

**MITIGATION MONITORING AND REPORTING PROGRAM  
SOUTH MOKELUMNE RIVER SETBACK LEVEE PROJECT**

**STATE CLEARINGHOUSE NO. 2022010311**

**Prepared for:**

Reclamation District No. 348  
500 Capitol Mall  
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Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<b>Air Quality</b>			
<p><b>AQ-1. Construction Emissions of PM<sub>10</sub></b></p> <ul style="list-style-type: none"> <li>• All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, covered with a tarp or other suitable cover or vegetative ground cover.</li> <li>• All unpaved roads used to access the Project will be effectively stabilized of dust emissions using water.</li> <li>• All land clearing, grubbing, scraping, excavation, land leveling, and grading activities will be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</li> <li>• For transportation of imported materials, all material will be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container will be maintained.</li> <li>• All operations will limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. In addition, the use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions; the use of blower devices is expressly forbidden.</li> <li>• Trackout will be immediately removed when it extends 50 or more feet from the site and at the end of each workday.</li> <li>• Limit traffic speeds of construction equipment and vehicles on unpaved roads to no more than 15 mph.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>

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<p><b>AQ-2. Emissions from Construction Equipment</b></p> <ul style="list-style-type: none"> <li>• Reduce idling time (e.g., turn off trucks that are waiting more than 5 minutes to load or unload, turn off equipment when not in use, use of automatic shutdown feature when available). Provide clear signage that posts this requirement for employees at the entrances to the site.</li> <li>• Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.</li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>

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<b>Biological Resources</b>			
<p><b>BIO-1. Rare Plant Avoidance and Mitigation</b></p> <ul style="list-style-type: none"> <li>• Prior to commencement of construction, the intertidal marsh shall be designated as an Environmentally Sensitive Area (ESA) on contractor plans and flagged in the field with brightly colored flagging. The flagging will be attached to vegetation or stakes placed along the limit of construction on the landward side of the marsh. No construction activities or personnel shall enter the ESA. A qualified biologist or botanist shall provide the construction crew with information on the location of the special-status plants, how to recognize the ESA and the plants, and the avoidance measures in place for the protection of special-status plants and their habitat, including applicable measures in environmental permits.</li> <li>• If any permanent impacts to special-status plants occur, the Project shall mitigate for those impacts at a minimum ratio of 3:1. Mitigation will be on an individual plant basis unless the CDFW provides written approval that an area of occupied habitat may be used. Plants shall be re-established on-site or as close as feasible with conditions similar to the location the impacts occurred. Mitigation plantings shall be monitored for three years and replanted if necessary if plants do not survive.</li> <li>• If endangered, threatened, or rare plants listed under the California Endangered Species Act or Native Plant Protection Act cannot be avoided, the Project shall obtain an incidental take permit in accordance with state law and regulation prior to commencement of the activities that will result in take.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>

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<p><b>BIO-2. Valley Elderberry Longhorn Beetle Avoidance and Mitigation</b></p> <ul style="list-style-type: none"> <li>Establish a setback of 20 feet from the dripline of each avoided elderberry shrub.</li> <li>Throughout construction, install and maintain brightly colored flags or fencing around retained elderberry shrubs.</li> <li>If shrubs cannot be avoided, the Project shall obtain take coverage via a formal Section 7 endangered species act consultation with USFWS for valley elderberry longhorn beetle (VELB).</li> <li>If shrubs are impacted, prior to construction, purchase VELB mitigation credits at a USFWS-approved mitigation bank (Table 4). A total of 2 credits would be purchased for the removal of the 8 elderberry shrub saplings on the land side of the levee near Sta 267+00.</li> </ul> <p style="text-align: center;"><i>Table 4. Summary of VELB Mitigation Compensation</i></p> <table border="1"> <thead> <tr> <th>Habitat Type</th> <th>Compensation Ratio <sup>1</sup></th> <th>Total Elderberry Disturbance Area</th> <th>Compensation Area</th> <th>VELB Credit Compensation <sup>2</sup></th> </tr> </thead> <tbody> <tr> <td>Riparian</td> <td>3:1</td> <td>1,200 sq ft</td> <td>3,600 sq ft</td> <td>2 credits</td> </tr> </tbody> </table> <p><sup>1</sup> Compensation ratio obtained from Table 1 of the 2017 VELB Framework. <sup>2</sup> Per the 2017 VELB Framework, a single credit equals 1,800 square feet. The VELB Credit Compensation was calculated by dividing the Compensation Acreage by the number of acres in a VELB Credit.</p>	Habitat Type	Compensation Ratio <sup>1</sup>	Total Elderberry Disturbance Area	Compensation Area	VELB Credit Compensation <sup>2</sup>	Riparian	3:1	1,200 sq ft	3,600 sq ft	2 credits	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>
