
State Water Resources Control Board

Mitigation Monitoring and Reporting Plan

Application A033073 (The Marshall Ranch LLC)

Project Title: Salmonid Restoration Federation Marshall Ranch Streamflow Enhancement Project

This Mitigation Monitoring and Reporting Plan (MMRP) has been prepared in conformance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21081.6). The MMRP has been developed based on the information and mitigation measures contained in the Initial Study/Mitigated Negative Declaration (IS/MND) for the Salmonid Restoration Federation Marshall Ranch Streamflow Enhancement Project, prepared September 2021 by Humboldt County (State Clearinghouse Number 2019109088). The MMRP lists the mitigation measures recommended in the IS/MND for the proposed project and specifies implementation and monitoring responsibilities. Pursuant to Public Resources Code, section 21081.6, subdivision (b), each of the mitigation measures identified in the MMRP has been included as enforceable permit terms in the permit authorizing construction, diversion and use of water pursuant to water right permit application A033073.

Generally, the State Water Resources Control Board, Division of Water Rights (Division) will monitor mitigation measures requiring pre-construction actions or submittals. Implementation of mitigation measures is the sole responsibility of the Permittee. Compliance with mitigation measures will be assessed through the Division's routine compliance monitoring activities. Non-compliance with mitigation measures may be addressed through the Division's ongoing enforcement program on an as-needed basis.

All documents and other information that constitute the public record for this project shall be maintained by the Division and shall be available for public review at the following address: State Water Resources Control Board, Division of Water Rights, 2nd Floor, 1001 I Street, Sacramento, CA 95814.

Project Description

Water right permit application A033073 requests a permit for the diversion to storage of up to 20 acre-feet of water from two unnamed streams in Humboldt County. The purpose of use for water is fish and wildlife preservation and enhancement, domestic, stockwatering, and fire protection. The season of diversion is from December 1 of each year to April 30 of the succeeding year. Water would be stored in two proposed offstream reservoirs and a tank farm, and water used for fish and wildlife preservation and enhancement will be released into Redwood Creek during the low-flow season.

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

Table 1. Biological Resources

Mitigation Measure	Implementation	Timing	Monitoring and Enforcement
<p>Mitigation Measure BIO-1</p> <p>The use of cofferdams will contain any turbid water produced during the Project within the work area, thereby avoiding impacts on downstream salmonids. Any turbid water within the confined work areas would be pumped to a receiving site outside the channel or to tanks. Any turbid water within the work area would be allowed to settle prior to removal of the cofferdams, thereby minimizing downstream effects on salmonids.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-2</p> <p>Discharge of sediment will be controlled and minimized with the implementation of best management practices (BMPs) on all disturbed soils that have the potential to discharge into area watercourses. Applicable BMPs include, but are not limited to, installation of silt fences, straw wattles, and placement of seed-free rice straw. BMPs will be installed at all access points to the work sites, which will minimize the potential for sediment delivery and deleterious effects on salmonids.</p>	Right Holder	Construction, Ongoing	Division of Water Rights
<p>Mitigation Measure BIO-3</p> <p>All gully stabilization work will be conducted when the individual sites are dry (i.e. no surface water).</p>	Right Holder	Pre-Construction	Division of Water Rights

<p>Mitigation Measure BIO-4</p> <p>A June 15 – November 1 instream work window will be established to allow time for young-of-the-year salmonids to be very mobile and capable of avoiding injury. The work window will also allow downstream migration of smolts to be completed prior to any Project-related channel disturbance taking place. In addition, the work window coincides with the summer low-flow season during which flow in the creek will be at its summer base flow. Finally, the November 1 date will ensure all work is done prior to the rainy season and arrival of any upstream migrating adult salmonids.</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>
<p>Mitigation Measure BIO-5</p> <p>Prior to the initiation of any instream work in areas with surface water, a qualified biologist will survey the site to determine fish presence. The biologist will implement an aquatic species removal and relocation plan to move any fish or amphibians that may be in work sites to suitable habitat downstream. Block nets will be installed to prevent fish from reentering the work area. Any fish remaining in the work area will be captured by hand, dip net, or as a last resort, using a backpack electrofisher. Cofferdams will be constructed in the channel at sites where streamflow is present. Water will then be diverted around the work area.</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>
<p>Mitigation Measure BIO-6</p> <p>Project will follow the Fish Screening Criteria for Salmonids (NMFS 1997), NOAA Restoration Center/Army Corps of Engineers programmatic biological opinion requirements.</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>

