEIR.</p> <p><b>Substantial Damage to Scenic Resources Within a Scenic Corridor (Groundwater FEIR Measure with Revisions).</b></p> <p>The proposed Project shall be implemented to adhere to the design criteria presented below and the Future Activity Allowance, if needed, shall be designed and implemented to adhere to the design criteria below and the Future Activity Allowance, if needed, shall be designed and implemented to adhere to the design criteria below:</p> <ol style="list-style-type: none"> <li>a. A minimum setback requirement of 20 feet from the water (ordinary high water mark or OHWM) shall be enforced, except with regard to any required river intake facilities, to prevent substantial vegetation removal along the river bank.</li> <li>b. Existing mature plant specimens (i.e. medium- to large-sized trees, large or prominent shrubs, and tall predominately herbaceous plants) shall be protected in place during construction, operation, and decommissioning phases. The identification of plant specimens that are determined to be mature and retained shall occur as part of the design phase and mapped/identified by a qualified plant ecologist or biologist and integrated into the final design and project implementation consistent with CUL 1a-5.</li> <li>c. Revegetation of disturbed areas within the riparian vegetation along the Colorado River shall occur concurrently with construction operations. Plans and specifications for revegetation shall be developed by a qualified plant ecologist or biologist before any riparian vegetation is disturbed. The revegetation plan shall include specification of maintenance and monitoring requirements, which shall be implemented for a period of 5 years after project construction or after the vegetation has successfully established, as determined by a qualified plant ecologist or biologist.</li> <li>d. Plant material shall be consistent with surrounding native vegetation.</li> <li>e. The color of the wells, pipelines, reagent storage tanks, control structures, and utilities shall consist of muted, earth-tone colors that are consistent with the surrounding natural color palette. Matte finishes shall be used to prevent reflectivity. Integral color concrete should be used in place of standard gray concrete.</li> <li>f. The final revegetation plans and specifications shall be reviewed and approved by an architect, landscape architect, or allied design professional licensed in the State of California to ensure that the aesthetic mitigation design objectives and criteria are being met. Planting associated with biological mitigation may contribute to, but may not fully satisfy, visual mitigation.</li> </ol>	<p>During project construction and operation and maintenance. Maintenance and monitoring plan will be implemented for 5 years after construction or until vegetation has successfully established, as determined by a qualified plant ecologist or biologist</p>	<p>PG&amp;E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.</p>		

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	g. The requirements of the <i>Aesthetics and Visual Resources Protection and Revegetation Plan</i> (C/RAWP Appendix N) shall be implemented throughout the construction, operation and maintenance, and decommissioning phases of the Project, including but not limited to replacement planting procedures (see Section 4.3), maintenance and adaptive management (see Section 5.2), and photo-monitoring (see Section 5.3). These measures apply to new Project components added as part of the Future Activity Allowance, should they be visible from Key View 11 or any of the other key views identified in the SEIR.				
<b>AIR-1</b>	<p><b>Short Term-Construction Related Emissions of Criteria Air Pollutants (Groundwater FEIR Measure).</b></p> <p>PG&amp;E shall implement the fugitive dust control measures below for any construction and/or demolition activities:</p> <ul style="list-style-type: none"> <li>• Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions during dust episodes. Use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient;</li> <li>• Cover loaded haul vehicles while operating on publicly maintained paved surfaces;</li> <li>• Stabilize (using soil binders or establish vegetative cover) graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days, except when such delay is caused by precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions;</li> <li>• Cleanup project-related track out or spills on publicly maintained paved surfaces within twenty-four hours; and</li> <li>• Curtail nonessential earth-moving activity under high wind conditions (greater than 25 miles per hour) or develop a plan to control dust during high wind conditions. For purposes of this rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.</li> </ul>	During all construction, operation and maintenance, and demolition activities	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
<b>AIR-1a</b>	<p><b>Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors (New Measure).</b></p> <p>PG&amp;E's construction contractor shall ensure that all off-road equipment with a horsepower greater than 50 horsepower have USEPA certified Tier 4 interim engines or engines that are certified to meet or exceed the NO<sub>x</sub> emission ratings for USEPA Tier 4 engines. This measure excludes specialty construction</p>	At a minimum during Phase 1 and Phase 2 construction activities and during Decommissioning of IM-3 Facility when the	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

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	equipment where Tier 4 interim engines cannot currently be obtained within the industry, or older equipment cannot be retrofitted to meet Tier 4 emissions standards. During construction and decommissioning, the construction contractor shall maintain a list of all operating equipment in use on the Project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. For specialty equipment where Tier 4 interim engines are not available, documentation supporting this conclusion shall be included in the equipment files. Once Tier 4 equipment is available for a piece of specialty equipment, it shall be incorporated into the construction fleet, replacing the existing non-Tier 4 piece of equipment. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449	decommissioning phase overlaps with Phase 2 construction			
<b>BIO-1</b>	<b>Potential Fill of Wetlands and Other Waters of the United States and Disturbance or Removal of Riparian Habitat (Measure Completed – no longer applicable).</b>	<i>Measure completed during design development</i>	<i>PG&amp;E completed, DTSC ensured compliance</i>	<i>Preparation of CH2M Hill 2013, PG&amp;E 2014a</i>	<i>2013, 2014</i>
<b>BIO-1a</b>	<b>No-net-loss of Jurisdictional Wetlands/Waters Function or Value (New Measure).</b> Unavoidable direct impacts to jurisdictional areas shall be documented by a wetland specialists or Field Contact Representative (FCR) during implementation of the proposed Project. To document unavoidable direct impacts, the extent of work areas near jurisdictional areas shall be delineated in the field using GPS technology and pre- and post-impact conditions of jurisdictional areas documented with photographs. The nature of construction within work areas shall also be described, including the Project facilities installed, equipment utilized, and duration of construction activities. Documentation of unavoidable impacts shall be submitted to CDFW and DTSC to ensure adequate mitigation is provided consistent with the requirements below.  Unavoidable direct impacts to non-disturbed jurisdictional ephemeral waters (estimated at up to approximately 1.61 acres including direct impacts resulting from planned facilities and additional facilities constructed under the Future Activity Allowance) shall be mitigated to ensure no-net-loss of function or value. Mitigation shall include both (a) and (b) detailed below. Mitigation for ground disturbance associated with restoration and enhancement activities shall not be required.  a) In-place restoration of jurisdictional areas directly impacted by construction at a 1:1 ratio (i.e., 1 acre of restoration for each acre of	Implementation of habitat restoration plans shall occur during construction and operation and maintenance. Compensation for unavoidable impacts shall occur prior to unavoidable impacts occurring	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

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	<p>direct impact to non-disturbed jurisdictional area) shall occur in accordance with the <i>Havasu National Wildlife Refuge Habitat Restoration Plan</i> (Appendix G to the C/RAWP (CH2M Hill 2015b)) and <i>Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats</i> (Appendix O to the C/RAWP (CH2M Hill 2015b)). In-place restoration of areas directly impacted during construction will occur in two phases. The first phase will involve restoration within the areas directly impacted by construction where it will not interfere with continued operation and maintenance of the proposed Project (e.g., restoration of temporary construction work areas). The first phase of restoration shall begin within 1 year of completing construction. The second phase will involve restoration of areas that will be occupied by Project facilities to occur following decommissioning of the proposed Project. Restoration of jurisdictional areas following decommissioning of the proposed Project will be guided by a Final Habitat Restoration Plan (refer to Mitigation Measure BIO-1b).</p> <p>b) To address temporal loss of jurisdictional areas directly impacted by construction, PG&amp;E shall provide compensatory mitigation at a minimum 2:1 ratio (2 acres of compensation for each acre of direct impacts to non-disturbed jurisdictional area). Compensatory mitigation to address temporal loss shall be agreed upon with CDFW prior to the start of construction, involve the same amount and quality of jurisdictional area(s) disturbed, and include one or more of the following approaches: 1) acquisition and preservation in perpetuity; 2) restoration; and/or 3) enhancement. Acquisition and preservation may include establishment of a conservation easement or purchase of credits from a CDFW- and/or USACE -approved mitigation banking program, or compliance with an applicable CDFW and/or USACE-approved in-lieu fee program. Restoration may include conversion of non-wetland habitat to functioning wetland habitat. Enhancement may include removal of non-native species in existing wetland habitat. As summarized in the technical memorandum, <i>Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts</i>, included as Appendix V to the C/RAWP (CH2M Hill 2015b), PG&amp;E has identified restoration areas within the historical floodplain of the Colorado River. The historical floodplain no longer functions as a riparian habitat with hydrologic connectivity to the river; therefore, restoration in the historical floodplain may qualify as compensatory mitigation to address temporal loss if hydrologic function can be restored. PG&amp;E shall prepare a mitigation plan prior to the start of construction to specify methodology, criteria for meeting the 2:1 mitigation requirement, and monitoring and reporting for compensatory mitigation. The plan shall be subject to CDFW approval and in conformance with the identified performance standards, and submitted</p>				

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	<p>to DTSC, BLM, BOR, USFWS, DOI, Interested Tribes, and other appropriate landowners for review and comment within 60 days prior to finalization, as appropriate based on location of impacts.</p> <p>Restoration of jurisdictional areas within the Project Area shall be guided by the <i>Havasu National Wildlife Refuge Habitat Restoration Plan</i> (Appendix G to the C/RAWP (CH2M Hill 2015b)) and <i>Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats</i> (Appendix O to the C/RAWP (CH2M Hill 2015b)), as approved by CDFW, USFWS, and DOI. Implementation of these plans will be informed by the technical memorandum, <i>Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts</i>, included as Appendix V to the C/RAWP (CH2M Hill 2015b), which provides preliminary information on the condition within fourteen proposed mitigation planting areas.</p> <p>The habitat restoration plans also specify on-site restoration success criteria, monitoring and reporting requirements, and adaptive management guidelines for salvage and replanting of trees, shrubs, and perennial species. In accordance with the habitat restoration plans, removal of riparian trees (e.g., palo verde trees) shall be replaced at a 3:1 ratio (i.e., planting three trees in restoration areas for each tree removed during construction). The success criteria for mitigation plantings shall be a final minimum plant replacement ratio of 2.25:1 (75% overall survival rate) of mitigation plantings at the end of a minimum 5-year monitoring period. Adaptive management guidelines outline modifications to restoration approaches, as appropriate, to ensure successful establishment of native vegetation and desired density of cover of plants. As required by the plans, the following adaptive management actions shall be implemented if success criteria are not being met: weed control, irrigation modification, herbivory protection, and additional plantings. Reporting to DTSC, CDFW, and USFWS shall be completed within 90 days of completing each monitoring year.</p> <p>The habitat restoration plans also specify design and construction avoidance and minimization measures, including:</p> <ul style="list-style-type: none"> <li>• Locating pipelines, wells, and staging and storage areas along roadways, pipeline rights-of-way, and other previously disturbed areas to avoid impacts to vegetation to the extent feasible.</li> <li>• Performing pre-activity surveys prior to ground disturbance to identify and demark with flagging, fencing, and/or signage areas of native vegetation and sensitive habitats in the immediate vicinity of the construction areas.</li> <li>• Providing construction workers with environmental awareness training regarding biological resources including sensitive species and habitats.</li> </ul>				

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<b>BIO-1b</b>	<p><b>Final Remedy Restoration Plan (New Measure).</b></p> <p>A Final Remedy Restoration Plan shall be developed and implemented following decommissioning of the proposed Project. The Final Remedy Restoration Plan will address restoration of areas that were impacted during construction, operation and maintenance, and decommissioning of the proposed Project, specifying salvage/replanting measures, as well as success criteria, monitoring, and adaptive management requirements for restored areas. Success criteria for restoration areas will be similar to that identified in the existing habitat restoration plans (i.e., 75% overall survival rate of mitigation plantings at the end of a minimum 5-year monitoring period). Adaptive management actions to ensure successful establishment of native vegetation and desired density of cover of plants will include weed control, irrigation modification, herbivory protection, and additional plantings. The plan shall be submitted to DTSC, CDFW, BLM, BOR, USFWS, DOI, and other appropriate landowners for review. The Final Remedy Restoration Plan shall also be provided to Interested Tribes for review and comment, consistent with Mitigation Measure CUL-1a-16.</p>	Following decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
<b>BIO-2a</b>	<p><b>Disturbance of Special-Status Birds and Loss of Habitat (Groundwater FEIR Measure with Revisions).</b></p> <p>The proposed Project has been designed to minimize removal of habitat for special-status birds. Impact avoidance and minimization measures required by the BIAMP shall be implemented (refer to Appendix S of the C/RAWP (CH2M Hill 2015b)). Avoidance and minimization measures required by the BIAMP include prohibiting construction near or in special-status bird habitat; limiting construction during the breeding seasons; requiring an on-site biological monitoring during field activities; implementing buffers around active nests to the extent practical and feasible to limit noise and visual disturbances; and conducting worker awareness training and monitoring to assess the activity effect, ambient activities, site conditions, and bird behavior to determine the efficacy of nest avoidance buffers.</p>	Before and during ground-disturbing construction, operation and maintenance activities, and prior to the start of decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
<b>BIO-2b</b>	<p><b>Disturbance of Desert Tortoise and Loss of Habitat (Groundwater FEIR Measure with Revisions).</b></p> <p>To the extent feasible, project construction (including planned facilities and those potentially constructed as part of the Future Activity Allowance) shall be designed to minimize removal of habitat for the desert tortoise. Before any ground-disturbing project activities begin, a qualified desert tortoise biologist shall identify potential desert tortoise habitat in areas that could be affected. Through coordination with the designated qualified biologist, PG&amp;E shall ensure that the footprints of Project elements and construction zones, staging areas, and access routes are designed to avoid direct or indirect effects on potential desert tortoise habitat to the extent feasible. Through coordination with the designated qualified biologist, PG&amp;E shall ensure that the footprints of Project facilities and construction zones, staging areas, and access routes are designed</p>	Before and during ground-disturbing activities, operation and maintenance activities, and prior to the start of decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

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	<p>to avoid direct or indirect effects on potential desert tortoise habitat to the extent feasible. In areas where impacts to potential desert tortoise habitat are unavoidable, measures outlined in the PBA and in the USFWS letter concurring with the PBA, shall be implemented, as described below.</p> <p>A qualified desert tortoise biologist shall conduct pre-activity desert tortoise clearance surveys immediately prior to activities that would result in unavoidable impacts to tortoise habitat. The pre-activity survey will occur immediately prior to ground-disturbance. If feasible, the preconstruction desert tortoise surveys would coincide with one of the two peak periods of desert tortoise activity (i.e., if feasible, the surveys should be conducted in either the period from April through May, or from September through October). Otherwise, pre-activity clearance surveys shall be in full accordance with the substantive requirements of USFWS protocols. Any desert tortoise burrows and pallets outside of, but near, work areas shall be flagged so that they may be avoided during work activities. At conclusion of work activities, all flagging shall be removed. Should any live tortoises be found during the clearance survey, or if a tortoise moves into the work area, all work shall stop immediately and the animal shall be left to move out of the work area on its own accord. To the extent feasible, tortoises shall not be handled. PG&amp;E will have a USFWS-approved desert tortoise handler available if and when a tortoise requires active relocation. USFWS shall be contacted prior to handling any live tortoises. All encounters of desert live tortoises shall be reported to USFWS, BLM, CDFW, and DTSC. Information to be reported will include for each individual: the location (narrative, vegetation type, and maps) and date of observation; general conditions and health; any apparent injuries and state of healing; and diagnostic markings.</p> <p>PG&amp;E shall designate a field contact representative (FCR) who will be responsible for overseeing compliance with proper execution of the mitigation measures. The FCR will be on-site during implementation of all ground disturbing activities. The FCR shall be trained by the qualified desert tortoise biologist and have authority to halt activities that are in violation of the mitigation measures/or pose a danger to listed species. The FCR will have a copy of the mitigation measures and may be a project manager, PG&amp;E representative, or qualified biologist. All employees and contractors shall be required to attend a worker awareness training prior to working on the proposed Project. The FCR shall maintain record of all employees and contractors who have completed the worker awareness training.</p> <p>USFWS may identify additional conservation measures should Project plans change, or if new information regarding the distribution or abundance of desert tortoise becomes available. PG&amp;E shall implement any additional conservation measures identified by USFWS through the Section 7 consultation process.</p>				

