

RECLAMATION

Managing Water in the West

Categorical Exclusion Checklist (CEC)

Pacific Gas and Electric - Former Manufactured Gas Plant Remediation – Red Bluff, CA

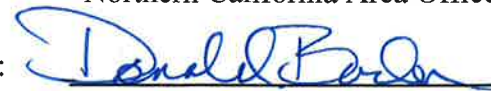
NCAO-CEC-16-07

Prepared by:  Date: September 12, 2016
Megan Simon
Natural Resource Specialist
Northern California Area Office

Concurrence by: See Attachment 1 Date: May 16, 2016
Megan Simon
NCAO Designee for Tribal Trust Assets

Concurrence by: See Attachment 2 Date: August 25, 2016
Mark Carper
Archaeologist
Mid-Pacific Regional Office

Concurrence by:  Date: 9/12/16
Paul Zedonis
Environmental and Natural Resources
Supervisory Natural Resource Specialist/
Division Manager
Northern California Area Office

Approved by:  Date: 9/13/16
Donald Bader
Acting Area Manager
Northern California Area Office

September 2016

Proposed Action

Reclamation will issue a letter permit to grant Pacific Gas and Electric Company and its contractors (PG&E) access to Reclamation's right-of-way (ROW) along the west bank of the Sacramento River in Red Bluff, Tehama County, CA. Reclamation is granting PG&E the access in order for PG&E to complete remediation activities associated with legacy contamination from the adjacent property at 600 Rio Street: the former site of the Red Bluff manufactured gas plant (MGP; Figure 1), which operated from 1874 to 1947. The remediation activities are designed to address elevated levels of residual volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH) in soil, soil vapor and groundwater, and lead in soil, from operations, incidents and/or housekeeping practices at the former MGP site, and adjacent impacted properties, including Reclamation's ROW. Construction is anticipated to commence in December 2016 and be complete in approximately seven (7) months. Work to be performed in Reclamation's ROW includes site preparation, soil excavation, in-situ solidification (ISS) soil treatment, excavation backfilling and site grading, groundwater monitoring well installation, site restoration/re-vegetation, and post-construction monitoring.

PG&E's remediation site is located in a mixed land use area comprised of commercial and residential development. Reclamation's ROW is located on Assessor's Parcel Numbers 29-423-8, 29-423-9, and 29-423-12, Unit Numbers R-96, R-97, R-98, and R-230 and is zoned for recreational use. The ROW is bounded to the east by the Sacramento River, to the south by the Highway 36 bridge/Antelope Boulevard, to the west by PG&E's property/the former Red Bluff MGP and vacant property, and to the north by an additional undeveloped, lightly wooded riparian corridor. The ROW is steeply sloped and vegetated with grasses, shrubs (including blue elderberry shrubs) and willows, with riprap along the shoreline. The ROW is accessible to, but infrequently used by, the public for recreation purposes. Facilities in the ROW are limited to the remnants of a concrete boat ramp. Representative photographs of the ROW, extracted from North State Resources, Inc.'s draft Conceptual Revegetation Plan dated December 8, 2015, are included as Figure 2.

The depth to groundwater on Reclamation's property generally ranges from about 13 to 16 feet below ground surface (bgs). PG&E plans for impacted shallow soil (ranging from 3 ft bgs near the shoreline to 10 ft bgs near the PG&E property line) in Reclamation's ROW to be remediated to standards it has determined appropriate for recreational use, based on exposure scenarios developed for its human health risk assessment and associated modeling outputs. PG&E will excavate localized areas with deeper contamination to a greater depth and will sample the lateral and vertical extents of the excavation to confirm its adequacy. To increase the efficiency of the remediation, PG&E will treat some deeper soils, having higher than goal concentrations of contaminants, by ISS. The ISS will use a solidifying reagent to immobilize contaminants in impacted soil below the depth of excavation activities, estimated at 3 ft bgs or deeper in Reclamation's ROW. The ISS process will mitigate the potential for further migration of contaminants to groundwater.

PG&E will segregate, characterize and transport excavated soil and other wastes generated during remediation activities (as appropriate) offsite for proper disposal at permitted facilities.

PG&E has initially categorized the soil to be excavated from the MGP remediation site as approximately 25 percent non-Resource Conservation and Recovery Act (RCRA) hazardous waste and approximately 75 percent non-hazardous waste. PG&E will back-fill excavations with clean, imported soil, which it will grade to promote drainage and accommodate future use.

PG&E will revegetate Reclamation's property with acceptable riparian vegetation. PG&E's post-remediation monitoring of Reclamation's ROW will include groundwater, post-construction erosion control, and revegetation monitoring. PG&E will install at least one groundwater monitoring well on Reclamation's for the purposes of post-treatment monitoring and will be responsible for properly maintaining the well, as well as promptly and properly decommissioning and removing it following the completion of monitoring activities.

The discretionary action analyzed in this CEC is Reclamation's decision to grant PG&E access to perform remediation activities in Reclamation's ROW (though the Area of Potential Effects (APE) for Reclamation's cultural resources assessment extends beyond Reclamation's property to meet the Federal standard for compliance). Reclamation will not provide value engineering or technical commentary on the adequacy of PG&E's remedial plan and pre-construction work products, or the anticipated effectiveness or acceptability of the treatment strategies to be employed. Such effort has been determined inappropriate, based on the following rationale:

- Reclamation was not an owner or operator of the MGP facility that disposed of, and/or generated and/or stored the materials that were the source of the contamination. Consequently, Reclamation has not been designated a responsible party.
- Although Reclamation's property has been impacted, the clean-up is not a discretionary action for Reclamation. The remainder of the remediation effort could proceed without the access agreement, resulting in a lost opportunity for an environmental improvement on public property that does not require public funding.
- The remediation work is being conducted in conjunction with the state's Voluntary Cleanup Program (VCP) under which PG&E has volunteered to be the project proponent for the remediation activity. The VCP program encourages efficient site remediation by allowing for the development of site-specific, results-oriented clean-up criteria. These conditions and the involvement of the Department of Toxic Substance Control (DTSC), the regulatory/enforcement agency with active oversight authority for the remediation site, in the assessment and remediation processes makes any determination by Reclamation on the acceptability of the remediation plans (i.e. whether or not the site is rendered 'clean') unnecessary.
 - PG&E advises that residual contamination will remain following the completion of remedial construction activities, adjacent to the Highway 36 bridge and adjacent to the Sacramento River, because the horizontal and vertical extent of remediation activities will be limited, as necessary, to protect existing structures and/or to prevent impacts to biological, and potentially, cultural, resources (as discussed in the Environmental Commitments section herein); the goal of the remediation effort in Reclamation's ROW is to remove and/or treat impacted soil such that residual contaminant concentrations are at or below the threshold determined acceptable for recreational use, rather than to actively (without reliance on natural attenuation processes) and completely remediate the

contamination and restore the impacted media to its original condition and chemical quality.

- o PG&E's work plans and assessment documents have been reviewed and accepted by the CA Department of Toxic Substances Control (DTSC) and are therefore considered adequately protective of receptors. In addition, under the VCP, DTSC retains authority to take enforcement action in the event that there is an immediate threat to human health or the environment not addressed by the project proponent in a timely manner.
- o It is anticipated that DTSC will issue a site certification and closure when remediation is complete.

Exclusion Categories

Bureau of Reclamation Categorical Exclusion – 516 DM 14.5, D.10. Issuance of permits, licenses, easements, and crossing agreements which provide right-of-way over Bureau lands where the action does not allow for or lead to a major public or private action.

Extraordinary Circumstances

Below is an evaluation of the extraordinary circumstances as required in 43 CFR 46.215.

