

Mitigation Monitoring and Reporting Plan, Napa River Rutherford Reach Restoration Project

Measure	Monitoring and Reporting Action	Monitoring Responsibility	Implementation Timing
<b>General Protection Measures</b>			
<p><b>Informational Measures.</b> Prior to project construction, the project proponent will develop informational signage to be posted in visible locations at any work sites where there is known or potential public access. The purpose of the signage will be to ensure that the public is aware of the purpose and goals of the restoration project. It will include an overview of the planned activities and the expected restoration outcomes, as well as a construction timeline. Signage will be posted in English and Spanish and will include a contact name and telephone number for further inquiries or concerns. Signage will not be required for maintenance activities because of their short duration and limited areal extent.</p>	<ol style="list-style-type: none"> <li>1. Develop, review and approve the informational signage as described in this measure.</li> <li>2. Designate a representative responsible for addressing construction questions or concerns.</li> <li>3. Confirm that signage is installed prior to the start of construction</li> <li>4. Confirm that signage remains posted for the duration of the construction period.</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> <li>3. Napa County</li> <li>4. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. During development of plans and specifications</li> <li>3. Prior to start of construction</li> <li>4. During construction</li> </ol>
<p><b>Measures to Address Construction and Maintenance Noise.</b> Because of the area's prevailing rural character, the project proponent has committed to the greatest possible sensitivity to minimizing construction noise effects. Before restoration activities begins, the proponent will send a notification letter to owners of all residential, agricultural, and other properties within 300 feet of active construction areas. It will identify the intended construction schedule and the expected duration of construction activities as well as providing information on the planned construction access routes and hours of work, and will include a telephone number to call with noise complaints. Noticing will not be required for maintenance activities, because of their short duration and limited areal extent. In addition, the construction contractor selected for the project will be required to implement the following best management practices (BMPs) to minimize noise related to construction traffic and onsite construction activities. These measures will also apply to all maintenance activities.</p>	<ol style="list-style-type: none"> <li>1. Review and approve construction plans and specifications to confirm that measure is included</li> <li>2. Confirm distribution of notification</li> <li>3. Monitor compliance with noise reduction measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> <li>3. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Before the start of construction</li> <li>3. During construction</li> </ol>
<ul style="list-style-type: none"> <li>• Normal work hours will be 7:00 a.m.-4:30 p.m., Monday through Friday. No construction will occur on Saturdays, Sundays, or</li> </ul>			

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<p>County holidays.</p> <ul style="list-style-type: none"> <li>The construction contractor will ensure that all equipment is equipped with sound-control devices no less effective than those provided as original equipment. All equipment will be operated and maintained to meet the applicable County standards for construction noise generation. No equipment will be operated with an unmuffled exhaust.</li> </ul>			
<p><b>Waste Management Measures.</b> Consistent with County General Plan Policy CON-88b, the proponent will require all project contractors to implement waste reduction measures, including recycling and reuse where feasible. In particular, greenwaste will be reused onsite as mulch or in bank stabilization construction where this is appropriate, and will be offhauled for composting if it cannot be reused onsite.</p>	<ol style="list-style-type: none"> <li>Confirm that measure is included in plans and specifications</li> <li>Document appropriate disposal</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Construction contractor</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>During construction</li> </ol>
<b>Visual Resource Protection</b>			
<p><b>Mitigation Measure AES-1. Implement Good Construction Site Housekeeping Measures and Designate Visual Disturbance Coordinator.</b> In order to avoid or reduce adverse effects related to vegetation removal, earthwork, construction staging, and other project activities and needs, the proponent will require all contractors employed on the project to implement the following measures at all construction sites.</p> <ul style="list-style-type: none"> <li>Project work and staging areas will be maintained in a clean, orderly condition at all times.</li> <li>Equipment and materials will be stored in construction staging areas and/or away from public view. To the extent feasible, staging areas will be located away from public view.</li> <li>Debris such as excavation spoils and downed vegetation not slated for onsite reuse will be removed promptly at regular intervals.</li> </ul> <p>Informational signage for the project will include the name and contact information for a County staff person to serve as the designated visual disturbance coordinator. This person, who may be the same staff member designated as noise coordinator, will be responsible for responding to public complaints regarding construction visual disturbance. S/he will be available during regular business hours to monitor and respond to concerns. In the event a visual disturbance complaint is received, s/he will be responsible for determining the cause</p>	<ol style="list-style-type: none"> <li>Confirm that measure is included in plans and specifications</li> <li>Designate a representative responsible for addressing construction questions or concerns.</li> <li>Confirm that signage is installed</li> <li>Confirm that housekeeping measures are implemented</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Napa County</li> <li>Napa County</li> <li>Construction contractor</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>During development of plans and specifications</li> <li>Prior to construction</li> <li>During construction</li> </ol>