<p>Mitigation Measure BIO-7</p> <p>A foothill yellow-legged frog egg mass survey will be conducted in May prior to the construction season to determine if breeding occurs within the Project reaches.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-8</p> <p>A visual observation survey of the project areas will be conducted within two weeks prior to the start of construction to determine if adult and juvenile foothill yellow-legged frogs are present in the Project area.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-9</p> <p>If foothill yellow-legged frogs are present, then a qualified CDFW-approved biologist will be present immediately prior to the start of construction to remove any frogs and relocate them in suitable habitat.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-10</p> <p>The Project manager or qualified designee will conduct daily morning inspections of the area slated for work to determine if amphibians entered the areas overnight. Any individuals will be captured and relocated prior to the start of the day's work.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-11</p> <p>Sufficient terrestrial woody debris will be left in place to maintain the habitat supporting viable population of red-bellied newt during operations within the riparian areas.</p>	Right Holder	Pre-Construction	Division of Water Rights

<p>Mitigation Measure BIO-12</p> <p>Prior to the initiation of any instream work in areas with surface water, a qualified biologist will survey the site to determine larval newt presence. If red-bellied newts are present, then a qualified CDFW-approved biologist will be present immediately prior to the start of operations to remove any individuals and relocate them in suitable habitat.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-14</p> <p>Prior to the initiation of any instream work in areas with surface water, a qualified biologist will survey the site to determine turtle presence. The biologist will capture and relocate any turtle that may be in work sites to suitable habitat downstream. Block nets will be installed to prevent turtles from reentering the work area.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-15</p> <p>Planting of seedlings shall begin after December 1, or when sufficient rainfall has occurred to ensure the best chance of survival of the seedlings, but in no case after April 1.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-16</p> <p>Any disturbed banks shall be fully restored upon completion of construction. Revegetation shall be done using native species. Planting techniques can include seed casting, hydroseeding, or live planting methods using the techniques in Part XI of the California Salmonid Stream Habitat Restoration Manual.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure BIO-17</p>	Right Holder	Pre-Construction	Division of Water Rights

<p>Disturbed and compacted areas shall be re-vegetated with native plant species. The species shall be comprised of a diverse community structure that mimics the native riparian corridor. Planting ratio shall be 2:1 (two plants to every one removed). Unless otherwise specified, the standard for success is 80 percent survival of plantings or 80 percent ground cover for broadcast planting of seed after a period of 3 years.</p>			
<p>Mitigation Measure BIO-18</p> <p>To ensure that the spread or introduction of invasive exotic plants shall be avoided to the maximum extent possible, equipment shall be cleaned of all dirt, mud, and plant material prior to entering a work site. When possible, invasive exotic plants at the work site shall be removed. Areas disturbed by project activities will be restored and planted with native plants.</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>
<p>Mitigation Measure BIO-19</p> <p>Mulching and seeding shall be done on all exposed soil which may deliver sediment to a stream. Soils exposed by project operations shall be mulched to prevent sediment runoff and transport. Mulches shall be applied so that not less than 90% of the disturbed areas are covered. All mulches, except hydro-mulch, shall be applied in a layer not less than two (2) inches deep. Where feasible, all mulches shall be kneaded or tracked-in with track marks parallel to the contour, and tackified as necessary to prevent excessive movement. All exposed soils and fills, including the downstream face of the road prism adjacent to the outlet of culverts, shall be reseeded with a mix of native grasses common to the area, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment.</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>
<p>Mitigation Measure BIO-20</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>

<p>If erosion control mats are used in re-vegetation, they shall be made of material that decomposes. Erosion control mats made of nylon plastic, or other non-decomposing material shall not be used.</p>			
<p>Mitigation Measure BIO-21</p> <p>If riparian vegetation is to be removed with chainsaws, the Permittee shall use saws that operate with vegetable-based bar oil.</p>	<p>Right Holder</p>	<p>Pre-Construction</p>	<p>Division of Water Rights</p>

Table 2. Geology and Soils

Mitigation Measure	Implementation	Timing	Monitoring and Enforcement
<p>Mitigation Measure GEO-1</p> <p>Work sites shall be winterized at the end of each day to minimize the eroding of unfinished excavations when significant rains are forecasted. Winterization procedures shall be supervised by a professional trained in erosion control techniques and involve taking necessary measures to minimize erosion on unfinished work surfaces. Winterization includes the following: smoothing unfinished surfaces to allow water to freely drain across them without concentration or ponding; compacting unfinished surfaces where concentrated runoff may flow with an excavator bucket or similar tool, to minimize surface erosion and the formation of rills; and installation of culverts, silt fences, and other erosion control devices where necessary to convey concentrated water across unfinished surfaces, and trap exposed sediment before it leaves the work site.</p>	Right Holder	Ongoing	Right Holder/ Division of Water Rights
<p>Mitigation Measure GEO-2</p> <p>Effective erosion control measures shall be in-place at all times during construction. Construction shall not begin until all temporary erosion controls (i.e., straw bales or silt fences that are effectively keyed-in) are in place down slope or down stream of project activities within the riparian area. Erosion control measures shall be maintained throughout the construction period. If continued erosion is likely to occur after construction is completed, then appropriate erosion prevention measures shall be implemented and maintained until erosion has subsided.</p>	Right Holder	Ongoing	Right Holder/ Division of Water Rights