- | | | | | | | |
|---|----|-------------------------------------|-----------|--------------------------|-----|--------------------------|
| 1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 2. This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2)(E) and 43 CFR 46.215(c)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 4. This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 5. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |

- | | | | | | | |
|--|----|-------------------------------------|-----------|--------------------------|-----|--------------------------|
| 6. This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (43 CFR 46.215 (e)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 8. This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01; and 43 CFR 46.215 (g)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 9. This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species (43 CFR 46.215 (h)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 10. This action would violate a Federal, Tribal, State, or local law or requirement imposed for protection of the environment (43 CFR 46.215 (i)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898; and 43 CFR 46.215 (j)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 13. This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007; 43 CFR 46.215 (k); and 512 DM 3). | No | ☒ | Uncertain | ☐ | Yes | ☐ |
| 14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act; EO 13112; and 43 CFR 46.215 (l)). | No | ☒ | Uncertain | ☐ | Yes | ☐ |

Regional Archeologist concurred with Item 8 (email attached).

ITA Designee concurred with Item 11 (email attached).

NEPA Action Recommended

☒ CEC – This action is covered by the exclusion category and no extraordinary circumstances exist. The action is excluded from further documentation in an EA or EIS.

☐ Further environmental review is required, and the following document should be prepared.

☐ EA

☐ EIS

Environmental commitments, explanations, and/or remarks:

All work will be conducted outside of waters of the US. Excavation near the Ordinary High Water Mark will be limited to approximately 3 feet bgs to minimize the setbacks required for stability of both the river bank and the excavation, while maximizing the volume of surface and near-surface soil that can be excavated. Security fencing will demarcate the limits of work along the Sacramento River. Stormwater discharges will be covered under the National Pollutant Discharge Elimination System (NPDES) General Permit and a site-specific stormwater pollution prevention plan (SWPPP) that contains construction and post-construction Best Management Practice (BMPs) for sediment and erosion control.

PG&E will prepare and adhere to a Cultural and Biological Resources Monitoring and Mitigation Plan (CBMMP) that outlines requirements for pre-construction surveys, monitoring and surveys during construction, and actions to be taken upon the discovery of cultural, historical, paleontological, or sensitive biological resources. The CBMMP will be provided to DTSC for review prior to implementation of remediation activities.

DTSC prepared a CEQA Statement of Reasons for the Remedial Action Plan. According to the Statement of Reasons, PG&E completed plant and wildlife surveys and wetland delineation at the remediation site. PG&E has a standing permit with the Service that allows certain work activities in the vicinity of Elderberry shrubs at the remediation site. According to the Statement of Reasons, the site does not provide suitable habitat for any Federally or state-listed plant species but does provide potentially suitable habitat for five Federally-listed animal species, in addition to one special-status plant and 10 additional special-status animal species.

Reclamation supplemented PG&E's research by consulting the Service's online Information, Planning, and Conservation System (IPaC), and the California Natural Diversity Database (CNDDB), maintained by CDFW and its Biogeographic Information and Observation System (BIOS) mapping complement, for the presence of species Federally listed as Threatened or Endangered under the Endangered Species Act. In addition to the Federally-listed species reported in the Statement of Reasons, the IPaC report indicated the potential for the following species to occur in the general project area: the California red-legged frog (*Rana draytonii*), yellow-billed cuckoo (*Coccyzus americanus*), conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), Delta smelt (*Hypomesus transpacificus*), giant garter snake (*Thamnophis gigas*) and slender orcutt grass (*Orcuttia tenuis*). None of the aforementioned species have

Critical Habitat in the project area. The CNDDB BIOS output identified least bell's vireo (*Vireo bellii pusillus*), and Central Valley steelhead (*Oncorhynchus mykiss irideus*) as also occurring in the project area; least bell's vireo was noted as "possibly extirpated".

The California red-legged frog is widely accepted to have been extirpated from the Valley floor and is not anticipated to be present in the site area. Vernal pool species (vernal fairy shrimp, vernal pool tadpole shrimp and conservancy fairy shrimp) are not anticipated to be impacted by the work, due to the lack of vernal pool habitat on-site. Although the yellow cuckoo is found in riparian woodlands, it requires a minimum 1.5 liner mile corridor of contiguous forest and is therefore not anticipated to be present at the site. Central Valley steelhead are not anticipated to be impacted due to commitments in permits and monitoring associated with site discharges. Migratory birds are anticipated to be largely unaffected by the project. In addition, PG&E has a standing protection plan for migratory bird species.

BMPs for the protection of biological resources, to be included in the CBMMP, include, but are not limited to, the following:

- PG&E will employ a qualified biologist to conduct biological resources orientations for all site workers. In particular, PG&E will provide training to the tree removal foreman on nesting endangered bird protection regulations, and the appropriate actions to take if a nesting bird is encountered during tree removal activities.
- PG&E's biologist will conduct a pre-construction survey of the remediation site for the presence of protected plant and animal species, no more than one week prior to the start of construction, and will flag areas of concern to these species for avoidance. If determined appropriate, PG&E will develop a plan for additional biological resource surveys to be conducted during construction, and/or avoidance buffers, in cooperation with the California Department of Fish and Wildlife (CDFW) and the US Fish and Wildlife Service (the Service).
- If habitat for the yellow warbler and yellow-breasted chat is found within a 250-foot radius of the remediation site during the pre-construction survey, excavation and ISS areas will be restricted to areas outside riparian wetlands.
- If active yellow warbler and yellow-breasted nests are identified within the survey area, a non-disturbance buffer zone, developed in conjunction with the CDFW, will be established around the nest site.
- If the biologist finds active nests (containing eggs or young) for raptors within a 0.5-mile radius of the remediation site, a no-disturbance buffer zone will be established around the nest site. The buffer zone will be delineated with exclusionary fencing, flagging and/or signage, as appropriate; its width will be determined by the biologist in conjunction with CDFW. The buffer zone will be maintained until the young have fledged (as determined by the biologist). Work will cease if abandonment behavior is noted by the biologist.
- If the biologist finds habitat for the western pond turtle, excavation and ISS will be restricted to areas outside the habitat (Sacramento River and riparian wetlands).
- If western pond turtles are found during the preconstruction surveys, the biologist will consult with the CDFW on whether or not to capture and relocate the turtles. The biologist will also assess the need, and appropriate frequency for, additional surveys during construction activities.

- The biologist will verify compliance with the terms of PG&E's Valley elderberry longhorn beetle (VELB) Conservation Program, as follows:
 - Identify and flag elderberry shrubs within 20 feet of the worksite. Elderberry shrubs in inaccessible areas within 20 feet of the work site will be flagged at the fence line.
 - Provide and document worker briefings on the presence of the shrubs and the avoidance, protection, and minimization measures.
 - If ground disturbance occurs within 20 feet of an identified shrub, or if any other direct impact occurs (e.g., pruning or accidental damage), report the information to PG&E's VELB Program Manager. Any necessary removal of an elderberry shrub will require the PG&E's VELB Program Manager's pre-approval and review for consistency with the terms of the existing or equivalent permit.
- In the event of an emergency on the project that has the potential to affect listed species, PG&E will contact CDFW and the Service, as appropriate, after taking appropriate emergency response action, and will comply with any additional biological resource protection measures requested.
- PG&E will submit a post-construction report to the CDFW and USFWS containing pertinent data with regard to successes and failures of meeting project mitigation measures, an explanation of any failure to meet such measures, and known occurrences of incidental take effects.

PG&E will revise the limits of remediation to align with the limits of any buffer zones, determined by the pre-construction survey or subsequent surveys, as necessary to protect potentially impacted species.

Reclamation's determination that there is no likelihood that the project will affect Indian Trust Assets is included as Attachment 1.

The cultural resource investigation resulted in a finding of no historic properties affected, with which the State Historic Preservation Office (SHPO) offered no objection. The SHPO specifically concurred with Reclamation's finding that the remains of the former Cinderella Motel are not eligible for inclusion on the National Register of Historic Places. Reclamation's determination, including the SHPO response, is included as Attachment 2. Regardless, BMPs for the protection of cultural resources, to be included in the CBMMP, include, but are not limited to, the following:

- A qualified archaeologist will be retained to conduct cultural resources orientations for all construction site workers. The archaeologist will also respond to any accidental discoveries of cultural resources during ground-disturbing activities and may temporarily suspend work for assessment and protection and/or recording activities, as appropriate.
- A qualified paleontologist will be retained to respond to any resource discoveries during ground-disturbing activities. The paleontologist may stop work to assess the discovery and will identify the specimen to the lowest taxonomic level and curate it into an institutional repository, as appropriate.
- A Native American monitor from the Redding Rancheria will be retained to respond should prehistoric and Native American human remains be discovered during ground disturbing activities.

