

Mitigated Negative Declaration 2023 – 2024 Sites Reservoir Test Pits, Fault Studies, and Quarry Studies

Introduction

The Sites Project Authority (Authority) is proposing to conduct field investigations ("investigations" or "Proposed Project") using test pits and trench excavations in Colusa, Glenn, and Yolo Counties. The purpose of these investigations is to obtain information necessary to support the ongoing engineering evaluations and design development for the proposed Sites Reservoir and associated facilities. Specifically, test pits would provide information regarding the quantity and quality of borrow materials at proposed quarry locations, as well as information regarding pipeline trench stability; fault studies would provide information in areas of suspected and known fault traces/zones; and quarry studies would provide information on quantity and quality of borrow materials.

A Draft Initial Study (IS) and Mitigated Negative Declaration (MND) were prepared to satisfy requirements of the California Environmental Quality Act (CEQA). The Draft IS/MND was circulated for public review and comment for a 30-day period between September 23, 2022 and October 24, 2022. During the public review period, letters were received from the following public agencies: California Department of Fish and Wildlife (CDFW), California Department of Toxic Substances Control (DTSC), Central Valley Regional Water Quality Control Board (RWQCB), and the Yocha Dehe tribe. The comments received were mostly advisory in nature or required minor clarifications to the Draft IS/MND and appendices. Minor changes to mitigation measures have been made in response to CDFW and Yocha Dehe comments. These changes result in equivalent or more effective mitigation when compared to the originally proposed measures. Appendix D, Draft IS Public Review Comment Letters and Responses, of the Final IS has a table with comments and responses and locations where changes were made, as well as the original comment letters received. The Final IS is attached to this MND.

Project Description

The Proposed Project includes conducting investigations by test pits and trench excavations (for the fault and quarry studies) to obtain information necessary to support the ongoing engineering evaluations and design development for the proposed Sites Reservoir and associated facilities.

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 Colusa and Glenn Counties. Other proposed Sites Reservoir facilities would be located in Colusa, Glenn, Tehama, and Yolo Counties. 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 of the Final IS and investigation locations are shown in Figure 2 of the Final IS. For ease of reference, these figures are attached to this MND (in addition to being included in the Final 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 proposed through Colusa, Glenn, and Yolo Counties, as described in the Final IS. The three investigations are summarized below.

- Test Pits Test pits would be used at proposed quarry locations to gather information regarding the quantity and quality of borrow materials proposed for dam and reservoir feature construction fill. In addition, test pits at other locations would provide information regarding pipeline trench stability analysis. Test pit locations were selected to provide sufficient assessment of feature footprints and would allow collection of soil samples for engineering and laboratory analysis. Each test pit would have an approximate footprint of 18 feet by 18 feet. Test pits would be approximately 18 to 20 feet deep, and excavation and sampling would take up to 1 day to complete at each location. Stockpiling of excavated materials would occur adjacent to the hole within the established 50-foot-wide work area. Test pits would be backfilled with the excavated material on the same day as they are excavated with the stockpiled soil and the area restored, as closely as possible, to pre-project or better conditions.
- Fault Studies Fault trenches would be used to gather information regarding the location and stratigraphy in areas of suspected and known fault traces/zones and to further evaluate the areas for evidence of last movement. Fault trenches have been sited at specific existing and suspected fault line locations in proximity to proposed Sites Reservoir project features. Each trench would be approximately 5 feet wide and range from 200 to 600 feet long, and would vary from 10 to 15 feet deep. Fault studies would occur over a maximum 25-day period at each location. Stockpiling of excavated materials would occur adjacent to the trench within the established 40-foot-wide work area. Trenches would be temporarily covered with heavy duty plywood sheets (3/4 inch or thicker sheets) at the end of each workday. Once the trenching and mapping are complete, the trenches would be backfilled with excavated materials. Upon completion of work at a fault study area, the area would be returned to pre-project or better conditions.
- Quarry Studies Quarry study trenches would be used to gather information regarding the quantity and quality of borrow materials proposed for dam and reservoir feature construction fill and to assess the means and methods needed to remove overburden and rock materials during construction. These investigations would be conducted by trenching in areas of planned quarries for the Sites Project. Each trench would be up to 20 feet wide and range from 300 to 1,500 feet long, would vary from 15 to 20 feet deep. Stockpiling would occur adjacent to each trench within the established 40-foot-wide work area. Each quarry study trench will take up to 2 days to complete. Open portions of the trenches would be backfilled at the end of each day with excavated materials. Upon completion of