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BIO-2c	<p><b>Disturbance of Special-Status Species and Loss of Habitat Caused by Decommissioning (Groundwater FEIR Measure with Revisions).</b></p> <p>To avoid impacts on special-status species that may occur within the project area as a result of decommissioning activities, an Avoidance and Minimization Plan shall be developed and implemented through consultation with CDFW, BLM, and USFWS. The Avoidance and Minimization Plan will specify species-specific measures, including seasonal restrictions for decommissioning activities (i.e., avoidance of the avian breeding season and maternity roosting season for bats where habitat exists) as needed, as well as avoidance buffers around known locations of special-status species or their habitats. Avoidance and minimization measures identified in the plan shall be based on surveys conducted prior to decommissioning, and during the breeding season (as previously defined in the Groundwater FEIR for each species or suite of species). To the extent appropriate, the Avoidance and Minimization Plan for decommissioning activities will include applicable measures identified in the existing BIAMP and PBA. Restoration of any disturbed areas shall include measures to achieve no net loss of habitat functions and values existing before project implementation. These measures shall be achieved by developing and implementing a Final Remedy Restoration Plan (refer to Mitigation Measure BIO-1b). The plan shall include a revegetation seed mix or plantings design, a site grading concept plan, success criteria for restoration, a monitoring plan for achieving no net loss of habitat values and functions, and an adaptive management plan. Success criteria for restoration areas will be similar to that identified in the existing habitat restoration plans (i.e., 75% overall survival rate of mitigation plantings at the end of a minimum 5-year monitoring period). Adaptive management actions to ensure successful establishment of native vegetation and desired density of cover of plants will include weed control, irrigation modification, herbivory protection, and additional plantings. The Final Remedy Restoration Plan shall be submitted to DTSC, CDFW, BLM, BOR, USFWS, DOI, and other appropriate landowners for review. The Final Remedy Restoration Plan shall also be provided to Interested Tribes for review and comment, consistent with Mitigation Measure CUL-1a-16.</p>	Prior to the start of decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
BIO-2d	<p><b>Disturbance to Ring-Tailed Cat Individuals and Habitat (New Measure).</b></p> <p>The following measures shall be implemented to avoid and minimize impacts to ring-tailed cat:</p> <ol style="list-style-type: none"> <li>i. Pre-activity surveys for ring-tailed cats shall be conducted by a qualified biologist with species-specific experience prior to the start of ground disturbing activities (including during construction, operation and maintenance, and decommissioning phases) where suitable denning habitat is present. No activities that will result in disturbance to dens or individual ring-tailed cats will proceed prior to completion of the surveys. If no active dens are found, no further action is needed. If a ring-tailed cat den is present, additional measures shall be</li> </ol>	Before and during ground-disturbing construction and operation and maintenance activities, and prior to the start of decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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				Action	Date Completed
	<p>implemented as outlined below, and the CDFW shall be notified of any active dens within the proposed disturbance area.</p> <p>ii. If an active ring-tailed cat den is found during pre-activity surveys, Project facilities that may result in direct impacts to the active den shall be reconfigured to avoid the loss of the den if feasible. If Project facilities cannot be modified to avoid a den, activities with the potential to disturb the den shall cease and CDFW shall be contacted immediately. If approved by CDFW, demolition of the den site shall commence only outside of the breeding season (February 1 to August 30) when the den has been confirmed to be vacated. If an occupied non-breeding den is found in an area scheduled to be impacted, prior to disturbance, the CDFW shall be notified to review and approve the proposed procedures to ensure that no take of the species occurs as a result of the action. Areas with unoccupied dens that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow adult ring-tailed cats to escape during the darker hours.</p>				
<b>BIO-2e</b>	<p><b>Disturbance of Nelson's Bighorn Sheep (New Measure).</b></p> <p>If a Nelson's bighorn sheep is observed during ground-disturbing activities (including during construction, operation and maintenance, and decommissioning phases), work within 125 feet of individuals shall be halted (CDFW 2016). Project activities can recommence after the bighorn sheep moves more than 125 feet away on its own. If proximity of Nelson's bighorn sheep to a proposed construction area may result in construction delays, PG&amp;E shall contact CDFW prior to proceeding with ground disturbing activities to determine an appropriate course of action.</p>	During ground-disturbing construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>BIO-2f</b>	<p><b>Disturbance or Loss of Special-status Bat Species (New Measure).</b></p> <p>Bats occupying Roost 9 (refer to Figure 4.3-7) shall be safely excluded after the maternity season (which ends August 31) and before bats go into hibernation or torpor (which begins October 31) through the use of a one-way door. Exclusion of bats shall be performed by a biologist holding a Memorandum of Understanding from CDFW to handle bats in California or a biologist otherwise licensed by the State of California to do so. After bats are safely excluded, fast drying foam shall be used to fill the void to prevent bats from re-entering the cavity.</p> <p>To the extent possible, ground disturbance within proximity of suitable maternity roosting habitat for special-status bat species as shown in Figure 4.3-7 should occur outside the maternity season (March 15 through August 31). If activities critical to meeting the Project objectives are determined necessary during the maternity season, measures (i) through (v) below will be implemented. Measures</p>	Before and during ground-disturbing construction, operation, and maintenance activities, and prior to the start of decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1  
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	(i) through (v) are not required for activities implemented outside the maternity season.				
	<p>i. High- and low-frequency noise disturbance shall be minimized by establishing avoidance buffers around known roost locations. Required buffer distance will vary by roost site and noise source. Table 4.3-5 provides buffer requirements for known roosting sites and noise source. Note, vehicles and heavy equipment may travel under the railroad bridges on National Trails Highway as these vehicles are generally moving quickly and are not expected to create much frequency noise while passing under the bridges.</p> <p>ii. To minimize potential effects to bats during nighttime activities, the Project must reduce or eliminate light levels at night. If artificial lighting at night is needed, floodlights shall be adjusted so that the angle of the beam is less than 70 degrees and directed away from roost sites. All nighttime lights shall be directed downward if possible. If lighting is required for minimum safety and security purposes, light barriers shall be used to reduce the potential for light to reach roosts. For example, if lights are needed to ensure safety of a work area, the light could be positioned so that a hillside blocks the light reaching the roosts sites. Smaller barriers, such as plywood sheeting, can be used, but lighting shall not surround a roost within the given buffer zones. Lights with high blue-white or ultraviolet content shall be avoided. When using nighttime lighting a buffer of 250 feet shall be maintained between every light source near roost sites 2 through 9, and a buffer of 400 feet shall be maintained near roost sites 1 and 10 (Table 4.3-5).</p> <p>iii. To minimize effects of increased human activities, pedestrians shall not approach active roosts during the maternity season, and a 65-foot buffer shall be maintained between roosts and foot traffic.</p> <p>iv. To minimize air quality degradation near roosts, stationary heavy equipment vehicles, large generators, and large idling trucks producing diesel exhaust shall not operate for more than 2 minutes within 250 feet of a bat roost (Table 4.3-5). Vehicles shall not idle their engine while under a bridge.</p> <p>v. A biological monitor shall be on-site during ground disturbing activities within proximity of roosts to ensure avoidance and minimization measures (including avoidance buffers) are properly implemented.</p>				

**Table 4.3-5 Bat Roost Buffer Distances Per Equipment Category<sup>1</sup>**

Roost Site	Buffer Distance (feet) by Equipment Category <sup>2</sup>					
	Construction Trucks and Heavy Equipment	Small Vehicles	Drilling, Trenching, and Light Equipment	Light Source	Pedestrian Traffic and Water Sampling Equipment	Stationary Diesel Sources > 2 minutes
1	120	90	150	400	65	250
2	90	65	150	250	65	250
3	90	65	150	250	65	250
4	90	65	150	250	65	250
5	90	65	150	250	65	250
6	90	65	150	250	65	250
7	90	65	150	250	65	250
8	90	65	150	250	65	250
9	90	65	150	250	65	250
10	90	65	150	250	65	250
Hypothetical Townsend's big-eared bat roost	400	200	200	400	200	250

<sup>1</sup> Roost buffers shall be implemented when ground disturbing activities are scheduled to occur during the maternity season (March 15 through August 31). Roost buffers are not needed for activities occurring outside the maternity season.

<sup>2</sup> Equipment Categories (see Appendix BOD for more detail):

Construction Trucks and Heavy Equipment/Stationary Diesel Exhaust Sources: e.g., dump trucks, 18-wheeled flatbed trucks, front-end loaders, water trucks.

Small Vehicles: e.g., pick-up trucks, UTVs.

Drilling, Trenching, and Light Equipment: e.g., excavators, backhoes, road graders, drill rigs, trenching machines.

Pedestrian Traffic and Water Sampling Equipment: e.g., hand tools, water quality instruments.

Source: H.T. Harvey & Associates 2016

Because roosting bats, including maternity colonies, switch roosts especially on a season-by-season basis, roost locations shall be identified by a qualified biologist specializing in bats at least once each for the spring and summer periods of the maternity season once every 3 years. Additionally, because western red bats could potentially breed in the large tamarisk groves located in Arizona, acoustic surveys for a minimum of three consecutive nights during fair weather (above 50 degrees Fahrenheit, no rain or high winds) during the summer maternity season shall occur once every 3 years. If western red bats are recorded acoustically, an attempt to locate active roost sites shall occur to establish appropriate buffer zones around each roost. If known roost sites do not change locations after three sets of surveys (over the course of 9 years) roosts shall be surveyed for spring and summer periods once every 5 years thereafter. Avoidance and minimization measures described (i) through (v) shall be implemented when activities are planned near newly discovered roosting locations between March 15 and August 31.

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
BIO-2g	<p><b>Disturbance of Northern Mexican Gartersnake (New Measure).</b></p> <p>The following measures, as detailed in the USFWS Concurrence Letter (USFWS 2017), shall be implemented for activities undertaken within 600 feet of potential northern Mexican gartersnake habitat at the southern end of Topock Marsh in Arizona. These measures are additional to the general measures required by Section 3.4 of the PBA (included as Appendix U to the C/RAWP).</p> <ol style="list-style-type: none"> <li>1. Workers shall exercise caution when traveling near potential gartersnake habitat along the southern margin of Topock Marsh. During the most-active season for northern Mexican gartersnakes (February 1st to November 30th), workers will not exceed 10 mph when traveling off-road to maximize the likelihood that gartersnakes would be seen and avoided by drivers. During the inactive season (December 1st to January 31st) workers will not exceed 25 mph when traveling off-road. Construction personnel will abide by the posted speed limit while traveling on the Oatman-Topock Highway.</li> <li>2. Work will stop if a gartersnake is found within the immediate area to be disturbed and the gartersnake will be allowed to leave the site on its own volition.</li> <li>3. A qualified biologist shall perform preconstruction surveys prior to ground disturbing activities with the intention of identifying potential microhabitat sites (artificial or natural cover such as debris, wood, or rock piles, wildcat dump sites, high rodent burrow densities, etc.) favorable to gartersnakes in the disturbance area to focus search effort for potential gartersnakes.</li> <li>4. When possible, ground disturbing activities should be avoided when snakes may be inactive and underground, in order to avoid injury to snakes. Construction will be completed when the northern Mexican gartersnake is active (February 1st through November 30th).</li> <li>5. Material stockpiles located near the southern margin of Topock Marsh shall be limited to designated storage areas that are more than 600 feet from potentially suitable northern Mexican gartersnake habitat or on the opposite side of the Oatman Highway.</li> <li>6. All open holes and trenches shall be inspected for trapped gartersnakes at the beginning, middle, and end of the work day, at a minimum. During excavation of trenches and to the extent possible, earthen ramps or wooden planks shall be provided to facilitate the escape of any wildlife species that may inadvertently become entrapped and to leave the site on its own volition (adapted from General Project Management Measure Number 17 of the PBA [Appendix U to the C/RAWP (CH2M Hill 2015b)]).</li> </ol>	During ground-disturbing construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1  
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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
BIO-2h	<p><b>Disturbance of Special-Status Plants (New Measure).</b></p> <p>To reduce potential construction-related impacts to populations of mousetail suncup and other potentially occurring special-status plant species, at least one pre-construction survey shall be conducted prior to the start of any ground-disturbing activities in areas of suitable habitat. The survey shall be conducted in areas where construction is planned and during the blooming period of those species which are either known to occur or likely to occur in the area (i.e., generally March through May but dependent on rainfall patterns). The survey shall be conducted by a qualified botanist skilled at identification of the plant species in the region. The qualified botanist shall determine where pre-construction surveys are required based on existing habitat conditions. The locations of identified special-status plants shall be flagged and mapped using GPS, and a construction avoidance buffer of at least 50 feet where possible shall be established at identified locations to ensure no direct or indirect impacts occur. If the work cannot be conducted outside of the 50-foot buffer, the qualified botanist will identify construction limits and access routes that avoid impacts to known plants. PG&amp;E shall not proceed with ground-disturbing activities that may adversely impact areas within 50 feet of special-status plants without first conferring with CDFW.</p> <p>To the maximum extent feasible, additional Project facilities to be constructed under the Potential Future Activity Allowance shall be sited to avoid suitable habitat for special-status plant species. If additional Project facilities to be constructed under the Potential Future Activity Allowance cannot be sited to avoid suitable habitat, one of the following measures shall apply.</p> <ul style="list-style-type: none"> <li>Assume suitable habitat is occupied by special-status plant species and provide mitigation (as prescribed in (i) through (iii) below); or</li> <li>Verify absence or avoidance of individuals by performing focused presence/absence surveys within the suitable habitat to be impacted. Verification of presence/absence shall require data from at least 2 years of focused surveys within the previous 5 years. Focused presence/absence surveys shall be performed by a qualified botanist during the blooming period of potentially occurring species (i.e., generally March through May but dependent on rainfall patterns). If special-status plant species are observed and avoidance cannot be achieved, mitigation shall be provided (as prescribed in (i) through (iii) below).</li> </ul> <p>Results of all surveys performed following construction of the Proposed Project shall be incorporated onto a comprehensive map of suitable habitat and known rare plant populations within the Project Area.</p> <p>As noted above, if disturbance within 50 feet of a special-status plant species cannot be avoided, PG&amp;E shall contact CDFW to determine appropriate minimization and mitigation measures. Such measures may include, but may not</p>	Before ground-disturbing construction, operation and maintenance activities, and prior to decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1  
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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>be limited to, the approaches listed below. PG&amp;E shall not proceed with ground disturbing activities that may directly or indirectly impact areas within 50 feet of special-status plants without first conferring with CDFW. The appropriate means to mitigate unavoidable impacts shall be determined based on coordination with CDFW while taking into account the nature and extent of unavoidable impacts and the species' rarity and known distribution within the Project Area. Mitigation may include a combination of the approaches outlined below, or other approaches determined by CDFW to sufficiently mitigate the impact. To the extent possible, mitigation of unavoidable impacts to special-status plants may occur in conjunction with mitigation for temporal loss of jurisdictional wetlands and waters.</p> <p>i. <i>Seed Collection for Restoration:</i> Seed from individuals to be impacted would be collected prior to ground-disturbing activities. The seed would be collected following the protocols set forth by the Center for Plant Conservation and, if long-term storage is necessary, placed in a secure seed bank facility such as the Agricultural Research Service National Center for Genetic Resources Preservation in Fort Collins, Colorado. Collected seed would be applied to restoration areas within the Project Area. Restoration plans developed for the proposed Project would be revised to include success criteria for restoration of the special-status plant species to ensure successful re-establishment of the impacted species. Success criteria for impacted special-status plants would be developed through coordination with CDFW.</p> <p>ii. <i>Enhancement of Known Populations:</i> Known populations of the species to be impacted would be enhanced by undertaking actions to increase the size of the known population. Such actions may include improving the quality of occupied habitat (e.g., invasive species removal) and/or seeding to facilitate population expansion. Enhancement of known populations may occur at off-site populations that are currently conserved or within the occupied portions of the Project Area that can be conserved. An enhancement plan for impacted special-status plants would be developed through coordination with CDFW. The plan shall be approved by CDFW and submitted to DTSC, BLM, BOR, USFWS, DOI, and Interested Tribes for review and comment prior to finalization.</p> <p>iii. <i>Preservation of Occupied Habitat:</i> Habitat occupied by the species to be impacted would be permanently protected by establishing a conservation easement. PG&amp;E would coordinate with CDFW to determine the conditions of the conservation easement, including the required acreage of occupied habitat to be conserved and requirement monitoring and management of the conserved population. The agreed upon conditions would be detailed in a mitigation plan for impacted special-status plants. The plan shall be</p>				