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<p>of the complaint and ensuring that all reasonable measures are implemented to correct the problem.</p>			
<p><b>Measures to Avoid Glare.</b> The proponent will ensure that the project construction documents require the floodwall to be surfaced with a non-reflective/low-glare finish. The maintenance program will also be written to require periodic assessments of the floodwall's appearance, with touch-up or replacement of the finish when necessary. The County will be responsible for long-term assessment and maintenance to ensure that the floodwall does not generate excess glare.</p>	<ol style="list-style-type: none"> <li>1. Review and approve plans and specifications to confirm that design is consistent with measure</li> <li>2. Confirm material use and appearance</li> <li>3. Conduct monitoring and maintenance of wall finish</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> <li>3. Napa County Maintenance Department</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Before and during construction</li> <li>3. For duration of program</li> </ol>
<b>Air Quality Protection</b>			
<p><b>Measures to Protect Air Quality.</b> The principal concern about the effect of construction projects on air quality relates to the potential for earthwork and other activities to generate dust, including inhalable particulate matter (PM10) that poses a human health hazard. To address the potential for dust generation, the contractor selected for project construction will be required to implement the following BMPs, which are based on the Bay Area Air Quality Management District's (BAAQMD's) Feasible Control Measures for Construction Emissions of PM10 (see Bay Area Air Quality Management District 1999). These measures will also apply to ground disturbing maintenance activities.</p> <ul style="list-style-type: none"> <li>• Water all active construction areas as needed to control dust generation during earthmoving activities.</li> <li>• Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.</li> <li>• As needed to control dust generation, apply water on all unsurfaced access roads, parking areas, and staging areas at construction sites.</li> <li>• Using street sweepers, sweep all paved access roads, parking areas, and staging areas at construction sites daily or more often, as needed.</li> </ul>	<ol style="list-style-type: none"> <li>1. Review and approve plans and specifications to confirm that measure is included.</li> <li>2. Confirm that dust control measures are implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Construction contractor</li> </ol>	<ol style="list-style-type: none"> <li>1. During Approval of Construction Contracts</li> <li>2. During construction</li> </ol>

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<ul style="list-style-type: none"> <li>Using street sweepers, sweep streets, including haul routes, daily or more often, as needed, if visible soil material is carried onto adjacent public streets.</li> <li>Cover inactive construction areas (previously graded areas inactive for 10 days or more).</li> <li>Enclose, cover, or water twice daily exposed stockpiles of dirt, sand, and other loose, granular construction materials.</li> <li>Limit traffic speeds in unpaved areas to 5 mph.</li> <li>Suspend excavation and grading activity when wind speeds (instantaneous gusts) exceed 25 mph.</li> </ul>			
<p><b>Mitigation Measure AQ-1. Implement Tailpipe Emission Reduction Plan.</b> The County will require all project contractors (or, for activities conducted by County staff, the County foreperson) to prepare and implement a tailpipe emissions reduction plan to minimize air quality impacts related to site preparation, grading, construction, and maintenance. The emission reduction plan will include at least the following measures and may include other measures identified as appropriate by the County and/or contractor.</p> <ul style="list-style-type: none"> <li>Maintain construction equipment in good condition.</li> <li>Minimize truck idling near residences and other facilities.</li> <li>Set up stationary equipment as far as possible from residences and other facilities.</li> </ul> <p>The County will be responsible for proper and effective implementation of the plan, including the following specific duties.</p> <ul style="list-style-type: none"> <li>Conducting periodic inspections to confirm all specified BMPs are being implemented.</li> <li>Taking corrective action to resolve issues revealed by either routine inspections or incoming complaints.</li> </ul>	<ol style="list-style-type: none"> <li>Confirm that measure is included in plans and specifications</li> <li>Confirm implementation of BMPs</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Napa County</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>During construction</li> </ol>
<p><b>Mitigation Measure AQ-2. Provide Advance Notification of Construction Schedule and 24-Hour Hotline.</b> The County will provide advance written notification of proposed construction activities to all property owners within 500 feet of the construction site. Notification will include a brief overview of the proposed project and its purpose, as</p>	<ol style="list-style-type: none"> <li>Designate a representative responsible for addressing construction</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Napa County</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> </ol>