work at a quarry study area, the area would be returned to pre-project or better conditions.

Table 1 provides a summary of the investigation types, approximate numbers, and approximate depths by feature (also included as Table 1 in the Final IS). Figure 2 shows an overview of the proposed investigation locations. All investigations, except for the one test pit in the Dunnigan area, would be in grasslands, open areas of oak savannas, and hayfields located north and east of the town of Sites. The Dunnigan area is generally agricultural, but the test pit would be in an area identified as disturbed habitat and is adjacent to ruderal habitat. No tree removal or trimming is included in the Proposed Project.

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	 Up to 76 test pits, 18 to 20 feet below grade Up to 9 fault studies, 10 to 15 feet below grade Up to 7 quarry studies, 15 to 20 feet below grade
Funks Reservoir	 Up to 3 test pits, 18 to 20 feet below grade Up to 2 fault studies, 10 to 15 feet below grade
Terminal Regulating Reservoir Pipeline	1. Up to 4 test pits, 18 to 20 feet below grade
Dunnigan Pipeline	1. Up to 1 test pit, 18 to 20 feet below grade
Total	 Up to 84 test pits, 18 to 20 feet below grade Up to 11 fault studies, 10 to 15 feet below grade Up to 7 quarry studies, 15 to 20 feet below grade

The investigations are scheduled to occur between January 2023 and December 2024. The sequence would depend on site and seasonal conditions, as well as landowner access. All proposed investigations would be conducted during daylight hours and would be limited to the times allowed by the applicable county noise ordinance.

Using available materials for reference, the Proposed Project planning involved an extensive review of desktop aerial imagery and geographic information system (GIS) 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 examined during the desktop evaluation process.

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 Final IS.

• Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs)





- 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, Safety, Security and Environmental Plan (HSSE Plan)
- Fire Prevention and Suppression at Investigation Locations

Proposed Impact Determination

As documented in the attached Final IS, the Authority hereby finds that the Project as mitigated will not have a significant effect on the environment. The Authority has made a final decision regarding whether to adopt an MND and 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 IS.

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 Final IS:

The Project would result in no impacts on the following resources: aesthetics, energy, mineral resources, noise, population and housing, public services, recreation, and utilities and service systems.

The Project would have less than significant impacts on agriculture and forestry resources, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, and wildfire.

The Project, with implementation of 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, reduce, or minimize potential environmental impacts. Implementation of these mitigation measures would reduce the potential environmental impacts of the Proposed Project 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 the Final 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: Potentially Regulated Wetlands and 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: Nesting 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 and Host Plants for Special-status Pollinators
- Mitigation Measure Bio-17: Special-status Bat Species
- 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 and Tribal Sensitivity Training
- Mitigation Measure Cul-5: Conduct Archaeological and Tribal 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 Geo-1: Consult with Qualified Paleontologist if Paleontological Resources Were Discovered
- 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

As reflected in the attachment to this MND and in the Final IS, the Authority made improvements



to certain of its draft mitigation measures. The following lists the changed measures and documents the Authority's finding that each such measure is equivalent or more effective in mitigating environmental impacts as compared to the previous draft measures, and that each changed measure does not itself cause any potentially significant effect:

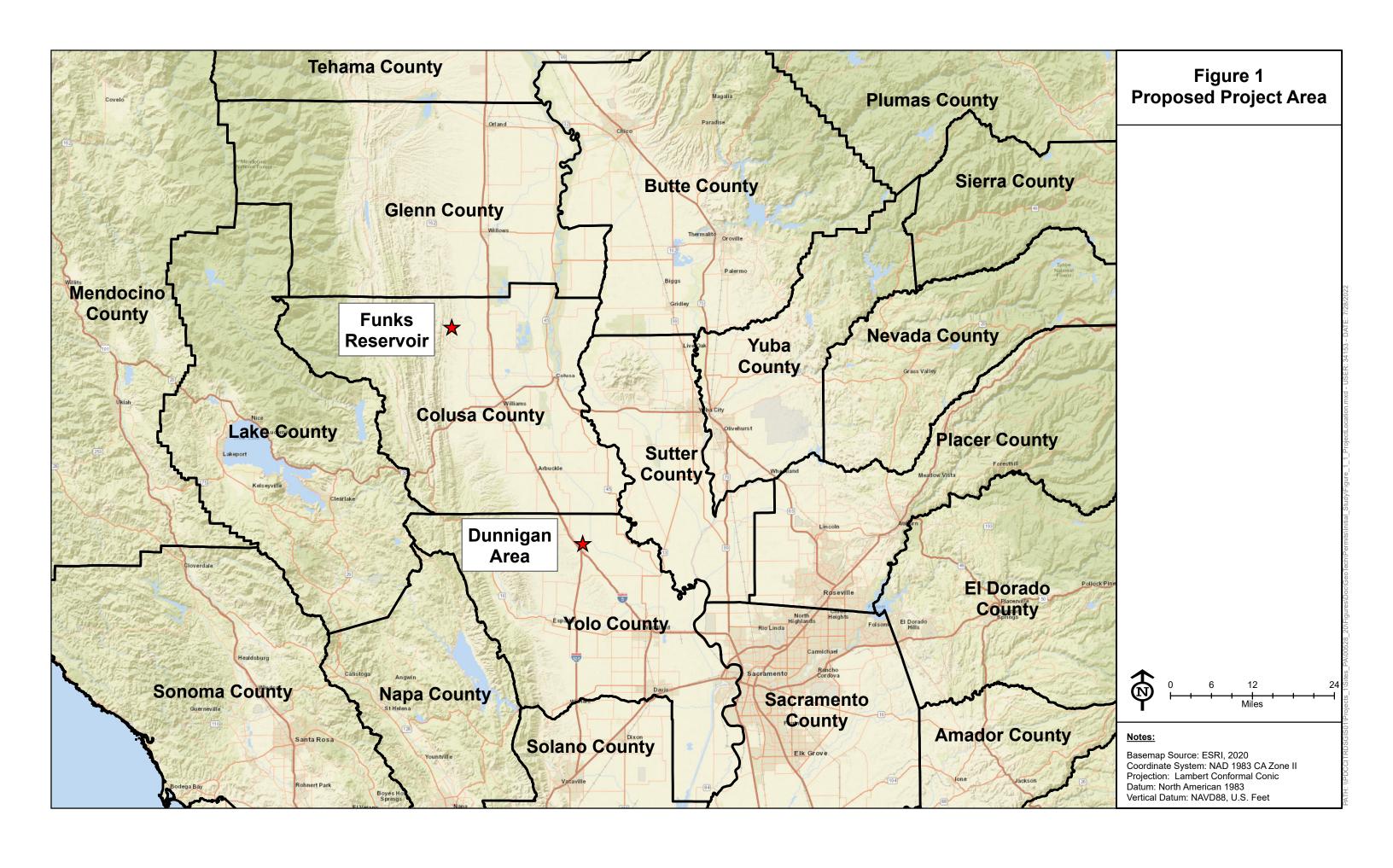
- Mitigation Measure Bio-6 Giant Garter Snake. The Authority improved this measure to
 clarify that no work would occur within any aquatic habitat or within 200 feet of suitable
 upland habitat for giant garter snake. MM Bio-6, as changed, is equivalent or more
 effective in mitigating potential environmental impacts to the giant garter snake and does
 not itself cause any potentially significant effect.
- Mitigation Measure Cul-4 Conduct Archaeological and Tribal Sensitivity Training and Mitigation Measure Cul-5 Conduct Archaeological and Tribal Monitoring. MM Cul-4 was improved to add tribal sensitivity training and a tribal representative at this training, should they choose to participate. MM Cul-5 was improved to add a tribal monitor for monitoring ground-disturbing activities. MM Cul-4 and MM Cul-5, as changed, are equivalent or more effective in mitigating potential environmental impacts to tribal cultural resources and do not themselves cause any potentially significant effect.