- In the event of accidental discovery or recognition of any human remains, work will immediately be suspended at the Site or any nearby areas and the County Coroner notified to determine the origin of the remains. If the County Coroner determines that the human remains are Native American, s/he will contact the Native American Heritage Commission within 24 hours. Additionally, procedures prescribed under CEQA Guidelines (CCR Section 15064.5(e) and Health and Safety Code Section 7050.5) will be implemented to ensure compliance with the appropriate California laws and regulations for protecting cultural resources. The qualified archaeologist, Native American monitor, and DTSC will also be notified of the situation.
- In the event of discovery of any cultural resources, DTSC will be notified of the discovery. Ongoing updates and collaboration regarding appropriate actions will be performed in accordance with the CBMMP. The qualified archaeologist, Native American monitor, and PG&E will coordinate and collaborate on establishing the appropriate procedures regarding the management of the discovery of Native American human remains and cultural resources to be documented in the plan. The CBMMP will be provided to DTSC for review prior to implementation of remediation activities.

Access to the remediation site will be restricted by security fencing and personnel during the construction phase. PG&E will conduct air sampling and real-time monitoring during construction activities for the protection of site workers and the general public. PG&E will minimize diesel emissions through the preferential use of Tier 3 and Tier 4 equipment, retrofitted engines, ultra-low or low sulfur diesel or alternative fuels, or filter/treatment devices. Lower emission late-model trucks (post-2006) will be utilized to the extent possible. PG&E will instruct truck drivers to maintain their tire inflation in accordance with manufacturer's recommendations. Diesel equipment and trucks will not be allowed to idle for more than five minutes. PG&E will also institute noise and vibration controls and monitoring.

PG&E will obtain all necessary permits to complete the work, including but not limited to those pertaining to site access and safety, fugitive dust, stormwater discharge, working in floodplains, well installation and abandonment, grading, streambed alteration, and groundwater discharge. Prior to and during construction, installation and maintenance of temporary controls will be completed to meet applicable Federal, state, and local laws and regulations designed to protect the environment. Temporary controls include, but are not limited to: traffic control, operational zone control, stormwater management and erosion and sediment control, excavation water management, dust control, and waste spill control. Background air, noise, and vibration monitoring will be performed as specified in the applicable monitoring plans. Additional temporary fencing will be installed, as needed, to delineate work areas and limit Site access. Screening materials will be included on all fencing to limit visual access from the fence line.

To the extent possible, excavated contaminated soil will be direct-loaded into haul trucks and immediately transported to an approved disposal facility. In the event that stockpiling of contaminated soil is required, care will be taken to make sure that the stockpiled soil is not in direct contact with the ground surface. In the event that stockpile soil is placed over bare ground, plastic sheeting will be placed under the stockpiled soil. Stockpiled soil will also be covered with plastic sheeting and secured with sandbags or other anchoring devices.

Liquid waste generated during the remedial action will be properly stored in containers (drums or totes) or a temporary tank, profiled, and disposed of at a PG&E-approved offsite facility permitted to accept the waste or, if it meets the discharge requirements, based on sampling results, disposed of through the City of Red Bluff's sanitary sewer system. Although dewatering is not anticipated to be a component of the project, any groundwater collected from unforeseeable excavation dewatering will be temporarily stored on site to allow sediment to settle and will be tested, and potentially treated, prior to discharge. Decontamination water generated during remediation activities may be disposed of either via the sanitary sewer, applied to the excavated soil in the haul trucks to assist with dust suppression, or disposed of at an offsite treatment facility. Precautions will be taken to prevent ponding and/or migration of the dust control agent.

Materials hauled off-site will be properly secured and protected from the elements. Trucks will be loaded in daylight hours. No trucking will be conducted under inclement weather conditions. Vehicles that have encountered contamination will be cleaned prior to leaving the site. Vehicles that enter areas infested by invasive species, or are transporting invasive species, will be cleaned to remove soil, seeds, and plant parts prior to leaving the site.

Soil to be used as backfill will be tested for quality and approved for use by DTSC. Although groundwater is not expected to be encountered during excavation activities, any potable water supply wells that are encountered during the course of remedial activities will be abandoned in accordance with Tehama County guidelines. Should groundwater enter the excavation, it will be removed and properly disposed of offsite at a permitted treatment facility, discharged to the City of Red Bluff's sanitary sewer system following sampling, or used for dust control. All contaminated materials will be disposed of in compliance with local, state, and federal regulations. Post-construction erosion control monitoring and maintenance will be conducted for a period of at least one year. A soil management plan will be prepared to address the handling/management of residual soil contamination.

Existing vegetation within the work area will be removed or reused as mulch. Invasive plant materials will be contained and disposed of at an appropriate disposal facility. Post-construction planting zones will be revegetated at a time when the plant materials have the greatest chance for successful establishment. Species used will be appropriate to the general location and site-specific conditions and selected in concert with the intended use and the applicable streambed alteration agreement. PG&E will perform short-term monitoring and maintenance of the revegetated areas. The maintenance and monitoring will be terminated if success criteria are met by the third growing season following planting:

- Live native plants in all areas revegetated (some minor gaps expected) with an approximate spacing of an established native live plant (planted or recruit) every 4 to 8 feet on center.
- Minimum relative cover of native vegetation (i.e., percent of ground covered by vegetation) of 50 percent.
- Weeds are not substantially suppressing or displacing the growth of native riparian vegetation.
- Supplemental irrigation or replacement plantings have not been required during the last growing season.

Monitoring surveys will be conducted approximately quarterly for the first year following planting and on an annual basis thereafter. Minor corrective measures may be implemented in conjunction with the surveys and may include replacement of revegetation plantings, hand removal of invasive species, installation or removal of protective plant covers, the removal of trash and debris and the application of supplemental irrigation, although plant restoration will be scheduled to minimize irrigation requirements. The use of herbicides for weed control will be avoided.