**TABLE 1  
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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	approved by CDFW and submitted to DTSC, BLM, BOR, USFWS, DOI, Interested Tribes, and other appropriate landowners for review and comment prior to finalization.				
<b>CUL-1a-1</b>	<p><b>Avoidance and Preservation in Place (Groundwater FEIR Measure with Revisions).</b></p> <p>During the construction, operation and maintenance, and decommissioning phases of the Project, PG&amp;E shall carry out all Project activities, and shall require all subcontractors to implement established protocols regarding Project activities, in ways that avoid, minimize, and mitigate significant impacts to resources associated with the Topock TCP, consistent with the CEQA Guidelines and with Stipulation I.B of the PA and Section 7.1 of the CHPMP, and to the maximum extent feasible as determined by DTSC, in coordination with PG&amp;E, Interested Tribes, and respective landowners.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-2</b>	<p><b>Develop Tribal Access Plan (Measured Completed – Tribal Access Plan attached as Appendix P of the C/RAWP)</b></p>	<i>Measure completed during design development</i>	<i>PG&amp;E completed, DTSC ensured compliance</i>	<i>Tribal Access Plan (Appendix P of C/RAWP)</i>	<i>November 2015</i>
<b>CUL-1a-2a</b>	<p><b>Implement Tribal Access Plans (New Measure).</b></p> <p>During the construction, operation and maintenance, and decommissioning phases of the Project, on non-federal land, Tribal access shall be permitted in a manner consistent with Section 2.1 “Protocols for Continued Tribal Coordination” of the CIMP (as described below in Mitigation Measure CUL-1a-8q) and “Protocol to Preserve Tribal Member’s Access to, and Use of, the Project Area” as included in Appendix P of the C/RAWP, and on federal land, Tribal access will be governed by the provisions of Appendix B “Tribal Access Plan” of the CHPMP.</p> <p>Procedures required by Appendix P of the C/RAWP include protocols and timelines for requesting access to PG&amp;E property for religious, spiritual, or other cultural purposes and notification procedures (for additional details on requirements of the CIMP see below Mitigation Measure CUL-1a-8q, Section 2.11).</p> <p>Procedures required by Appendix B of the CHPMP include allowing Interested Tribes to access federal lands without specific authorization for the purposes of collecting materials (such as plants and minerals) or for traditional or ceremonial noncommercial uses; protocols for obtaining access permission for other purposes (such as larger or overnight gatherings); privacy measures that prohibit</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
CUL-1a-3	<p>recording Tribal activities; and closure of some areas and roads to public access.</p> <p><b>Site Security (Groundwater FEIR Measures with Revisions).</b>                      During construction, operation and maintenance, and decommissioning of the Project, PG&amp;E shall enhance existing measures to prevent and reduce incursions from recreational and/or other outside users from affecting unique archeological and historically significant resources, including resources within the Topock TCP, by implementing Measures CUL-1a-3a, -3c, -3d, and -3e:</p>	<p>Prior to and during construction, operation and maintenance, and decommissioning activities</p>	<p>PG&amp;E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.</p>		
	<p><b>CUL-1a-3a: Professional Qualifications and Site Condition Assessment (Groundwater FEIR Measure with Revisions).</b>                      PG&amp;E's approved Qualified Cultural Resource Consultant shall carry out all cultural resources work associated with the Project and implement the Mitigation Monitoring and Reporting Program (MMRP). Cultural resources consulting staff shall meet, or be under the direct supervision of individuals meeting, the minimum professional qualifications standards set forth by the Secretary of the Interior (codified in 36 CFR Part 61; 48 FR 44739), as provided in Stipulation XI.A of the PA. In the event that PG&amp;E needs to retain a new Qualified Cultural Resource Consultant, or additional cultural consultants, DTSC shall have approval authority over PG&amp;E's selection of cultural resources consultants.</p> <p>During construction, operation and maintenance, and decommissioning of the Project, the Qualified Cultural Resources Consultant shall conduct yearly site condition assessments of documented historical resources (as identified in Table 4.4-2 of this SEIR, as well as any future resources identified within the Project Area, and any additional resources that the BLM requests be included in the annual site condition assessments), including site condition assessments of the Topock TCP, to determine if substantial adverse changes have occurred relative to the condition of the historical resources during the past year. Site condition assessments may occur less frequently or may be limited in geographic scope upon approval by DTSC and in coordination with PG&amp;E, Interested Tribes, and BLM. PG&amp;E shall offer to retain a Tribal monitor at historic rates of compensation or Tribal representatives designated by the Tribal Council or chairperson, if so requested, to accompany the Qualified Cultural Resources Consultant during the site condition assessments. Annual site condition assessment reports in the established format shall be prepared documenting the results of the site condition assessments. PG&amp;E shall provide reports to DTSC and the Interested Tribes for review and comment in accordance with CIMP Section 2.3 "<i>Protocols for the Review of Cultural Resource-Related Documents</i>" and Section 6.6.5 "<i>Periodic Site Monitoring</i>" of the CHPMP. Based on the results of the report, DTSC may request that PG&amp;E initiate a meeting with agencies and</p>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	Interested Tribes to discuss the findings within 30 days of submittal of the reports.				
	<b>CUL-1a-3b: Develop Site Security Plan (Measure Completed – Site Security Plan attached as Appendix Q of the C/RAWP).</b>	<i>Measure completed during design development</i>	<i>PG&amp;E completed, DTSC ensured compliance</i>	<i>Site Security Plan (Appendix Q of the C/RAWP)</i>	<i>November 2015</i>
	<b>CUL-1a-3c: Coordination with BLM and San Bernardino County (Groundwater FEIR Measure with Revisions).</b> PG&E shall continue to coordinate with BLM and San Bernardino County to facilitate outreach to the staff at Moabi Regional Park, requesting that they communicate to visitors the parts of the Project Area that are off limits to off-road vehicle usage because of health and safety concerns, public lands management plans, or landowner requests. PG&E shall make a good faith effort to involve Interested Tribes in this outreach effort, providing Interested Tribes with the opportunity to comment on outreach materials or provide a Tribal representative the opportunity to participate in the outreach activities. As part of this outreach effort, PG&E shall work with Moabi Regional Park and offer to design, develop, and fund the installation of an informational display (e.g., bulletin board, kiosk) within Moabi Regional Park that informs visitors of the work being done in connection with the Project.  As provided in Appendix P of the C/RAWP, PG&E shall use information gathered during previous meetings with BLM, San Bernardino Regional Parks Department, Moabi Regional Park concessionaires, and Interested Tribes to facilitate the execution of visitor outreach materials. PG&E shall develop draft visitor outreach materials; develop a draft training session for Moabi Regional Park visitor-contact employees; develop display design concepts and draft informational content; and develop a draft plan for executing other outreach ideas identified during meetings. Once initial materials and plans are drafted, PG&E shall consult with the BLM, San Bernardino Regional Parks Department, Moabi Regional Park concessionaires, and Interested Tribes and provide these stakeholders an opportunity to review and comment on any outreach plan prior to its implementation. PG&E shall initiate conversations with key stakeholders (i.e., BLM, San Bernardino County, Moabi Regional Park, and Interested Tribes) within six months of approval of the Final Remedy Design.  In addition to Appendix P of the C/RAWP, PG&E shall complete and implement outreach materials and plans prior to the start of construction. Materials shall be reviewed by PG&E at each phase of the Project and may be updated with input from Interested Tribes and with approval by DTSC, as the Project progresses.				
	<b>CUL-1a-3d: Signage (Groundwater FEIR Measure with Revisions).</b>				

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	<p>PG&amp;E shall post signage to indicate those parts of the Project Area that are off limits to off-road vehicle usage due to possible health and safety concerns and to reduce potential damage to environmental resources. If agreed to by land owners and/or local, state, or federal management entities within the Project Area, PG&amp;E shall work with the relevant land owner or land management entity to develop, design, and fund the installation of easily visible and clear signage. This may include coordination with BLM to install signage noting the designation of the area as an Area of Critical Environmental Concern owing to its biological and cultural resources, while ensuring that signs are placed in a way that does not draw unwanted attention to specific resources.</p> <p>As provided in Appendix P of the C/RAWP, PG&amp;E shall initiate conversations with key stakeholders (i.e., BLM, San Bernardino County, Park Moabi) within six months of the final approval of the Final Remedy Design. In addition to the key stakeholders listed in Appendix P of the C/RAWP, the FMIT shall be included as a land owner in the Project Area.</p> <p>In addition to requirements set forth in Appendix P of the C/RAWP, PG&amp;E shall include Interested Tribes as key stakeholders in the design and installation of signage, and shall install signage prior to the start of construction, if possible, dependent on cooperation and input from land owners and land management entities.</p> <p><b>CUL-1a-3e: Site Security (New Measure).</b></p> <p>Site security procedures shall be implemented in a manner consistent with the Site Security Plan (C/RAWP Appendix Q). The Site Security Plan includes, but is not limited to, protocols for regular inspections of the Project Area during working and non-working hours; ensuring construction zones and protective measures are being maintained; ensuring personnel use designated travel routes and parking areas; notification and reporting of outside disturbances to the environment; worker cultural resources sensitivity training; and visitor access controls.</p>				
<b>CUL-1a-4</b>	<p><b>Technical Review Committee (Groundwater FEIR Measure with Revisions).</b></p> <p>PG&amp;E shall work with representative members of the Interested Tribes to convene and retain a multidisciplinary panel of independent scientific and engineering experts as part of a Technical Review Committee (TRC). TRC may be called upon by the Interested Tribes to review Project-related documents and attend Project-related meetings. TRC efforts must be specific to that person's area of expertise and with the objective of advising interested tribal members on technical matters relating to the remedy design and its construction. The TRC shall be made up of not more than five multidisciplinary experts. The TRC shall include only persons with technical expertise limited to geology, hydrology, water quality, engineering, paleontology, toxicology, chemistry, or biology. TRC members shall be retained at rates comparable to those paid historically to tribal</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	experts by PG&E. TRC members shall be selected by majority vote amongst participants from the Interested Tribes. For the purposes of contracting, this grant may be awarded to one tribal government to manage or, alternatively, PG&E may reimburse the tribe or TRC members directly. The entirety of the monies shall be used to fund the scientific and engineering team exclusively, and shall not be used to fund other tribal government expenses or used to support legal counsel. Activities shall be reported to DTSC for review and to ensure PG&E is in compliance at least annually. Funding for the TRC shall continue until DTSC has determined that the remedy is operating properly and successfully, at which time the necessity of the TRC shall be assessed by DTSC and the provision of the TRC may be extended, reduced, or terminated. During the operation and maintenance and decommissioning phases, the necessity of the TRC shall be periodically evaluated by DTSC. This is the same committee referenced by CR-1e-8 in the Topock Soil Investigation Project EIR and MMRP.				
CUL-1a-5	<p><b>Avoidance of Indigenous Plants of Biological and Cultural Significance (Groundwater FEIR Measure with Revisions).</b></p> <p>During construction, operation and maintenance, and decommissioning of the Project, should any indigenous plants of traditional cultural significance and listed in Appendix PLA of the Groundwater FEIR be identified within the Project Area, PG&amp;E shall avoid, protect, and encourage the natural regeneration of the identified plants. In the event that impacts to the identified plants cannot be avoided and such plants are displaced, provisions included in the <i>Plan for Culturally Significant Plants</i> (Appendix A of the CIMP) shall be implemented. This mitigation measure is not meant to replace or subsume any actions required by state or federal entities with regard to the protection of species listed as rare, threatened, or endangered. Appendix A of the CIMP requires preconstruction surveys of works areas, staging areas, and access routes to identify and demarcate culturally significant plants; protocols for transplanting culturally significant trees and plants; protocols for salvaging topsoil for re-use during site rehabilitation to encourage regrowth of desert annuals; collecting seeds for future planting; protocols for replacement planting by container grown plants/trees; and future monitoring of transplanted trees and shrubs.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-6	<p><b>Noise (Groundwater FEIR Measure with Revisions).</b></p> <p>During construction, operation and maintenance, and decommissioning of the Project, all phone calls and alarms associated with remediation activities or facilities shall not be routed through PG&amp;E's existing alarm system utilized at the Station. The notification system for remediation-related alerts and/or phone calls shall not introduce additional noise to the Project Area, to the maximum extent feasible, provided there is ongoing compliance with applicable safety regulations or standards of the Federal Energy Regulatory Commission, Occupational Safety and Health Administration, and other agencies.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-7	<p><b>Nighttime Lighting (Groundwater FEIR Measure with Revisions).</b></p>	Prior to and during construction,	PG&E would be responsible for the		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	During construction, operation and maintenance, and decommissioning of the Project, nighttime construction-related activities shall be limited to circumstances that require the continuation of work into the nighttime periods because it cannot be disrupted or suspended (including but not limited to conditions during drilling or concrete pouring) or work may require an early morning start to ensure completion within 1 day or because of heat constraints including with regard to personnel health and safety. To minimize lighting impacts, lighting shall include shrouding or shielding for portable lights, the use of the lowest allowable height and fewest feasible numbers of lights consisting of downward-facing fixtures fitted with cutoff shields to reduce light diffusion. No permanent light poles shall be installed. However, lighting would also be required to comply with the minimum county, state, and federal security and safety standards (as described in Appendix P – Cultural Resources Protocols).	operation and maintenance, and decommissioning activities	implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-8 (a through p)</b>	<b>Develop Cultural Impact Mitigation Program (CIMP) (Measure Completed – Cultural Impact Mitigation Program attached as Appendix H of the C/RAWP)</b>	<i>Measure completed during design development</i>	<i>PG&amp;E completed, DTSC ensured compliance</i>	<i>CIMP (Appendix H of C/RAWP)</i>	<i>November 2015</i>
<b>CUL-1a-8q</b>	<b>Implement Cultural Impact Mitigation Program (New Mitigation Measure).</b> All activities related to the Final Remedy Design, as well as implementing the Future Activity Allowance, long-term operation and maintenance, and future decommissioning activities, shall be implemented consistent with provisions of the Cultural Impact Mitigation Program (CIMP). In addition to the parties listed in Section 2.15 of the CIMP as requiring consultation regarding discoveries and review of draft documents, DTSC shall also be included in these processes. PG&E, in consultation with the Interested Tribes, may amend the CIMP if protocols or procedures require modification due to unforeseen circumstances, as deemed necessary by DTSC. The CIMP, which is based upon Groundwater FEIR measures CUL-1a-8 (a through p), is summarized below. The text below is intended to provide a brief summary of the primary impact-reducing components of the CIMP, some of which reference the federal requirements of the PA and CHPMP (the CIMP, PA, and CHPMP may be amended or revised from time to time). Where this summary text differs from the CIMP (or the PA or CHPMP) or subsequent revision, the language of the CIMP (or PA or CHPMP) shall govern. <b>Section 2.1- Protocols for Continued Tribal Communication:</b> This provides methods for facilitating open communication with Interested Tribes; documenting the Interested Tribes' preferences for method of open communication; and reporting Tribal outreach to DTSC. This protocol incorporates reference to Section 6.7 "Protocols for Tribal Notification and Consultation in Advance of Certain Activities" of the CHPMP, which requires the BLM to establish email and mail distribution lists for all Points of Contact (POCs) and distribution of documents in accordance with Appendix B of the PA.	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p><b>Section 2.2 - Protocols for Appropriate Treatment of Archaeological Materials:</b> This describes how PG&amp;E will continue to collaborate with Interested Tribes, respecting their preferences for avoidance and other treatment of archaeological discoveries; pre-construction field verifications; implementing procedures in Section IX of the PA and Section 8.1 and Appendix C of the CHPMP (i.e., cease work measures, notification protocols, inspecting and evaluating significance of discoveries, avoiding discoveries if possible and establishing protective measures, and treatment of discoveries that cannot be avoided). This section also outlines collection and curation protocols and data recovery procedures.</p> <p><b>Section 2.3 - Protocols for the Review of Cultural Resource-Related Documents:</b> This describes the dissemination and review of cultural resource-related documents; outlines types of documents available for review and comment; provides a timeframe for review and comment; and provides an opportunity for Interested Tribes to present their unique perspectives on cultural significance of the area, including natural and cultural resources, Tribal beliefs, religions, customs, and current practices. This protocol incorporates reference to Section XI of the PA.</p> <p><b>Section 2.4 - Protocols for the Review of Project Design Documents:</b> This documents the procedures for dissemination and Tribal review and comment on the completed groundwater remedy design documents prior to the beginning of construction. The Final Remedy Design document was completed and submitted to DTSC on November 18, 2015.</p> <p><b>Section 2.5 - Protocols for Restoring the Environment to Its Preconstruction Conditions Upon Decommissioning:</b> This protocol includes a description of the general approach to restoring areas affected by the Final Remedy Design (e.g., backfill and compaction; grading and contouring; habitat restoration and revegetation; and consideration/accommodating requests for Tribal ceremonies); completion of a restoration plan within 120 days of the Department of the Interior's (DOI's) certification of the completion of the remedy; development of the restoration plan in consultation with land owners and managers; and consultation with Signatories, Interested Tribes, and Invited Signatories to the PA. (Mitigation Measure CUL-1a-17, described below, requires implementation of the restoration plan.)</p> <p><b>Section 2.6 - IM-3 Decommissioning Plan (Appendix B of the CIMP):</b> The IM-3 Decommissioning Plan includes procedures for IM-3 system lay-up; procedures for decommissioning and removing the IM-3 system; waste management procedures; best management practices and mitigation measures compliance; soil confirmation sampling; a general approach for restoring areas originally affected by IM-3 operations; approvals and reporting requirements during the phases of IM-3 system closure; and a proposed work schedule.</p> <p><b>Section 2.7 - Protocols for Repatriation of Clean Soils During Construction:</b> The approach and management to soil displacement was documented in</p>				