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<p>well as the proposed construction activities and schedule. It will also include the name and contact information of the County's project manager or another County representative or designee who will be responsible for resolving any air quality concerns.</p>	<p>questions or concerns</p> <p>2. Confirm that notification is issued</p>		<p>2. Prior to construction</p>
<p><b>Mitigation Measure CU-1. Require Construction Emissions Control Technology.</b> The County will coordinate with its contractors and BAAQMD to prepare a construction emissions control plan identifying a preferred approach and demonstrating that heavy-duty (&gt;50-horsepower) equipment and vehicles used in project construction will achieve a fleet-average 20% NO<sub>x</sub> reduction and 45% particulate matter reduction compared to the most recent ARB fleet average at time of contracting. Control measures available to achieve emissions reduction include use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology (e.g., diesel particulate matter filters and lean-NO<sub>x</sub> or diesel oxidation catalysts), after-treatment products, and/or other options as they become available. The County will be responsible for ensuring that the plan is properly implemented.</p>	<p>1. Review and approve construction emissions control plan</p> <p>2. Confirm that emissions controls are implemented</p>	<p>1. Napa County</p> <p>2. Napa County</p>	<p>1. During development of plans and specifications</p> <p>2. During construction</p>
<p><b>Mitigation Measure CU-2. Implement Measures to Reduce GHG Emissions.</b> The County will require all construction contractors to implement the following measures to the extent they are feasible.</p> <ul style="list-style-type: none"> <li>• Use of biodiesel fuel in construction equipment and vehicles.</li> <li>• Recycling and/or reuse of construction waste and debris.</li> </ul> <p>The County will also monitor emerging GHG-reduction technologies and incorporate them into future project construction and maintenance activities as appropriate. If the BAAQMD establishes specific GHG significance thresholds or other applicable GHG guidelines during the project's lifespan, the County will ensure that future project activities are in full compliance.</p>	<p>1. Confirm that measures are included in plans and specifications</p> <p>2. Identify and implement additional measures for GHG-reduction</p>	<p>1. Napa County</p> <p>2. Napa County</p>	<p>1. During development of plans and specifications</p> <p>2. During construction</p>
<p><b>Biological Resource Protection</b></p>			
<p><b>Vegetation Protection Measures.</b> In order to avoid and minimize adverse effects on riparian vegetation slated to remain in place, the following guidelines will be observed.</p> <ul style="list-style-type: none"> <li>• Before construction begins, the project engineer and a qualified biologist will identify locations for equipment and personnel access and materials staging that will minimize riparian</li> </ul>	<p>1. Review and approve construction plans and specifications to confirm that design is consistent with measure.</p>	<p>1. Napa County</p> <p>2. Napa County/ Qualified Biologist retained by County</p> <p>3. Construction</p>	<p>1. During Approval of Construction Contracts</p> <p>2. Prior to construction</p>

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<p>disturbance.</p> <ul style="list-style-type: none"> <li>• During construction, as much understory brush and as many trees as possible will be retained. The emphasis will be on retaining shade-producing and bank-stabilizing vegetation.</li> <li>• When chainsaws are used to remove riparian vegetation, saws compatible with vegetable-based bar oil will be used if possible.</li> <li>• When heavy equipment is required, unintentional soil compaction will be minimized by using equipment with a greater reach, or using low-pressure equipment. Disturbed soils will be decompacted when work is completed.</li> <li>• Any disturbed and decompacted areas outside the restoration area will be revegetated with locally native stock in an appropriate palette.</li> </ul>	<ol style="list-style-type: none"> <li>2. Confirm that staging surveys are conducted</li> <li>3. Confirm that protection measures are implemented</li> </ol>	<p>contractor</p>	<ol style="list-style-type: none"> <li>3. During construction</li> </ol>
<p><b>Measures to Protect California Freshwater Shrimp.</b> Immediately prior to the start of construction activities, the County will retain a qualified biologist to conduct preconstruction dipnet surveys for California freshwater shrimp at each inchannel work site. If the species are determined to be present, the biologist will capture and relocate them to a suitable site downstream of the construction area.</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and specifications</li> <li>2. Confirm pre-construction surveys are conducted and any species are relocated</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County/ Qualified Biologist retained by County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Prior to start of construction</li> </ol>
<p><b>Measures to Protect Salmonids.</b> To reduce the likelihood of adverse impacts on salmonids that use the Napa River corridor, inchannel construction, including both streambank and channel bed construction, will be limited to the dry season (April 15–October 15), with the condition that construction requiring stream dewatering, stream crossings, or work in the live stream may not commence before May 1. If necessary, upstream passage for salmonids will be provided through or around construction sites from September 1 through October 15. The determination of the need to provide passage will be based on the occurrence of more than 25 adult Chinook salmon or steelhead, on flow conditions, and on a cooperative assessment of passage needs by the proponent, NMFS, and DFG. During inchannel work, flow will be diverted around the work area. Stream segments subject to dewatering are expected to be several hundred feet or less in length; large-scale dewatering will not be needed. Any salmonids present in the work area</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and specifications</li> <li>2. Confirm that salmonid surveys are conducted</li> <li>3. Confirm that determinations for flow diversions are made collaboratively with NMFS and DFG</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County/ Qualified Fisheries Biologist retained by County</li> <li>3. Napa County/ Qualified Fisheries Biologist retained by County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Prior to start of construction</li> <li>3. Prior to start of construction</li> </ol>