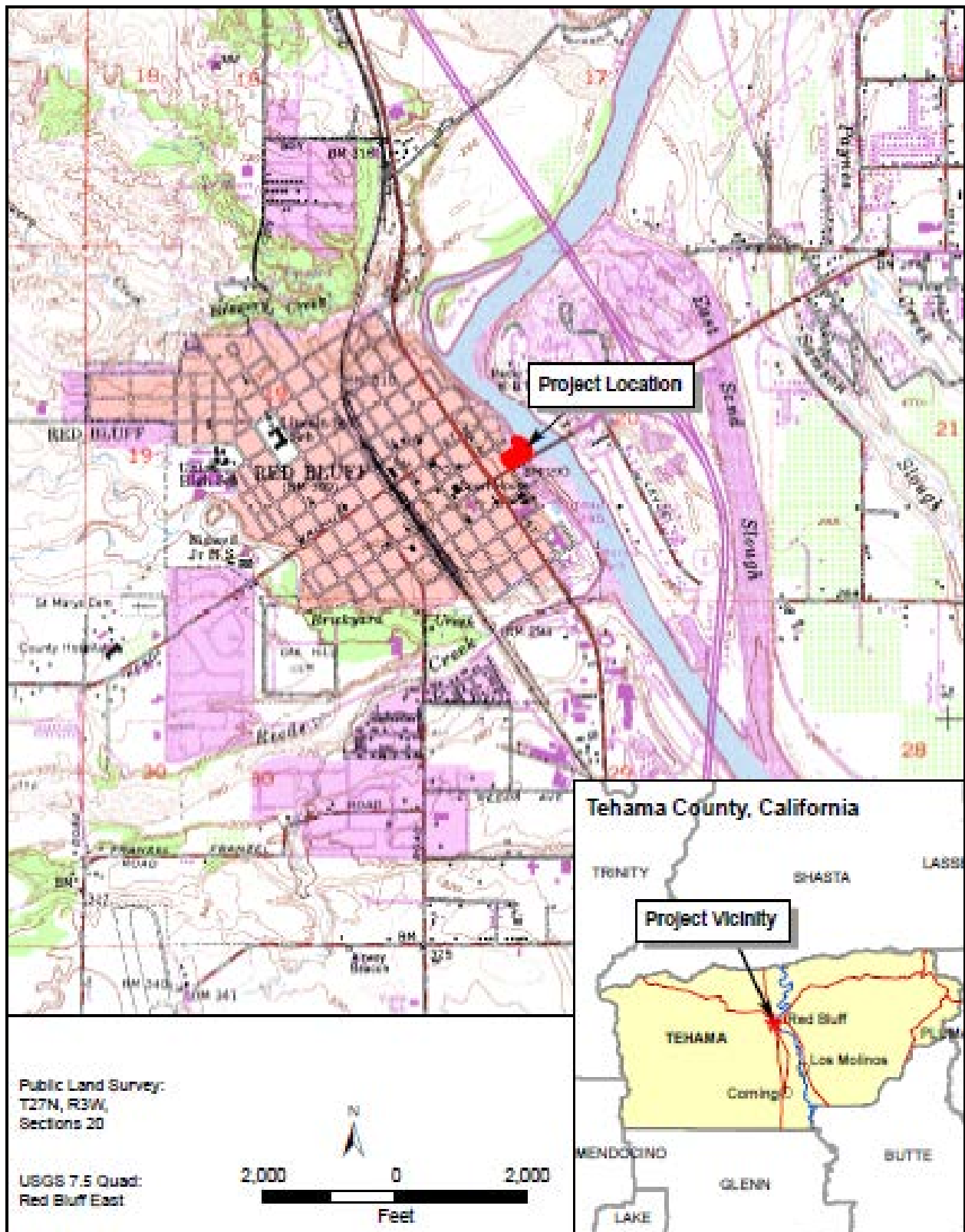


Figure 1. Project Vicinity Map depicting location of former Red Bluff manufactured gas plant remediation site, courtesy North State Resources, Inc. Conceptual Revegetation Plan.

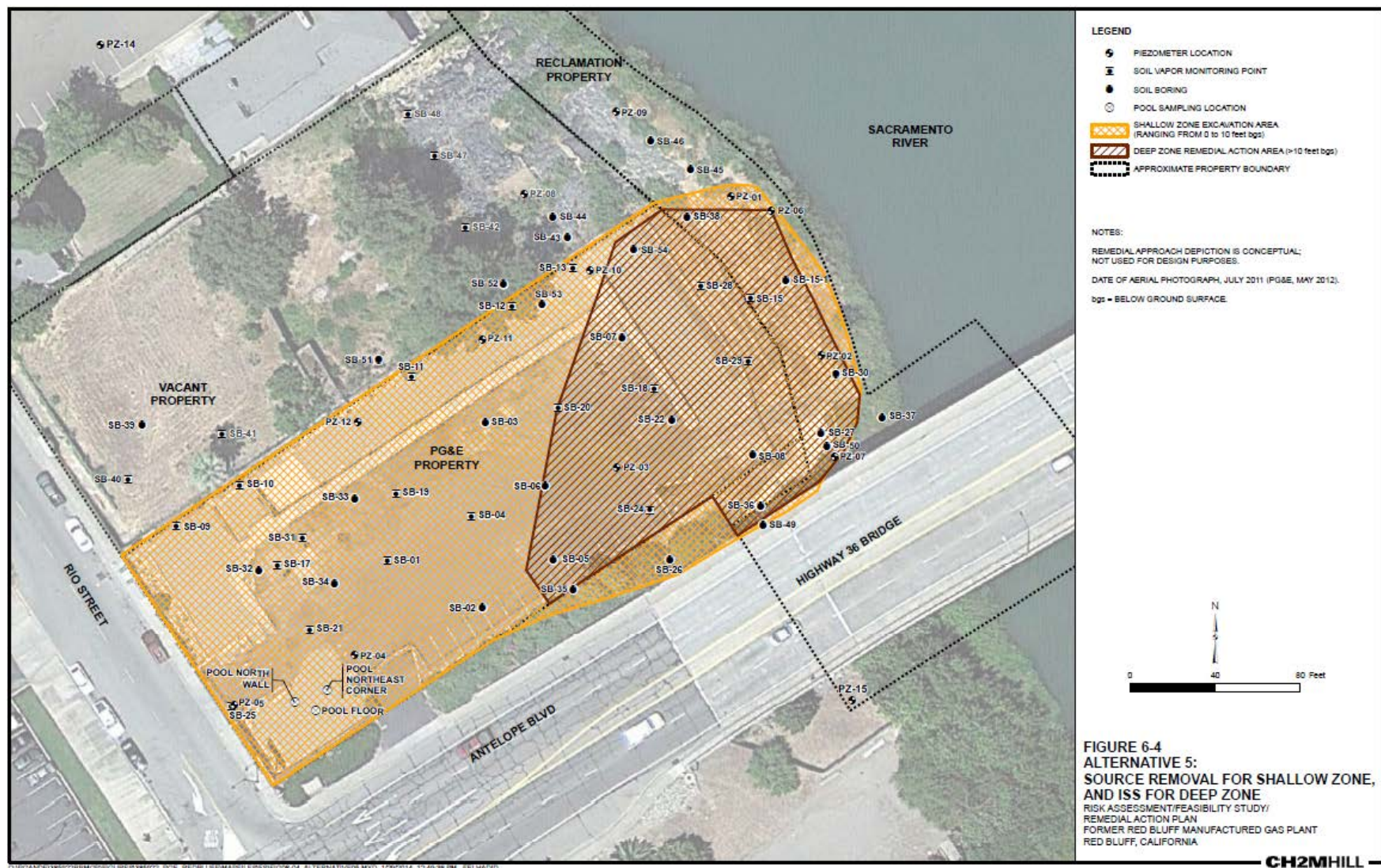


Figure 2A. Planned locations of shallow soil excavation and deep soil ISS treatment.



Figure 2B. Revegetation map for Former Red Bluff Manufactured Gas Plant remediation site.



Photograph 1. View of Planting Zones 1 & 2 looking northwest from Antelope Blvd.



Photograph 2. Planting Zone 1 on the right bank of Sacramento River, looking north.



Photograph 3. Location of Planting Zone 2, looking north from Antelope Blvd. bridge over the Sacramento River.

