Sites Project Authority
Notice of Intent to Adopt a Mitigated Negative Declaration for the 2022-2024 Sites Reservoir Geologic, Geophysical, and Geotechnical Investigations

The Sites Project Authority (Authority), as the Lead Agency pursuant to the California Environmental Quality Act (CEQA) in coordination with the Bureau of Reclamation (Reclamation), as the Lead Agency pursuant to the National Environmental Policy Act (NEPA) has prepared an Environmental Assessment/Initial Study (EA/IS) with Proposed Mitigated Negative Declaration for the 2022-2024 Sites Reservoir Geologic, Geophysical, and Geotechnical Investigations (proposed Project; also referred to as the Proposed Action in the Draft EA/IS). The Authority and Reclamation are proposing to conduct geologic, geophysical, and geotechnical investigations in Glenn, Colusa, and Yolo Counties. The purpose of the proposed Project is to conduct field investigations and surveys to obtain data and information needed to formulate and refine the engineering design and to assist in the preparation of permit applications for the proposed Sites Reservoir and associated facilities in western Sacramento Valley. The proposed Project includes up to 70 pavement cores, 258 augers and borings, and 33 cone penetration tests at varying depths. In addition, approximately 70 piezometers would be installed at select auger or boring locations in the proposed Project Area. Non-invasive geophysical surveys would occur at each investigation location. Non-invasive geologic surveys would also occur at various locations in the proposed Project Area.

Through analysis presented in the Draft EA/IS, the proposed Project may result in potentially significant environmental impacts to biological resources; cultural resources; paleontological resources; and, tribal cultural resources. However, with implementation of the proposed Project's standard protocols and procedures and mitigation measures, any potentially significant environmental impacts of the proposed Project would be reduced to less than significant levels as described in the Draft EA/IS.

The Draft EA/IS is being circulated for public review and comment for a 30-day period starting on **May 23, 2022,** through **June 21, 2022.** Comments on the Draft EA/IS must be received in writing via e-mail or U.S. mail to the contact listed below by 5:00 p.m. on **June 21, 2022**. For e-mailed comments, please include the project title in the subject line.

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During the 30-day public review period the Draft EA/IS will be available for review on the Authority's Website at: https://sitesproject.org/environmental-review or on the CEQAnet web portal at: https://ceqanet.opr.ca.gov/. Copies of the Draft EA/IS can also be reviewed at the Authority's Office at 122 Old Highway 99 West, Maxwell, CA, 95955. For individuals requesting reasonable accommodations, please contact the Sites Project Authority at 530-438-2309 or Boardclerk@SitesProject.org.

Proposed Mitigated Negative Declaration
2022-2024 Sites Reservoir Geologic, Geophysical, and Geotechnical Investigations

Introduction

The Sites Project Authority (Authority) and the Bureau of Reclamation (Reclamation) are proposing to conduct geologic, geophysical, and geotechnical investigations ("investigations") in Glenn, Colusa, and Yolo Counties. These investigations are intended to provide technical information to assist in the ongoing efforts to formulate and refine the engineering design and to assist in the preparation of permit applications for the proposed Sites Reservoir and its associated facilities in western Sacramento Valley. A Draft Environmental Assessment (EA)/Initial Study (IS) has been prepared to satisfy the requirements of both the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The Draft EA/IS is attached to this proposed Mitigated Negative Declaration (MND).

Project Description

The proposed Project (also referred to as the Proposed Action in the Draft EA/IS) includes conducting geologic, geotechnical, and geophysical investigations, focusing on those areas proposed for the Sites Reservoir[1] saddle dams, roads, bridges, pumping and generating plants, borrow areas, tunnels, pipelines, and transmission corridors. The investigations would be sited in areas where additional or updated data is needed to inform engineering cost projections, design, and preparation of permit applications for the proposed Sites Reservoir and associated facilities. The Project area is shown in Figure 1-1 of the Draft EA/IS and investigation locations are shown in Figure 1-2 of the Draft EA/IS. For ease of reference, these figures are attached to this MND (in addition to being included in the Draft EA/IS). The Project area generally includes the areas in and near the Antelope Valley in Colusa and Glenn Counties where the dams, reservoirs, pipelines, and related facilities could be located for the proposed Sites Reservoir, along with areas near the town of Dunnigan in Yolo County where pipelines and related facilities could be located for the proposed Sites Reservoir.

Three types of investigations are planned, and are described in the Draft EA/IS. The three types of investigations are summarized below.

- Surface Geologic Investigations – These surveys would include mapping the existing geology of the proposed Sites Reservoir inundation area, proposed conveyance facilities, and roads. Surveys would be performed on foot within areas immediately surrounding Funks Reservoir and lands between the existing reservoir and the proposed Sites Reservoir inundation area

[1] The proposed Sites Reservoir would include construction and operation of a new offstream storage reservoir with a capacity of approximately 1.3-1.5 million acre-feet and associated water management facilities. The reservoir would be located approximately 10 miles west of the town of Maxwell, in both Glenn and Colusa Counties. Other proposed Sites Reservoir facilities would be located in Glenn, Colusa, Tehama, and Yolo Counties.

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including lands south of Hunters Creek, east and south of Funks Creek, adjacent to Maxwell Sites Road and Sites Ladoga Road, and throughout the proposed Dunnigan Pipeline corridor.

- Surface Geophysical Investigations – These walking surveys would be comprised of up to 100 transect lines within the proposed Sites Reservoir inundation area. As part of these investigations, up to 16 geologic pedestrian surveys are also proposed in other locations within the Project area. Geophysical investigations typically involve various noninvasive or minimally invasive physical methods to determine the properties of the subsurface down to about 3 feet in depth.
- Subsurface Geotechnical Investigations – These geotechnical investigations are intended to provide information on geologic conditions 20 to 550 feet below grade. Up to 70 pavement cores, 258 augers and borings, and 33 cone penetration test (CPT) probes are proposed within the proposed Sites Reservoir inundation area and associated conveyance facilities areas in Colusa, Glenn, and Yolo Counties. In addition, approximately 70 piezometers (a type of groundwater monitoring well) are proposed at select auger or boring locations. This effort is conducted through exploratory pavement borings, auger and rotary wash borings with downhole testing and rock coring, and CPT probes to collect subsurface data and samples and examine material processing requirements.

Table 1 provides a summary of the investigation types, approximate numbers, and approximate depths by feature (also included as Table 2-1 in the Draft EA/IS). The 70 pavement core locations and 25 of the 258 borings would be located in developed areas (e.g., existing roadways, areas of exposed soil in croplands, or developed areas). Most of the remaining augers and borings would be in grasslands and oak woodlands located north and south of the town of Sites, around Funks Reservoir, and adjacent to Funks Creek, Stone Corral Creek, and Antelope Creek in Glenn and Colusa Counties (Figure 1-2). Most of these locations have been sited during Project planning to be more than 250 feet from potentially regulated Federal and State wetlands and waters. The only exceptions are three locations within Funks Reservoir, one location in a potentially regulated seasonal wetland, and 39 locations in grasslands but within 250 feet of potential seasonal wetlands.