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Riparian	3:1	1,200 sq ft	3,600 sq ft	2 credits									
<p><b>BIO-3. Environmental Training</b></p> <ul style="list-style-type: none"> <li>Prior to construction, the contractor(s) shall be provided with the specific protective measures to follow during implementation of the Project. A qualified biologist shall provide the construction crew with information on the protected species potentially found in the Project vicinity, the protection afforded the species by the Federal Endangered Species Act and California Endangered Species Act, and guidance on those specific protection measures that must be implemented as part of the Project.</li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Pre-construction</p>										

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<p><b>BIO-4. Waterside Work Window</b></p> <ul style="list-style-type: none"> <li>Waterside work will occur from June 1 to October 31, when special-status fish are least likely to be present and/or least vulnerable to waterside activities. This is the window recommended by NOAA Restoration Center’s Program to Facilitate Implementation of Restoration Projects in the Central Valley of California (NMFS 2018). The work window may be extended with approval from the National Marine Fisheries Service (NMFS) and CDFW.</li> <li>Ground-disturbing work along the shore of the SMR below the river HTL (8.48 ft elevation) shall be conducted at receding or low tide to avoid in-water work to the maximum extent possible.</li> </ul>	RD 348	RD 348	Ongoing during construction
<p><b>BIO-5. Water Quality Protection</b></p> <ul style="list-style-type: none"> <li>The Project will implement best management practices (BMPs), including a Storm Water Pollution Prevention Program (SWPPP) or Water Pollution Control Program (WPCP), as appropriate, to minimize adverse effects to water quality, special-status species and their habitat, and designated critical habitat.</li> <li>Construction equipment and plant materials shall be staged in designated terrestrial areas adjacent to the Project sites. Existing staging sites, maintenance toe roads, and crown roads shall be used to the maximum extent possible for Project staging and access to avoid affecting previously undisturbed areas.</li> <li>The use or storage of petroleum-powered equipment shall be accomplished in a manner that prevents potential release of petroleum materials into state or federal waters. Fuel storage, refueling, and servicing of construction equipment will take place in upland locations.</li> </ul>	RD 348 & primary construction contractor	RD 348 & CVRWQCB	Ongoing during construction

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-5. Water Quality Protection (cont'd)</b></p> <ul style="list-style-type: none"> <li>• Mechanized equipment used for work in the stream channel or within 25 feet of a wetted channel shall have a double (i.e., primary and secondary) containment system for diesel and oil fluids. Hydraulic fluids in mechanical equipment working within the river channel shall not contain organophosphate esters. Vegetable-based hydraulic fluids are preferred.</li> <li>• Prior to use, all equipment shall be cleaned to remove external oil, grease, dirt, or mud. Wash sites must be located in upland locations so wash water does not flow into the river channel or wetlands. All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. Prior to construction, all mechanical equipment shall be thoroughly inspected and evaluated for the potential of fluid leakage. Mechanical equipment shall be inspected on a daily basis to ensure there are no motor oil, transmission fluid, hydraulic fluid, or coolant leaks. All leaks shall be repaired in the equipment staging area or other suitable location prior to resumption of construction activity. Equipment stored for a lengthy period of time (more than one week on site) shall have drip and leak pans placed underneath potential leak areas to contain accidental drips.</li> <li>• Oil absorbent and spill containment materials shall be located on-site when mechanical equipment is in operation within 100 feet of watercourses. If a spill occurs, no additional work shall commence in-channel until (1) the mechanical equipment is inspected by the contractor, and the leak has been repaired, (2) the spill has been contained, and (3) resource agencies (i.e., NMFS, USFWS, CDFW, as applicable) are contacted and have evaluated the impacts of the spill. Absorbent and spill containment materials will otherwise be inspected regularly to ensure functionality.