Attachment 1. Indian Trust Asset Review



Simon, Megan <msimon@usbr.gov>

ITA Review - PG&E Former Manuf. Gas Plant - Red Bluff

1 message

Simon, Megan <msimon@usbr.gov>
To: Paul Zedonis <pzedonis@usbr.gov>

Mon, May 16, 2016 at 4:31 PM

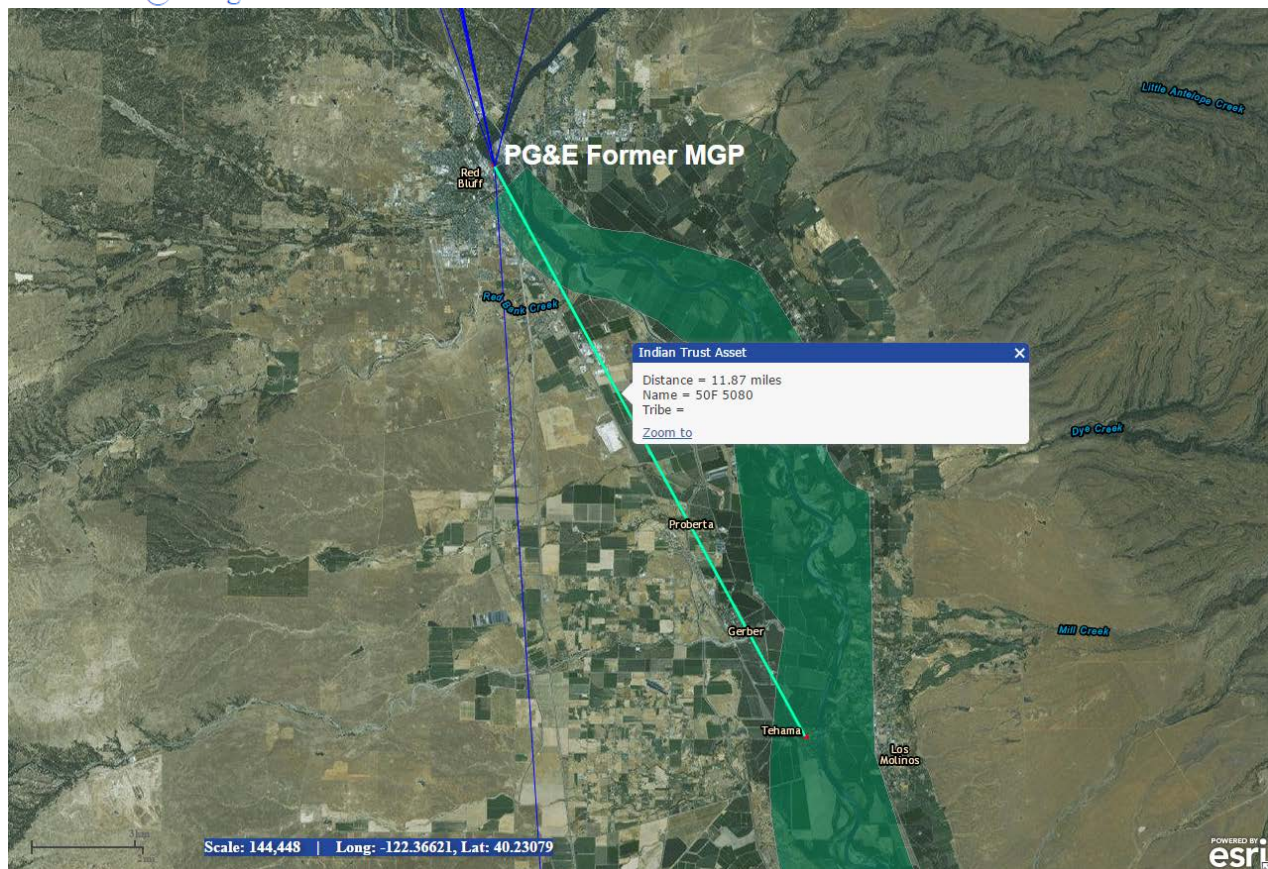
I have examined the proposal for the referenced project and have determined that this project is at least 11 miles from the closest Indian Trust Asset.

I have determined that there is no likelihood that this project will adversely impact Indian Trust Assets.

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Megan K. Simon

Natural Resources Specialist
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Attachment 2. Cultural Resource Compliance (page 1 of 4)

**CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch**

MP-153 Tracking Number: 16-NCAO-095

Project Name: PG&E Red Bluff Gas Plant Remediation Project

NEPA Document: NCAO-CEC-16-07

MP 153 Cultural Resources Reviewer: Mark Carper

NEPA Contact: Megan Simon

Determination: No Historic Properties Affected

Date: August 25, 2016

The proposed project entails ground disturbing remediation activities on a parcel of Federal land that is managed by Reclamation in the town of Red Bluff, California. This parcel of land adjoins the site of PG&E's Red Bluff Manufactured Gas Plant. Reclamation determined that authorization of the proposed project is an undertaking as defined in 36 CFR § 800.16(y) and a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a).

PG&E has requested an encroachment permit to conduct the remediation activities. The Plant operated between 1874 and 1947 at that site. After the Plant was shut down, the property was used for natural gas distribution until 1962, when the Cinderella Motel was built. The motel operated on the site until 2011, when PG&E re-acquired the location and demolished the motel. Remediation actions planned for the PG&E property are guided by a potential residential exposure scenario and would include excavation of the top 10 feet of contaminated soil in most locations. In areas where high volatile organic concentrations are found at the 10-foot depth, excavation will be extended deeper to remove potential sources of soil vapor. Within lands owned by Reclamation, excavation will be limited to 13 to 16 feet below the current ground surface. For contamination found below these excavation levels, in situ solidification (ISS) will be used. ISS uses a solidifying reagent which immobilizes contaminants in impacted soils below the depth of excavation. Site restoration on the PG&E property will include erosion control seeding, road and parking area surfacing (gravel), driveway resurfacing (asphalt), and fencing. Site restoration on the Reclamation property will include re-vegetation and construction of monitoring wells and

Attachment 2. Cultural Resource Compliance (page 2 of 4)

**CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch**

temporary soil vapor monitoring probes to evaluate post-remediation and soil vapor concentrations

In an effort to identify historic properties in the APE, PG&E contracted CH2M HILL, Inc. (CH2MH) to conduct cultural resource inventories for the proposed project location. The inventory included a record search and pedestrian survey. CH2MH assessed the project APE as highly disturbed with concrete and brick fill materials ranging in depth from 3 to 28 feet below ground surface, evincing a negligible potential for buried historic properties. CH2MH documented a single cultural resource within the APE. This consists of the concrete foundation for the now demolished Cinderella Motel. CH2MH evaluated the site for eligibility for National Register of Historic Places inclusion and recommended it ineligible as it failed to meet any of the requisite criteria. Reclamation agreed with this recommendation.

Pursuant to the regulations at 36 CFR § 800.3(f)(2), Reclamation identified the Paskenta Band of Nomlaki Indians and Redding Rancheria as Indian tribes who might attach religious and cultural significance to historic properties within the APE. Reclamation sent letters to the tribe May 11, 2016, inviting their participation in the Section 106 process, and requesting their assistance in the identification of sites of religious and cultural significance or historic properties that may be affected by the proposed undertaking pursuant to 36 CFR § 800.4(a)(4). No responses were received.

Reclamation initiated consultation with California the State Historic Preservation Officer (SHPO) on August 1, 2016 with a notification of a determination of no historic properties affected for the proposed project. SHPO concurred with the determination in a letter dated August 24, 2016.

I concur with Item 8 on NCAO-CEC-16-07. The proposed action would have no significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places.

This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

Attachment 2. Cultural Resource Compliance (page 3 of 4)

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY

EDMUND G. BROWN, JR., Governor

OFFICE OF HISTORIC PRESERVATION DEPARTMENT OF PARKS AND RECREATION

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SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
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August 24, 2016

In reply refer to: BUR_2016_0801_002

Anastasia T. Leigh, Regional Environmental Officer
Attention: Mark Carper
U.S. Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

RE: Sec 106 Consultation for the PG&E Red Bluff Gas Plant Remediation Project,
Tehama County, California (Project # 16-NCAO-095)

Dear Ms. Leigh:

The Office of Historic Preservation received on August 01, 2016 your letter initiating consultation on the above referenced project to comply with Section 106 of the National Historic Preservation Act of 1966 (as amended) and its implementing regulations at 36 CFR Part 800. The Bureau of Reclamation (Reclamation) is seeking my comments on the delineation of their Area of Potential Effects (APE), historic property identification efforts, eligibility determination, and finding of effect for the PG&E Red Bluff Gas Plant Remediation Project located within the City of Red Bluff, Tehama County, California. Along with your letter, you submitted the following documents to support Reclamation's finding of effect:

- *Cultural Resources Survey for Former Red Bluff Manufactured Gas Plant Site, Red Bluff, California* (CH2M Hill, Inc. 2016)

The proposed undertaking would issue an encroachment permit to PG&E to conduct remediation activities on Reclamation-managed land. This parcel of land adjoins the site of PG&E's Red Bluff Manufactured Plant, which operated from 1874 to 1947, after which the property was used for natural gas distribution until 1962. The proposed remediation activities would include excavation of contaminated soil from approximately 10 to 16 feet below the current ground surface. Contamination below this depth will be treated with an in situ solidification (ISS) reagent. Additional activities on the PG&E property will include erosion control seeding, gravel surfacing and asphalt resurfacing, and fencing. Reclamation has defined the APE as approximately 1.35-acres, encompassing the entire remediation project area. The vertical APE has been defined as up 16 feet in depth.