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Table 1. Investigation Types, Approximate Numbers, and Approximate Depths by Proposed Sites Reservoir Feature

Proposed Sites Reservoir Feature	Approximate Numbers, Investigation Types, and Approximate Depths
Sites Reservoir Inundation Area	1. 70 Pavement Cores, 3 feet below grades 2. 190 Borings, 30 to 550 feet below grades 3. 45 Piezometers, 100 to 350 feet below grades 4. 100 Geophysics Surveys, 700 to 3,000 feet in length, at each investigation point, non-invasive 5. 10 Geologic Mapping Walking Surveys, non-invasive.
Funks Reservoir	1. 10 Borings, 20 to 100 feet below grades 2. 2 Piezometers, 100 to 350 feet below grades 3. 1 Geologic Mapping Walking Survey, non-invasive.
Terminal Regulating Reservoir Pipeline	1. 36 Borings, 50 to 90 feet below grades 2. 16 Cone Penetration Test Probes, 70 to 90 feet below grades 3. 5 Seismic Cone Penetration Test Probes, 70 to 90 feet below grades 4. 15 Piezometers, 100 to 350 feet below grades 5. 1 Geologic Mapping Walking Survey, non-invasive.
Dunnigan Pipeline	1. 20 Borings, 35 to 80 feet below grades 2. 6 Cone Penetration Test Probes, 70 to 90 feet below grades 3. 6 Seismic Cone Penetration Test Probes, 70 to 90 feet below grades 4. 8 Piezometers, 50 to 80 feet below grades 5. 4 Geologic Mapping Walking Surveys, non-invasive.
Total	**1. 70 Pavement Cores, 3 feet below grades** **2. 258 Borings, varying from 20 to 550 feet below grades** **3. 70 Piezometers, varying from 50 to 350 feet below grades** **4. 33 Cone Penetration Test Probes, varying from 70 to 90 feet below grades** **5. 16 Geologic Mapping Surveys, non-invasive** **6. Geophysics Survey at each investigation point (348 total) in addition to 100 survey transects, varying in length from 700 to 3,000 feet, non-invasive.**

Previous mapping and data from the proposed Sites Reservoir permitting efforts was reviewed to site investigation locations outside of sensitive habitats, potential wetlands, and known cultural sites. Using available materials for reference, early Project development work involved an extensive review of desktop aerial imagery and geographic information system data with a goal of selecting investigation locations that would avoid potential sensitive resources to the extent possible. In addition, access to the investigation locations was considered during the desktop evaluation process.

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The proposed investigations are scheduled to occur between July 2022 and December 2024. The sequence of investigations would depend on site and seasonal conditions, as well as landowner access. The duration of field sample collection and testing activities at each location would vary from 0.5 days to 3 weeks, depending on the conditions and activity. Up to 70 piezometers would be installed at select boring locations and would be left in the ground for up to 10 years. The proposed piezometers are the only data-gathering equipment that would remain in the field following the investigations and require longer-term monitoring. All proposed investigations and monitoring activities would be conducted during daylight hours.

Several standard protocols and procedures have been incorporated as part of the proposed Project and would be implemented prior to and throughout the investigations. These standard protocols and procedures are listed below and described further in Appendix B of the Draft EA/IS.

- Stormwater Pollution Prevention Plan and Best Management Practices - pursuant to the State Water Resources Control Board's National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.
- Spill Prevention and Hazardous Materials Management.
- Standard Fugitive Dust Control.
- Standard Measures to Reduce Equipment Usage and Exhaust.
- Traffic Management and Hazards.
- Emergency Access.
- Health and Safety Plan.
- Fire Prevention and Suppression at Investigation Locations.

The Draft EA/IS considers two alternatives – the No Action/No Project and the proposed Project. The No Action/No Project reflects existing and reasonably foreseeable future conditions without the Project.

Proposed Impact Determination

As documented in the attached Draft EA/IS, the Authority hereby proposes to find that the Project as mitigated will not have a significant effect on the environment. The Authority will make a final decision regarding whether to adopt an MND and whether to approve the Project by exercising its independent judgment in accordance with the requirements of CEQA upon the conclusion of the public review and comment period for the Draft EA/IS. Reclamation will similarly exercise its independent judgment to make a final decision regarding the Project in accordance with NEPA.

The proposed finding by the Authority that the Project would not have a significant effect on the environment is summarized as follows and is explained in greater detail in the attached Draft EA/IS:

The Project would not impact the following resources and topic areas due to the temporary, minimal and short-term nature of the Project activities, as well as a lack of certain resources within or near the Project area that would be affected by the proposed investigations: aesthetics and visual

resources, minerals, population and housing, public services, fluvial geomorphology, flood control and management, recreation, forestry resources, utilities and service systems, and power production/energy.

The Project would have less than significant impacts on land use and agriculture; water resources and water quality; air quality, climate change, and greenhouse gas emissions; transportation and traffic; noise and vibration; and, hazards, hazardous materials, and wildfire.

The Project, with implementation of avoidance, minimization, and mitigation measures, would result in less than significant impacts to the following resource areas biological resources, paleontological resources, cultural resources, and tribal cultural resources.

The following mitigation measures will be implemented to avoid or minimize potential environmental impacts. Implementation of these mitigation measures would reduce the potential environmental impacts of the Proposed Action to a less-than-significant level. For ease of reference, these mitigation measures are listed below and are described in an attachment to this MND (in addition to being included in Chapter 3 and Appendix B of the Draft EA/IS).

- Mitigation Measure Gen-1: Conduct Pre-Investigation Siting Survey
- Mitigation Measure Gen-2: Reprioritize or Postpone proposed investigations if sensitive resources cannot be avoided.
- Mitigation Measure Bio-1: Conduct Mandatory Biological Resources Awareness Training
- Mitigation Measure Bio-2: General Measures to Avoid and Minimize Effects on Sensitive Biological Resources
- Mitigation Measure Bio- 3: Waters of the U.S./State
- Mitigation Measure Bio-4: Valley Elderberry Longhorn Beetle
- Mitigation Measure Bio-5: Vernal Pool Branchiopods
- Mitigation Measure Bio-6: Giant Garter Snake
- Mitigation Measure Bio-7: California red-legged frog
- Mitigation Measure Bio-8: Foothill Yellow-legged Frog
- Mitigation Measure Bio-9: Migratory Birds
- Mitigation Measure Bio-10: Bald and Golden Eagles
- Mitigation Measure Bio-11: Swainson's Hawk
- Mitigation Measure Bio-12: Western Burrowing Owl
- Mitigation Measure Bio-13: Tricolored Blackbird
- Mitigation Measure Bio-14: Bank Swallow
- Mitigation Measure Bio-15: American Badger
- Mitigation Measure Bio-16: Special-Status Plant Species