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CVRWQCB</p>	<p>Ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-5. Water Quality Protection (cont'd)</b></p> <ul style="list-style-type: none"> <li>• Precautions to minimize turbidity/siltation shall be implemented at the time of construction. This includes installation of silt fencing, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to erode into downstream reaches. If flows within the river reach or have the potential to reach areas of sediment exposed by the Project, a turbidity curtain will be used to minimize the effects of construction on river turbidity. These barriers shall be placed at all locations where the likelihood of sediment input exists and shall be in place during construction activities, and afterward if necessary. If any sediment barrier fails to retain sediment, corrective measures shall be taken immediately.</li> <li>• Erosion control materials such as coir rolls or erosion control blankets will not contain plastic netting that could entrain reptiles (especially snakes) and amphibians.</li> <li>• The contractor shall inspect, maintain, and repair all erosion control materials and devices prior to and after any storm event, at 24-hour intervals during extended storm events, and a minimum of every two weeks until all erosion control measures are no longer needed. If an erosion control measure fails and sediment is discharged, appropriate agencies should be notified within 48 hours of discovery.</li> <li>• Any excavated material shall be stockpiled in areas a sufficient distance from watercourses, where it cannot enter the stream channel.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CVRWQCB</p>	<p>Ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-5. Water Quality Protection (cont'd)</b></p> <ul style="list-style-type: none"> <li>Immediately after Project completion and before close of seasonal work window, all exposed soil shall be stabilized with erosion control measures such as mulch, seeding, and/or placement of erosion control blankets. Where straw, mulch, or slash is used on bare mineral soil, the minimum coverage shall be 95 percent with two-inch minimum depth. All non-natural erosion control materials shall be removed after the Project vicinity has fully stabilized. When seeding is used as an erosion control measure, only seeds from native plant species will be used. Sterile (without seeds), weed-free straw, free of exotic weeds, is required when hay or hay bales are used as erosion control measures.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CVRWQCB</p>	<p>Ongoing during construction</p>
<p><b>BIO-6. Limit Effects of Construction on Aquatic Habitats</b></p> <ul style="list-style-type: none"> <li>Prior to beginning Project activities, the contractor shall establish and clearly mark the Project limits, including the boundaries of designated equipment staging areas; ingress and egress corridors; stockpile areas for spoils disposal, soil, and materials; and equipment exclusion zones. Vegetation disturbance will be avoided and minimized to the extent practicable.</li> <li>Where feasible, waterside construction shall occur from the top of the levee.</li> <li>Woody debris and vegetation on the levee and in the river shall not be disturbed if outside of the Project's work area.</li> <li>The amount of rock and other structural materials used for levee protection shall be limited to the minimum needed for scour protection.</li> <li>RSP will be removed/placed in a manner that limits resuspension of sediments. The Project shall conduct turbidity monitoring in accordance with the project's CWA 401 Water Quality Certification. If needed, rock placement methods will be modified, slowed, or suspended in order to comply with the terms and conditions of the Certification.</li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Pre-construction and ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-7. Minimization of Acoustic Impacts to Fish</b></p> <ul style="list-style-type: none"> <li>• Operation of heavy equipment will be restricted to daylight hours to allow quiet nighttime migration conditions for fish.</li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>
<p><b>BIO-8. Restoration Plan</b></p> <ul style="list-style-type: none"> <li>• Prior to construction, a detailed restoration plan will be prepared and submitted to the Department of Water Resources, CDFW, and NMFS for review. The restoration plan will describe responsible parties, the species palette, planting locations, planting densities, the schedule for implementation, restoration success criteria, monitoring methods, reporting requirements, and corrective actions to be taken if the proposed success criteria are not being met. The restoration plan will identify the location of the proposed intertidal marsh, RF, and SS habitat.</li> <li>• Restoration shall utilize plant species native to the Project vicinity or region and include a diverse community structure (plantings shall include both woody and herbaceous species). Restoration shall include control and proper disposal of invasive weeds.</li> <li>• Restoration shall include at minimum a 3:1 replanting ratio (3 native riparian plantings for each individual removed) for any woody riparian vegetation measuring 1 inch diameter or greater at breast height that is removed by the Project.