Efforts to identify historic properties that may be affected by the undertaking included a records search, pedestrian survey, and Native American consultation. Cultural resources records searches were conducted by PG&E at the Northeast Information Center in 2008 and updated by the Department of Toxic Substances Control (DTSC) in 2013. Both records searches

Attachment 2. Cultural Resource Compliance (page 4 of 4)

Ms. Leigh
August 24, 2016
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indicated that no cultural resources have been previously recorded within ¼-mile of the APE, although the NEIC indicated that the area is considered very sensitive for cultural resources. CH2M Hill, Inc. (CH2M) conducted a pedestrian survey of the APE on July 30, 2013, during which one resource was identified – the footings and foundations of the Cinderella Motel. The motel was built in the site in 1962 and was demolished in 2011. Reclamation sent letters the Paskenta Band of Nomlaki Indians and the Redding Rancheria on May 11, 2016, to which no responses have been received. Reclamation has stated that they will address any concerns that may arise and will notify this office, as appropriate.

Reclamation has determined that the Cinderella Motel site is not eligible for listing on the National Register as it does not meet any of the eligibility criteria, and that there are no historic properties located within their APE. Furthermore, Reclamation has determined that there is a low possibility of uncovering intact archaeological deposits as a result of this undertaking as the APE has been highly disturbed and is covered in fill materials from 3 to 28 feet in depth. Therefore, they are seeking my concurrence on a finding of *no historic properties affected* for this undertaking. After reviewing the submitted materials, I have the following comments:

- Pursuant to 36 CFR 800.4(a)(1), the APE appears appropriately defined.
- Pursuant to 36 CFR 800.4(b), Reclamation's historic property identification efforts for this undertaking appear to be adequate.
- Pursuant to 36 CFR 800.4(c)(2), Reclamation has determined the Cinderella Motel site is not eligible for the National Register. **I concur.**
- Pursuant to 36 CFR 800.4(d)(1), it appears that there are no historic properties located within the project area for this undertaking and, therefore, **I do not object** to a finding of *no historic properties affected* for this undertaking.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, Reclamation may have additional future responsibilities for this undertaking under 36 CFR Part 800. For more information or if you have any questions, please contact Koren Tippett at (916) 445-7017 or koren.tippett@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer

Attachment 3. Remediation Project Mitigation Measures

Resource	Mitigation Number	Mitigation Measure	Compliance Status, February 2016 Remedial Design and Implementation Plan
Air Quality	3.1	Standard Mitigation Measures to reduce PM ₁₀ and PM _{2.5} include the following: - During grading, ground disturbance or excavation operations, fugitive dust emissions will be controlled by regular watering or other dust preventative measures. - Ambient air monitoring will be conducted to determine whether contaminated soils are released off-site during remedial work and to ensure the project complies with the state and federal air quality regulations. - Work areas and haul routes will be periodically swept to prevent dust generation during soil hauling activities. - All grading or open excavating activities shall cease when winds exceed 15 miles per hour averaged over 1 hour. - Plastic sheets will be used to cover stockpiled soil and may be used to cover other exposed areas, if necessary. - If dust levels cannot be controlled to below action levels with implementation of these measures, the work will stop until additional controls are implemented to reduce dust generation from the work area.	This mitigation measure (MM) will be complied with during remedial construction activities. The requirements of this MM are repeated in the Remedial Design and Implementation Plan (RDIP) (see RDIP Section 3.2.4 and Air Monitoring Plan) and will be enforced by Pacific Gas and Electric (PG&E) during remedial construction activities.
Air Quality	3.2	Standard Mitigation Measures to reduce implementation of excavation, backfilling, and soil transport that require the use of heavy equipment and trucks associated with the project will generate ozone and ozone precursor(s). However, the following standard mitigation measures will reduce the amount of ozone and ozone precursors (NOx and ROG) generated: - Reducing heavy equipment idling time. Reduce diesel equipment idling time to no more than 10 minutes of inactivity. - Reducing truck idling time. Reduce truck idling time to a maximum of 5 minutes while on-site waiting to load or unload. - Properly sized equipment. Equipment engines too large for an application burn more fuel by adding unnecessary weight. In addition, drivers may be prone to use the excess horsepower needlessly, causing additional fuel consumption. An undersized engine easily becomes overworked, leading to excess fuel consumption and accelerated engine wear. Equipment selection will be based on the anticipated requirements of the remedial action. - Improving equipment maintenance. Improper wheel alignment and improperly inflated tires on trucks can adversely affect fuel efficiency by 3 to 4 percent. Hauling trucks will be maintained in accordance with the manufacturer's recommendations. Truck drivers will be instructed to check their tire inflation in accordance with tire manufacture's recommendations. - Improving operator training. Example - An excavator operator who needlessly shifts hydraulic levers to lift additional weight when the equipment is already operating at its maximum capacity can save 225 gallons of fuel a year by eliminating this practice 1 hour per day. During the tailgate safety meetings, equipment operators will be provided overview training on ways to minimize excessive fuel consumption. - Use heavy equipment and trucks that are either equipped with a diesel oxidation catalyst and diesel particulate filter or that meet the Tier 3 emissions standards. - Where possible, use transport trucks with a model year of 2006 or newer.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 4 and Air Monitoring Plan) and will be enforced by PG&E during remedial construction activities
Air Quality	3.3	The Tehama County Air Pollution Control District (TCAPCD) adopted Rule 4:24 which addresses fugitive dust emissions and applies to construction sites. Several elements of Rule 4:24, such as the protocols for mitigation of potential fugitive dust emissions have been incorporated into this RAP. The TCAPCD also requires that specified projects obtain a Fugitive Dust Permit to Operate and requires the use of reasonably available control measures to minimize fugitive dust. PG&E will comply with the applicable provisions of TCAPCD Rule 4:24 for fugitive dust emissions and obtain a Fugitive Dust Permit.	This MM will be complied with during remedial construction activities. Prior to initiation of construction activities, PG&E will submit a Fugitive Dust Permit application to the TCAPCD. The requirements of this MM are repeated in the RDIP (see RDIP Section 2.4.1, and Air Monitoring Plan)
Air Quality	3.4	PG&E will implement odor control measures as necessary during the excavation, solidification and stabilization, and soil haul-out operations, in conformance with TCAPCD Rule 6:2 (aeration of contaminated soil) and TCAPCD Rule 4:4 (nuisance air emissions) through measures that may include the following: - Applying a water mist, possibly with environmentally safe additives; - Applying environmentally safe chemical suppressants or vapor suppressing foam; - Covering exposed areas with plastic sheeting or tarp.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.2.5, and Air Monitoring Plan) and will be enforced by PG&E during remedial construction activities