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<p>will be relocated under the supervision of a qualified fisheries biologist. The following sections provide additional details on procedures for diverting streamflow and relocating salmonids.</p>			
<p><b>Procedures for Flow Diversion.</b> As identified in <i>Water Quality Measures for Inchannel Work</i> above, when work occurs within the river channel, flow will be diverted around the work area and the work site will be dewatered. Before dewatering, the project engineer and a qualified fisheries biologist will identify the best means to bypass flow around the work area to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic vertebrates. Flow will be incrementally diverted at the upstream boundary of the work area. Diversion will increase progressively over a 4-hour period, by the following increments: 50%, 75%, 90%, 95%, and 100 %. This incremental reduction in flow will allow fish to move downstream. All native aquatic vertebrates and larger invertebrates will be moved by a qualified fisheries biologist prior to dewatering. Fish will be removed from any pools that remain after flow is diverted from the project reaches of the creek, in accordance with the protocol presented in the next section (<i>Procedures for Fish Relocation</i>). The following guidelines will apply.</p> <ul style="list-style-type: none"> <li>• The length of the dewatered stream channel and duration of dewatering will be minimized; at any given time, dewatered channel segments are not expected to exceed several hundred feet in length.</li> <li>• Streamflow will be maintained to the river channel below the work area.</li> <li>• If it is necessary to pump the work area to remove seepage and maintain a dry condition, pumps will be placed in flat areas well away from the channel and secured by anchoring to a tree or stake. Pumps will be refueled in an area well away from the stream channel, consistent with procedures outlined in <i>General Measures to Protect Water Quality</i>. Pump intakes will be covered with 1/8-inch mesh to prevent entrainment of fish or amphibians, and will be checked periodically for impingement of fish and amphibians. Wastewater will be discharged to an upland location where it will not result in sediment-laden drainage back to the channel.</li> </ul>	<ol style="list-style-type: none"> <li>1. Confirm that procedures for flow diversion are included in plans and specifications</li> <li>2. Confirm that flow bypass surveys are conducted</li> <li>3. Confirm diversion installation and monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County/ Qualified Fisheries Biologist retained by County</li> <li>3. Napa County/ Qualified Fisheries Biologist retained by County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Prior to start of construction</li> <li>3. Before and during construction</li> </ol>
<p><b>Procedures for Fish Relocation.</b> As identified above, before a work area is dewatered, fish and amphibians will be captured and relocated to</p>	<ol style="list-style-type: none"> <li>1. Confirm that procedures for fish relocations are</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of</li> </ol>

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<p>avoid injury and mortality and minimize disturbance. The following guidelines will apply.</p> <ul style="list-style-type: none"> <li>• Before fish removal and relocation begins, a qualified fisheries biologist will identify the most appropriate release location(s). Release locations should have water temperatures similar to the capture location and offer ample habitat for released fish, and should be selected to minimize the likelihood that fish will reenter the work area or become impinged on the exclusion net or screen.</li> <li>• The means of capture will depend on the nature of the work site, and will be selected by a qualified fisheries biologist who has a current CDFG scientific collecting permit and is experienced with fish capture and handling. Complex stream habitat may require the use of electrofishing equipment, whereas in outlet pools, fish may be captured by pumping down the pool and then seining or dipnetting. Electrofishing will be used only as a last resort; if electrofishing is necessary, it will be conducted only by properly trained personnel following the NMFS guidelines dated June 2000.</li> <li>• To the extent feasible, relocation will be performed during morning periods. Air and water temperatures will be measured periodically, and relocation activities will be suspended if temperatures exceed the limits allowed by NMFS guidelines.</li> <li>• To prevent fish from reentering the work area, the channel will be blocked by placing fine-meshed nets or screens above and below the work area. To minimize entanglement, mesh diameter will not exceed 1/8 inch. The bottom edge of the net or screen will be secured to the channel bed to prevent fish from passing under the screen. Exclusion screening will be placed in low velocity areas to minimize fish impingement. Screens will be checked periodically and cleaned of debris to permit free flow of water.</li> <li>• Handling of salmonids will be minimized. When handling is necessary, personnel will wet hands or nets before touching fish.</li> <li>• Fish will be held temporarily in cool, shaded water in a container with a lid. Overcrowding in containers will be avoided; at least two containers will be used and no more than 25 fish will be kept in each bucket. Aeration will be provided with a battery-powered external bubbler. Fish will be protected from jostling and noise, and will not be removed from the container until the time of</li> </ul>	<p>included in plans and specifications</p> <ol style="list-style-type: none"> <li>2. Confirm implementation and monitoring of procedures as needed</li> <li>3. Confirm notification with appropriate agencies as necessary</li> </ol>	<ol style="list-style-type: none"> <li>2. Napa County/ Qualified Fisheries Biologist retained by County</li> <li>3. Napa County</li> </ol>	<p>plans and specifications</p> <ol style="list-style-type: none"> <li>2. Before and during construction</li> <li>3. Before and during construction</li> </ol>