</li> <li>• The restoration plan will include an adaptive management and monitoring program consistent with the framework established in the Delta Plan Appendix 1B.</li> <li>• The restoration plan will include an invasive species management plan that meets the requirements set forth in Delta Plan Mitigation Measure 4-1.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348, CDFW, &amp; DSC</p>	<p>Pre-construction (restoration plan) and post-construction (revegetation &amp; monitoring)</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-9. Western Pond Turtle Avoidance</b></p> <ul style="list-style-type: none"> <li>• Prior to the start of construction, a biologist will conduct a training session for all construction personnel that includes a description of western pond turtle (WPT), their habitat, and how to proceed if a suspected WPT individual is encountered. The training will also describe the specific avoidance measures being implemented for this species.</li> <li>• Within 48 hours prior to the start of work, a qualified biologist will conduct a preconstruction survey for WPT and other special-status amphibians and reptiles. The survey area will include the construction area and 250 feet upstream and downstream of the construction area. If the biologist discovers a WPT or other special-status amphibian or reptile within the construction footprint on the land side of the levee, the biologist shall, with approval from CDFW and in accordance with applicable permits, relocate the individuals to suitable habitat (e.g., to one of the larger main canals on New Hope Tract outside the project area for WPT found on the land side). If a potential turtle nest is observed, the monitor shall flag the nest and a 300-foot environmentally sensitive area (ESA) buffer shall be established around the nest. No construction or construction personnel shall be allowed in the ESA. The ESA buffer shall be indicated by temporary fencing if construction has or will begin before nesting periods end (the period from egg laying to emergence of hatchlings is normally April to November). If it is not feasible to avoid the nest, CDFW shall be contacted for guidance on potential nest relocation specific to the project site. If working outside the nesting period, no coordination with CDFW will be necessary.</li> <li>• Any holes or trenches associated with the Project will be covered during non-work hours to prevent wildlife from becoming trapped or injured. Any holes that are not covered will have an escape ramp during nonwork hours to prevent wildlife from becoming trapped.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-9. Western Pond Turtle Avoidance Cont'd</b></p> <ul style="list-style-type: none"> <li>If WPT (or other special-status wildlife) is encountered during construction, activities will cease until a qualified biologist verifies that the individual(s) have left on their own, that work activities will not affect the individual(s), or in coordination with CDFW and in accordance with applicable permits, the biologist moves the individual(s) to other suitable habitat on New Hope Tract, away from construction.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>
<p><b>BIO-10. Giant Garter Snake Avoidance</b></p> <ul style="list-style-type: none"> <li>As GGS are not known to occur on New Hope Tract, the project will implement avoidance during construction as follows: If a giant garter snake is observed during preconstruction surveys or during construction, the Project shall immediately cease construction within 200 feet of potentially occupied aquatic habitat until the appropriate level of consultation with the USFWS and coordination with CDFW are completed.</li> <li>Construction shall occur during the active period for the snake, between May 1 and October 1. If any work is proposed between October 2nd and April 30th, the USFWS shall determine if additional measures are necessary to minimize and avoid take.</li> <li>Limit vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat to the minimal area necessary.</li> <li>Confine the movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat to existing roadways to minimize habitat disturbance.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-10. Giant Garter Snake Avoidance (cont'd)</b></p> <ul style="list-style-type: none"> <li>• Prior to ground disturbance, all on-site construction personnel shall be given instruction regarding the presence of SJMSCP Covered Species, including giant garter snake, and the importance of avoiding impacts to these species and their habitats.</li> <li>• In areas where wetlands, irrigation ditches, marsh areas or other potential giant garter snake habitats are being retained on the site:               <ul style="list-style-type: none"> <li>○ Install temporary fencing at the edge of the construction area and the adjacent wetland, marsh, or ditch;</li> <li>○ Restrict working areas, spoils and equipment storage and other Project activities to areas outside of marshes, wetlands and ditches; and</li> <li>○ Maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents.</li> </ul> </li> <li>• If on-site wetlands, irrigation ditches, marshes, etc. are being relocated in the vicinity: the newly created aquatic habitat shall be created and filled with water prior to dewatering and destroying the pre-existing aquatic habitat. In addition, non-predatory fish species that exist in the aquatic habitat and which are to be relocated shall be seined and transported to the new aquatic habitat as the old site is dewatered.</li> <li>• Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.</li> <li>• Preconstruction surveys for the giant garter snake (conducted after completion of environmental reviews and prior to ground disturbance) shall occur within 24 hours of ground disturbance.</li> <li>• If a lapse in Project activity of 2 weeks or greater occurs, surveys for giant garter snake in the Project area shall be repeated.</li> <li>• After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-Project conditions.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-11 Nesting Bird Avoidance</b></p> <ul style="list-style-type: none"> <li>• If construction occurs between February 15 and September 15, a qualified biologist shall conduct a preconstruction survey for the active nests of protected birds. The survey shall occur no more than 5 days prior to construction. The survey shall cover all areas to be disturbed by the Project, and accessible areas within the following buffers surrounding proposed work areas, staging areas, and access roads:               <ul style="list-style-type: none"> <li>○ 250 feet for birds protected under the Migratory Bird Treaty Act (MBTA),</li> <li>○ 300 feet for tricolored blackbird</li> <li>○ 0.25 mile for nesting raptors</li> </ul> </li> <li>• Surveys shall be conducted during periods of peak activity (early morning, dusk) and shall be of sufficient duration to observe movement patterns. Survey results, including a description of timing, duration and methods used, shall be submitted to CDFW for review 48 hours prior to the initiation of the Project. The measures listed below shall be implemented based on the survey results.</li> </ul> <p><u>No Active Nests Found:</u></p> <ul style="list-style-type: none"> <li>• If no active nest of a bird of prey, MBTA bird, or other CDFW protected bird is found, then no further avoidance and minimization measures are necessary.</li> </ul> <p><u>Active Nests Found:</u></p> <ul style="list-style-type: none"> <li>• If an active nest of a bird of prey, MBTA bird, or other CDFW protected bird is discovered that may be adversely affected by construction activities or an injured or killed bird is found, immediately:               <ul style="list-style-type: none"> <li>○ Stop all work within a 300-foot radius of the active nest (if MBTA bird) or 0.25 mile (if raptor).</li> <li>○ Notify the Engineer.</li> <li>○ Do not resume work within the specified radius of the discovery until authorized.</li> </ul> </li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-11 Nesting Bird Avoidance Cont'd</b></p> <ul style="list-style-type: none"> <li>• The biologist shall establish a minimum 0.25-mile radius Environmentally Sensitive Area (ESA) if the nest is that of a bird of prey, 300-foot radius ESA if the nest is of a tricolored blackbird, or 100-foot ESA if the nest is that of an MBTA bird other than a bird of prey. Activity in the ESA will be restricted as follows:               <ul style="list-style-type: none"> <li>○ Do not enter the ESA unless authorized.</li> <li>○ If the ESA is breached, immediately: Secure the area and stop all operations within 60 feet of the ESA boundary.</li> <li>○ Notify the Engineer.</li> </ul> </li> <li>• If the ESA is damaged, the Project Engineer shall determine what efforts are necessary to remedy the damage and who performs the remedy.</li> <li>• No construction activity shall be allowed in the ESA until the biologist determines that the nest is no longer active.</li> <li>• The ESA may be reduced if a qualified biologist experienced with raptor behavior monitors the nest and determines, in coordination with CDFW, that no disturbance to the active nest is occurring. Reduction of the ESA depends on the species of bird, the location of the nest relative to the Project, Project activities during the time the nest is active, and other Project-specific conditions.</li> <li>• Active nests found inside the limits of species-specific buffer zones or nests within the vicinity of the Project site showing signs of distress from Project activity as determined by the qualified biologist shall be monitored daily during the duration of the Project for changes in bird behavior. Buffer areas of active nests within the vicinity of the Project site showing signs of distress or disruptions to nesting behaviors from Project activity, as determined by the qualified biologist, shall have their buffers immediately adjusted by the qualified biologist until no further interruptions to breeding behavior are detectable.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-11 Nesting Bird Avoidance Cont'd</b></p> <ul style="list-style-type: none"> <li>For raptor nests, the on-site biologist shall be on the work site daily while construction-related activities are taking place within the 0.25-mile ESA. The monitor shall have the authority to stop work if raptors are exhibiting agitated behavior.</li> <li>Between February 15 and September 15, if a lapse in Project activity of 7 days or more occurs, the survey for MBTA birds shall be repeated and no work shall proceed until the results have been submitted to CDFW.</li> <li>Between February 15 and September 15, if a lapse in Project activity of 14 days or more occurs, the survey for raptors within 0.25 mile shall be repeated and no work shall proceed until the results have been submitted to CDFW.</li> <li>If an active nest is identified in or adjacent to the construction zone after construction has started, the protective measures outlined above (establish ESA, monitor, etc.) will be implemented to ensure construction is not causing disturbance to the nest.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>