Resource	Mitigation Number	Mitigation Measure	Compliance Status, February 2016 Remedial Design and Implementation Plan
Biological Resources	4.1	A qualified biologist acceptable to both the (United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be hired to conduct a preconstruction survey no more than 1 week prior to the beginning of construction activities. The biologist in consultation with CDFW or USFWS will determine whether additional surveys will be needed during construction activities (and their recommended frequency). The biologist shall re inventory animals and plants subject to vegetation clearance and/or grading for the occurrence of listed species and species of concern. The locations for listed plant and / or animal populations shall be flagged for avoidance. The width of buffer zones should be developed in consultation with the CDFW and USFWS. The buffer zone will be maintained until after the project activities are completed (or as determined by the qualified biologist and / or CDFW). The buffer zone will be delineated with exclusionary fencing and flagging and/or signage, as appropriate. Preconstruction survey results shall be sent to the Department of California Fish and Wildlife Attention: CEQA Review, 601 Locust Street, Redding, CA 96001. If special-status species are observed during any surveys, the Department requests that California Natural Diversity Database (CNDDb) forms be filled out and sent to Sacramento and a copy of the form be sent to the address above. Instructions for providing data to the CNDDb can be found at http://www.dfg.ca.gov/biogeodata/cnddb/. The following special-status animal or plants species the biologist survey will included, but not limited to the following: The Valley Elderberry Longhorn Beetle has a moderate potential to occur. The Western Pond Turtle has a moderate to high potential to occur due to available habitat in the study area. There is a moderate potential for Townsend's big-eared bat and pallid bat to occur and a low to moderate potential for western red bat to occur. The Sacramento River provides habitat for all species identified in the study area, including several federal and state threatened species Fish: • Green sturgeon southern Distinct Population Segment (DPS) (<i>Acipenser medirostris</i>), federal threatened, California species of special concern; • Central Valley steelhead DPS (<i>Oncorhynchus mykiss irideus</i>), federal and state threatened; • Central Valley spring-run Chinook salmon Evolutionary Significant Unit (ESU) (<i>Oncorhynchus tshawytscha</i>), federal and state threatened; • Sacramento River winter-run Chinook salmon ESU (<i>Oncorhynchus tshawytscha</i>) , federal and state endangered; • Central Valley fall/late fall-run Chinook salmon ESU (<i>Oncorhynchus tshawytscha</i>), federal species of concern, California species of special concern; • River lamprey (<i>Lampetra ayrestris</i>), California species of special concern; • Hardhead (<i>Mylopharodon conocephalus</i>), California species of special concern. Since the project has a potential for erosion, the fish in the Sacramento River were listed above. There are additional special-status animal or plants species that the project might impacted that were included in an April 2013 Biological Resources Survey Report conducted by North State Resources.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.4) and will be enforced by PG&E during remedial construction activities
Biological Resources	4.2	Comply with the terms of PG&E's Valley Elderberry Longhorn Beetle (VELB) Conservation Program, as follows: • Identify and flag elderberry shrubs within 20 feet of the worksite for identification of the elderberry shrubs at the site. • Provide worker briefings about the presence of the shrubs and the avoidance, protection, and minimization measures. Document worker briefings using the PG&E tailboard form. • If ground disturbance occurs within 20 feet of an identified shrub, or if any other direct impact occurs (for example, pruning or accidental damage), report the information to PG&E's VELB Program Manager using the PG&E VELB Habitat Impact Report Field Form. If removal of an elderberry shrub is necessary, removal will be authorized by PG&E's VELB Program Manager to be consistent with the terms of the existing or equivalent permit.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.4) and will be enforced by PG&E during remedial construction activities

Resource	Mitigation Number	Mitigation Measure	Compliance Status, February 2016 Remedial Design and Implementation Plan
Biological Resources	4.3	If the qualified biologist discussed in Mitigation Measure 4.1 finds habitat for the western pond turtle, then restrict excavation and in situ stabilization to areas outside those area (that is, the Sacramento River and riparian wetlands). If pond turtles are found during the preconstruction survey, the qualified biologist will assess whether the turtles require capture and movement to nearby suitable habitat undisturbed by the project construction, whether additional surveys will be needed during construction activities (and their recommended frequency), or both. If western pond turtles are found during the preconstruction surveys, the decision to capture and move turtles will be made in consultation with the CDFW.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.4) and will be enforced by PG&E during remedial construction activities
Biological Resources	4.4	If the qualified biologist discussed in Mitigation Measure 4.1 finds habitat for the yellow warbler and yellow-breasted chat within a 250-foot radius of the site, then excavation and in situ stabilization areas will be restricted to areas outside riparian wetlands. If active nests are identified within the survey area, non-disturbance buffer zone will be developed in conjunction with the CDFW will be established around the nest site.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.4) and will be enforced by PG&E during remedial construction activities
Biological Resources	4.5	If the qualified biologist discussed in Mitigation Measure 4.1 finds active nests (nests containing eggs or young) for raptors within a 0.5-mile radius from the site, then a no-disturbance buffer zone will be established around the nest site. Although the Biological Resources Characterization for the Red Bluff MGP Project (April 2013) indicated a low potential for bald eagle to occur within the study area, nesting and roost trees suitable to support bald eagle are present west of the site, and upstream and downstream from the site. The width of the buffer zone will be determined by the qualified biologist. The buffer zone will be maintained until the young have fledged (as determined by the qualified biologist). The buffer zone will be delineated with exclusionary fencing and flagging and/or signage, as appropriate. Work will be allowed to continue as long as no abandonment behavior is noted by the biologist. No-disturbance buffer zones will be developed in conjunction with the CDFW. Surveys for nesting raptors and birds protected by the Migratory Bird Treaty Act must occur between February 1 st and August 31 st , no more than one week prior to the beginning of construction activities. Preconstruction surveys results shall be sent to the Department at Attention: CEQA Review, 601 Locust Street, Redding, CA 96001. If special-status species are observed during any surveys, the Department requests that CNDDDB forms be filled out and sent to Sacramento and a copy of the form be sent to the address above. Instructions for providing data to the CNDDDB can be found at http://www.dfg.ca.gov/biogeodata/cnddb/ .	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.4) and will be enforced by PG&E during remedial construction activities
Biological Resources	4.6	The CDFW and USFWS shall be contacted after taking appropriate action regarding emergency response in the event of an emergency on the project, which has the potential to affect listed species. During subsequent activities related to the emergency, the CDFW and USFWS may require additional biological resource protection measures. Within 45 calendar days of completion of the project, a brief post-construction report shall be submitted to the CDFW and USFWS. The Report shall include the following information: • Dates that the project construction occurred. • Pertinent data concerning the applicant's success in meeting project mitigation measures and an explanation of failure to meet such measures, if any. • Known occurrences of incidental take effects on listed species habitat including the specific number of habitat acres disturbed and specific number destroyed, if any. • Any other pertinent information.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.8.2) and will be enforced by PG&E during remedial construction activities
Biological Resources	4.7	Prior to implementation, the delineation of waters of the United States shall be properly surveyed and subject to verification by the Redding Regulatory Office, Sacramento District. The United States Army Corps of Engineers (Corps) will provide written verification of the boundaries of the waters of the United States subjected to its jurisdiction. After receiving written verification from the Corps, the surveyor shall clearly delineate by stakes, flagging, and / or rope or cord to minimize inadvertent degradation or loss of waters of the United States during project activities. Temporary fencing or other appropriate demarcation will be used to delineate the OHWM and RW areas to minimize disturbance of these no-impact zones during remediation. Limit excavation and in situ solidification (ISS) to areas outside those designated as waters of the United States. No excavation or ISS will occur within the temporary fencing or appropriate demarcation to delineate the ordinary high water mark and riparian wetlands.	By letter dated March 6, 2015 from the U.S. Army Corps of Engineers to PG&E, the jurisdictional boundaries of the waters of the United States have been delineated. Compliance with this aspect of the MM is complete. The remaining aspects of the MM (field demarcation, etc.) will be complied with during remedial construction activities. The requirements are repeated in the RDIP (see RDIP Section 2.4.2) and will be enforced by PG&E during remedial construction activities.