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<p>release. A thermometer will be placed in each holding container and partial water changes will be conducted as necessary to maintain a stable water temperature. Fish will not be held more than 30 minutes. If water temperature reaches or exceeds NMFS limits, fish will be released and relocation operations will cease.</p> <ul style="list-style-type: none"> <li>• If fish are abundant, capture will cease periodically to allow release and minimize the time fish spend in holding containers.</li> <li>• Fish will not be anesthetized or measured. However, they will be visually identified to species level, and year classes will be estimated and recorded.</li> <li>• Reports on fish relocation activities will be submitted to CDFG and NMFS in a timely fashion.</li> <li>• If mortality during relocation exceeds 5%, relocation will cease and CDFG and NMFS will be contacted immediately or as soon as feasible.</li> <li>• When feasible, initial fish relocation efforts will be performed several days prior to the scheduled start of construction. The fisheries biologist will perform a survey on the same day before construction begins to verify that no fish have moved back into the project area.</li> </ul>			
<p><b>Measures to Protect Northwestern Pond Turtle.</b> Prior to the start of construction activities, the County will retain a qualified biologist to conduct preconstruction surveys for northwestern pond turtle at each inchannel work site. Surveys will take place no more than 72 hours prior to the onset of construction activities (including site preparation) with the potential to disturb turtles or their habitat. If the species is determined to be present, the biologist will capture and relocate them to a suitable site downstream of the construction area. If preconstruction surveys identify active nests, the biologist will establish no-disturbance buffer zones around each nest using temporary orange construction fencing. The radius of the buffer zone and the duration of exclusion will be determined in consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The buffer zones and fencing will remain in place until the young have left the nest, as determined by a qualified biologist.</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and specifications</li> <li>2. Confirm that surveys are conducted</li> <li>3. Confirm fencing is installed as needed between nesting site and construction area</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> <li>3. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Prior to start of construction</li> <li>3. Before and during construction</li> </ol>

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<p><b>Measures for Migratory Bird and Raptor Protection.</b> In order to avoid adverse effects related to disturbance of migratory birds (protected under the federal Migratory Bird Treaty Act, the California Fish and Game Code, and CEQA), the proponent will retain a qualified biologist to conduct preconstruction surveys for migratory birds and their nests at each work site no more than 1 week prior to the initiation of any construction activity planned to occur during the migratory bird nesting season (February 15–August 1). If preconstruction surveys identify active nests belonging to common migratory bird species, an exclusion zone will be established around each nest to minimize disturbance-related impacts on nesting birds. If active nests belonging to special-status migratory birds are identified, a larger no-activity buffer zone will be established around each nest. The minimum exclusion zone radius will be 200 feet. However, in each case, the radius of the exclusion zone/no-activity zone and the duration of exclusion will be determined in consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game; buffers wider than 200 feet may be required, depending on the species and activities involved.</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and specifications</li> <li>2. Confirm that bird surveys are conducted as needed for work during nesting season</li> <li>3. Confirm that bird protection is implemented as needed during construction</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> <li>3. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Prior to start of construction</li> <li>3. Before and during construction</li> </ol>
<b>Cultural Resource Protection</b>			
<p><b>Mitigation Measure CUL-1. Conduct Archaeological Investigations.</b> The proponent will retain a qualified archaeologist to formally survey and conduct preliminary archaeological testing (rapid recovery units or similar) to better determine the integrity and extent of the known archaeological site within the project area. If archaeological deposits are found to be significant, a program of data recovery in areas of proposed disturbance will be implemented.</p>	<ol style="list-style-type: none"> <li>1. Confirm that archaeological investigation is conducted</li> <li>2. If needed, confirm preparation of treatment plans and recovery programs</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. Prior to construction</li> </ol>
<p><b>Mitigation Measure CUL-2. Monitor Construction Activities.</b> The proponent will retain a qualified archaeologist, as well as a Native American monitor, who will be present onsite during any ground-disturbing activities within or adjacent to known archaeological sites. If any cultural resources are discovered during these or any other project activities, <i>Mitigation Measure CUL-3</i> will also be implemented.</p>	<ol style="list-style-type: none"> <li>1. Confirm that qualified monitors are present during ground-disturbing activities</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During construction</li> </ol>
<p><b>Mitigation Measure CUL-3. Stop Work if Cultural Resources Are Discovered During Project Activities.</b> If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and</li> </ol>