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- Mitigation Measure Bio-17: Special-Status Bat Species
- Mitigation Measure Geo-1: Consult with Qualified Paleontologist if Paleontological Resources Were Discovered
- Mitigation Measure Cul-1: Avoid Impacts on Cultural Resources
- Mitigation Measure Cul-2: Pre-activity Pedestrian Survey
- Mitigation Measure Cul-3: Prepare a Post-review Discovery Plan
- Mitigation Measure Cul-4: Conduct Archaeological Sensitivity Training
- Mitigation Measure Cul-5: Conduct Archaeological Monitoring
- Mitigation Measure Cul-6: Immediately Halt Ground-disturbing Activities if Cultural Resources Are Discovered and Implement the Post-review Discovery Plan Prepared under MM Cul-1
- Mitigation Measure Cul-7: Immediately Halt Ground-disturbing Activities if Human Remains Are Discovered and Implement a Burial Treatment Plan
- Mitigation Measure TCR-1: Avoid or Preserve in Place
- Mitigation Measure TCR-2: Treat Resource with Culturally Appropriate Dignity
- Mitigation Measure TCR-3: Permanent Conservation Easements

Attachments:

Figure 1-1. Proposed Action Location

Figure 1-2. Proposed Geologic, Geophysical, and Geotechnical Investigation Locations

Table 2. Mitigation Measures

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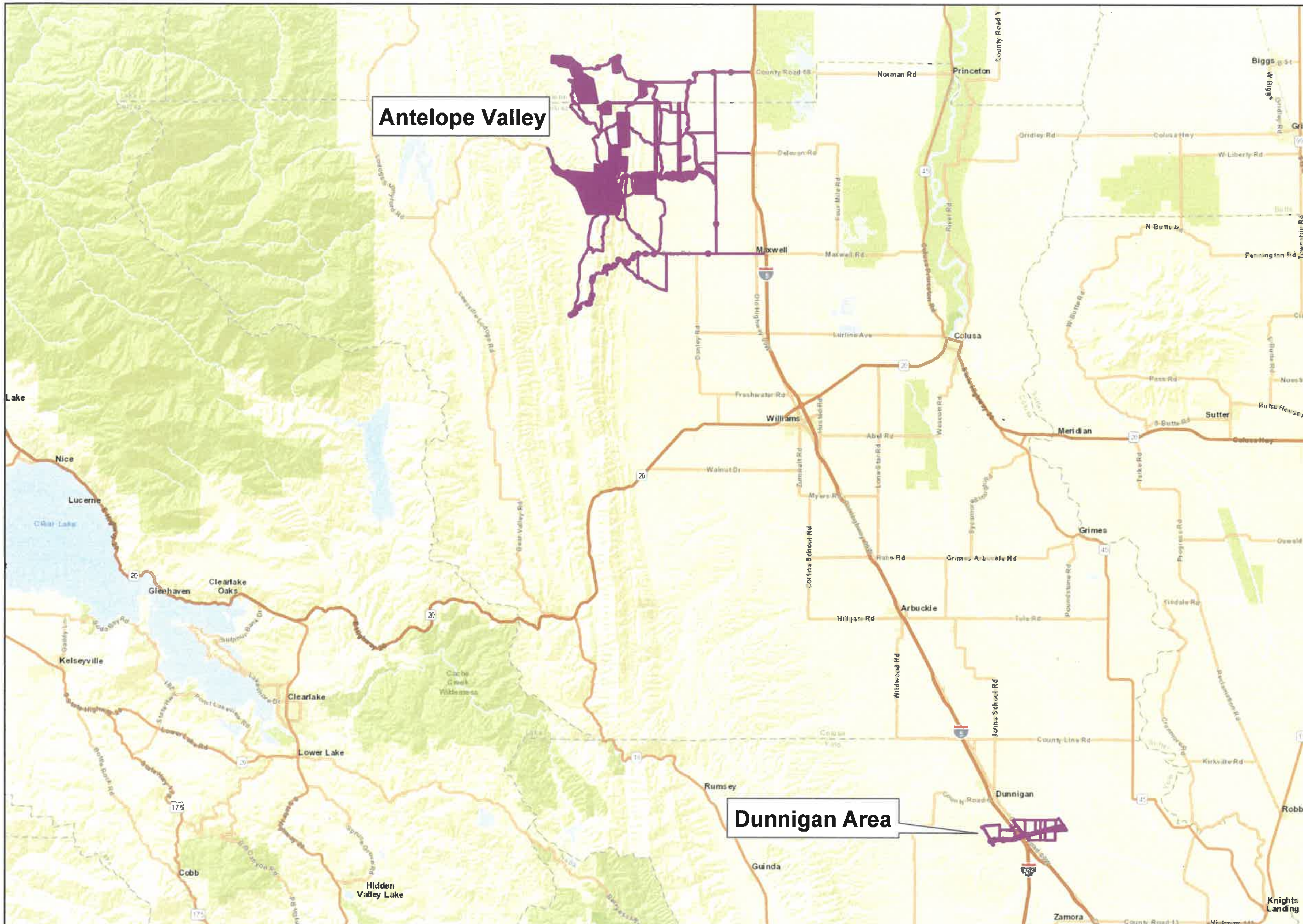

Figure 1-1
Proposed Action Area

Legend

Proposed Action Area

0 2.5 5 10
Miles

Notes:

Basemap Source: ESRI, 2020
Coordinate System: NAD 1983 CA Zone II
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: NAVD88, U.S. Feet

Path: ...\Projects_1\Sites_PA00528_20\Figures\Doc\GeoTech\Permits\EA_EIS\Figure_1_4_1_ProjectLocation.mxd; Author: ; Date: 4/20/2022

Figure 1-2, Proposed Geologic, Geophysical, and Geotechnical Investigation Locations

LEGEND

- Geotechnical Investigation Locations
- Geophysical Survey LInes
- Geologic Mapping Survey Areas
- City/Town/Community
- Canal
- Proposed Sites Reservoir Inundation Area

0 1 2 4
Miles

Notes:
Base Map Source:ICF, 2021
Imagery Source: ESRI World Imagery 2021
Coordinate System: NAD 1983 CA Zone II
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: NAVD88, U.S. Feet

Tehama-Colusa Canal
Glenn County
Colusa County
GCID Main Canal
Colusa Basin Drain
Funks Reservoir
Sites Lodoga Rd
Sites
Huffmaster Rd
Maxwell Sites Rd
Maxwell
Antelope Valley
Sacramento River
Dunnigan
Tehama-Colusa Drain
Colusa Basin Drain
Yolo County
5

PATH: \\PDCCITRDSGIS1\PROJECTS_1\SITES_PA\00528_20\FIGURES\DOC\GEOTECH\PERMITS\EA_EIS\TESTING FIGURE_1_4_2_SITESPROJECT.MXD - USER: 34153 - DATE: 4/21/2022