<p><b>BIO-12. Burrowing Owl Avoidance</b></p> <ul style="list-style-type: none"> <li>Prior to any construction, regardless of season, a qualified biologist will conduct Take Avoidance Surveys in accordance with applicable portions of Appendix D of the CDFW <i>Staff Report on Burrowing Owl Mitigation guidelines</i> (7 March 2012). One Take Avoidance Survey will be conducted within 14 days prior to initiation of ground-disturbing activities. The survey will cover all accessible potential burrowing owl habitat within 500 feet of the Project construction footprint.</li> <li>If a lapse in Project activity of 7 days or more occurs, the take avoidance survey shall be repeated and no work shall proceed until the results have been submitted to CDFW.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-12. Burrowing Owl Avoidance Cont'd</b></p> <ul style="list-style-type: none"> <li>• If active burrowing owl burrows are found, the following measures will be implemented:               <ul style="list-style-type: none"> <li>○ During the non-breeding season (September 1 through January 31), the biologist will establish a 160-foot Environmentally Sensitive Area (ESA) around the burrow. During the breeding season (February 1 through August 31), the biologist will establish a 250-foot ESA around the burrow. No construction activity will be allowed in the ESA.</li> <li>○ The size of the ESA may be reduced if, in consultation with CDFW, the biological monitor determines that no disturbance to the burrowing owl is occurring.</li> <li>○ In consultation with CDFW, burrowing owls that cannot be avoided through other means may be passively excluded during the non-breeding season using one-way doors, as described in the Exclusion Plan of Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012).</li> </ul> </li> <li>• If a potentially occupied burrowing owl burrow is observed during construction, work shall immediately cease within 500 feet of the burrow. A qualified biologist shall verify occupancy and follow procedures outlined above including establishment of an ESA.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-13. Swainson’s Hawk Avoidance</b></p> <ul style="list-style-type: none"> <li>• If construction (including tree removal) is proposed to begin during the nesting season for Swainson’s hawk (March 1 through September 15), a qualified biologist shall conduct a preconstruction survey for Swainson’s hawk in accordance with the applicable sections of the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson’s Hawk TAC 2000). The survey effort shall include at minimum one survey for Swainson’s hawk within 14 days in advance of the construction start date. The survey area will include the Project site (which contains no potential nest trees) and a 0.5-mile radius around the site.</li> <li>• If a nesting Swainson’s hawk is found within 0.5 mile of the Project, then a biologist experienced with raptor behavior will establish a 0.5-mile protection buffer. If construction activities that may cause nest abandonment or forced fledging are necessary within the buffer, then the biologist shall monitor the nest for signs of disturbance on a daily basis during construction. If the Swainson’s hawk is showing agitated behavior, then construction will cease or be reduced to a point that it does not disturb the hawks. Monitoring may be reduced if the on-site biologist determines, in coordination with CDFW, that construction is not disturbing the nesting hawks. Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance would generally not be prohibited within the buffer.</li> </ul>	<p>RD 348 &amp; primary construction contractor</p>	<p>RD 348 &amp; CDFW</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>BIO-14. Western Red Bat Avoidance</b></p> <ul style="list-style-type: none"> <li>If work begins from May through July, trees within the BSA should be surveyed for this foliage-roosting bat within 15 days of the start of work. If western red bats (or sign of bat) are found within the BSA, the biologist shall evaluate the colony to determine its size and develop appropriate mitigation measures for CDFW review and approval. The bat survey shall document 1) the location of all roosting sites (location shall be adequately described and drawn on a map), 2) the number of bats present at the time of visit (count or estimate), and 3) the location, amount, distribution of all bat guano shall be described and shown on a map. Western red bats shall not be disturbed without specific notice to and coordination with CDFW.</li> </ul>	RD 348 & primary construction contractor	RD 348 & CDFW	Pre-construction & ongoing during construction