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	<p>“Revised Management Protocol for Handling and Disposition of Displaced Site Material” (Appendix B of the Soil Management Plan) and outlines the procedures and measures to minimize the amount of displaced material that leaves the Project Area and to provide for the eventual return, reuse, or restoration of the material onto the lands from which it was displaced. The management protocol was incorporated into the Soil Management Plan (Appendix L of the C/RAWP) – see Mitigation Measure CUL-1a-18 below for additional details on the procedures in the Soil Management Plan.</p> <p><b>Section 2.8 - Noise Protocol:</b> This protocol includes establishing a disturbance coordinator for Project-related noise concerns; implementing engineering controls to minimize construction-related noise (e.g., install temporary noise barriers such as berms, stockpiles, dumpsters, bins, and/or engineered acoustical barriers) within identified noise buffers; selecting noise monitoring locations in coordination with Interested Tribes; maintaining all construction equipment according to manufacturer guidelines and fitting equipment with the best available noise suppression devices; shrouding or shielding impact tools; muffling or shielding exhaust ports on power equipment; limiting idling of construction equipment; procedures for addressing Project-related noise concerns; and communication/notification with Interested Tribes.</p> <p><b>Section 2.9 - Protocols for the Appropriate Methods, Consistent with Mitigation Measures AES-1 and AES-2, to Reduce Visual Intrusions:</b> This protocol includes the measures listed in SEIR Mitigation Measures AES-1 and AES-2, including a minimum setback of 20 feet from the water to prevent substantial vegetation removal along the riverbank; protecting mature plants; revegetation of disturbed areas within the riparian vegetation along the Colorado River; using plant material consistent with surrounding native vegetation; construction wells, pipeline, and utilities in muted, earth-tone colors consistent with the surrounding natural color palette. The protocol also summarizes the design concepts that PG&amp;E incorporated into the Project, including locating final aboveground facilities within existing facilities when appropriate; building designs that are harmonious with existing buildings and nearby landforms; flush-mount or below-ground installations whenever feasible; construction within existing transportation corridors; working within previously disturbed sites whenever possible; placing aboveground facilities away from traffic where feasible; and designing lighting to minimize glare. The protocol also describes the opportunities afforded to agencies, Interested Tribes, and other stakeholders to provide their input on visual aspects of the Project design, such as providing visuals in design packages and allowing reviewing parties to request additional visualizations or key views. The protocol also provides notification procedures to address temporary visual intrusions during Project implementation.</p> <p><b>Section 2.10 - Protocols for Tribal Notification in Advance of Project-Related Activities:</b> Whenever possible, PG&amp;E will notify Interested Tribes at least two weeks in advance of project-related ground-disturbing activities (such</p>				

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	<p>as grading, trenching, boring, drilling, or other excavation) whenever possible. Methods of notification may include, but are not limited to: through workplans and Project schedules; formal presentation or announcements at meetings; posting schedules online; email; telephone when advance notification was not possible; monthly schedules of field activities; weekly look-ahead schedules; and/or daily information sheets during times of intensive Project activity.</p> <p><b>Section 2.11 - Protocols to Accommodate Tribal Ceremonies or Activities Involving Topock Cultural Area:</b> Key Tribal ceremonies involving the Topock Cultural Area [Topock TCP] will be accommodated if feasible as determined by DTSC. Any Tribe(s) wishing to perform such a ceremony may contact PG&amp;E's Site Manager by telephone, email, or in writing to discuss the specific request. For the purposes of this protocol, key Tribal ceremonies will include any ceremonies or activities for which the Tribes choose to notify and/or ask for assistance. PG&amp;E will consider the request and decide if the request can be accommodated as is, with modifications, or not at all, and will notify the requestor by phone or in person as soon as possible. PG&amp;E staff, consultants, contractors or subcontractors will conduct themselves appropriately and, if invited to participate, will be respectful, turn off cell phones, and refrain from photography without permission. PG&amp;E will maintain confidentiality of documents and sensitive information to the maximum extent allowed by the law. The Tribal representative will be responsible for further discussion of ceremonial activities with other identified impacted landowners, if necessary. Access to the Project area by Tribal religious practitioners for the purpose of conducting Tribal ceremonies will be consistent with Federal and state laws, regulations, and agreements governing the property within the Project area. Such access will also be consistent with the Tribal Access Plan prepared in response to 2011 Groundwater FEIR Mitigation Measure CUL-1a-2, "Protocol to Preserve Tribal Member's Access to, and Use of, the Project Area" as included in Appendix P of the C/RAWP, General Principle I.C of the BLM's PA, and Appendix B "Tribal Access Plan" of the CHPMP.</p> <p><b>Section 2.12 - Protocols for Tribal Monitors to Observe Ground-Disturbing Activities:</b> PG&amp;E will notify Interested Tribes of planned ground-disturbing activities and other scientific surveying within a minimum of one week and in the event of schedule changes. Tribal monitors will prepare and submit Daily Monitoring Logs. This protocol references Section 6.6.4 "Construction Monitoring" of the CHPMP, which requires advance notification and inviting Tribal monitors to observe ground-disturbing activities in accordance with Appendix C of the PA.</p> <p><b>Section 2.13 - Provision of Reasonable Compensation for Tribal Monitors:</b> PG&amp;E will provide reasonable compensation for Tribal monitors who work on the Project consistent with historic rates.</p> <p><b>Section 2.14 - Protocols for Protective Measures for Archaeological/Historical Sites During Construction:</b> This protocol provides</p>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>for identifying protective measures cultural sites, to the extent feasible, prior to construction; modifying construction zones to avoid discoveries identified during construction; implementing protective measures (such as covering, flagging, or fencing); if needed, modifying exclusion zones in consultation with the parties in the field; providing for archaeological and Tribal monitoring of implementation and removal of protective measures; periodic inspection of protective measures during construction; inspection, documentation, evaluation, and protection of discoveries; notification to Tribal monitors of discoveries; and restoration of areas to pre-constructions conditions after removal protective measures.</p> <p><b>Section 2.15 - Protocols for Reporting Discoveries of Cultural Importance:</b> This protocol outlines how PG&amp;E will notify DTSC and BLM of discoveries of previously unidentified or suspected historic or archaeological resources (including human remains and/or associated funerary objects or graves), as well as Interested Tribes if the resource is Native American in origin; will cease work within the vicinity of the discovery until the discovery has been evaluated and treatment developed; implement protective measures, if necessary; choose avoidance as the preferred method for the treatment of cultural resources, particularly for human remains, items of cultural patrimony, or funerary objects; and document discoveries in a culturally sensitive manner, and invite Interested Tribes to assist with documentation to identify Tribal cultural values. If further studies are required for any discovery, PG&amp;E will consult with BLM, who will consult with Interested Tribes. Documentation will be provided to BLM and Interested Tribes (for Native American resources) for review and comment and final documents will be distributed to DTSC, BLM, Interested Tribes, and PG&amp;E, and to ASM or CHRIS as appropriate.</p> <p><b>Section 2.16 - Protocols for Inspecting Remediation Facilities and/or Staging Areas During Construction:</b> The locations of remediation facilities and staging area will be examined for cultural resources throughout the construction phase. Interested Tribes will receive notice at least 2 weeks in advance whenever possible. Previously impacted land will be selected wherever feasible for re-use as staging areas and/or the siting of remediation facilities and direct physical impacts to the Topock Maze as it is manifested archaeologically will be completely avoided when siting any staging area or remediation facility. Any resources present will be avoided to the extent feasible. This protocol also provides for archaeological and Tribal monitoring of earth-disturbing activities at remediation facilities and/or staging areas during construction, and states that these monitors will at all times comply with Project-wide and job site-specific safety requirements.</p>				
CUL-1a-9	<p><b>Preference for Previously Disturbed Areas (Groundwater FEIR Measure with Revisions).</b></p> <p>During the design of areas to be used as part of the Future Activity Allowance, PG&amp;E shall, in communication with the Interested Tribes (and subject to their review), and to the maximum extent feasible, as determined by DTSC, give: (1)</p>	Prior to and during construction, operation and maintenance, and	PG&E would be responsible for the implementation of these measures. DTSC would be responsible		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	priority to previously disturbed areas for the placement of new physical improvements; and (2) priority to re-use of existing physical improvements, such as but not limited to wells and pipelines, but not including the IM-3 Facility. "Disturbed" areas in this context means those areas outside of documented archaeological site boundaries that have experienced ground disturbance in the last 50 years.	decommissioning activities	for ensuring compliance.		
<b>CUL-1a-10</b>	<b>Avoidance of Topock Maze (Groundwater FEIR Measure with Revisions).</b> During construction, and operation and maintenance, and decommissioning activities, as well as activities associated with the Future Activity Allowance, PG&E shall consider the location of Loci A, B, and C of the Topock Maze during the design of Project components and is prohibited from creating any direct physical impact on the Topock Maze, as it is manifested archaeologically. The design of facilities as part of the Future Activity Allowance shall also prevent all indirect (e.g. noise, aesthetics) impacts on the Topock Maze, to the maximum extent feasible as determined by DTSC.	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-11</b>	<b>Open Grant Funding (Groundwater FEIR Measure with Revisions).</b> During the construction phase of the Project, PG&E shall provide an open grant for one part-time cultural resource specialist/project manager position for each of these four Interested Tribes: Chemehuevi, Cocopah, CRIT, and Hualapai. Additionally, the FMIT shall receive one full-time cultural resource specialist/project manager position in light of their ownership of land in the Project Area and historical involvement in the remediation process. The award of the grants is for the timely review of Project documents, participating in project-related meetings, coordinating and managing input and interests for the Tribe on the Project, and to act as a Tribal liaison with PG&E and regulatory agencies. The cultural resources specialist/project manager shall be compensated at rates of historic compensation with provisions for escalation of rates tied to the U.S. Department of Labor, Bureau of Labor Statistics Employment Cost Index. The payment of grant monies shall be timed to the awarded tribes' fiscal cycles so that the tribes are not forced to front funds for long periods of time. These positions shall act as cultural resources contacts and project managers for interactions between the tribes, PG&E, and DTSC to ensure coordination during construction of the remedy to avoid, reduce, or otherwise mitigate impacts on resources qualifying as historical resources under CEQA. This funding is separate from provisions for tribal monitor positions and shall not be used for routine tribal business or legal counsel. For review and approval, PG&E shall provide DTSC with the names of the selected grant recipients and a report that summarizes activities associated with the grant program, at least annually. Funding for these positions shall continue until DTSC has determined that the remedy is operating properly and successfully, at which time the necessity of the cultural resource specialist/project manager positions shall be assessed by DTSC and the positions shall be extended, reduced, or terminated. During the	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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<b>CUL-1a-12</b>	<p>operation and maintenance and decommissioning phases, the necessity of the positions shall be periodically evaluated by DTSC. These positions shall be inclusive of those referenced by CR-1e-9 in the Topock Soil Investigation Project EIR and MMRP and not additive.</p> <p><b>Tribal Ceremonies (Groundwater FEIR Measure with Revisions).</b>                      PG&amp;E shall provide reasonable opportunity, as determined by DTSC, for Interested Tribes to conduct a traditional healing/cleansing ceremony (or ceremonies) before and after the construction phase. Accommodations for Tribal ceremonies shall be implemented consistent with Section 2.11 "Protocols to Accommodate Tribal Ceremonies or Activities Involving Topock TCP" of the CIMP (as described above in Mitigation Measure CUL-1a-8q) and Section 7.2 "Accommodation of Tribal Activities and Ceremonies Involving the Topock Maze/TCP" (see below) and Appendix B of the CHPMP (as described above in Mitigation Measure CUL-1a-2a).</p> <p>As described in Section 7.2 of the CHPMP, the BLM will continue to work with the Interested Tribes to identify Tribal activities and ceremonies that are associated with the Topock TCP and to consult with the Interested Tribes and PG&amp;E to develop treatment measures to accommodate them.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-13</b>	<p><b>Develop Worker Education Training Program (Measure Completed – Worker Education Training Program is attached in Appendix P of the C/RAWP).</b></p>	<i>Measure completed during design development</i>	<i>PG&amp;E completed, DTSC ensured compliance</i>	<i>Worker Education Training Program (Appendix P of C/RAWP)</i>	<i>November 2015</i>
<b>CUL-1a-13a</b>	<p><b>Implement Worker Education Training (New Measure).</b>                      During construction, operation and maintenance, and decommissioning of the Project, worker education training procedures shall be implemented consistent with the protocols identified in Appendix P of the C/RAWP. The following provides a summary of the worker education training procedures as identified in Appendix P of the C/RAWP. The worker education program will be implemented prior to commencement of any ground-disturbing activities and as personnel are added. The program includes, but is not limited to: mandatory training for PG&amp;E employees, consultants, contractors, and subcontractors who are involved with construction or ground disturbing activities (including decommissioning and restoration); cultural sensitivity training to familiarize personnel with the sacred nature of the area; providing for participation of Interested Tribes, Tribal monitors, archaeological monitors, and Federal agency staff as appropriate; and non-tolerance of any disrespectful behavior in the field and removal of any staff, workers, or contractors who do not comply. Personnel engaged in field activities will be trained prior to conducting fieldwork and personnel engaged in design work will be trained as soon as practicable after being assigned to the Project.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	Training will be conducted at each Field Project Orientation meeting prior to each substantial Project work phase and at additional opportunities as identified by PG&E in collaboration with the Interested Tribes. Training will include, but is not limited to discussion topics such as: the significance and sensitivity of the Topock TCP; appropriate on-site behavior; protection of significant cultural resources; worker responsibilities (avoidance of sensitive areas, staying on designated routes and work areas, etc.); and consequences of noncompliance. Presentation materials that may be developed will be shared with Interested Tribes for their input. PG&E will maintain training records that will be dated and signed by the trainee and trainer.				
<b>CUL-1a-14</b>	<p><b>Tribal Notification of Potential Future Activities (New Measure).</b></p> <p>For any potential Future Activity Allowance that requires preparation of a work request, work plan, or technical memorandum, PG&amp;E shall submit the subject documentation to DTSC, which will contain a description of the proposed activities, any available information regarding current conditions, and tracking information regarding how much of the Future Activity Allowance would be used by the particular activity, should it be authorized by DTSC. DTSC shall then provide the documentation to Interested Tribes (and other stakeholders) for review and comment. Timeline for review and consideration of Tribal comments shall be made by DTSC on a case-by-case basis, dependent on the known resources present on the subject location and the urgency of the Future Activity Allowance to ensure the proper and successful operation of the Remedy. Following Tribal review of the documentation, next steps could include modifications to the work plan, additional correspondence (i.e., site walk, meetings), or authorization by DTSC of the necessary Future Activity Allowance. If the Future Activity Allowance is ultimately approved by DTSC, all the applicable mitigation measures defined in this SEIR will apply.</p>	Prior to and during construction, operation and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-15</b>	<p><b>Future Activity Allowance Cultural Resources Survey (New Measure).</b></p> <p>During the planning phase of any Future Activity Allowance activities, all areas that may be subject to construction or operation and maintenance activities as part of the Future Activity Allowance, plus a 50-foot buffer, and have not been surveyed in the past 5 years, shall be subject to archaeological resources survey prior to any ground disturbing activity. The survey shall be conducted by the Qualified Cultural Resources Consultant and shall document resources potentially qualifying as historical resources under CEQA (both as contributors to the Topock TCP and as individual historical resources). Tribal monitors shall be invited to participate in the survey. PG&amp;E's Qualified Cultural Resources Consultant shall document the results of the survey in a <i>Future Activity Allowance Cultural Resources Survey Report</i> that follows the "Archaeological Resource Management Reports guidelines and Department of Parks and Recreation" guidelines. PG&amp;E's Qualified Cultural Resources Consultant shall also prepare Department of Parks and Recreation 523 forms and file them with the South Central Coastal Information Center (for resources in California) and</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	<p>Arizona State Museum site cards shall be prepared and filed with the Arizona State Museum (for resources in Arizona). PG&amp;E shall distribute draft reports to DTSC, BLM, and the Interested Tribes for review and comment consistent with Section 2.3 “<i>Protocols for the Review of Cultural Resources-Related Documents</i>” of the CIMP and Section 6.7 “<i>Protocols for Tribal Notification and Consultation in Advance of Certain Activities</i>” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). PG&amp;E shall submit final reports to DTSC, BLM, and the Interested Tribes no less than 2 weeks prior to the start of ground disturbance in an area.</p> <p>In the event that resources potentially qualifying as historical resources under CEQA (either as contributors to the Topock TCP or as individual historical resources) are identified during the survey, avoidance and preservation in place shall be the preferred manner of mitigating impacts to the resources. If avoidance of the identified resources is determined by DTSC, in coordination with respective landowners, Interested Tribes, and PG&amp;E, to be infeasible, procedures provided in Section 2.2 “<i>Protocols for the Appropriate Treatment of Archaeological Materials</i>” of the CIMP, Section 8 “<i>Discoveries</i>” and Appendix C “<i>Discovery Plan</i>” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q), and Appendix D “<i>Plan of Action</i>” of the CHPMP (as described below in Mitigation Measure CUL-4) shall be implemented.</p> <p>If DTSC determines that an expedited action is necessary in order to respond to the changing site condition, pre-construction inspection protocols identified in Section 2.16, “<i>Protocols for Inspecting Remediation Facilities and or Staging Areas During Construction</i>” of the CIMP shall then be followed. This section requires tribal notification in advance of the pre-construction inspection, archaeological and tribal inspection of the area, avoidance of identified resources if possible, or treatment if necessary, and monitoring of any ground disturbance.</p> <p>In instances where Future Activity Allowance activities are proposed in the field due to an immediate need as a result of unforeseen circumstances, PG&amp;E shall conduct the activity in consultation with an archaeological monitor and Tribal Monitor on the ground, and notify DTSC and the appropriate DOI agency of the activity within 24 hours.</p>				
<b>CUL-1a-16</b>	<p><b>Implement Restoration Plan (New Measure).</b></p> <p>Restoration following decommissioning of the Project shall be implemented in a manner consistent with Section 2.5 “<i>Protocols for Restoring the Environment to its Preconstruction Conditions Upon Decommissioning</i>” of the CIMP (as described above in Mitigation Measure CUL-1a-8q) and the Havasu National Wildlife Refuge Restoration Plan (C/RAWP Appendix G; see Mitigation Measure BIO-1a in this SEIR). Additionally, consistent with requirements of Section 6.3 “<i>Environmental Restoration</i>” of the CHPMP, a Remedy Decommissioning Plan will be submitted by PG&amp;E to DOI within 120 days of DOI’s certification of</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	completion of the CERCLA Remedial Action and determination by DOI that removal of such facilities is protective of human health and the environment. The Remedy Restoration Plan shall be provided to DTSC and Interested Tribes for review and comment, consistent with Mitigation Measure BIO-1b.				
<b>CUL-1a-17</b>	<p><b>Displaced Soil Procedures (New Measure).</b></p> <p>Procedures for the management and handling of displaced soils resulting from activities associated with construction, operation and maintenance, and decommissioning of the Project shall be treated in a manner consistent Section 2.7 "Protocols for Repatriation of Clean Soils Cuttings Generated During Construction" of the CIMP (as described above in Mitigation Measure CUL-1a-8q) and the Soil Management Plan (C/RAWP Appendix L). The following provides a summary of the Soil Management Plan procedures as identified in Appendix L of the C/RAWP. Where this summary text differs from the Soil Management Plan or subsequent revision, the language of the Soil Management Plan shall govern. As indicated in the Soil Management Plan, clean soil (material that is determined to have a representative concentration that is equal to or less than the interim screening level or project-specific cleanup goal) will be labeled and stored on-site in 55-gallon drums/small containers, roll-off bins, and/or stockpiles for return, re-use, and/or restoration. Soil classified as RCRA and non-RCRA hazardous waste, and non-hazardous soil that is unsuitable for final disposition on-site because contaminants are present above the interim screening level or Project-specific cleanup goal, will be labeled and stored temporarily on-site and transported off-site for disposal. Options for return, re-use, and/or restoration on-site that have been identified include: replacement of original material into original or other borings, trenches, or excavations; creation of topographical or landscape barriers to protect sensitive areas; creation of berms or other structures to prevent erosion; on-site road maintenance; and stockpiling in designated areas</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-18</b>	<p><b>Aesthetics (New Measure).</b></p> <p>During construction, operation and maintenance, and decommissioning, protocols for the protection of visual resources shall be implemented in a manner consistent with Section 2.9 "Protocols for the Appropriate Methods, Consistent with Measures AES-1 and AES-2 [of the Groundwater FEIR] to Reduce Visual Intrusions" of the CIMP (see also Mitigation Measures AES-1 and AES-2 of this SEIR).</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1a-19</b>	<p><b>Implement Treatment Plan for the Topock TCP (New Measure).</b></p> <p>All activities associated with construction, operation and maintenance, and decommissioning of the Final Remedy Design shall be implemented consistent with provisions of the <i>Cultural and Historical Property Treatment Plan for the Topock Compressor Station</i> (Hanes and Price <i>in progress</i>), which is being prepared pursuant to requirements of the Stipulation VII.B and Appendix B of the</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible		