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Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
MM Gen-1: Conduct Pre-Investigation Siting Survey	At least one week prior to mobilization for Proposed Action activities at each investigation location, the Proposed Action contractor and staff, along with a qualified biologist, a cultural resources specialist, and a tribal monitor will conduct a pre-investigation siting survey. Following review of the proposed site locations and investigation plan, the team will conduct a coordinated field survey and provide recommendations to the Proposed Action team to assist in finalizing investigation sites and provide findings as to the extent of the ground surface preparations (if any) that would be needed at each location. The team will also confirm the means of access by personnel and equipment, which includes the biologist, tribal and cultural specialist demarcating the overland access route that avoids impacts to any identified sensitive resources during the siting survey. Adjustments in the exact location of the investigation areas and in the application of species/habitat-specific mitigation measures may be required to avoid or minimize impacts to sensitive resources, to avoid potential utility conflicts, or if specific site conditions are different than anticipated. These adjustments will be limited to the vicinity of the general investigation locations shown in Figure 1-2 and will remain compliant with any permit restrictions placed on specific areas in the Proposed Action Area.	At least one week prior to investigations	One day pre-investigation siting survey for each investigation location	Proposed Action contractor and staff, qualified biologist, cultural resources specialist, and a tribal monitor
MM Gen-2: Reprioritize or Postpone proposed investigations if sensitive resources cannot be avoided.	If implementation of MM Gen-1 and species/habitat-specific mitigation measures do not avoid or minimize permanent impacts to sensitive resources, and resource avoidance would require relocation of the investigation location outside of the area where data collection is needed to inform design, then the need for an investigation at that specific location would be re-evaluated as part of the overall Proposed Action investigation plan and, if found to be necessary, the effort would be reprioritized within the Proposed Action schedule to avoid or minimize permanent impacts (e.g., moving investigation to later date in schedule to avoid an active bird nest) or postponed to a subsequent investigation effort that would require separate environmental evaluation and permitting.	At least one week prior to investigations	Determination made after One day pre-investigation siting survey for each investigation location	Proposed Action contractor and staff, qualified biologist, cultural resources specialist, and a tribal monitor
MM Bio-1: Conduct Mandatory Biological Resources Awareness Training	Prior to Proposed Action implementation, a qualified biologist will conduct a mandatory biological resources awareness training for all Proposed Action personnel. A qualified biologist is defined as someone with training, knowledge, and experience with the species this document is concerned with. The training will cover special-status species and their habitats that could be encountered in the Proposed Action area. The training will cover the natural history, appearance (using representative photographs), and legal status of species, regulatory protections, penalties for noncompliance, benefits of compliance, as well as the avoidance and minimization measures to be implemented. Participants will be required to sign a form that states they have received and understand the training. Reclamation will maintain the record of training and make it available to USFWS upon request. The Authority-provided biological monitor will verify that the new personnel brought onto the Proposed Action team receive the mandatory training before starting work.	Prior to investigations	Throughout the investigation period	Proposed Action contractor and staff and qualified biologist
MM Bio-2: General Measures to Avoid and Minimize Effects on Sensitive Biological Resources	General restrictions and guidelines that will be followed by personnel are listed below. The contractor and Authority-provided biological monitor will be responsible for ensuring that crew members adhere to these measures. • Qualified biologists (USFWS-approved for giant garter snake and California red-legged frog, see below) will monitor all terrestrial activities. Any observations of federally listed species will be reported to Reclamation and USFWS within 24 hours. • Personnel driving vehicles will observe the posted speed limit on paved roads and a 15 mile-per-hour speed limit on unpaved roads during travel in the Proposed Action area. • All project personnel will have stop work authority if a potentially listed species is observed within an active work area. • All food-related trash will be disposed of in closed containers and removed from the work area daily during the work period. Personnel will not feed or otherwise attract fish or wildlife to the work site. • No pets or firearms will be allowed in the Proposed Action area. • Personnel conducting aquatic surveys for amphibians will follow USFWS-approved decontamination protocols prior to any staff entering a wetland or stream (USFWS, 2005a) (see MM Bio-17 below). • All Proposed Action-related equipment will be maintained to prevent leaks of fuels, lubricants, or other fluids. Daily equipment inspections will include inspections for leaks. • Temporary signs, staking, or flagging will be used to identify sensitive biological resources and project personnel will be advised to avoid disturbance of these areas. These areas will be identified during pre-activity surveys. Signs, staking, and flagging will be inspected by the qualified or approved biologist on a daily basis. • Any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped will immediately report the incident to the Authority-provided biological monitor, who will immediately report the incident to Reclamation. Reclamation will provide oral notification to the USFWS Sacramento Endangered Species Office within 1 working day. Reclamation will follow up with written notification to USFWS within 5 working days. • Vehicles and equipment left on-site overnight will be thoroughly inspected each day for wildlife (both underneath the vehicle and in open cabs) before they are moved. To prevent possible resource damage from hazardous materials such as motor oil or gasoline, personnel will not service or refuel vehicles, equipment, or motorized tools within 300 feet of any aquatic habitat. • Work will be restricted to open areas in riparian habitat and other sensitive natural communities, including woodlands. All work will remain outside of the tree canopy. Additionally, the upper 12 inches of topsoil will be restored at drilled work area within these habitats.	Prior to, and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff and qualified biologist,