<b>Cultural Resources</b>			
<p><b>CUL-1. Avoid and Minimize Potential Effects on Cultural Resources</b></p> <ul style="list-style-type: none"> <li>If buried materials are encountered, all soil disturbing work should be halted at the location of any discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36CFR60.4). Prehistoric archaeological site indicators expected within the general area include: chipped chert and obsidian tools and tool manufacture waste flakes; grinding and hammering implements that look like fist-size, river-tumbled stones; and for some rare sites, locally darkened soil that generally contains abundant archaeological specimens. Historical remains expected in the general area commonly include items of ceramic, glass, and metal. Features that might be present include structure remains (e.g., cabins or their foundations) and pits containing historical artifacts.</li> </ul>	RD 348	RD 348 & State Native American Commission	Ongoing during construction

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>CUL-1. Avoid and Minimize Potential Effects on Cultural Resources Cont'd</b></p> <ul style="list-style-type: none"> <li>Per the requirements of the California Code of Regulations, Title 14, Chapter 3, Section 15064.5(e) if human remains are encountered during the course of the project, excavation or disturbance of the location must be halted in the vicinity of the find, and the County coroner contacted. If the coroner determines the remains are Native American, the coroner will contact the National American Heritage Commission (NAHC) within 24 hours. The NAHC will identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent may make recommendations about the treatment or disposal of the human remains with appropriate dignity.</li> </ul>	RD 348	RD 348 & State Native American Commission	Ongoing during construction
<b>Geology/Soils</b>			
<p><b>GEO-1. Avoid and Minimize Potential Effects on Paleontological Resources</b></p> <ul style="list-style-type: none"> <li>If any subsurface paleontological resources are encountered during construction of the project, all construction activities in the vicinity of the encounter shall be halted until a qualified paleontologist can examine these materials, make a determination of their significance and, if significant, recommend further mitigation measures that would reduce potential effects to a level that would be less than significant. Such measures could include 1) preservation in place or 2) excavation, recovery and curation by qualified professionals. The District shall be responsible for retaining qualified professionals, implementing recommended mitigation measures and documenting mitigation efforts in a written report, consistent with the requirements of the State CEQA Guidelines.</li> </ul>	RD 348 & primary construction contractor	RD 348 & primary construction contractor	Ongoing during construction

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<b>Hazards and Hazardous Materials</b>			
<p><b>HAZ-1. Best Management Practices Regarding the Use of Hazardous Materials</b></p> <ul style="list-style-type: none"> <li>• No potentially hazardous materials will be stored in a location where there is potential to enter any waterways and/or contaminate aquatic resources.</li> <li>• All construction materials with the potential to pollute runoff will be handled and delivered with care and stored under cover and/or surrounded by berms when rain is forecast or during wet weather.</li> <li>• An effort will be made to store only enough of a product necessary to complete the job.</li> <li>• Materials, fuels, liquids and lubricants, and equipment supplies stored onsite will be stored in a neat, orderly manner, in their appropriate containers, with the original manufacturer’s label and, if possible, in an enclosure.</li> <li>• Any hazardous materials will be stored and labeled according to local, state, and federal regulations.</li> <li>• If drums must be stored without overhead cover, they will be stored at a slight angle to reduce corrosion and ponding of rainwater on the lids.</li> <li>• Substances will not be mixed with one another unless recommended by the manufacturer.</li> <li>• Manufacturer’s recommendations for proper use and disposal of a product will be followed.</li> <li>• Whenever possible, all of a product will be used up before disposal of its container.</li> <li>• If surplus product must be disposed of, the manufacturers or the local and State recommended methods for proper disposal will be followed.</li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Pre-construction &amp; ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>HAZ-2. Prevent, Control, and Minimize Impacts from a Spill</b></p> <ul style="list-style-type: none"> <li>• Stationary equipment such as motors, pumps, generators, compressors and welders located within or adjacent to the river will be positioned over drip-pans.