Resource	Mitigation Number	Mitigation Measure	Compliance Status, February 2016 Remedial Design and Implementation Plan
Biological Resources	4.8	Prior to implementation, the CDFW will determine whether a Lake or Streambed Alteration Agreement (LSAA), pursuant to Section 1600 et seq. of the Fish and Game Code if the riparian corridor is impacted, and an LSAA is required based on the proposed remediation area and affected vegetation and wildlife resources. A motel was located on the property from 1962 until 2011 and during that time the area between the motel and the river was maintained as a grass lawn; photos of the area during the time that the motel was in operation showing maintained lawn and a concrete boat ramp. A May 2011 letter determination from CDFW determined that PG&E's drilling of boreholes and installation of piezometers in the remediation area did not require a LSAA.	Compliance with this MM is complete. PG&E and CDFW signed a LSAA for the remedial action on August 13, 2015. PG&E will comply with the LSAA during remedial construction activities. A copy of the LSAA has been included in the RDIP as Appendix H.
Biological Resources	4.9	The design document shall incorporate the Best Management Practices (BMPs) to control erosion and sedimentation during construction activities. Straw wattles, silt fencing, or similar best management practices will be implemented along the edge of the riparian corridor to reduce the potential for sediment transport into the adjacent Sacramento River and riparian wetlands. A cutoff wall or other engineering controls might be needed to manage and control groundwater quantity and quality in areas adjacent to the Sacramento River while implementing the project activities listed above. BMPs, cutoff wall, or other engineering controls will be identified in the Design Report and subject to approval by DTSC. All BMPs shall be maintained as required to insure effectiveness. BMPs will minimize indirect impacts to federally-protected wetlands. Erosion control measures in the design documents and the Storm water Pollution Prevention Plan will address post-construction site conditions. The BMPs will continue to be in place after the project is completed and will be periodically inspected for the first year.	BMPs to control erosion and sedimentation during construction are included in the RDIP (see RDIP Section 3.6), The strategy for implementing ISS treatment to minimize the potential for transient increases in groundwater contaminant concentrations resulting from ISS treatment activities is included in the RDIP (see RDIP Section 2.10.4) BMPs to control erosion and sedimentation during post-construction site conditions are included in the RDIP (see RDIP Section 3.6 and Drawing C-8), and inspection of post-construction erosion control BMPs is included in the RDIP (see RDIP Section 3.9.3). PG&E will prepare a Storm Water Pollution Prevention Plan as required by Water Quality Order 2009-0009-DWQ, General NPDES Permit for Discharges of Storm Water Associated With Construction Activity and will comply with the permit requirements. The SWPPP will include BMPs consistent with the RDIP and the LSAA. BMPs and SWPPP will be complied with during and following remedial construction activities
Biological Resources	4.10	A tree removal crew foreman shall be given tailboard training before starting work. This training shall inform the foreman about nesting endangered bird protection regulations and the appropriate actions to take if a nesting bird is encountered during tree removal activities. This training may be provided over the phone and an email memorializing the training discussion shall be submitted to the foreman, PG&E project manager, DTSC, and PG&E biologist. - If an active nest is encountered during tree removal, work will be stopped and appropriate exclusions will be employed to avoid any further harm to the species/nest. - If an active nest is encountered, non-disturbance buffer zone will be developed in conjunction with the CDFW will be established around the nest. Buffer distances are species-dependent and can range from 50 feet to up to ½-mile. Work in other areas may continue if no harm or potential nest abandonment will occur.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Sections 2.4.2, 2.5 and 3.4) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.1	A qualified archaeologist will be designated and retained prior to construction to respond to accidental discoveries during ground-disturbing activities. A qualified archaeologist will need to be HAZWHOPER trained and currently field certified to enter the exclusion zone.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.2	A qualified archaeologist will conduct cultural resources orientations for all construction site workers.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities

Resource	Mitigation Number	Mitigation Measure	Compliance Status, February 2016 Remedial Design and Implementation Plan
Cultural Resources	5.3	In the event that historical resources are discovered during ground disturbing activities, work will temporarily be suspended and a qualified archaeologist contact to assess the situation. DTSC staff will also be notified and informed of the situation. The qualified archaeologist will investigate the significance of the find and in collaboration with DTSC will identify and implement any mitigation measures deemed necessary to record and/or protect the historical resource(s).	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.4	In the event of the accidental discoveries of archaeological resources, work will be temporarily suspended and a qualified archaeologist will be contacted to assess the discovery. DTSC staff will also be notified and informed of the situation. The qualified archaeologist will investigate the significance of the find and in collaboration with DTSC will identify and implement any mitigation measures deemed necessary to record and/or protect the cultural resources.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.5	A delegated Native American monitor from the Redding Rancheria will be designated and retained prior to construction to respond to prehistoric and Native American human remains discovered during ground disturbing activities. The Native American monitor will need to be HAZWOPER trained and currently field certified to enter the exclusion zone.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.6	The qualified archaeologist, Native American monitor, and PG&E will coordinate and collaborate on establishing appropriate procedures regarding the management of the discovery of Native American human remains and cultural resource	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.7	If any paleontological resources are encountered during the course of ground disturbing activities, activities shall be temporarily suspended and a qualified paleontologist shall be contacted to assess the discovery. The qualified paleontologist shall identify the specimen to the lowest taxonomic level and curated into an institutional repository. DTSC staff will also be notified, informed, and collaborate with the decision making process on this situation.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Cultural Resources	5.8	In the event of accidental discovery or recognition of any human remains work will immediately be suspended at the site or any nearby areas and the County Coroner notified to determine its origin. If the County Coroner determines that the human remains are Native American, he will contact the NAHC within 24 hours. Additionally, procedures prescribed under CEQA Guidelines, CCR section 15064.5(e) and H&SC section 7050.5 will be implemented to ensure compliance with the appropriate California laws and regulations in protecting cultural resources. The qualified archaeologist, Native American monitor, and DTSC must also be notified of the situation.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.5) and will be enforced by PG&E during remedial construction activities
Greenhouse Gas Emissions	7.1	Will be used at the site during project activities to minimize the generation of GHG emissions include: - Reducing heavy equipment idling time. Reduce diesel equipment idling time to no more than 10 minutes of inactivity. - Reducing truck idling time. Reduce truck idling time to a maximum of 5 minutes while onsite waiting to load or unload. - Properly sized equipment. Equipment engines too large for an application burn more fuel by adding unnecessary weight. In addition, drivers may be prone to use the excess horsepower needlessly, causing additional fuel consumption. An undersized engine easily becomes overworked, leading to excess fuel consumption and accelerated engine wear. Equipment selection will be based on the anticipated requirements of the remedial action. - Improving equipment maintenance. Improper wheel alignment and improperly inflated tires on trucks can adversely affect fuel efficiency by 3 to 4 percent. Hauling trucks will be maintained in accordance with the manufacturer's recommendations. Truck drivers will be instructed to check their tire inflation in accordance with tire manufacture's recommendations. - Improving operator training. Example - An excavator operator who needlessly shifts hydraulic levers to lift additional weight when the equipment is already operating at its maximum capacity can save 225 gallons of fuel a year by eliminating this practice 1 hour per day. During the tailgate safety meetings, equipment operators will be provided overview training on ways to minimize excessive fuel consumption.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 4, and Air Monitoring Plan) and will be enforced by PG&E during remedial construction activities
Hydrology and Water Quality	9.1	A Waste Discharge Requirement (WDR) permit is issued by the RWQCB and will be obtained, if applicable, prior to implementation. PG&E will contact the RWQCB about applying for a WDR prior to implementation, and the RWQCB will determine if a WDR permit is needed.	Compliance with this MM is complete. The Central Valley Regional Water Quality Control Board (RWQCB) notified PG&E on January 14, 2015 that the Central Valley Water Board will not require waste discharge requirement (WDRs) for implementation of the ISS project at the former Red Bluff Manufactured Gas Plant site.

Resource	Mitigation Number	Mitigation Measure	Compliance Status, February 2016 Remedial Design and Implementation Plan
Noise	12.1	PG&E will monitor and minimize construction-related noise between 7 am - 7 pm to include: - Noise monitoring will be conducted at the perimeters of the site or closest sensitive receptors to verify the offsite levels at noise sensitive receptors do not exceed the CalOSHA action level threshold of 85 dBA 8-hour time weighted average. The monitoring frequency will be determined according to the type and location of operations. - Manufacturers' equipment specifications will be reviewed for noise levels produced by any on-site equipment. If necessary, alternative equipment may be selected to reduce noise levels. - Noise mitigation measures will be specified, as necessary, based on the results of the noise monitoring.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.3 and Noise and Vibration Monitoring Plan) and will be enforced by PG&E during remedial construction activities
Noise	12.2	PG&E will include one or more of the following to mitigate noise exposure: - Mufflers may be used on selected equipment to mitigate noise. - Sound barriers may be placed around the work area. - Alternate equipment may be specified. - Operation times may be modified.	This MM will be complied with during remedial construction activities. The requirements of this MM are repeated in the RDIP (see RDIP Section 3.3 and Noise and Vibration Monitoring Plan) and will be enforced by PG&E during remedial construction activities