Attachments:

Figure 1. Proposed Project Vicinity

Figure 2. Investigation Locations

Table 2. Mitigation Measures



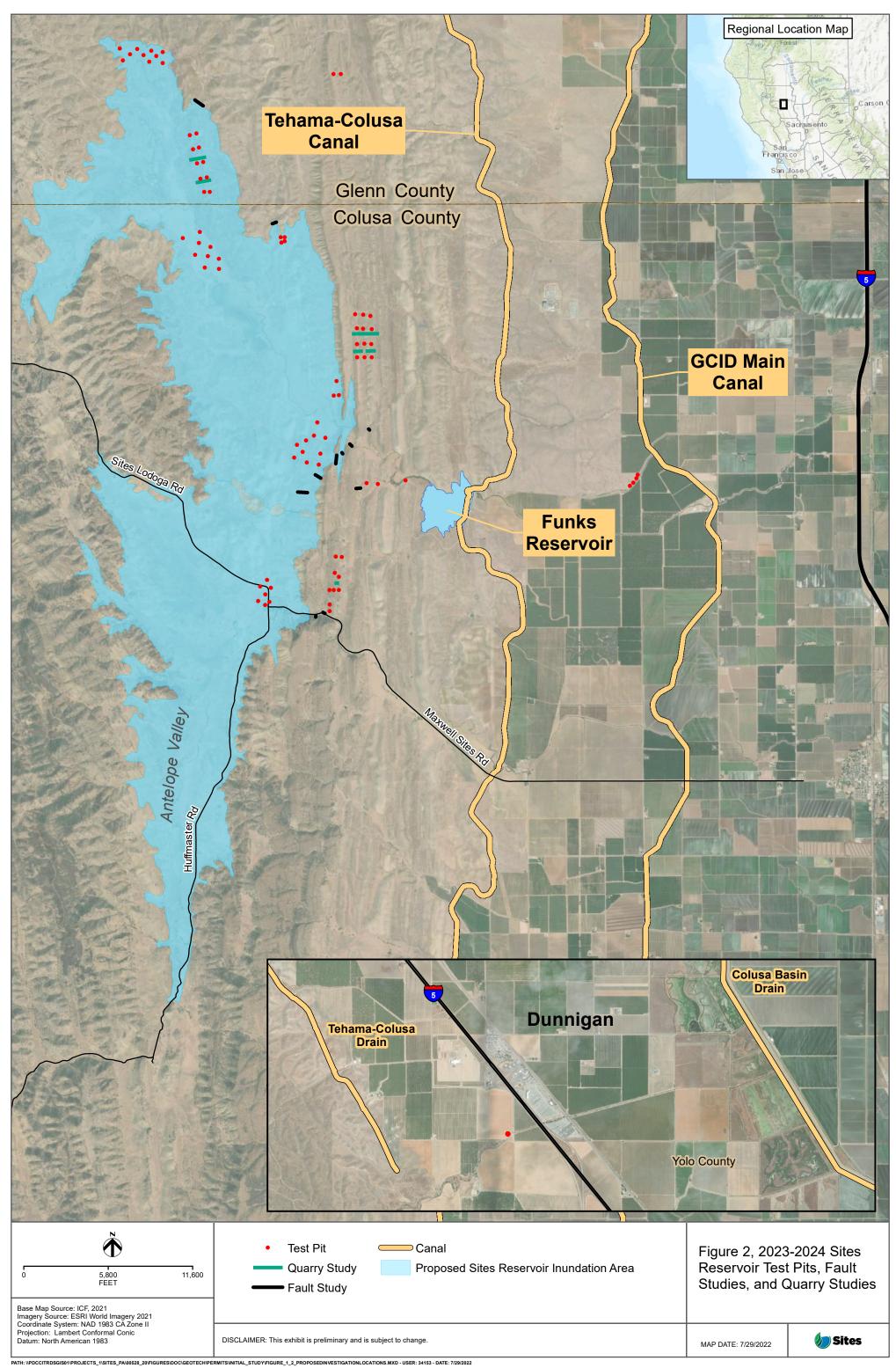




Table 2. Mitigation Measures

Title	Description	Timing	Duration	Responsibility
Survey		At least one week prior to investigations	One day pre- investigation siting survey for each investigation location	Proposed Project contractor and staff, qualified biologist, cultural resources specialist, and a tribal monitor
		At least one week prior to investigations	Determination made after one day pre- investigation siting survey for each investigation location	Proposed Project contractor and staff, qualified biologist, cultural resources specialist, and a tribal monitor
Mandatory Biological Resources Awareness		Prior to investigations	Throughout the investigation period	Proposed Project contractor and staff and qualified biologist



Title	Description	Timing	Duration	Responsibility
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 will monitor all terrestrial activities. Any observations of federally listed species will be reported to the Authority and USFWS within 24 hours. Any observations of state listed species will be reported to Authority and CDFW 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 off-road travel in or adjacent to habitat, and in any areas closed to normal traffic to reduce the risk of vehicle strikes to biological resources during travel in the Project 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 Project Area. • All Proposed Project -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 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 the Authority will provide oral notification to USFWS working days. • Vehicles and equip	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff and qualified biologist



Title	Description	Timing	Duration	Responsibility
MM Bio-3: Potentially Regulated Wetlands and 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: 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 within 250 feet of wetlands and waters (i.e., ponds, streams, reservoirs) and for activities identified in the Proposed Project 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 already restricted by mitigation for special-status wildlife species (see MM Bio-4, 5, and 6), the following measures will be implemented: Sediment control measures: Prevent transport of sediment from work area; Reduce runoff velocity on exposed slopes; and Reduce offsite sediment tracking. Management measures for investigation materials: Cover and berm loose stockpiled materials; Store chemicals in watertight containers; and Minimize exposure of work materials to stormwater. Designate refueling and equipment inspection/maintenance locations at least 300 feet from aquatic habitats. A spill prevention plan will be implemented. A biological monitor will be onsite during all work within 250 feet of waters and wetlands. In coordination with the Authority provided biological monitor, disturbe	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project 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 Project: 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 Project Area will be mapped. Those shrubs that are within 300 feet of Proposed Project 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 Project activity within 165 feet of the plants. A qualified biologist will be responsible for ensuring the buffer area fences are maintained throughout implementation of the Proposed Project. 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 Project contractor and staff, qualified biologist