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	PA and mitigation measure CUL-1b/c-3 of the Groundwater FEIR. The Treatment Plan shall address treatment to the Topock TCP and its contributors, in addition to historical resources other than the Topock TCP (this is the same Treatment Plan referenced in Section 7 “ <i>Cultural Property-Specific Treatment Measures</i> ” of the CHPMP, which can be used to satisfy the requirements of this mitigation measure). PG&E shall distribute the draft Treatment Plan and any future amendments to the Interested Tribes for tribal review consistent with Section 2.3 “ <i>Protocols for the Review of Cultural Resources-Related Documents</i> ” of the CIMP and Section 6.7 “ <i>Protocols for Tribal Notification and Consultation in Advance of Certain Activities</i> ” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). As such, the Treatment Plan is subject to revision prior to finalization. Once consultation is complete, PG&E shall submit the final Treatment Plan to DTSC for final review and approval prior to the start of construction. DTSC has included specific measures outlined in the draft Treatment Plan (March 26, 2018 version) that reduce impacts to historical resources, beyond those already outlined in the PA, CHPMP, CIMP, and Final SEIR MMRP, as conditions of approval on the Project. When the final Treatment Plan is approved, those final measures will replace and/or supplement those identified in DTSC’s conditions of approval for the Project. The Treatment Plan may be amended in the future in the event of new discoveries or greater than anticipated impacts. Treatment Plan amendments shall be required in instances where the current content of the Treatment Plan is insufficient to address necessary treatment measures and shall be determined in coordination amongst PG&E, BLM, DTSC, and Interested Tribes.		for ensuring compliance.		
<b>CUL-1b/c-1</b>	<b>Consider Locations of Historical Resources during Design (Groundwater FEIR Measure with revisions).</b> PG&E shall consider the locations of the identified historical resources during the design of the physical improvements necessary for the proposed Project and avoid, minimize, or mitigate impacts on historical and archaeological resources to the maximum extent feasible, as determined by DTSC. Future design plans for the Project, in relation to known cultural resources, shall be submitted to DTSC for review and approval.	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>CUL-1b/c-2</b>	<b>Prepare a Cultural Resources Study (Measure Completed – several cultural resources studies were completed, including “Geoarchaeological Assessment for the Topock Remediation Project” [Appendix T of the C/RAWP] and “Results of Pre-Construction Field Verification Inspections for the Topock Compressor Station Groundwater Remedy” [Moloney and Price 2014, confidential report on file at DTSC]).</b>	<i>Measure completed during design development</i>	<i>PG&amp;E completed, DTSC ensured compliance</i>	<i>Geoarchaeological Assessment (Appendix T of C/RAWP); Moloney and Price, 2014)</i>	<i>2014; November 2015</i>

**TABLE 1  
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
CUL-1b/c-3	<p><b>Prepare and Implement a Treatment Plan for Historical Resources other than the Topock TCP (Groundwater FEIR Measure with Revisions).</b></p> <p>All activities associated with construction, operation and maintenance, and decommissioning of the Final Groundwater Remedy Project shall be implemented consistent with provisions of the <i>Cultural and Historical Property Treatment Plan for the Topock Compressor Station</i> (Hanes and Price <i>in progress</i>), which is being prepared pursuant to requirements of the Stipulation VII.B and Appendix B of the PA and mitigation measure CUL-1b/c-3 of the Groundwater FEIR. The Treatment Plan shall identify measures to lessen impacts to historical resources other than the Topock TCP that cannot be avoided by the Project and that will be subject to significant impacts (this is the same Treatment Plan - <i>Cultural and Historical Property Treatment Plan for the Topock Compressor Station</i> [Hanes and Price <i>in progress</i>] - described above in Mitigation Measure CUL-1a-19 and is currently being prepared). The Treatment Plan shall identify which criteria for listing on the NRHP/CRHR contribute to the affected resource's significance and which aspects of significance would be materially altered by construction, operation and maintenance, or decommissioning and shall provide for reasonable efforts to be made to permit the resource to be preserved in place or left in an undisturbed state consistent with the CEQA Guidelines and with Stipulation I.B of the PA and Section 7 of the CHPMP, and to the maximum extent feasible as determined by DTSC, in coordination with PG&amp;E, Interested Tribes, and respective landowners. PG&amp;E shall distribute the draft Treatment Plan and any future amendments to the Interested Tribes for tribal review consistent with Section 2.3 "<i>Protocols for the Review of Cultural Resources-Related Documents</i>" of the CIMP and Section 6.7 "<i>Protocols for Tribal Notification and Consultation in Advance of Certain Activities</i>" of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). As such, the Treatment Plan <u>is subject to revision prior to finalization</u>. Once consultation is complete, PG&amp;E shall submit the final Treatment Plan to DTSC for final review and approval prior to the start of construction. DTSC has included specific measures outlined in the draft Treatment Plan (March 26, 2018 version) that reduce impacts to historical resources, beyond those already outlined in the PA, CHPMP, CIMP, and Final SEIR MMRP, as conditions of approval on the Project). When the final Treatment Plan is approved, those final measures will replace and/or supplement those identified in DTSC's conditions of approval for the Project. The Treatment Plan may be amended in the future in the event of new discoveries or greater than anticipated impacts. Treatment Plan amendments shall be required in instances where the current content of the Treatment Plan is insufficient to address necessary treatment measures and shall be determined in coordination amongst PG&amp;E, BLM, DTSC, and Interested Tribes.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-4	<p><b>Cultural Resources Monitoring Program and Inadvertent Discovery Measures (Groundwater FEIR Measure with Revisions).</b></p>	Prior to and during construction,	PG&E would be responsible for the		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p><b>CUL-1b/c-4a: Cultural Resources Monitoring Program.</b>                      All ground-disturbing activities associated with construction, operation and maintenance, and decommissioning phases of the Project, including the Potential Future Activities, shall require archaeological monitoring and PG&amp;E shall invite Tribal monitors to participate. The Cultural Resources Monitoring Program shall be implemented in a manner consistent with Sections 2.10 “<i>Protocols for Tribal Notification in Advance of Project-Related Activities</i>” and 2.12 “<i>Protocols for Tribal Monitors to Observe Ground Disturbing Activities</i>” of the CIMP, Appendix C “<i>Topock Remediation Project Programmatic Agreement Tribal and Archaeological Monitoring Protocol</i>” of the PA, and Section 6.6.4, “<i>Construction Monitoring</i>,” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). In addition to the parties that require notification and coordination as listed in Appendix C of the PA, PG&amp;E shall also notify DTSC.</p> <p>During construction, PG&amp;E shall document monitoring activities in the monthly progress reports or quarterly compliance reports, meeting at a minimum those requirements described in Section 2.6.3.3 “<i>Additional Reporting During Remedy Construction</i>” and Table 2.3-1 “<i>Communication Framework During Construction and Startup</i>” of the C/RAWP, and incorporate any additional communication requirements directed by DTSC and DOI. During operation and maintenance, PG&amp;E shall document monitoring activities in the quarterly progress reports or annual compliance reports described in Section L2.2 “<i>Summary of Communication Procedures and Protocols</i>” and Table L2.2-1 “<i>Communication Framework During Operation and Maintenance</i>.” During decommissioning, PG&amp;E shall document monitoring activities in monthly progress reports or quarterly monitoring compliance reports consistent with those described in Section 2.6.3.3 “<i>Additional Reporting During Remedy Construction</i>” and Table 2.3-1 “<i>Communication Framework During Construction and Startup</i>” of the C/RAWP. Documentation of monitoring shall generally include dates of monitoring, monitoring participants, activities observed, and descriptions of any archaeological resources encountered (resource location information shall be kept separate and confidential). Department of Parks and Recreation 523 forms, following the Office of Historic Preservation’s <i>Instructions for Recording Historical Resources</i>, shall be prepared by the Qualified Cultural Resources Consultant and filed with the South Central Coastal Information Center (for archaeological resources in California) and Arizona State Museum site cards shall be prepared by the Qualified Cultural Resources Consultant and filed with the Arizona State Museum (for archaeological resources in Arizona) for all newly identified and updated archaeological resources, and shall be compiled and provided to DTSC as they become available. Interested Tribes shall be afforded an opportunity to provide input on archaeological discoveries site forms and updates in accordance with measures outlined in the Treatment Plan (Mitigation Measure CUL-1a-19) and BLM policies and practices pertaining to information sharing.</p>	operation and maintenance, and decommissioning activities	implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p><b>CUL-1b/c-4b: Inadvertent Discoveries.</b></p> <p>During construction, operation and maintenance, and decommissioning phases of the Project, procedures for the treatment of inadvertent discoveries of resources potentially qualifying as historical resources under CEQA shall be implemented in a manner consistent with Section 2.2 “<i>Protocols for the Appropriate Treatment of Archaeological Materials</i>” of the CIMP, and Section 8 “<i>Discoveries</i>” and Appendix C “<i>Discovery Plan</i>” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q), and Appendix D “<i>Plan of Action</i>” of the CHPMP (as described below in Mitigation Measure CUL-4). In addition to the parties listed in Section 2.15 of the CIMP as requiring consultation regarding discoveries and review of draft documents, DTSC shall also be included in these processes.</p>				
CUL-1b/c-5	<p><b>Avoidance and Preservation in Place (New Measure).</b></p> <p>During the construction, operation and maintenance, and decommissioning phases of the Project, PG&amp;E shall carry out all Project activities, and shall require all subcontractors to implement established protocols regarding Project Activities, in ways that avoid, minimize, and mitigate significant impacts to historical resources other than the Topock TCP and unique archaeological resources consistent with the CEQA Guidelines and with Stipulation I.B of the PA and Section 7.3 of the CHPMP, and to the maximum extent feasible as determined by DTSC, in coordination with PG&amp;E, Interested Tribes, and respective landowners.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-6	<p><b>Implementation of Additional Protective Measures (New Measure).</b></p> <p>Mitigation Measures CUL-1a-3 (Site Security); CUL-1a-3a (Professional Qualifications and Annual Site Condition Assessment); CUL-1a-3c (Coordination with BLM and San Bernardino County); CUL-1a-3d (Signage) CUL-1a-3e (Site Security); CUL-1a-8q (Implement Cultural Impact Mitigation Program); CUL-1a-9 (Preference for Previously Disturbed Areas); CUL-1a-13a (Implement Worker Education Training Program); and CUL-1a-15 (Future Activity Allowance Cultural Resources Survey) shall be implemented to further reduce impacts to historical resources other than the Topock TCP and/or unique archaeological resources prior to and during construction, operation and maintenance, and decommissioning, as prescribed in each measure which are described in detail above.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-7	<p><b>Compliance with SOI Standards (New Measure).</b></p> <p>Prior to the start of decommissioning activities, PG&amp;E shall retain a qualified architectural historian who meets the Secretary of the Interior’s professional qualification standards for architectural history. The qualified architectural historian shall review the decommissioning plan to ensure that removal of the pipeline from the Old Trails Arch Bridge (36-027678), if proposed, would not materially impair the bridge. The architectural historian shall prepare a technical</p>	Prior to the start of decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
CUL-3	<p>memorandum documenting the results of the review, and provide any recommendations to reduce impacts to less than significant, if necessary, prior to start of decommissioning activities.</p> <p><b>Implement the Paleontological Resources Management Plan (PRMP) and Paleontological Monitoring (Groundwater FEIR Measure with Revisions).</b>                      PG&amp;E shall comply with all requirements of the <i>Paleontological Resources Management Plan</i> (Arcadis 2015) related to paleontological resources prior to and during construction, operation and maintenance, and decommissioning. The following is a summary of the procedures in the PRMP, which includes: retention of a Principal Paleontologist to oversee paleontological monitoring and to be on-call in the event of discovery; paleontological resources awareness training; future survey of any areas ranked PYFC 3a or above if additional work is planned and they were not previously surveyed; paleontological monitoring of grading and trenching in known sensitive areas and also in the event that sensitive sediments are encountered elsewhere (monitoring of borings, regardless of depth or diameter, is not required); cease work measures and notification protocols in the event of a discovery; recovery of discovered fossils; documentation, preparation, identification, and analysis of recovered fossils; reporting; and curation of paleontological resources of scientific value at an accredited repository. Treatment and disposition of recovered fossils shall be conducted in coordination with the respective landowner.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities			
CUL-4	<p><b>Mitigation Measure CUL-4: Discovery of Human Remains (Groundwater FEIR Measure with Revisions).</b>                      In the event of the discovery of human remains, PG&amp;E shall implement the requirements of Section 2.2 “<i>Protocols for Appropriate Treatment of Archaeological Materials</i>” and Section 2.15 “<i>Protocols for Reporting Discoveries of Cultural Importance</i>” the CIMP (as described above in Mitigation Measure CUL-1a-8q) and Section 8.2 “<i>Treatment of Any Human Remains, Funerary Objects, Ceremonial Objects, and Items of Cultural Patrimony</i>” and Appendix D “<i>Plan of Action</i>” of the CHPMP (see below). Consistent with Section D.4 of the CHPMP, the determination of whether remains are human or non-human will be made by qualified personnel, such as a physical or forensic anthropologist. In accordance with the CHPMP Appendix D (D.3.3), the BLM is responsible for notifying the appropriate Interested Tribes regardless of land ownership. Discoveries on federal land shall follow the procedures outlined in sections D.3.3.1 and D.3.9.1 of Appendix D of the CHPMP. Discoveries on non-federal land in Arizona shall follow the procedures outlined in Sections D.3.3.2 and D.3.9.2 of Appendix D CHPMP. Discoveries on non-federal land in California shall follow the procedures outlined in Sections D.3.3.3 and D.3.9.3 of Appendix D of the CHPMP. The following provides a summary of the plans, procedures, and requirements that govern actions to be taken in the event of the discovery of human remains.                      CHPMP Section 8.2:</p>	Prior to and during construction, operation and maintenance, and decommissioning activities			