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<p>human bone are discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified professional archaeologist can assess the significance of the find and develop appropriate treatment measures in consultation with the County, and other appropriate authority. The County will be responsible for ensuring that the treatment measures are properly implemented.</p>	<p>specifications</p> <p>2. Confirm that any discoveries are evaluated and addressed appropriately</p>		<p>specifications</p> <p>2. During construction</p>
<p><b>Mitigation Measure CUL-4. Protect Human Remains, Consistent with California State Codes.</b> If human remains are discovered or recognized at any time during project-related activities (construction or maintenance), there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Napa County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, ground-disturbing activities will not resume until the descendants of the deceased Native American(s) have made a recommendation regarding means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in California Public Resources Code Section 5097.98. The County will be responsible for ensuring that these recommendations are properly implemented. If NAHC is unable to identify a descendent or the descendent fails to make a recommendation within 24 hours after being notified by the NAHC, work may then resume.</p>	<p>1. Confirm that measure is included in plans and specifications</p> <p>2. Confirm that any discovered remains are evaluated and addressed appropriately</p>	<p>1. Napa County</p> <p>2. Napa County</p>	<p>1. During development of plans and specifications</p> <p>2. During construction</p>
<b>Soils and Seismicity</b>			
<p><b>Measures for Berm Design and Construction.</b> As part of the berm design process, the proponent will retain a qualified professional to conduct site-specific geotechnical investigations consistent with all applicable standards of professional engineering geologic/ geotechnical practice. The purpose of the investigations will be to provide a geologic basis for the development of appropriate berm design. Investigations will address bedrock and Quaternary geology; geologic structure; primary and secondary seismic hazards as defined by the State of California; soils, including the potential for expansive, collapsible, or otherwise unstable soils in the project corridor; slope stability; previous history of excavation and fill placement; earthwork recommendations; relevant groundwater considerations; and any other topics identified by the proponent, design engineer(s), geotechnical engineer, or project</p>	<p>1. Confirm geotechnical investigations survey is conducted</p> <p>2. Review and approve plans and specifications to confirm that design is consistent with measure</p>	<p>1. Napa County</p> <p>2. Napa County</p>	<p>1. Prior to development of plans and specifications</p> <p>2. During development of plans and specifications</p>

Measure	Monitoring and Reporting Action	Monitoring Responsibility	Implementation Timing
<p>engineering geologist as relevant.</p> <p><b>Topsoil Protection Measures.</b> To minimize impacts on topsoil resources, the proponent will require all restoration contractors to implement the following measures. These measures will also apply to ground-disturbing maintenance activities.</p> <ul style="list-style-type: none"> <li>The area disturbance will be limited to the minimum needed to accomplish restoration grading.</li> <li>In areas where topsoil is present, topsoil will be removed, sidecast, and stockpiled for onsite reuse during revegetation. Revegetation will include topsoil replacement. Topsoil will be stockpiled separate from other excavated materials, to facilitate effective reuse.</li> </ul>	<ol style="list-style-type: none"> <li>Review and approve plans and specifications to confirm that measure is included</li> <li>Confirm that topsoil protection measures are implemented</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Construction contractor</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>During construction</li> </ol>
<b>Hazardous Materials</b>			
<p><b>Measures to Ensure Safety and Minimize Exposure to Hazardous Materials.</b> In the event that hazardous materials are encountered during construction or maintenance work, all activities in the area of the discovery will stop, and the proponent will conduct Phase I, Phase II, and, if required, Phase III hazardous materials investigations to identify the nature and extent of contamination and evaluate potential impacts on project construction and human health. If necessary, the proponent will implement remediation measures consistent with all applicable local, state, and federal codes and regulations. Work will not resume until remediation is complete and has been certified by the appropriate agency. If waste disposal is necessary, the proponent will ensure that all hazardous materials are handled and disposed of by a licensed waste-disposal contractor and transported by a licensed hauler to an appropriately licensed and permitted disposal or recycling facility, in accordance with local, state, and federal requirements.</p>	<ol style="list-style-type: none"> <li>Review and approve plans and specifications to confirm that measure is included</li> <li>If needed, conduct hazardous materials investigation and confirm completion of remediation actions</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Napa County</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>Prior to resuming work during construction</li> </ol>
<p><b>Herbicide Application Measures.</b> The following measures will apply to all construction and maintenance activities.</p> <ul style="list-style-type: none"> <li>Herbicide use will be restricted to the minimum needed to ensure adequate control of invasive nonnative vegetation. Where other effective means of control are available, these will be prioritized.</li> <li>Herbicides will be applied only by California-licensed applicators.</li> <li>Herbicide application will be limited to cutting and painting stumps, or foliar or spot spray using backpack or ATV-mounted</li> </ul>	<ol style="list-style-type: none"> <li>Confirm that measure is included in plans and specifications</li> <li>Confirm possession of valid license for applicators</li> <li>Document appropriate</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Napa County</li> <li>Napa County</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>Prior to and during herbicide application activity</li> <li>After herbicide</li> </ol>