</li> <li>• Minor spills are those that can be controlled by onsite personnel. The following actions will occur upon discovery of a minor spill:               <ul style="list-style-type: none"> <li>○ The spread of the spill will be contained.</li> <li>○ If the spill occurs on impermeable surfaces, such as any temporary surfaces installed for pollution prevention during construction, it will be cleaned up using “dry” methods (i.e., absorbent materials, cat litter, and/or rags).</li> <li>○ If the spill occurs in permeable substrate areas, it will be immediately contained by constructing an earthen dike. The contaminated soil will be dug up and properly disposed of.</li> <li>○ If the spill occurs during rain, the impacted area will be covered to avoid runoff, and appropriate clean-up steps will be taken after precipitation.</li> </ul> </li> <li>• Onsite personnel should not attempt to control major spills until the appropriate and qualified emergency response staff has arrived at the site. Failure to report major spills can result in significant fines and penalties.               <ul style="list-style-type: none"> <li>○ Any major release or threatened release of a hazardous material requires immediate reporting by the responsible person to the Cal OES State Warning Center (800) 852-7550 and the Unified Program Agency (UPA) or 911.</li> </ul> </li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>HAZ-2. Prevent, Control, and Minimize Impacts from a Spill Cont'd</b></p> <ul style="list-style-type: none"> <li>○ For spills of federal reportable quantities, the National Response Center will also be notified at (800) 424-8802. The federal reportable spill quantity for petroleum products is any oil spill that (1) violates applicable water quality standards, (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.</li> <li>○ A written report will be sent to all notified authorities.</li> <li>● Diesel fuel, oil, gasoline, and lubricants are considered petroleum products. These materials will be handled carefully to minimize their exposure to storm water. The risks in using petroleum products will be reduced by following these steps:             <ul style="list-style-type: none"> <li>○ Waste oil and other petroleum products will not be discharged into the ground or other water bodies.</li> <li>○ Petroleum products will be stored in tightly sealed containers that are clearly labeled, in a covered area, within prefabricated spill containment devices, earthen berms, or similar secondary containment features.</li> <li>○ Onsite vehicles will be monitored for fluid leaks and receive regular preventative maintenance to reduce the chance of leakage (e.g., check for and fix fuel oil leaks in construction vehicles on a regular basis).</li> <li>○ Bulk storage tanks having a capacity of more than 55 gallons will be provided with a secondary containment measure. Containment can be provided by a prefabricated temporary containment mat, a temporary earthen berm, or other measure.</li> </ul> </li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>HAZ-2. Prevent, Control, and Minimize Impacts from a Spill Cont'd</b></p> <ul style="list-style-type: none"> <li>○ Bulk fuel or lubricating oil dispensers will have a valve that must be held open to allow the flow of fuel into construction vehicles. During fueling operations, the contractor will have personnel present to detect and contain spills.</li> <li>● The following additional spill control and cleanup practices will be followed:               <ul style="list-style-type: none"> <li>○ Spills will be contained and cleaned up immediately after discovery.</li> </ul> </li> <li>● Manufacturer's methods for spill cleanup of a material will be followed as described on the material safety data sheet (MSDS) sheets (kept with product containers).</li> <li>● Materials and equipment needed for cleanup procedures will be kept readily available onsite, either at an equipment storage facility or on the contractor's trucks. Equipment to be kept onsite will include, but not be limited to, brooms, dust pans, shovels, granular absorbents, sand, sawdust, absorbent pads and booms, plastic and metal trash containers, gloves, and goggles.</li> <li>● Onsite personnel will be made aware of cleanup procedures, the location of spill cleanup equipment, and proper disposal procedures.</li> <li>● Toxic, hazardous, or petroleum product spills required to be reported by regulations will be documented, and a record of the spills will be kept with this Project.</li> <li>● If a spill occurs that is reportable to the federal, state, or local agencies, the contractor is responsible for making and recording the reports.</li> </ul>	<p>Primary construction contractor</p>	<p>RD 348</p>	<p>Ongoing during construction</p>

Mitigation Measure	Responsible Entity	Monitoring Entity	Timing
<p><b>HAZ-3. Reduce the Potential for Fire</b></p> <ul style="list-style-type: none"> <li>Smoking will be permitted only in designated smoking areas or within the cabs of vehicles or equipment.</li> <li>Every fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C, and all flammable materials will be removed from equipment parking and storage areas.</li> </ul>	<p>Primary construction contractor</p>	<p>Primary construction contractor</p>	<p>Ongoing during construction</p>