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	<ul style="list-style-type: none"> <li>Section VII.H of the PA stipulates that the CHPMP will include a Plan of Action to be implemented if human remains are discovered within the APE, and that the Plan of Action will address the roles of the PA Signatories, Tribes, and Invited Signatories;</li> <li>The PA stipulates further that the BLM will be the lead Federal Agency responsible for seeing that the terms of the Plan of Action are executed, and that human remains and funerary objects must be treated in a culturally appropriate and respectful manner.</li> </ul> <p>CHPMP Appendix D – Section D.3.3:  This section requires that, in the event that human remains are discovered within the Project Area and without respect to land ownership, PG&amp;E will cease work and establish a protective buffer; ensure that the remains are not disturbed further and are treated with appropriate respect and cultural sensitivity; notify BLM within 24 hours; and cooperate with parties responsible for responsible for carrying out the treatment measures described in CHPMP Subsections D.3.3.1-D.3.3.3 (see below).</p> <p>CHPMP Appendix D – Sections D.3.3.1 and D.3.9.1 (discoveries on Federal land): Additional requirements of this section include:</p> <ul style="list-style-type: none"> <li>Complying with the Native American Graves Protection and Repatriation Act (NAGPRA) and its Federal implementing regulations outlined in 43 Code of Federal Regulations (CFR) Part 10, which requires establishing a chain of command for the remains, identifying and notifying lineal descendants, and consultation with the appropriate Tribe(s) to identify and implement appropriate treatment.</li> <li>Following California Health and Safety Code 7050.5 et seq., which includes notifying the San Bernardino County coroner for discoveries in California and contacting the California Native American Heritage Commission (NAHC).</li> <li>Following Public Resources Code 5097.98, which includes designation of a Most Likely Descendant by the NAHC and consultation with the MLD.</li> </ul> <p>CHPMP Appendix D - Sections D.3.3.2 and D.3.9.2 (discoveries on non-Federal land in Arizona): Additional requirements of this section include:</p> <ul style="list-style-type: none"> <li>Contacting the Director of the Arizona State Museum (ASM) for discoveries in Arizona on "lands, other than lands owned or controlled by this state, any agency or institution of this state or any county or municipal corporations within this state."</li> <li>Complying with ARS 41-865, which includes consultation with the ASM, identifying the group with cultural affinity for the remains and/or objects, and consultation with the governing body of the group with cultural affinity to determine appropriate treatment and disposition of the remains and/or objects.</li> </ul> <p>CHPMP Appendix D - Sections D.3.3.3 and D.3.9.3 (discoveries on non-Federal land in California): Additional requirements of this section include:</p>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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GEO-1a	<ul style="list-style-type: none"> <li>• Complying with California Health and Safety Code 7050.5 et seq., which requires notifying the San Bernardino County coroner for discoveries in California and contacting the NAHC.</li> <li>• Complying with Public Resources Code 5097.98, which includes designation of a MLD by the NAHC and consultation between the landowner and MLD to identify and implement appropriate treatment.</li> </ul>				
	<b>Construction, Operation and Maintenance, and Decommissioning Impacts Related to Erosion of Soils (Groundwater FEIR Measure).</b>				
	a) A DTSC-approved grading and erosion control plan, prepared by a California Registered Civil Engineer, shall be completed prior to implementation of any grading in areas of the site where there is a potential for substantial erosion or loss of top soils. The plan shall outline specific procedures for controlling erosion or loss of topsoil during construction, operation and maintenance, and decommissioning.	Prior to and during construction, operation and maintenance, and decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
	b) To ensure soils do not directly or indirectly discharge sediments into surface waters as a result of construction, operation and maintenance, or decommission activities, PG&E developed a SWPPP as discussed in mitigation measure HYDRO-1. The SWPPP identifies best management practices (BMPs) that would be used to protect stormwater runoff and minimize erosion during construction. PG&E shall prepare plans to control erosion and sediment, prepare preliminary and final grading plans, and shall prepare plans to control urban runoff from the project site during construction, consistent with the substantive requirements of the San Bernardino County Building and Land Use Services Department for erosion control.				
	c) During road preparation activities, loose sediment shall be uniformly compacted consistent with the substantive San Bernardino County Building and Land Use Services Department requirements to aid in reducing wind erosion. Ongoing road maintenance including visual inspection to identify areas of erosion and performing localized road repair and regrading, installation and maintenance of erosion control features such as berms, silt fences, or straw wattles, and grading for road smoothness shall be performed as needed to reduce potential for erosion.				
d) Regarding the potential for contaminated soils to be eroded and contribute contamination into receiving waters, Mitigation Measures GEO-1a and HAZ-2 shall be implemented. Mitigation Measure GEO-2 provides the provisions for mitigating erosion through BMPs which shall be implemented. Mitigation Measure					

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
GEO-1b	HAZ-2 provides the provisions for safe work practices and handling of contaminated soils as investigation derived wastes.				
	<b>Construction, Operation and Maintenance, and Decommissioning Impacts Related to Differential Compaction of Soils (Groundwater FEIR Measure).</b>	Prior to and during construction, operation and maintenance, and decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
	a) BMPs shall be implemented during construction, operation and maintenance, and decommissioning activities to minimize impacts on the affected areas. Such BMPs could include, but would not be limited to, the following: uniform compaction of roadways created for accessing the project area as per San Bernardino County Building and Land Use Services Department requirements, returning areas adversely affected by differential compaction to preexisting conditions when these areas are no longer needed, and continuing maintenance of access roads, wellhead areas, and the treatment facility areas.				
b) Work area footprints shall be minimized to the greatest extent feasible to limit the areas exposed to differential compaction. Where possible, existing unpaved access roads and staging/working areas shall be reused and maintained for different stages of the construction. New graded areas for staging or for access roads shall be compacted to a uniform specification, typically on the order of 90 to 95% compaction and consistent with substantive San Bernardino County Building and Land Use Services Department requirements to reduce differential compaction and subsequent erosion of site soils.					
	c) After the completion of the operation and maintenance phase, the disturbed areas which result in increased potential for compaction shall be returned to their respective preexisting condition by regrading consistent with the preconstruction slopes as documented through surveys that may include topographic surveys or photo surveys. The areas will be returned to the surrounding natural surface topography and compacted consistent with unaltered areas near the access roads or staging areas in question. The habitat restoration plan prepared in compliance with Mitigation Measure BIO-1 includes restoration of native vegetation or other erosion control measures where revegetation would be infeasible or inadequate, for purposes of soil stabilization and erosion control of the project area.				
HAZ-1a	<b>Spills or Releases of Contaminants during Operation and Maintenance Activities (Groundwater FEIR Measure with Revisions).</b>	Begin at the start of construction and continue for life of project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible		
	a) PG&E shall store, handle, and transport hazardous materials in compliance with applicable local, state, and federal laws.				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>b) All chemical storage and loading areas shall be equipped with proper containment and spill response equipment. BMPs to be implemented may include, but are not limited to, use of secondary containment in mixing and storage areas; availability of spill kits and spill containment booms, and appropriate storage containers for containment of the materials generated during the spill response. The Final Remedy Design provides engineering drawings of chemical storage and loading areas in Appendix D, specifications in Appendix E, and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), which shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p> <p>c) A project-specific Hazardous Materials Business Plan (HMBP), chemical standard operating procedure (SOP) protocols and contingency plans shall be developed to ensure that proper response procedures would be implemented in the event of spills or releases. Specifically, the HMBPs and SOPs shall describe the procedures for properly storing and handling fuel on-site, the required equipment and procedures for spill containment, required personal protective equipment, and the measures to be used to reduce the likelihood of releases or spills during fueling or vehicle maintenance activities. BMPs to be implemented may include, but are not limited to, use of secondary containment in mixing and storage areas; availability of spill kits and spill containment booms, and appropriate storage containers for containment of the materials generated during the spill response. The field manager in charge of operations and maintenance activities shall be responsible for ensuring that these procedures are followed at all times. SOPs are provided in Appendix B to the C/RAWP (CH2M Hill 2015b); the HMBP in Appendix L to the Final Remedy Design (Operation and Maintenance Manual), Volume 1, Appendix E; and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p>		for ensuring compliance.		
<b>HAZ-1b</b>	<p><b>Spill or Release of Contaminants during Construction and Decommissioning Activities (Groundwater FEIR Measure with Revisions).</b></p> <p>a) Fueling areas and maintenance areas would be supplied with proper secondary containment and spill response equipment. The Final Remedy Design provides engineering drawings of chemical storage and loading areas in Appendix D, specifications in Appendix E, and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), which shall all be implemented</p>	Begin at the start of construction and continue for life of project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>during construction, operation and maintenance, and decommissioning of the Project.</p> <p>b) PG&amp;E shall develop fueling SOP protocols and a contingency plan that would be implemented at all fueling areas on-site. The SOPs shall describe the procedures for properly storing and handling fuel on-site, the required equipment and procedures for spill containment, required PPE, and the measures to be used to reduce the likelihood of releases or spills during fueling or vehicle maintenance activities. Potential measures include but are not limited to, fuel storage in bermed areas, performing vehicle maintenance in paved and bermed areas, and availability of spill kits for containment and cleanup of petroleum releases. The field manager in charge of construction and decommissioning activities shall be responsible for ensuring that these procedures are followed at all times. SOPs are provided in Appendix B (CH2M Hill 2015b); the HMBP in Appendix L (Operation and Maintenance Manual), Volume 1, Appendix E; and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p> <p>c) PG&amp;E shall comply with local, state, and federal regulations related to the bulk storage and management of fuels. The Final Remedy Design provides engineering drawings of chemical storage and loading areas in Appendix D; specifications in Appendix E (Operation and Maintenance Manual), Volume 3; the HMBP in Appendix L (Operation and Maintenance Manual), Volume 1, Appendix E; and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), which shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p>				
<b>HAZ-2</b>	<p><b>Reasonably Foreseeable Releases of Chemicals from Excavated or Disturbed Soil (Groundwater FEIR Measure with Revisions)</b></p> <p>Subsequent to the Groundwater FEIR and in compliance with Groundwater FEIR Mitigation Measure HAZ-2, PG&amp;E developed a Final Construction Health and Safety Plan provided in C/RAWP, Appendix D, and a Draft Operation and Maintenance Health and Safety Plan in the Final Remedy Design, Appendix L, Volume 5. A final Operation and Maintenance Health and Safety Plan will be submitted to DTSC and DOI during the start-up phase of the remedy, and should include any separate plans provided by contractors. The health and safety plans include procedures to mitigate potential hazards, which include the use of PPE, measures that provide protection from physical and chemical hazards that may be present at the site, decontamination procedures, and worker and health and safety monitoring criteria to be implemented during construction. The worker health and safety plans includes protective measures and PPE that are specific</p>	Begin at the start of construction and continue for life of project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	<p>to the conditions of concern and meet the requirements of the U.S. Occupational Safety and Health Administration's (OSHA's) construction safety requirements and Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120). In accordance with OSHA requirements, appropriate training and recordkeeping shall also be a part of the health and safety program. The health and safety plans shall be certified by a Certified Industrial Hygienist in accordance with OSHA regulations. The worker health and safety plan shall be provided to the construction workers for review and all workers shall be required to sign the plan, which will be kept on the construction site at all times. Contractors and subcontractors may also provide their own health and safety plans, providing the contractors and subcontractors health and safety plans are compliant with OSHA requirements and have been provided to PG&amp;E and DTSC for review.</p> <p>Worker safety training shall occur prior to initiation of ground- disturbing activities. Training shall include the review of all health and safety measures and procedures. All workers and engineering inspectors at the site shall provide written acknowledgement that the soils management plan (discussed below), worker health and safety plan, and any existing community health and safety plan were reviewed and training was received prior to commencement of construction activities.</p> <p>The following are specific elements and directives that shall be included in the health and safety plan and implemented by PG&amp;E during construction, operation and maintenance, and decommissioning of this project:</p> <ul style="list-style-type: none"> <li>a) Vehicles traveling on unpaved roadways or surfaces would be directed to avoid traveling in areas where contaminated soils are known to be present; vehicle speeds shall be controlled (e.g., limited to 15 mph or slower) to limit generation of dust; measures, such as wetting of surfaces, will be employed to prevent dust generation by vehicular traffic or other dust-generating work activities.</li> <li>b) Pre-mobilization planning shall occur during which the likelihood of encountering contaminated soils shall be reviewed along with the Hazardous Materials Business Plan, site-specific health and safety plan, and SOPs so that the procedures are followed and the contingencies for handling contaminated soils are in-place prior to implementing the field operations.</li> <li>c) Should evidence of contaminated soil be identified during ground-disturbing activities (e.g., noxious odors, discolored soil), work in this area will immediately cease until soil samples can be collected and analyzed for the presence of contaminants as directed by the site supervisor or the site safety officer. Contaminated soil shall be managed and disposed of in accordance with the Project-specific health and safety plan and soil management plan. The health and safety plan and soil management plan shall be reviewed by DTSC</li> </ul>				

**TABLE 1  
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>before beginning any ground-disturbing activities. While the Project is exempt from the requirements of the San Bernardino County Division of Environmental Health, the health and safety plan shall be prepared in general accordance with the substantive requirements of this agency.</p> <p>d) In the event that drilling sites must be located within areas of suspected soil contamination, the appropriate PPE shall be worn by all personnel working in these areas and methods specified in the health and safety plan used to control the generation of dust. When working in these areas, personnel shall be required to follow all guidance presented in the site-specific health and safety plan and soil management plan. The site-specific health and safety plan shall include provisions for site control such as, but not limited to, delineation of the exclusion, contaminant reduction and support zones for each work area, decontamination procedures, and procedures for the handling of contaminated soils and other investigation derived wastes. Soil that is excavated shall be loaded directly into containers such as roll-off bins; dust suppression methods shall be used prior to and during loading of soils into the bins. Suspected contaminated soils shall be segregated from suspected uncontaminated soils.</p> <p>e) Personnel working at the site shall be trained in Hazardous Waste Operations.</p> <p>f) All soil excavated and placed in roll-off bins or trucks for transportation off-site shall be covered with a tarp or rigid closure before transporting, and personnel working in the area shall be positioned upwind of the loading location, as practicable.</p>				
<b>HAZ-3</b>	<p><b>Final Groundwater Remedy Decommissioning Plan (New Measure).</b></p> <p>Upon achieving the Remedial Action Objectives for the groundwater remedy, PG&amp;E shall provide a written request with documentation to the DTSC and DOI requesting approval for decommissioning the groundwater remedy. Upon approval from DTSC and DOI, PG&amp;E shall then prepare and submit a Final Groundwater Remedy Decommissioning Plan within 120 days to DTSC and DOI for their review and approval. This plan shall comply with the requirements in the Programmatic Agreement (BLM 2010), the Cultural and Historic Properties Management Plan (BLM 2012), the Consent Decree and Appendix C, Scope of Work, to Consent Decree (DOI 2013) (or functional equivalent if those document names change in the future), and the mitigation measures included within this SEIR. This plan shall include the decommissioning specifications and procedures currently described in the Final Remedy Design, but shall be updated to incorporate technology and regulatory changes, if any. In particular, the updated Final Groundwater Remedy Decommissioning Plan shall check for updates to waste disposal acceptance criteria to identify the appropriate disposal or recycling facilities for the Final Groundwater Remedy infrastructure to be</p>	After approval for decommissioning is received from the DTSC with concurrence from the DOI	PG&E shall be responsible for the preparation and implementation of this measure. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
HYDRO-1	removed, and for changes in well abandonment procedures by regulatory agencies (the States of California and Arizona, and the Counties of San Bernardino [California] and Mohave [Arizona]). <b>Groundwater FEIR Mitigation Measure HYDRO-1, Exceedance of Water Quality Standards (Groundwater FEIR Measure with Revisions).</b>				
HYDRO-1a/2a/3a	<b>Construction Best Management Practices Plan (Groundwater FEIR Measure with Revisions).</b> Subsequent to the Groundwater FEIR and as noted in the Regulatory Background, the Construction General Permits were updated for California (2014) and Arizona (2013). In compliance with the Groundwater FEIR Mitigation Measures HYDRO-1, HYDRO-2, and HYDRO-3, and incorporating the construction general permit updates, PG&E prepared a BMP Plan for construction activities (C/RAWP, Appendix M; CH2M 2015b). The BMP Plan complies with the substantive requirements of the California and Arizona Construction General Permits, as well as all other applicable federal, state, and local permit and regulatory requirements, even if a permit is not required pursuant to CERCLA, for purposes of ensuring the protection of receiving water quality. Details of the BMPs are provided in the BMP Plan and are summarized below. Site workers shall be trained in the implementation of these BMPs. Erosion Control BMPs: The following measures shall be used to reduce erosion and control sediment: <ul style="list-style-type: none"> <li>• Preservation of Existing Vegetation – Existing vegetation will be preserved to the maximum extent practicable to facilitate protection of surfaces from erosion and help control sediments. To the extent practical, remedy facilities have been located on previously disturbed areas. In the event that existing vegetation needs to be disturbed, areas that need to be preserved will be identified by a qualified biologist and marked with temporary fencing. Site workers will be informed of the limits of disturbance within the construction site and will be instructed to keep clear of delineated areas.</li> <li>• Geotextiles and Mats – Natural (e.g., excelsior, straw, coconut) or synthetic (usually polyethylene) materials will be used to reduce soil erosion by wind or water.</li> <li>• Road Preparation and Maintenance – During road preparation activities, loose sediment will be uniformly compacted, consistent with the substantive San Bernardino County Building and Land Use Services Department requirements, to aid in reducing wind erosion. Ongoing road maintenance will include: (1) visual inspections to identify areas of erosion, (2) localized road repair and regrading, installation, and maintenance of erosion control features such as berms, silt fences, or straw wattles, (3) grading for road smoothness,</li> </ul>	Before and during ground-disturbing activities, operation and maintenance activities, and prior to the start of decommissioning	PG&E shall be responsible for the preparation and implementation of this measure. DTSC would be responsible for ensuring compliance.		