Measure	Monitoring and Reporting Action	Monitoring Responsibility	Implementation Timing
<p>sprayers.</p> <ul style="list-style-type: none"> <li>Herbicides will be applied according to manufacturer’s specifications in a manner that minimizes drip and drift into the stream channel.</li> <li>At this time, only U.S. Environmental Protection Agency– and California EPA–approved aquatic formulations of glyphosate and imazapyr will be used. In the future, other herbicides may be approved by these agencies for use in aquatic habitats, and could be added to the program.</li> <li>Any cuttings will be removed and transported to a suitable disposal site to prevent re-establishment. Plant materials containing viable seed will be immediately bagged and transported to a suitable site for disposal.</li> </ul>	<p>application and disposal</p>		<p>application activity</p>
<b>Traffic and Transportation</b>			
<p><b>Measures to Reduce Effects on Traffic and Circulation.</b> The proponent will require the firm selected to develop detailed restoration plans and specifications to include a traffic control plan to minimize the effects of construction traffic on roadway function and safety in surrounding areas of the Napa Valley. The traffic control plan will include the following provisions and may include other measures if a further need is identified. These provisions will also apply to all maintenance activities.</p> <ul style="list-style-type: none"> <li>Post warning signage at points where construction traffic will enter or leave public roadways. During peak hours, use flaggers or other appropriate means to further reduce hazards related to slow-moving vehicles merging into highway traffic, if the County identifies a need.</li> <li>Maintain access, or provide appropriate alternate access, for private roads, including agricultural roads.</li> <li>Restrict all construction traffic, including haul and delivery trucks, to normal daytime business hours, unless the County identifies a need for off-hours routing to avoid impacts on peak-hour commute traffic.</li> <li>Avoid key commute routes and “rate-limiting” intersections during peak traffic periods, either by traveling different routes or by</li> </ul>	<ol style="list-style-type: none"> <li>Review and approve construction plans and specifications to confirm that measure is included</li> <li>Review and approve Traffic Control Plan</li> <li>Monitor implementation of traffic measures</li> </ol>	<ol style="list-style-type: none"> <li>Napa County</li> <li>Napa County</li> <li>Napa County</li> </ol>	<ol style="list-style-type: none"> <li>During development of plans and specifications</li> <li>Before start of construction</li> <li>During construction</li> </ol>

Measure	Monitoring and Reporting Action	Monitoring Responsibility	Implementation Timing
<p>traveling at non-peak times. Work with the County to identify the routes and intersections that should be avoided, and appropriate alternate travel routes or times.</p> <ul style="list-style-type: none"> <li>• Coordinate with local transit providers to avoid disruption of bus service.</li> <li>• Post a sign at all active construction sites providing the name, telephone number, and email address of the staff member to contact with concerns regarding construction traffic. Ensure that signage includes both English and Spanish versions.</li> <li>• Throughout the work period, provide adequate off-road parking and staging for vehicles, equipment, and materials. Coordinate with local landowners to ensure that parking and staging do not impede agricultural or other activities.</li> <li>• Provide offsite worker parking and a worker shuttle if necessary.</li> </ul>			
<p><b>Mitigation Measure CU-3. Coordinate Haul Traffic with Local Jurisdictions.</b> The proponent will coordinate the timing and routing of project traffic with other County offices and with local jurisdictions, in order to minimize any potential overlap with other construction and roadway improvement projects. As appropriate, and per agreement with the affected jurisdictions, the proponent will limit construction haul and delivery trips to off-peak hours, and may also require contractors to avoid particular roadways or intersections. In particular, if additional roadways or intersections are identified as operating below the applicable County LOS standard in the future, the proponent will make every attempt to ensure that project traffic avoids these roadways/intersections at peak traffic hours.</p>	<ol style="list-style-type: none"> <li>1. Review and approve plans and specifications to confirm that measure is included</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> </ol>
<p><b>Water Quality Protection</b></p>			
<p><b>General Measures to Protect Water Quality.</b> Subject to requirements of Section 402 of the federal Clean Water Act, and the National Pollutant Discharge Elimination System (NPDES) permitting process, all construction projects that disturb more than 1 acre of land are required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The firm selected to prepare detailed restoration plans will also be required to prepare a SWPPP for the project and include it in project plans and specifications. The restoration construction contractor(s) will</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and specifications</li> <li>2. Review and approve SWPP and confirm compliance with conditions of the State General Permit for Construction Discharges</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> <li>3. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>2. During development of plans and specifications</li> <li>3. Before and during construction</li> <li>4. During construction</li> </ol>