Title	Description	Timing	Duration	Responsibility
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 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 Project personnel. Vehicles and equipment will not travel in identified branchiopod habitat. Investigations will fully avoid impacts 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. Investigations will not take place within 250 feet of suitable vernal pool branchiopod habitat. 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 Project contractor and staff, qualified biologist
MM Bio-6: Giant Garter Snake	No work would occur within any aquatic habitat or within 200 feet of suitable upland 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 should it be identified during ground truthing of the Proposed Project work areas: • Prior to any ground-disturbing activities, a qualified biologist will ground truth the land cover mapping done for the Proposed Project within the above identified investigation areas and staging areas, to confirm the absence of habitat suitable for giant garter snake. In addition, an inspection of all areas within a minimum of 50 feet around the proposed work sites for burrow entrances or other signs of underground refugia will be conducted. As possible, areas near any identified potential refugia within the work area and within the 50-foot buffer will be avoided. 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 Project personnel. • Movement of heavy equipment will be confined to existing paved and dirt roads and will avoid suitable upland giant garter snake habitat. • 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, and no capture or relocation will be allowed. The observation will be recorded and reported to the USFWS and CDFW within one business day.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff, qualified biologist
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 qualified biologist: • Prior to any ground-disturbing activities, a qualified biologist will ground truth the land cover mapping that was done for the Proposed Project 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 Project 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 Proposed Project staff to align work such that burrows are not affected.	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff, qualified biologist



Title	Description	Timing	Duration	Responsibility
	• 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.			
	• 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 during egress, 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 Project 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.			
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 qualified 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 Project contractor and staff, qualified biologist
MM Bio-9: Nesting Birds	 The following measures will be implemented to avoid and minimize impacts on nesting birds, including special-status birds, as well as species not specifically protected by the Migratory Bird Treaty Act, 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, where accessible, a 0.25-mile radius around the work area will be surveyed for nesting raptors and a 500-foot radius around the work area will be surveyed for other nesting birds. 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 Project Area (this date varies by species). A qualified wildlife biologist with appropriate nesting bird experience 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 Project 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: A qualified wildlife biologist with appropriate bald and golden eagle experience will conduct nesting surveys before the start of investigation activities during the breeding season (January 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, where accessible, a 1-mile radius around the work area will be surveyed for nesting bald and golden eagles. All investigations (surface and subsurface) will be avoided within 0.5 mile of potential bald eagle nests; and 1 mile of potential golden eagle nests during the nesting season (January 1-August 31). 	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project 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 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 <i>Recommended Timing and Methodology for</i>	Prior to and during investigations	Throughout the investigation period, including the pre-	Proposed Project contractor and staff, qualified biologist





Title	Description	Timing	Duration	Responsibility
	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 Project 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.		investigation siting survey	
	• Investigations will fully avoid Swainson's hawk nests. Investigations will not be conducted within 0.25 mile of an occupied Swainson's hawk nest, except in cases where the Project biologist has determined that case-specific circumstances warrant a smaller buffer. 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.			
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 Project 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 Project Area. The surveys will be conducted while walking transects throughout the proposed investigations areas, plus all accessible areas within a 200-meter (656 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 656 feet around the burrow except in cases where a qualified biologist has determined that case-specific crumstances warrant a smaller buffer. 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-specifi	during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff, qualified biologist
	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: 	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff, qualified biologist
	 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 			



Title	Description	Timing	Duration	Responsibility
	 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. 			
MM Bio-14: Bank Swallow	 The following measures will be implemented to avoid, minimize, and mitigate impacts on bank swallow during investigations: 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 Project 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 Project contractor and staff, qualified biologist
MM Bio-16: Special- status Plant Species and Host Plants for Special- status Pollinators	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 Project 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 <i>Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities</i> (CDFW 2018). To the extent feasible, surveys will be conducted during the blooming season, when special-status plant and pollinator host plant species would be most evident and identifiable. Locations of special-status and pollinator host plants in the Project Area will be recorded using a GPS unit and flagged. Where surveys determine that a special-status or pollinator host plant species is present in or adjacent to a proposed investigation area, direct and indirect impacts of the Proposed Project 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 and pollinator host plant species will be established according to a 250-foot buffer surrounding the periphery of each special-status and host plant species occurrence, the boundaries of which will be clearly marked with standard orange plastic construction exc	Prior to and during investigations	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff, qualified biologist
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 Project 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). 	Throughout the investigation period	Throughout the investigation period, including the pre-investigation siting survey	Proposed Project contractor and staff, qualified biologist