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	<p>and (4) measures to reduce water erosion, such as clearing ditches and culverts of debris.</p> <p>Sediment Control BMPs – The following materials would be used to retain sediment in place where soil is being disturbed by construction processes, to intercept runoff and reduce flow velocity, and to allow sediment to settle from runoff before water leaves the construction site.</p> <ul style="list-style-type: none"> <li>• Silt Fences – Silt fences are typically used in combination with sediment basins and sediment traps as erosion control measures.</li> <li>• Fiber Rolls/Sediment Wattles – These consist of aspen wood excelsior, straw, flax, or other similar materials rolled and bound into tight tubular rolls and placed on the face of slopes at regular intervals, depending on steepness of slopes. Fiber rolls/sediment wattles will be inspected prior to a forecasted rain event and after rain events to ensure the fiber rolls are working properly. Sediment accumulated by the fiber rolls will be removed to maintain the effectiveness of the fiber rolls.</li> <li>• Gravel Bag Berms – Gravel bag berms can be used as an alternative to fiber rolls and sediment wattles. If used, they will be installed prior to rain events to form a barrier to intercept runoff or reduce its velocity. Gravel bags will also be used, if necessary, during trenching activities when stockpiles are on-site. In the event that gravel bag berms are used as perimeter erosion control, bags will be stacked, one on top of the other (two high). When used to anchor stockpiles, the bags will be placed one high.</li> <li>• Sandbag Berms – Sandbag berms can also be used as an alternative to fiber rolls and sediment wattles. If used, they will be installed prior to rain events to form a barrier to intercept runoff or reduce its velocity. Sandbags will also be used, if necessary, during trenching activities when stockpiles are left overnight. In the event that sandbag berms are needed, they will be placed around the staging area and trenching area.</li> <li>• Straw-Bale Barriers – Straw-bale barriers can also be used as an alternative to fiber rolls, gravel bag berms, and sandbag berms.</li> </ul> <p>Material Delivery and Storage – Proper management practices for delivery and storage of materials will be implemented to ensure minimal discharge or elimination of discharge of these materials to the storm drain systems or waterways. Construction materials and equipment will be parked and stored in the staging area. Materials subject to erosion from rain events within the storage area will be covered during nonworking days and prior to and during rain events. Storage and transfer of toxic or hazardous materials (e.g., ethanol, acids for well cleaning) will be on impervious surfaces appropriate to the stored materials.</p>				

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	<p>Material Use – Proper use of materials will be implemented to ensure minimal or complete elimination of discharge to the storm drain systems or waterways. Spill cleanup materials will be kept near the construction and staging areas. Leaks and spills will be cleaned up immediately using proper absorbent materials, which will then be disposed of as hazardous waste, unless determined to be non-hazardous waste.</p> <p>Stockpile Management – Stockpile management was discussed above in “Runoff from Soil Stockpile at Soil Processing Area.”</p> <p>Spill Prevention and Control – Spill prevention and control procedures and practices will be implemented in conjunction with the Waste Management Plan to prevent and control spills anytime chemicals and/or hazardous materials are stored on the construction site. Leaks and spills will be immediately cleaned up to the extent possible using absorbent materials, which will then be disposed of properly. Leaks and spills shall not be covered and/or buried or washed with water. Kits with appropriate spill response equipment will be kept near the construction and staging areas. The materials used for cleaning will not be allowed to enter storm drains or watercourses and will be collected and disposed of in accordance with BMPs. In particular, absorbents used to clean up spills of hazardous materials or waste must be managed as hazardous waste unless characterized as non-hazardous.</p> <p>Solid Waste Management – Solid waste management procedures and practices will be implemented at the beginning and throughout the Project. Solid waste, consisting primarily of asphalt concrete waste, shall be loaded directly onto trucks for off-site disposal. Loose debris will be picked up daily. Trash and scrap receptacles shall be placed at convenient locations to promote proper disposal of solid wastes. Receptacles shall be provided with lids or covers to prevent windblown litter. Hazardous wastes shall be accumulated at appropriate collection locations following appropriate labeling and management requirements pursuant to Title 22, California Code of Regulations.</p> <p>Concrete Waste Management – Concrete waste management procedures will be implemented where concrete is used as a construction material or where concrete dust and debris result from demolition activities. The concrete waste containers will be placed a minimum 50 feet from any drainage ways. Washouts will include secondary containment so that there is no discharge into the underlying soil and onto the surrounding areas. Watertight containers with lids and secondary containment, manufactured for the expressed purpose of containing waste concrete and its liquid residue, may be used. Containers will be emptied or removed from the project site when 75 percent of the full capacity has been reached.</p> <p>Sanitary/Septic Waste Management – Sanitary/septic waste management procedures and practices are implemented at construction sites when a temporary or portable sanitary/septic waste system exists. Sanitary facilities will be located away from Staging Areas 6 and 7 (due to proximity to culturally</p>				

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	<p>sensitive areas), drainage facilities, waterways, and from traffic circulation. In the event of high winds or a risk of high winds, temporary sanitary facilities will be secured with spikes or weighed down to prevent overturning. The sanitation subcontractor will monitor on-site sanitary/septic waste storage and disposal procedures on a weekly basis in accordance with the sanitary/septic waste management BMPs. Wastewater will not be discharged or buried. Waste will be removed and disposed off-site. Regular waste collection should be arranged before facilities overflow. The sanitary facility will be located a minimum of 50 feet away from drainage facilities and away from waterways and traffic circulation.</p> <p>Liquid Waste Management – Liquid waste management procedures will be employed to prevent the discharge of pollutants from liquid waste to the storm drain systems or watercourses. Liquid waste management will be applied if non-hazardous residuals or wastes are generated by construction activities.</p> <p>Tracking Control BMPs – A temporary construction entrance is defined as a stabilized point of entrance/exit to a construction site to reduce the tracking of mud and dirt onto private or public paved roads by construction vehicles. A temporary construction entrance will be established at applicable paved intersections and entry points to prevent sediment tracking. The temporary construction entrance will be inspected routinely.</p> <p>Good Housekeeping BMPs – Good housekeeping measures will be implemented on-site for the duration of the project and include the following:</p> <ul style="list-style-type: none"> <li>• Store chemicals in watertight containers (with appropriate secondary containment) in a completely enclosed storage cabinet, trailer, or sealed drums shed to prevent spillage and leakage.</li> <li>• Minimize exposure of construction materials to precipitation.</li> <li>• Cover waste disposal containers at the end of every business day and during rain events.</li> <li>• Prevent discharges from waste disposal containers to the stormwater drainage system or receiving water.</li> <li>• Prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters.</li> <li>• Immediately clean up leaked material and dispose of properly.</li> <li>• Establish and maintain effective perimeter controls and stabilize construction entrances and exits to control erosion and sediment discharges from the site.</li> <li>• Conduct regular stormwater tailgate meetings with the workforce when the project is staffed and work is under way.</li> </ul>				
<b>HYDRO-1b/2b/3b</b>	<b>O&amp;M SWPPP (Groundwater FEIR Measure with Revisions).</b>	Before and during ground-disturbing	PG&E shall be responsible for the		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>Subsequent to the Groundwater FEIR and in compliance with the Groundwater FEIR Mitigation Measures HYDRO-1, HYDRO-2, and HYDRO-3, PG&amp;E prepared a SWPPP for operation and maintenance activities (O&amp;M SWPPP; Final Remedy Design, Appendix L, Volume 1, Appendix D; CH2M Hill 2015a) to comply with the substantive requirements of the 2015 California General Industrial Storm Water Permit. The O&amp;M SWPPP requires the BMPs summarized below. Site workers shall be trained in the implementation of these BMPs.</p> <p>Good Housekeeping, including:</p> <ul style="list-style-type: none"> <li>• Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Clean and dispose of properly any identified debris, waste, spills, tracked materials, or leaked materials</li> <li>• Minimize or prevent material tracking</li> <li>• Minimize dust generated from industrial materials or activities</li> <li>• Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible</li> <li>• Cover all stored industrial materials that can be readily mobilized by contact with storm water</li> <li>• Contain all stored non-solid industrial materials or wastes that can be transported or dispersed by the wind or contact with storm water</li> <li>• Prevent disposal of any rinse/wash waters or materials into the storm water conveyance system</li> <li>• Minimize stormwater discharges from non-industrial areas (e.g., stormwater flows from employee parking area) that contact industrial areas of the facility</li> <li>• Minimize authorized non-storm water discharges from non-industrial areas (e.g., potable water, fire hydrant testing) that contact industrial areas of the facility</li> </ul> <p>Preventive Maintenance, including:</p> <ul style="list-style-type: none"> <li>• Identify all equipment and systems used outdoors that may spill or leak pollutants</li> <li>• Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks</li> <li>• Establish inspection schedule and maintenance schedule of identified equipment and systems</li> </ul>	<p>activities, operation and maintenance activities, and prior to the start of decommissioning</p>	<p>preparation and implementation of this measure. DTSC would be responsible for ensuring compliance.</p>		