Measure	Monitoring and Reporting Action	Monitoring Responsibility	Implementation Timing
<p>then be required to post a copy of the SWPPP at each project work site, file a notice of intent to discharge stormwater with the Regional Water Quality Control Board, and implement all measures required by the SWPPP. The County will be responsible for monitoring to ensure that the provisions of the SWPPP are effectively enforced. In the event of noncompliance, the County will have the authority to shut down the construction site or fine the responsible party or parties. The SWPPP will include the following information and stipulations.</p> <ul style="list-style-type: none"> <li>• A description of site characteristics, including runoff and drainage characteristics and soil erosion hazard.</li> <li>• A description of proposed construction procedures and construction-site housekeeping practices, including prohibitions on discharging or washing potentially harmful materials into streets, shoulder areas, inlets, catch basins, gutters, or agricultural fields, associated drainage, or irrigation features.</li> <li>• A description of measures that will be implemented for erosion and sediment control, including requirements to               <ul style="list-style-type: none"> <li>○ conduct major construction activities involving excavation and spoils haulage during the dry season, to the extent possible;</li> <li>○ conduct all construction work in accordance with site-specific construction plans that minimize the potential for increased sediment inputs to storm drains and surface waters;</li> <li>○ grade and stabilize spoils sites to minimize erosion and sediment input to surface waters and generation of airborne particulate matter (see discussions under <i>Measures to Protect Air Quality</i>); and</li> <li>○ implement erosion control measures as appropriate to prevent sediment from entering surface waters, agricultural water features, and storm drains to the extent feasible, including the use of silt fencing or fiber rolls to trap sediments and erosion control blankets on exposed slopes.</li> </ul> </li> <li>• A Spill Prevention and Response Plan that identifies any hazardous materials to be used during construction; describes measures to prevent, control, and minimize the spillage of hazardous substances; describes transport, storage, and disposal procedures</li> </ul>	<p>3. On-site inspection to confirm compliance with Storm Water Pollution Prevention Plan</p>		

Measure	Monitoring and Reporting Action	Monitoring Responsibility	Implementation Timing
<p>for these substances; and outlines procedures to be followed in case of a spill of a hazardous material. The Spill Prevention and Response Plan will require that hazardous and potentially hazardous substances stored onsite be kept in securely closed containers located away from drainage courses, agricultural areas, storm drains, and areas where stormwater is allowed to infiltrate. It will also stipulate procedures, such as the use of spill containment pans, to minimize hazard during onsite fueling and servicing of construction equipment. Finally, the Spill Prevention and Response Plan will require that the County be notified immediately of any substantial spill or release.</p> <p>A stipulation that construction will be monitored by County personnel to ensure that contractors are adhering to all provisions relevant to state and federal stormwater discharge requirements, and that the County will shut down the construction site in the event of noncompliance.</p>			
<p><b>Water Quality Measures for Inchannel Work.</b> Inchannel work, including all channel and bank modifications, will be restricted to the minimum necessary to support restoration success. Inchannel work will be limited to the dry season (April 15–October 15). Work requiring stream dewatering, stream crossings, or work within the live stream will not begin before May 1. To the extent feasible, inchannel work will be carried out by equipment operating from dry areas outside the low-flow channel. Silt fences, fiber rolls, and other appropriate sediment control measures will be used to minimize sediment input to the active channel, consistent with the project SWPPP (<i>see General Measures to Protect Water Quality</i>). In addition, prior to activities disturbing the bed or banks of the active low-flow channel, coffer dams will be installed and flow will be diverted around the work area. Fish and other aquatic organisms will be protected as described under <i>Measures to Protect Biological Resources</i>.</p>	<ol style="list-style-type: none"> <li>1. Confirm that measure is included in plans and specifications</li> <li>2. Monitor inchannel work</li> </ol>	<ol style="list-style-type: none"> <li>1. Napa County</li> <li>2. Napa County</li> </ol>	<ol style="list-style-type: none"> <li>1. During development of plans and specifications</li> <li>2. During construction</li> </ol>