Title	Description	Timing	Duration	Responsibility
	• 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.			
MM Cul-1: Avoid Impacts on Cultural Resources	Impacts on known historical resources, including prehistoric and historic-era archaeological sites, buildings, structures, and human remains will be avoided to the extent feasible. Methods of avoidance during Proposed Project planning shall include relocation of 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 1-day pre-investigation siting survey for each investigation location	Proposed Project contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-2: Pre-activity Pedestrian Survey	Once the 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 that qualify as historic resources or unique archeological resources under CEQA 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 Project contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-3: Prepare a Post-review Discovery Plan	Prior to the start of the Proposed Project investigation activities, 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 Project 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 Project implementation. At a minimum, the Plan shall include protocols and procedures for addressing post-review discoveries including work stoppage at the discovery site and appropriate assessment of the discovery (see MM Cul-6, below), Archaeological Sensitivity Training for Proposed Project personnel, an Archaeological Monitoring Plan, and a Burial Treatment Plan. 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 Project has implemented. The training will be conducted prior to the start of investigations.	Prior to investigations	3	Authority's cultural resource specialist
	The Archaeological Monitoring Plan describes qualifications and protocols for monitoring Proposed Project-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 test pits and trenches when monitoring is no longer needed. Specific activities to be monitored include excavation of test pits and trenching and related ground disturbing activities. 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.			



Title	Description	Timing	Duration	Responsibility
MM Cul-4: Conduct Archaeological and Tribal Sensitivity Training	The Authority will be responsible for obtaining the services of a qualified archaeologist, and a tribal representative should they choose to participate, to conduct archaeological and tribal sensitivity training (see MM Cul-3). Prior to the start of the Proposed Project investigations, a qualified archaeologist who meets the Secretary of the Interior's Standards and a tribal representative will conduct a mandatory archaeological and tribal sensitivity training (see MM Cul-3) for all personnel involved in the investigations about cultural resources sensitivity in the Project Area and cultural resources that could be encountered during the Proposed Project 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 Project's cultural resources staff and tribal staff, as requested. The Authority-provided cultural monitor will ensure that the new personnel brought onto the Proposed Project team receive the mandatory training before starting work.	Prior to investigations	Throughout the investigation period	Proposed Project contractor and staff, cultural resource specialist, and tribal monitor
MM Cul-5: Conduct Archaeological and Tribal Monitoring	The Authority will be responsible for obtaining the services of a qualified archaeologist, and a tribal monitor based on consultation with tribes, to conduct archaeological and tribal monitoring (see MM Cul-3). A qualified archaeological monitor and a tribal monitor shall monitor ground-disturbing activities associated with the Proposed Project (i.e., test pits and trenching). Once test pits and trenching 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. 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 CRHR-eligible) prehistoric or historic-era features, or any human remains, are exposed during investigations, the archaeological monitor and tribal 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 Authority 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 Project contractor and staff, cultural resource specialist, and tribal monitor
	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 Project 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 or unique archaeological resource. If necessary, the qualified archaeologist shall recommend additional measures in consultation with the Authority and responsible agencies and, as appropriate, interested parties such as California Native American tribes. The Authority, in consultation with responsible agencies, will determine when/if ground-disturbing activities at the 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 Project 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	Proposed Project contractor and staff, cultural resource specialist, and tribal monitor



Title	Description	Timing	Duration	Responsibility
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 California 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 California Native American Heritage Commission will identify a Most Likely Descendant. The Most Likely Descendant designated by the California 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 Project 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.	Throughout the investigation period if human remains are discovered	Throughout the investigation period	Proposed Project contractor and staff, cultural resource specialist, and tribal monitor
9	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 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 Project contractor and staff, qualified paleontologist
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 Project contractor and staff, cultural resource specialist, and tribal monitor
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 Project contractor and staff, cultural resource specialist, and tribal monitor
	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 Project contractor and staff, cultural resource specialist, and tribal monitor