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	<ul style="list-style-type: none"> <li>Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks</li> </ul> <p>Material Handling and Waste Management, including:</p> <ul style="list-style-type: none"> <li>Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with stormwater during a storm event</li> <li>Contain all stored non-solid industrial materials or wastes that can be transported or dispersed by the wind, erosion or contact with stormwater during handling</li> <li>Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use</li> <li>Divert run-on and stormwater generated from within the facility away from all stockpiled materials</li> <li>Clean all spills of industrial materials and/or wastes that occur during handling</li> <li>Observe and clean as appropriate, any outdoor material/ or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes</li> </ul> <p>Erosion and Sediment Controls, including:</p> <ul style="list-style-type: none"> <li>Implement effective wind erosion controls</li> <li>Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event</li> <li>Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site</li> <li>Divert run-on and storm water generated from within the facility away from all erodible materials</li> </ul> <p>The Industrial General Permit requires that the site, to the extent feasible, implement and maintain any advanced BMPs necessary to reduce or prevent discharges of pollutants in its stormwater discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability. Advanced BMPs may include:</p> <ul style="list-style-type: none"> <li>Exposure Minimization BMPs (such as storm resistant shelters that prevent the contact of stormwater with the industrial materials or areas of industrial activity)</li> <li>Storm Water Containment and Discharge Reduction BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of stormwater runoff</li> </ul>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<ul style="list-style-type: none"> <li>• Treatment Control BMPs (the implementation of one or more mechanical, chemical, biologic, or any other treatment technology)</li> <li>• Storm resistant shelters (i.e., buildings) for Operations at the TW Bench, Hazardous Materials storage at the TCS, and Carbon Amendment facilities at the MW-20 Bench</li> <li>• Storm water drainage at the TW Bench to divert stormwater run on and reduce the volume of stormwater runoff</li> <li>• Features in access roads to reduce erosion and divert storm water from remedy facilities such as wells and associated control equipment</li> </ul>				
<b>HYDRO-4</b>	<p><b>Manganese Treatment System (New Measure).</b></p> <p>Sampling as described in the Final Remedy Design, specifically in the Sampling and Monitoring Plan provided in the Operation and Maintenance Manual (CH2M Hill 2015a, Appendix L), shall be implemented throughout the duration of the groundwater remedy and shall include groundwater monitoring for manganese. If manganese exceeds concentrations as specifically identified in Table 2.2-1 of Appendix L, O&amp;M Volume 2 (e.g., 1 to 2.5 mg/L at California wells downgradient of the IRZ, or above baseline concentrations in Arizona wells), then PG&amp;E shall evaluate and implement operational modifications to control the manganese in accordance with Section 2, O&amp;M Volume 2. If operational modifications are unsuccessful at decreasing manganese concentrations to below the action levels cited on the above-referenced Table 2.2-1 and as determined by DTSC, then the contingency measure of manganese treatment shall be implemented. As described in the Project Description (Section 3.6.3.1) of this SEIR and in Appendix J of the Final Remedy Design, PG&amp;E shall implement manganese treatment using the Dissolved Metals Removal System in the Remedy-Produced Water Conditioning Plant if capacity is available or install an adsorptive or greensand filtration treatment system (or equivalent) preferentially located at the Remedy-Produced Water Conditioning Plant if space is available. If capacity and space are not available at the Remedy-Produced Water Conditioning Plant, the manganese treatment system could be located at the TW Bench or the MW-20 Bench (after the IM-3 system is decommissioned/removed). A manganese treatment system shall remain operational until the manganese concentrations remain below concentrations identified in Table 2.2-1 and DTSC approves of the cessation of the system.</p>	Commence if elevated manganese concentrations remain above anticipated concentrations identified in Table 2.2-1 of the O&M Volume 2, Appendix L after operational modifications prove to be ineffective. Manganese treatment would continue until concentrations decrease to below objectives and with the approval of the DTSC.	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
<b>HYDRO-5</b>	<p><b>Contingent Freshwater Pre-Injection Treatment (New Measure).</b></p> <p>To implement the Final Groundwater Remedy such that PG&amp;E will be able to respond to the triggering conditions described below, PG&amp;E shall implement the following measures.</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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HYDRO-5a	<p><b>Incorporate Arsenic Monitoring of Freshwater Injection into the Sampling and Monitoring Plan (New Measure).</b></p> <p>Sampling as described in the Final Remedy Design, specifically in the Sampling and Monitoring Plan provided in the Operation and Maintenance Manual (CH2M Hill 2015a, Appendix L), shall be implemented throughout the duration of the groundwater remedy, even after injection ceases. Wells used to monitor freshwater supply injection shall be sampled and analyzed in accordance with the Project monitoring program for arsenic and other chemicals as described in the Sampling and Monitoring Plan. PG&amp;E shall install and monitor wells designated in the Final Remedy Design for arsenic monitoring located approximately 150 feet and 225 feet from each freshwater injection well to comply with the SWRCB's requirements for freshwater injection with arsenic concentrations above the California MCL. Monitoring shall commence prior to freshwater injection and continue until observed arsenic concentrations return to pre-injection levels pursuant to Mitigation Measure HYDRO 5d. Monitoring wells for the freshwater injection area shall initially be sampled monthly for the first two quarters, then quarterly thereafter, unless the monitoring interval is modified with prior DTSC approval. The results of this monitoring shall determine whether Mitigation Measures HYDRO-5b and 5c are implemented</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-5b	<p><b>Assessment and Implementation of Interim Action if the California MCL is Exceeded 150 Feet Radially from Freshwater Injection Point (New Measure).</b></p> <p>If, as a result of the monitoring required in Mitigation Measure HYDRO-5a, the concentration of arsenic at the leading edge of the arsenic plume is found to exceed the arsenic water quality objective (California MCL) 150 feet radially from the freshwater injection point, PG&amp;E shall immediately reassess their groundwater modeling and identify interim actions to limit the migration of the arsenic plume. PG&amp;E shall submit the assessment and proposed action to DTSC within 60 days (or other timeframe directed by DTSC) of confirmed detections above water quality objectives.</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-5c	<p><b>Implementation of Alternatives if California MCL is Exceeded for Arsenic 225 feet from any Freshwater Injection Point (New Measure).</b></p> <p>If the concentration of arsenic at the leading edge of the plume migrates and exceeds the water quality objective (California MCL) at 225 feet radially from the freshwater injection point, PG&amp;E shall promptly notify DTSC and resample within 30 days. If the expedited resample confirms the exceedance, PG&amp;E shall immediately cease fresh water injection. The injection shall not recommence until PG&amp;E either blends the water source to below the California MCL at the point of injection; constructs and re-routes any contingent freshwater supply lines and appurtenances to the Contingent Freshwater Pre-Injection Treatment System to pre-treat the water and remove arsenic before injection; or proposes a</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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HYDRO-5d	<p>new water source that will comply with the California water quality objectives for injection. PG&amp;E shall obtain approval from DTSC prior to implementation of the options identified above. Pre-injection treatment of the freshwater shall continue until further monitoring indicates that pre-treatment is no longer needed and DTSC approves of cessation of pre-treatment.</p> <p><b>Post-Remedy Arsenic Monitoring (New Measure).</b> The SWRCB provided remedy requirements associated with injection of groundwater containing naturally occurring arsenic in a 2013 position letter (SWRCB 2013). To ensure that water quality objectives are not exceeded in groundwater within freshwater injection areas after completion of the remedy, sampling of the arsenic monitoring wells and possibly other wells (as directed by DTSC) would continue under the Sampling and Monitoring Plan for an estimated 20 years and possibly longer after completion of active treatment to ensure that arsenic concentrations are within and remain at pre-remedy background levels. The sampling would cease after results demonstrate that the concentrations of arsenic remain within water quality objectives and DTSC approves of ceasing the monitoring for arsenic.</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-6	<p><b>Protection of Non-Project Water Supply Wells (New Measure).</b></p> <p>To minimize any potential impacts to non-Project water supply wells associated with the long-term operation and maintenance of the Final Groundwater Remedy Project, PG&amp;E shall implement the mitigation measure described below.</p>	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-6a	<p><b>Incorporate Non-Project Water Supply Wells and/or Additional Monitoring Wells into the Monitoring Program (New Measure).</b></p> <ul style="list-style-type: none"> <li>For water supply wells located within about one mile of HNWR-1A (currently Topock-2, Topock 3, Marina-1, Sanders, Smith, PGE-9N, PGE-9S, MTS-1, MTS-2, and GSRV-2), PG&amp;E shall request well construction information and access to sample, test and assess current well conditions. If access is granted, PG&amp;E shall add the non-Project water supply wells to the monitoring program (Appendix L, O&amp;M Volume 2, Sampling and Monitoring Plan, Section 5.4). If access is denied, PG&amp;E will alert DTSC of such response in a timely manner and provide associated documentation. If the well owner does not otherwise respond within 60 days, PG&amp;E shall initiate a second request. If the well owner still does not respond, PG&amp;E will alert DTSC of such response in a timely manner and provide documentation of both attempts to contact the owner. If new water supply non-Project wells are installed or discovered in the general area in the future, DTSC may direct PG&amp;E to take additional action for access and add them to the wells listed above at any time.</li> </ul>	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	<ul style="list-style-type: none"> <li>PG&amp;E shall submit a well installation work plan to DTSC describing installation of a new nested monitoring well located between HNWR-1 and wells Topock-2/Topock-3 since wells Topock-2/Topock-3 are currently the largest producing non-Project supply wells in the area. The work plan shall also propose the installation of any additional monitoring wells that are needed to ensure protection of the water resource in the vicinity of the non-Project water supply wells. PG&amp;E shall submit the well installation work plan to DTSC within twelve months of DTSC's approval of the remedy design and would be implemented only after DTSC's review and approval. Up to ten well locations from the total borehole count evaluated in this SEIR can be allocated for the monitoring of water quality to protect non-Project water supply wells. Overtime, wells may be added to or removed from the monitoring program (with prior DTSC approval) based on accumulated data or lack thereof.</li> <li>Monitoring of wells identified in this mitigation measure shall initially be quarterly for the first two years of operation and include groundwater levels and chemical constituents to establish baseline conditions and assess seasonal variations in the area of the non-Project water supply wells and monitoring wells. Pressure transducers shall be fitted to monitoring wells, Well HNWR-1, Site B, and the above-listed non-Project water supply wells (some which are not currently pumping) to track and evaluate pumping effects over time and to assist with assessments required below in Mitigation Measure HYDRO-6b and 6c. Chemical testing shall include, at a minimum, Title 22 metals, Cr(VI), stable isotopes of hydrogen and oxygen, general minerals, and TDS. After the second year of monitoring, sampling frequencies may be reduced to semi-annually for two additional years and annually thereafter with DTSC approval. The well network, monitoring frequency, pressure transducer monitoring, and chemical constituents may be modified with DTSC approval.</li> </ul>				
<b>HYDRO-6b</b>	<p><b>Water Supply Mitigation (New Measure).</b></p> <ul style="list-style-type: none"> <li>If non-pumping groundwater elevations substantially decrease from baseline conditions established under HYDRO-6a in a monitored non-Project water supply well (e.g., below top of well screen, below pump depths, or causes significant decrease in well yield) or a similar groundwater elevation decrease is observed in a water resource protection monitoring well described in HYDRO-6a, PG&amp;E shall inform DTSC as soon as practicable and no longer than two weeks (unless modified with DTSC approval) after receipt of data documenting such an event. Additionally, PG&amp;E will assess well and aquifer conditions to evaluate if the Project has caused a substantial decrease in groundwater elevations/well yield. PG&amp;E shall promptly provide its</li> </ul>	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	<p>assessment to DTSC for review. At a minimum, the assessment shall consider the following conditions:</p> <ul style="list-style-type: none"> <li>o Historical well usage</li> <li>o Well condition</li> <li>o Anticipated drawdown effects</li> <li>o Regional groundwater level trends</li> </ul> <ul style="list-style-type: none"> <li>• If PG&amp;E or DTSC determines that the Project has adversely impacted a non-Project water supply well to the extent that the Project is determined to be the primary cause, or one of the primary contributing causes, of the reduction in well yield or elevation such that the well does not provide sufficient water, PG&amp;E shall promptly notify the well owner. PG&amp;E shall coordinate with the well owner(s) to arrange for an interim drinking water supply if necessary, and develop a plan (for DTSC approval) which will assist in restoring the water resource by using measures that may include:                             <ul style="list-style-type: none"> <li>o Lowering the well pump</li> <li>o Rehabilitating the well</li> <li>o Deepening the existing well</li> <li>o Providing short and/or long term replacement of water supply</li> <li>o Constructing a new replacement well,</li> <li>o Modifying remedy operations (e.g., placing a packer in HNWR-1A)</li> </ul> </li> </ul> <p>An alternate course of action may be considered, provided it is mutually agreeable to DTSC, PG&amp;E, and the well owner.</p> <p>Unless an alternative period is approved by DTSC, the plan/alternate course of action should be provided to DTSC for approval within 30 days of determining that the Project adversely impacted a non-Project water supply well.</p>				
<b>HYDRO-6c</b>	<p><b>Water Quality Mitigation (New Measure).</b></p> <ul style="list-style-type: none"> <li>• If the groundwater quality of a non-Project water supply well deteriorates by exceeding water quality objectives (e.g., MCLs for drinking water wells) and baseline conditions established pursuant to HYDRO-6a, PG&amp;E will immediately notify DTSC and DOI and take steps to collect confirmation samples from the well within 60 days of original sample collection unless modified with DTSC approval. PG&amp;E shall identify/confirm the specific uses of the well and inform DTSC, DOI, the Arizona Department of Environmental Quality, and the well owner of the deterioration as soon as possible (e.g., within 7 days of</li> </ul>	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	<p>receiving confirmation samples results). This shall include PG&amp;E providing both the initial and confirmation sample data to agencies and well owner even if the initial exceedance is not confirmed.</p> <ul style="list-style-type: none"> <li>• If PG&amp;E or DTSC determines that the Project has adversely impacted a non-Project water supply well to the extent that the Project is determined to be the primary cause, or one of the primary contributing causes, of the reduction in water quality, PG&amp;E shall immediately notify the well owner. PG&amp;E shall coordinate with the well owner(s) to arrange for an interim drinking water supply if necessary, and develop a plan (for DTSC approval) which will assist in restoring the water resource by using measures which may include: <ul style="list-style-type: none"> <li>○ Deepening the existing well</li> <li>○ Providing short and/or long term replacement of water supply</li> <li>○ Constructing a new replacement well</li> <li>○ Conducting water treatment,</li> <li>○ Modifying remedy operations (e.g., placing a packer in HNWR-1A)</li> </ul> </li> </ul> <p>An alternate course of action may be considered, provided it is mutually agreeable to DTSC, PG&amp;E and the well owner.</p> <p>The plan/alternate course of action should be provided to DTSC for approval within 30 days, unless modified with DTSC approval, of determining that the Project adversely impacted a non-Project water supply well.</p> <ul style="list-style-type: none"> <li>• If the groundwater quality of any well installed as part of HYDRO-6a deteriorates by exceeding water quality objectives (e.g., MCLs for drinking water wells) and baseline conditions, PG&amp;E shall conduct confirmation sampling and promptly assess aquifer conditions to evaluate if the Project has adversely impacted the well. PG&amp;E shall promptly inform DTSC, DOI, and the Arizona Department of Environmental Quality of any adverse impacts and provide an assessment with any recommendations for review and approval.</li> </ul>				
<b>NOISE-2</b>	<p><b>Mitigation Measure NOISE-2: Potential Impacts to Noise Levels and Noise Standards (Groundwater FEIR Measure with Revisions).</b></p> <ul style="list-style-type: none"> <li>• Construction equipment shall be properly maintained per manufacturer specifications and fitted with the best available noise-suppression devices (e.g., mufflers, silencers, wraps). All impact tools shall be shrouded or shielded, and all intake and exhaust ports on power equipment shall be muffled or shielded.</li> </ul>	During all initial construction activities, during operation and maintenance, and during decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

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	<ul style="list-style-type: none"> <li>Construction equipment shall not idle for extended periods of time (more than 15 minutes) when not being utilized during construction activities. A notable exception is when a support vehicle is needed to remain running for health and safety reasons (i.e., air conditioning), consistent with health and safety procedures.</li> <li>Construction activities shall include, but not limited to, the use of berms, stockpiles, dumpsters, and/or bins to shield the nearest noise-sensitive receptor adjacent to construction activities to within acceptable non-transportation noise level standards. When construction activities are conducted within the distances outlined earlier (i.e., 1,850 feet and 5,830 feet from California receptors and 330 feet and 735 feet from Arizona receptors for daytime and nighttime noise, respectively) relative to noise-sensitive uses in the project area, noise measurements shall be under the supervision of a qualified acoustical consultant at the nearest noise-sensitive land use relative to the construction activities with a sound level meter that meets the standards of the American National Standards Institute (ANSI Section S14 1979, Type 1 of Type 2) to ensure that construction noise associated with the project component complies with applicable daytime and nighttime noise standards. Coordination with the Tribes and appropriate landowner(s) shall occur to allow opportunity for input in determining noise monitoring locations. If noise levels are still determined to exceed noise standards, temporary engineered acoustical barriers shall be erected as close to the construction activities as feasible, breaking the line of sight between the source and receptor where noise levels exceed applicable standards. Coordination with the Tribes shall occur in a manner consistent with the Cultural Impact Mitigation Program (CIMP; see Appendix H to the C/RAWP) throughout all Project phases, including input in determining constraints in locating temporary noise barriers to avoid or minimize physical impact to cultural resources. All acoustical barriers shall be constructed with material having a minimum surface weight of 2 pounds per square foot or greater and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by the American Society for Testing and Materials' Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by, or under the direct supervision of, a qualified acoustical consultant.</li> <li>A disturbance coordinator shall be designated by the PG&amp;E, which will post contact information in a conspicuous location near groundwater project activity areas so that it is clearly visible to nearby noise-sensitive receptors as identified in Figure 4.7-1 and Interested Native American Tribes (Chemehuevi Indian Tribe, Cocopah Indian Tribe,</li> </ul>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>Colorado River Indian Tribes, Fort Mojave Indian Tribe, and the Hualapai Indian Tribe). The coordinator will manage and thoroughly investigate complaints resulting from the Project-related noise to ensure resolution. Reoccurring disturbances will be evaluated by a qualified acoustical consultant retained by PG&amp;E to ensure compliance with applicable standards. Noise complaints shall be reported to DTSC as soon as practicable and no more than 72 hours upon receipt of complaint. Resolutions will be recorded, tracked, and reported to DTSC on a monthly basis. The disturbance coordinator will contact nearby noise-sensitive receptors as labeled in Figure 4.7-1 and Interested Tribes, advising them of the Project activity schedule. The disturbance coordinator will also consider the timing of Project activities in relation to Tribal ceremonial events that are sensitive to noise in a manner consistent with the Cultural Impact Mitigation Program (CIMP) Section 2.11 (see Appendix H to the C/RAWP).</p> <ul style="list-style-type: none"> <li>This shall be achieved in part through annual project update mailings (could be combined with other annual project mailings) to potentially impacted owners/occupants of sensitive land uses to give notice of possible disturbances and impacts. The mailing shall also identify the disturbance coordinator's contact information.</li> </ul>				
<b>NOISE-1</b>	<p><b>Mitigation Measure NOISE-1: Short-Term Groundborne Vibration Levels Caused by Project Activities near Sensitive Receptors (Groundwater FEIR Measure with Revisions).</b></p> <ul style="list-style-type: none"> <li>New wells shall be constructed a minimum of 45 feet from vibration-sensitive receptors, as feasible. Constructing new wells within 30 feet of vibration-sensitive land uses located in California and 275 feet of vibration-sensitive land uses located in Arizona shall be avoided.</li> <li>A disturbance coordinator shall be designated by PG&amp;E, which will post contact information in conspicuous locations near Project activity areas such as on construction fencing or trailers, but with consideration to culturally sensitive areas such as the Topock Maze. Signage will be clearly visible to nearby vibration-sensitive receptors as identified in Figure 4.7-1. The coordinator will manage complaints resulting from the construction vibration. Reoccurring disturbances will be evaluated by a qualified acoustical consultant retained by the project applicant to ensure compliance with applicable standards. The disturbance coordinator will contact nearby vibration-sensitive receptors, advising them of the construction schedule. This shall be achieved in part through annual project update mailings (could be combined with other annual project mailings) to owners/occupants of potentially impacted sensitive land uses to give notice of possible disturbances and impacts. The mailing shall also identify the disturbance coordinator's contact information.</li> </ul>	<p>During all construction activities that occur during the initial construction phase, as well as during operation and maintenance and decommissioning that are being performed in proximity to vibration-sensitive receptors.</p>	<p>PG&amp;E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.</p>		

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<b>CUL-5</b>	<p><b>Cumulative Impacts to the Topock TCP (New Measure).</b></p> <p>PG&amp;E shall provide funding to the following Tribes (Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Hualapai Indian Tribe) that would facilitate actions to preserve the cultural and ecological integrity of the Topock TCP, and that would provide interpretation, and/or educational programs related to the Topock TCP. The funds shall be used for the purposes of ensuring the preservation, conservation and transmission of cultural values associated with the Topock TCP, including furthering Tribal knowledge and community awareness of the TCP's importance and meaning for each Tribe. The funds shall be used to implement interpretive facilities or programs, land preservation/conservation, educational programs (such as grant funding to further the cultural understanding, including research of the Topock area). The Project's Conditions of Approval will identify the amount of the one-time contribution to be made by PG&amp;E, and the type of funding mechanism to be utilized as determined by DTSC. The funding mechanism shall provide for the management of individual, separate funds of equal amounts for each of the five Tribes, and shall administer the release of funds upon review and approval of proposals by Tribe(s). Proposals must meet the above-described purpose related to preservation/conservation, interpretation, and/or educational programs pertaining to the Topock TCP, and must meet pre-established minimum criteria. The funding mechanism shall also provide tracking and verification through documentation of the appropriate use of the funds. Within 6 months of Project approval, DTSC shall develop, in consultation with the Tribes, Tribal Funding Application Guidelines for distribution to the Tribes. The Tribal Funding Application Guidelines will identify the funding management organization that will manage the funds and will provide guidance on accessing the funds, including the identification of minimum criteria by which proposals will be evaluated. Within 30 days of notification by DTSC that the funding management organization has been established, PG&amp;E shall provide documentation that the required funding contribution has been made. The funding organization shall report to DTSC upon the following three occasions: (1) receipt of a proposal by Tribe(s), (2) approval and release of funds, and (3) verification of implementation/use of funds. Funding shall be available for use within the duration of the active remedy, currently estimated to be approximately 30 years.</p>	Implementation of CUL-1 through CUL-4 prior to and during construction, operation and maintenance, and decommissioning, and CUL-5 prior to construction activities and over 30 years of Project operation.	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
<b>NOISE-3</b>	<p><b>Cumulative Noise Increases from Remedial Activities (New Measure).</b></p> <p>Coordination between teams implementing soil remedial activities (including investigation, pilot testing, and remediation) and groundwater remediation shall occur as to avoid cumulative noise levels to exceed ambient noise levels by 5 dBA or greater, or to exceed applicable County standards at any sensitive receptor (as defined in Chapter 4.7 of this SEIR). If concurrent activities must occur near common sensitive receptors, real time noise measurements of activities shall be conducted by a qualified acoustical consultant (or contractor</p>	Prior to and during construction, operation and maintenance, and decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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	trained by an appropriate qualified acoustical consultant) at the nearest noise-sensitive land use with a sound level meter that meets the standards of the American National Standards Institute (ANSI Section S14 1979, Type 1 of Type 2). If exceedances are not observed, monitoring can be discontinued. If exceedances are experienced, temporary barriers shall be erected as close to the construction activities as feasible, breaking the line of sight between the source and receptor where noise levels exceed applicable standards. If noise cannot be effectively mitigated, one or more of the concurrent activities shall be modified (options include but are not limited to using lower-noise-producing equipment or manual methods, relocating activities further away from each other, or avoiding/rescheduling concurrent activity, etc.) so as to result in appropriate noise levels.				

**SOURCES:**

CH2M HILL. 2014. *Bird Impact Avoidance and Minimization Plan Topock Groundwater Remediation Project*. Prepared for Pacific Gas and Electric Company. April 2014;

International Society of Arboriculture (ISA 2011). 2011. *Pruning Mature Trees*. Champaign, IL;

Society for Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Available:.. Accessed February 20, 2014.