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Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
MM Bio- 3: Waters of the U.S./State	The following measures will be implemented to avoid, minimize, and mitigate impacts on wetlands and waters subject to federal and State jurisdiction: The following measures will be implemented to avoid, minimize, and mitigate impacts on wetlands and waters subject to federal and State jurisdiction: • At least 48 hours prior to any ground-disturbing activities, a qualified biologist will ground truth the land cover mapping within proposed investigation areas and staging areas, including areas within 250 feet where accessible (i.e., where access has been granted by the property owner), to confirm the presence and absence of wetlands and waters. All wetlands and waters not previously identified will be mapped in the field using a global positioning system (GPS) with submeter accuracy and will be used to update the land cover mapping. • To the extent practicable, investigations will not take place in or within 250 feet of wetlands and waters (i.e., ponds, streams, reservoirs), except for the investigation sites within Funks Reservoir and the potential jurisdictional water and for activities identified in the Proposed Action description that are near or adjacent to canals and ditches in the agricultural areas. • If work needs to occur within 250 feet of wetlands and waters that are not also restricted by environmental commitments for special-status wildlife species (see MM Bio-4, 5, and 6), the following measures will be implemented: o Sediment control measures: Prevent transport of sediment from work area; Reduce runoff velocity on exposed slopes; and Reduce offsite sediment tracking. o Management measures for investigation materials: Cover and berm loose stockpiled materials; Store chemicals in watertight containers; and Minimize exposure of work materials to stormwater. o Designate refueling and equipment inspection/maintenance locations at least 300 feet from aquatic habitats. A spill prevention plan will be implemented. o A biological monitor will be onsite during all work within 250 feet of waters and wetlands. o In coordination with the Authority provided biological monitor, disturbed areas will be returned to their original condition, which may include the following: – Restoring original topography to the degree possible. – Placement of erosion control BMPs (e.g., wattles, soil binders, straw mulch, geotextiles) may be used to help stabilize work areas once work is complete. – Hydroseeding with noninvasive plant seed.	Prior to, and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-4: Valley Elderberry Longhorn Beetle	The following measures will be implemented to avoid, minimize, and mitigate impacts on valley elderberry longhorn beetle throughout the Proposed Action Area. o Pre-activity surveys for elderberry shrubs will be conducted in and adjacent to potential work areas by a qualified biologist familiar with the appearance of valley elderberry longhorn beetle exit holes in elderberry shrubs. Pre-activity surveys will be conducted in accordance with the USFWS's 2017 *Framework for Assessing Impacts to the Valley Elderberry* Longhorn *Beetle (Desmocerus californicus dimorphus)*. Any elderberry shrubs in the Proposed Action Area will be mapped. Those shrubs that are within 300 feet of Proposed Action activities will be identified with flagging and protected with high-visibility fencing (at the edge of the work area) and signs indicating the potential for beetle presence and excluding any Proposed Action activity within 165 feet of the plants. o A qualified biologist will be responsible for ensuring the buffer area fences are maintained throughout Proposed Action implementation. o Gravel roadways, staging areas, and other applicable areas will be sprayed with water as needed to minimize dust moving onto elderberry shrubs.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-5: Vernal Pool Branchiopods	The following measures will be implemented to avoid, minimize, and mitigate impacts on federally listed vernal pool branchiopods. • Prior to any ground-disturbing activities, a qualified biologist will ground truth the land cover mapping that was done for the Proposed Action Biological Assessment within the above identified investigation areas and staging areas, including areas within 250 feet, to confirm the presence or absence of habitat suitable for vernal pool branchiopods. All suitable branchiopod habitat will be mapped in the field using a GPS with submeter accuracy and will be used to update the land cover mapping. Updated maps with exclusion buffers for listed species will be provided to all Proposed Action personnel. • Vehicles and equipment will not travel in identified branchiopod habitat. • Investigations will fully avoid effects on vernal pool branchiopods and their habitat. Full avoidance requires a minimum 250-foot no-disturbance buffer around all suitable habitat potentially supporting vernal pool branchiopods or drainage features feeding or draining these areas. The buffers will be identified with flagging or high- visibility fencing as well as signs identifying it as off limits and protected habitat. • Geophysical activities will not take place within 250 feet of suitable vernal pool branchiopod habitat. All geophysical lines will avoid going through pools that represent potential suitable habitat for these species. • The Authority-provided qualified biologist will ensure that the contractor complies with these avoidance buffers.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-6: Giant Garter Snake	No work would occur within aquatic habitat for giant garter snake. However, the following measures will be implemented to avoid, minimize, and mitigate impacts on the giant garter snake and its upland habitat. • Prior to any ground-disturbing activities, a qualified biologist will ground truth the land cover mapping that was done for the Proposed Action Biological Assessment within the above identified investigation areas and staging areas, to confirm the presence or absence of habitat suitable for giant garter snake. All suitable habitat will be mapped in the field using a GPS with submeter accuracy and will be used to update the land cover mapping. Updated maps with exclusion buffers for listed species will be provided to all Proposed Action personnel.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist

Sites

Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
	• Geotechnical activities will not be conducted in giant garter snake upland habitat during the active giant garter snake season (April through October) to the maximum extent practicable. • No less than 30 days prior to Proposed Action implementation, Reclamation will submit a request for approval of biologists to conduct monitoring and other activities (see below) associated with the giant garter snake in the areas identified above. • A USFWS-approved biologist will survey work areas within 200 feet of giant garter snake aquatic habitat for snakes no more than 24 hours prior to the start of activities. • Movement of heavy equipment will be confined to existing paved and dirt roads and will avoid suitable upland giant garter snake habitat. • A USFWS-approved biologist will be present during all investigation activities taking place within 200 feet of suitable aquatic habitat. The biologist will visually check for giant garter snake under vehicles and equipment prior to contractors moving them. The biologist will ensure that the contractor caps all materials onsite (e.g., conduits, pipe), precluding wildlife from becoming entrapped. The biologist will check any crevices or cavities in the work area where individuals may be present including stockpiles that have been left for more than 24 hours where cracks/crevices may have formed. • If a giant garter snake is observed by the biologist within the work area, all work will cease until the snake has moved out of the work area on its own. If a giant garter snake does not move out of the work area on its own, the USFWS-approved biologist will have the discretion to relocate the snake to the nearest suitable habitat where it will not be exposed to Proposed Action activities that may result in take. The relocation will be immediate and will be recorded and reported to the USFWS within one business day. • All Proposed Action activities adjacent to suitable giant garter snake aquatic habitat will be conducted within paved roads, farm roads, road shoulders, and similarly disturbed and compacted areas without small mammal burrows or other suitable refugia that could be used by giant garter snake. A USFWS-approved biologist will assess the locations of proposed bore holes in order to avoid small mammal burrows. The biologist will ensure that the work area along the geophysical line remains clear of snakes and other wildlife during testing. The USFWS-approved biologist will immediately notify the operator to shut down testing if a snake is seen moving into the work area. Testing will resume once the snake has moved out of the work area on its own. • No Electrical Resistance Survey work will be conducted within 200 feet of giant garter snake aquatic habitat to avoid exposing giant garter snakes to electrical current if they are occupying or passing through uplands.			
MM Bio-7: California red-legged frog	No work would occur within suitable California red legged frog aquatic habitat. If work needs to be conducted within suitable California red-legged frog upland habitat or dispersal habitat (areas within 1 mile of aquatic breeding habitat during the rainy season, generally October 15 to March 31), the following measures will be implemented to avoid, minimize, and mitigate impacts under the guidance of a USFWS-approved biologist. • Prior to any ground-disturbing activities, a qualified biologist will ground truth the land cover mapping that was done for the Proposed Action Biological Assessment within the above identified investigation areas and staging areas to confirm the presence or absence of habitat suitable for California red-legged frog. All suitable habitat will be mapped in the field using a GPS with submeter accuracy and will be used to update the land cover mapping. Updated maps with exclusion buffers for listed species will be provided to all Proposed Action personnel. • A qualified biologist will be present during all investigation activities in California red-legged frog upland habitat and dispersal habitat (if work occurs during rainy season, generally October 15 to March 31 when frogs are dispersing) to implement avoidance and minimize measures for the California red-legged frog. The biologist will survey work areas for frogs and for rodent burrows in potential upland habitat before equipment is moved in and work begins. Areas with higher potential for California red-legged frog, such as areas with a high density of burrows, will be flagged for avoidance. The biologist will work with the geotechnical crew and geologists to align work such that the minimum number of burrows is affected. • The qualified biologist will inspect all equipment left in a work area overnight to ensure that no frogs are present before work begins. Any California red-legged frogs found within a work area will be avoided and allowed to disperse on their own accord. • The qualified biologist will ensure that the work area along the geophysical lines remains clear of frogs and other wildlife during the ERI. The biological monitor will immediately notify the operator to shut down the ERI equipment if a frog, or other special-status wildlife species, is seen moving into the work area. Testing will resume once the frog has moved out of the work area on its own. • No work will occur in the aforementioned work areas during or 24 hours following a rain event. Following a rain event, no work will proceed until a qualified biologist has inspected the work areas and verified that there are no California red-legged frogs present. A rain event is to be considered precipitation of at least one-quarter inch within a 24-hour period. • Activities within suitable upland/dispersal habitat will occur during daylight hours (from 30 minutes before sunrise to 30 minutes after sunset). Except when necessary for driver or pedestrian safety, artificial lighting at a worksite will be prohibited during the hours of darkness when working in suitable California red-legged frog upland/dispersal habitat. • If work in suitable California-red legged frog dispersal habitat occurs during the rainy season, generally October 15 to March 31, and lasts for more than 1 day, exclusion fencing will be installed around the work area. Fencing will remain within the Proposed Action Area at any location and allow enough room for the movement of equipment and personnel. The fencing will be installed to a depth of 6 inches and be at least 36 inches above grade. The contractor will avoid placing fencing on top of ground squirrel burrows. A qualified biologist will inspect the fencing daily for the presence of California-red legged frogs.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist

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Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
MM Bio-8: Foothill Yellow-legged Frog	All investigations will be sited outside of foothill yellow-legged frog habitat (i.e., intermittent or perennial streams with moderate gradient and rocky substrates). If work occurs within 300 feet of suitable aquatic habitat, a CDFW-approved biological monitor will conduct a pre-activity survey immediately prior to work crews entering the work area and will remain onsite for the duration of the activities within 300 feet of suitable aquatic habitat. If a frog is observed in a work area, it will be allowed to move out of the work area on its own. Any observed foothill yellow-legged frogs will be reported to CDFW within 24 hours.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-9: Migratory Birds	The following measures will be implemented to avoid and minimize impacts on nesting migratory birds, including special-status birds, during investigations: • A qualified wildlife biologist with experience with nesting birds will conduct nesting surveys before the start of investigation activities during the breeding season (February 1-August 31). A minimum of two separate surveys will be conducted within 14 days prior to the initiation of work, with the last survey within 24 hours prior to work beginning in a given work area. Surveys will include a search of all suitable nesting habitat in the work area. In addition, a 500-foot radius around the work areas, where accessible, will be surveyed for nesting raptors, and an area within 50 feet of the work area will be surveyed for other nesting birds protected by the Migratory Bird Treaty Act. If no active nests are detected during these surveys, no additional measures are required. • If active nests are found in the survey area, no-disturbance buffers will be established around the nest sites to avoid disturbance or destruction of the nest site until the end of the breeding season (approximately August 31) or until a qualified wildlife biologist determines that the young have fledged and moved out of the Proposed Action Area (this date varies by species). A qualified wildlife biologist will monitor activities in the vicinity of the nests to ensure that activities do not affect nest success. The extent of the buffers will be determined by the biologists in consultation with CDFW and will depend on the level of noise or disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-10: Bald and Golden Eagles	The following measures will be implemented to avoid, minimize, and mitigate impacts on bald and golden eagles during investigations: • All investigations (surface and subsurface) will be avoided within 0.5 mile of potential bald eagle nests; and 1 mile of golden eagle nests during the nesting season (January to August 31). • Work within the 0.5 and 1 mile buffers will only occur if the Proposed Action receives an eagle take permit from USFWS. Once the permit is received, the Proposed Action will implement conditions of the permit that are applicable to investigations, including mitigation. Conditions may include participation in an in-lieu fee program for take of eagles or utility line relocation and retrofit.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-11: Swainson's Hawk	The following measures will be implemented to avoid, minimize, and mitigate impacts on Swainson's hawk during investigations: • Pre-activity surveys will be conducted by a biologist with experience with Swainson's hawk in order to identify the presence of potential Swainson's hawk nest trees on and within 0.25 mile of work and staging areas. Surveys will be consistent with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000), or as the methodology is modified based on Proposed Action timing. Survey results will be provided to CDFW by phone or e-mail no less than 5 days prior to commencement of activities, and in a written report within 30 days after commencement of activities. The report will include the location of any known nest trees (occupied within one or more of the last 5 years) present within 0.25 mile of the work footprint. • Investigations will fully avoid Swainson's hawk nests. Investigations will not be conducted within 650 feet of an occupied Swainson's hawk nest. A nest is considered occupied from the time the nest is being constructed until the young leave the nest, or until the nesting attempt fails and the nest is abandoned.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-12: Western Burrowing Owl	The following measures will be implemented to avoid, minimize, and mitigate impacts on western burrowing owl during investigations. These measures incorporate survey, avoidance, and minimization guidelines adapted from CDFW's Staff Report on Burrowing Owl Mitigation (CDFG, 2012). • Pre-activity surveys will be conducted with one occurring 14 days prior to all activities, including staging, and another within 24 hours of these activities within and adjacent to areas of suitable habitat. A qualified biologist will survey the Proposed Action Area and record and map all burrowing owl observations and burrows that may be occupied (as indicated by tracks, feathers, egg shell fragments, pellets, prey remains, cast pellets, whitewash, or decoration) on the Proposed Action Area. The surveys will be conducted while walking transects throughout the proposed investigations areas, plus all accessible areas within a 250-foot radius of the proposed investigation areas. Surveys will be conducted between 10:00 a.m. and 2 hours before sunset. • Burrowing owls will be avoided by relocating work areas. If an active burrow is identified near a work area and work cannot be conducted outside of the nesting season (February 1 to August 31), a qualified biologist will establish a no-activity buffer that extends a minimum of 250 feet around the burrow. If burrowing owls are present at the site during the nonbreeding season (September 1 through January 31), a qualified biologist will establish a no-activity zone that extends a minimum of 150 feet around the burrow. • If the appropriate no-activity buffer for breeding or nonbreeding burrowing owls cannot be established, a wildlife biologist experienced in burrowing owl behavior will evaluate site-specific conditions and recommend a smaller buffer that still minimizes the potential to disturb the owls (and still allows reproductive success during the breeding season). The site-specific buffer will be established by taking into consideration the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls to existing conditions, and the dissimilarity of the proposed activity to background activities.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist

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Title	Description	Timing	Duration	Responsibility
	• A biological monitor will be present during all activities occurring within any reduced buffers. If during the breeding season there is any change in owl nesting and foraging behavior as a result of activities, the biological monitor will work with personnel and Authority to provide additional protections to reduce disturbance, such as adding visual and sound curtains. • If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in used by owls, the no-activity buffer may be removed.			
MM Bio-13: Tricolored Blackbird	The following measures will be implemented to avoid, minimize, and mitigate impacts on tricolored blackbird during investigations: • Prior to initiation of investigations within 1,300 feet of suitable nesting habitat, a biologist with experience surveying for and observing tricolored blackbird will conduct pre-activity surveys to establish use of nesting habitat by tricolored blackbird colonies. Surveys will be conducted, where access allows, during the nesting season (generally March 15 to July 31). Three surveys will be conducted within 15 days prior to activities with one of the surveys within 5 days prior to the start of activities. If active tricolored blackbird nesting colonies are identified, the following avoidance measure will be implemented: • Investigations will fully avoid tricolored blackbird nesting and roosting habitat. • To the extent practicable, investigations will not occur within 1,300 feet of an active tricolored blackbird nesting colony (generally March 15 through July 31). Where a buffer distance of 1,300 feet is not practicable, CDFW will be consulted to develop a smaller buffer. The buffer may be reduced in areas with dense trees, buildings, or other habitat features between the activities and the active nest colony, or where there is sufficient topographic relief to protect the colony from excessive noise or visual disturbance as determined by the biological monitor that is experienced with tricolored blackbird. If tricolored blackbirds colonize habitat adjacent to work areas after activities have been initiated, the contractor will reduce disturbance through establishment of buffers and/or sound curtains, as determined by the biological monitor. • Investigations will avoid activities within at least 300 feet from occupied active tricolored blackbird roosting habitat. This minimum buffer may be reduced in areas with dense trees, buildings, or other habitat features between the work activities and the roost, or where there is sufficient topographic relief to protect the roosting site from excessive noise or visual disturbance, or where sound curtains are used, as determined by the biological monitor that is experienced with tricolored blackbird.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-14: Bank Swallow	The following measures will be implemented to avoid, minimize, and mitigate impacts on bank swallow during investigations: • Prior to beginning investigations within 500 feet of the Sacramento River during the bank swallow nesting season (April 1 through August 31), a pre-activity survey for bank swallow colonies will be conducted where bank swallow habitat is present within 500 feet of work areas. If no active nesting colonies are present, no further measures are required. • If an active colony is found and work must occur during the nesting season (April 1 through August 31), the Authority will establish a no disturbance buffer (determined by the Authority in consultation with CDFW) around the colony during the breeding season. In addition, a qualified biologist will monitor any active colony within 500 feet of work areas to ensure that activities do not affect nest success.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-15: American Badger	The following measures will be implemented to avoid, minimize, and mitigate impacts on American badger during investigations: • A qualified biologist will survey for American badger in work areas, concurrent with the pre-activity survey for burrowing owl. If an active den is located, no investigations will occur within 50 feet of an active American badger den. • A biological monitor will be present during all work within 50 to 100 feet of an active American badger den. The monitor will ensure that activities do not affect the den or substantially disrupt the badger's ability to move freely in and out its den.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Bio-16: Special-Status Plant Species	The following measures will be implemented to avoid, minimize, and mitigate impacts on special-status plant species during investigations: • Pre-activity surveys will be conducted for special-status plant species in all investigation and equipment staging areas, as well as areas within 250 feet of investigation and equipment staging areas. The purpose of these surveys will be to verify that the locations of special-status plants identified in previous record searches or surveys are extant, identify any new special-status plant occurrences, and cover any portions of the Proposed Action Area not previously surveyed. During pre-activity surveys, the biologist would also identify any host plants suitable for special-status pollinators (e.g., milkweed, dusty maidens, lupines, medics, phacelias, sages, clarkias, poppies, and wild buckwheats). • All surveys will be conducted by qualified biologists using the using *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2018). To the extent feasible, surveys will be conducted during the blooming season, when special-status plant species would be most evident and identifiable. Locations of special- status plants in the Proposed Action Area will be recorded using a GPS unit and flagged. • Where surveys determine that a special-status plant species is present in or adjacent to a proposed investigation area, direct and indirect impacts of the Proposed Action on the species will be avoided through the establishment of 250-foot activity exclusion zones surrounding the periphery of occurrences, within which no ground-disturbing activities shall take place. Activity exclusion zones for special-status plant species will be established according to a 250-foot buffer surrounding the periphery of each special-status plant species occurrence, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no activity-related disturbances will occur within 250 feet of the occurrence. The 250-foot buffer may be reduced based on the nature of the activities, the presence of a biological monitor, and/or other site-specific conditions that would allow work to occur closer.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist

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Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
MM Bio-17: Special-Status Bat Species	The following measures will be implemented to avoid, minimize, and mitigate impacts on special-status bat species during investigations: • Pre-activity surveys will be conducted for special-status bat species in all work areas, including staging areas. The biologist shall look for bats and bat sign, including existing roost sites and bat guano deposits, and will listen for roosting bats. If potential roost sites are identified, a project-specific avoidance and minimization plan shall be prepared by a qualified biologist to be reviewed and approved by CDFW prior to the start of Proposed Action investigations. • If vegetation trimming is needed, the biologist will examine the trees to be trimmed to identify suitable bat roosting habitat. Trimming of trees with potentially suitable bat roosting habitat will be avoided during the maternity season (generally between April 1 and July 31) and the hibernation season (generally from November 1 to March 1). • If a maternity roost is found, the roost will be protected until July 31 or until the qualified biologist has determined the maternity roost is no longer active. Appropriate no-work buffers around the roost will be established under direction of the qualified biologist. Buffer distances may vary depending on the species and activities being conducted. The establishment of buffers will be coordinated with CDFW through the preparation of the previously referenced project-specific avoidance and minimization plan.	Throughout the investigation period	Throughout the investigation period, including the pre-investigation siting survey	Proposed Action contractor and staff, qualified biologist
MM Geo-1: Consult with Qualified Paleontologist if Paleontological Resources Were Discovered	The proposed investigations have the potential to have impacts on unidentified paleontological resources. If vertebrate or plant fossils are discovered during field activities, the Authority and Reclamation would be notified, and the fossil would be evaluated for its unique properties and protected by extraction, preservation, and curation by a qualified paleontologist.	Throughout the investigation period if paleontological resources are discovered	Throughout the investigation period	Proposed Action contractor and staff, qualified paleontologist
MM Cul-1: Avoid Impacts on Cultural Resources	Impacts on known historical resources/historic properties, including prehistoric and historic-era archaeological sites, buildings, structures, Traditional Cultural Properties, and human remains will be avoided to the extent feasible. Methods of avoidance during Proposed Action planning shall include relocation of geologic, geotechnical, and geophysical investigation locations to at least 50 feet away from any identified resource dependent upon the resource and the area, prioritizing the use of existing roadways or other previously disturbed locations for the investigations, rerouting of access routes and the installation of protective fencing around resources where appropriate.	Prior to investigations	Throughout the investigation period, including the one day pre-investigation siting survey for each investigation location	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-2: Pre-activity Pedestrian Survey	Once the geotechnical field investigation sites have been confirmed, built resource surveys and archaeological surveys will be conducted in all work areas to identify whether any new or previously unidentified built historic resources or archaeological sites are present. This activity will be conducted regardless of whether a previous cultural resources survey has covered the area to ensure adequate coverage. All newly identified resources will be recorded on California Department of Parks and Recreation 523-Series forms. If archaeological resources are identified during pre-activity survey, the Authority will ensure that they are avoided to the extent feasible by implementing the measures in MM Cul-1 (Avoid Impacts on Cultural Resources).	At least one week prior to investigations	One day coupled with the pre-investigation siting survey for each investigation location	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-3: Prepare a Post-review Discovery Plan	Prior to the start of geotechnical exploration, a Post-review Discovery Plan (Plan) will be prepared by a qualified archaeologist. Not all cultural resources are visible on the ground surface. Protocols for addressing the accidental discovery of archaeological resources or human remains that are not visible on the ground surface during Proposed Action implementation shall be outlined in the Plan. The Plan shall be developed prior to ground disturbance so that all parties are aware of the actions required if buried archaeological resources are encountered during Proposed Action implementation. At a minimum, the Plan shall include protocols and procedures for addressing post-review discoveries, Archaeological Sensitivity Training for Proposed Action personnel, an Archaeological Monitoring Plan, and a Burial Treatment Plan. The Plan will be consistent with 36 CFR 800.13(b)9(3). The post review discovery procedures included in the Plan will at a minimum include the process identified under MM Cul-6 below regarding work stoppage at the discovery site and appropriate assessment of the discovery. The Archaeological Sensitivity Training will cover the historical context, resource types (using representative photographs of soils, features or artifacts if appropriate) and legal status of known resources, regulatory protections, penalties for noncompliance, benefits of compliance, as well as the avoidance and minimization measures that the Proposed Action has implemented. The training will be conducted prior to the start of investigations. The Archaeological Monitoring Plan describes qualifications and protocols for monitoring Proposed Action-related ground disturbance, including the following: • Documentation and chain-of-command notifications • Procedures for securing an area where cultural remains are discovered • Procedures for evaluating the nature of the finds • The schedule for notifications and conducting activities associated with evaluating the finds. • Protocols for establishing minimum depth of borings when monitoring is no longer needed Specific activities to be monitored include subsurface geotechnical boring. Boring samples will be collected in clear plastic sleeves to allow for inspection of soils contained in the samples.	Prior to investigations	Throughout the investigation period	Authority and Reclamation's cultural resource specialist

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Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
	The Burial Treatment Plan describes specific procedures for burial discovery, including documentation and chain-of-command notifications, and procedures for securing an area where burials are discovered.			
MM Cul-4: Conduct Archaeological Sensitivity Training	The Authority and Reclamation will be responsible for obtaining the services of a qualified archaeologist to conduct archaeological sensitivity training (see MM Cul-3). Prior to the start of the Proposed Action investigations, a qualified archaeologist who meets the Secretary of the Interior's Standards will conduct a mandatory archaeological sensitivity training (see MM Cul-3) for all personnel involved in the geotechnical and geological investigations about cultural resources sensitivity in the Proposed Action Area and cultural resources that could be encountered during the Proposed Action investigations. Participants will be required to sign a form that states they have received and understand the training. The Authority will maintain the record of training and make it available to the Proposed Action's cultural resources staff and to Bureau of Reclamation, upon request. The Authority-provided cultural monitor will ensure that the new personnel brought onto the Proposed Action team receive the mandatory training before starting work.	Prior to investigations	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-5: Conduct Archaeological Monitoring	The Authority and Reclamation will be responsible for obtaining the services of a qualified archaeologist to conduct archaeological monitoring (see MM Cul-3). One qualified archaeological monitor shall monitor ground-disturbing activities associated with the Proposed Action (i.e., subsurface geotechnical boring). Once boring activities reach depths exceeding that which is likely to encounter cultural remains as described and established in the Archaeological Monitoring Plan, monitoring is no longer necessary. One Native American monitor (as appropriate according to Proposed Action consultation with tribes) will also be invited to monitor these same Proposed Action ground disturbing activities. In accordance with Cul-6 (Immediately Halt Ground-disturbing Activities if Cultural Resources Are Discovered and Implement a Post-review Discovery Plan), if any important (potentially eligible) prehistoric or historic-era features, or any human remains, are exposed during investigations, the archaeological monitor shall have the authority to notify the appropriate contractor supervisor to stop work in the vicinity of the find and implement the Post-review Discovery Plan. If human remains are encountered, the archaeological monitor will also initiate Cul-7 (Immediately Halt Ground-disturbing Activities if Human Remains Are Discovered and Implement a Burial Treatment Plan). Resources identified during investigation activities will be treated in accordance with MM Cul-1 (Avoid Impacts on Cultural Resources).	Throughout the investigation period	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-6: Immediately Halt Ground-disturbing Activities if Cultural Resources Are Discovered and Implement the Post-review Discovery Plan Prepared under MM Cul-1	If important (potentially eligible) cultural resources, such as structural features, unusual amounts of bone or shell, flaked or ground stone artifacts, historic-era artifacts, human remains, or architectural remains are encountered during any Proposed Action activities, work shall be suspended in coordination with the appropriate contractor supervisor immediately at the location of the find and within an appropriate radius, with a minimum of 50 feet. The Authority will implement MM Cul-1 (Avoid Impacts on Cultural Resources), and implement the Post-review Discovery Plan prepared under MM Cul-3. As part of the Post-review Discovery Plan, a qualified archaeologist shall conduct a field investigation of the find and recommend avoidance measures deemed necessary for the protection of any cultural resource concluded by the archaeologist to represent an historical resource, unique archaeological resource, or a potential historic property. If necessary, the qualified archaeologist shall recommend additional measures in consultation with the Authority and responsible agencies and, as appropriate, interested parties such as Native American tribes. The Authority and Reclamation, in consultation with responsible agencies, will determine when/if ground-disturbing activities at the geotechnical location may resume. All the activities identified above will be detailed in the Post-review Discovery Plan so that all parties are aware of the actions required if buried archaeological sites are encountered during Proposed Action implementation. Discoveries of human remains shall be treated as described in the following sections for Cul-7 (Immediately Halt Ground-disturbing Activities if Human Remains Are Discovered and Implement a Burial Treatment Plan).	Throughout the investigation period if cultural resources are discovered	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-7: Immediately Halt Ground-disturbing Activities if Human Remains Are Discovered and Implement a Burial Treatment Plan	In accordance with relevant provisions of the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the potentially damaging excavation must halt in the area of the remains and the local County Coroner must be notified. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5(b)). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission by phone within 24 hours of making that determination (Health and Safety Code Section 7050(c)). Pursuant to the provisions of Public Resources Code Section 5097.98, the Native American Heritage Commission will identify a Most Likely Descendant. The Most Likely Descendant designated by the Native American Heritage Commission will have at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. All the activities identified above shall be detailed in a Burial Treatment Plan (MM Cul-3) developed in consultation with local Native American tribes prior to Proposed Action implementation. If human remains that are not of Native American origin are discovered, disposition of the remains shall be determined in consultation with the coroner or possible descendants, if they can be identified. In the event human remains are discovered on federal lands, the federal land managing agency should be notified immediately, and should the Coroner determine the find may be Native American, then the federal land managing agency must follow the procedures of the Native American Graves Protection and Repatriation Act.	Throughout the investigation period if human remains are discovered	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM TCR-1: Avoid or Preserve in Place	Avoidance and preservation of the resources in place, including, but not limited to, planning and implementing activities to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.	Throughout the investigation period	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor

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Title	**Description**	**Timing**	**Duration**	**Responsibility**
MM TCR-2: Treat Resource with Culturally Appropriate Dignity	Treating the resource with culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following: • Protecting the cultural character and integrity of the resource. • Protecting the traditional use of the resource. • Protecting the confidentiality of the resource.	Throughout the investigation period	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor
MM TCR-3: Permanent Conservation Easements	Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.	Throughout the investigation period	Throughout the investigation period	Proposed Action contractor and staff, cultural resource specialist, and tribal monitor

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