<p>Mitigation Measure GEO-3</p> <p>An adequate supply of erosion control materials (gravel, straw bales, shovels, etc.) shall be maintained onsite to facilitate a quick response to unanticipated storm events or emergencies.</p>	<p>Right Holder</p>	<p>Ongoing</p>	<p>Right Holder/ Division of Water Rights</p>
<p>Mitigation Measure GEO-4</p> <p>Upon project completion, all exposed soil present in and around the project site shall be stabilized within 7 days. Soils exposed by project operations shall be mulched to prevent sediment runoff and transport. Mulches shall be applied so that not less than 90% of the disturbed areas are covered. All mulches, except hydro-mulch, shall be applied in a layer not less than two (2) inches deep. Where feasible, all mulches shall be kneaded or tracked-in with track marks parallel to the contour, and tackified as necessary to prevent excessive movement. All exposed soils and fills, including the downstream face of the road prism adjacent to the outlet of culverts, shall be reseeded with a mix of native grasses common to the area, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment.</p>	<p>Right Holder</p>	<p>Ongoing</p>	<p>Right Holder/ Division of Water Rights</p>

Table 3. Hazards and Hazardous Materials

Mitigation Measure	Implementation	Timing	Monitoring and Enforcement
<p>Mitigation Measure HAZ-1</p> <p>Heavy equipment that will be used in these activities will be maintained according to a maintenance and repair schedule and will be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started.</p>	Right Holder	Pre-Construction	Division of Water Rights
<p>Mitigation Measure HAZ-2</p> <p>When operating vehicles in wetted portions of the stream channel, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, the responsible party shall, at a minimum, do the following:</p> <p>a) All equipment shall be cleaned to remove external oil, grease, dirt, or mud. Wash sites shall be located in upland locations so that dirty wash water does not flow into the stream channel or adjacent wetlands;</p> <p>b) Check and maintain on a daily basis any vehicles to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat;</p> <p>c) Take precautions to minimize the number of passes through the stream and to avoid increasing the turbidity of the water to a level that is deleterious to aquatic life; and</p> <p>d) Allow the work area to rest to allow the water to clear after each individual pass of the vehicle that causes a plume of turbidity above background levels, resuming work only after the stream has reached the original background turbidity levels.</p>	Right Holder	Pre-Construction	Division of Water Rights

<p>Mitigation Measure HAZ-3</p> <p>All equipment operators shall be trained in the procedures to be taken should an accident occur. Prior to the onset of work, the Permittee shall prepare a Spill Prevention/Response plan to help avoid spills and allow a prompt and effective response should an accidental spill occur. All workers shall be informed of the importance of preventing spills. Operators shall have spill clean-up supplies on site and be knowledgeable in their proper deployment.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Right Holder/ Division of Water Rights</p>
<p>Mitigation Measure HAZ-4</p> <p>All activities performed in or near a stream will have absorbent materials designed for spill containment and cleanup at the activity site for use in case of an accidental spill. In an event of a spill, work shall cease immediately. Clean-up of all spills shall begin immediately. The responsible party shall notify the State Office of Emergency Services at 1-800-852-7550 and the CDFW immediately after any spill occurs and shall consult with the CDFW regarding clean-up procedures.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Right Holder/ Division of Water Rights</p>
<p>Mitigation Measure HAZ-5</p> <p>All fueling and maintenance of vehicles and other equipment and staging areas shall occur outside of Streamside Management Areas and place fuel absorbent mats under pump while fueling. The USACE and the CDFW will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Permittee shall prepare a plan to allow a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Right Holder/ Division of Water Rights</p>

<p>Mitigation Measure HAZ-6</p> <p>Location of staging/storage areas for equipment, materials, fuels, lubricants, and solvents, will be located outside of the streams high water channel and associated riparian area. The number of access routes, number and size of staging areas, and the total area of the work site activity shall be limited to the minimum necessary to complete the restoration action. To avoid contamination of habitat during restoration activities, trash will be contained, removed, and disposed of throughout the project.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Right Holder/ Division of Water Rights</p>
<p>Mitigation Measure HAZ-7</p> <p>Petroleum products, fresh cement, and other deleterious materials shall not enter the stream channel.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Right Holder/ Division of Water Rights</p>
<p>Mitigation Measure HAZ-8</p> <p>Stationary equipment such as motors, pumps, generators, compressors, and welders, located within the dry portion of the stream channel or adjacent to the stream, will be positioned over drip-pans.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Right Holder/ Division of Water Rights</p>

Table 4. Hydrology and Water Quality

Mitigation Measure	Implementation	Timing	Monitoring and Enforcement
<p>Mitigation Measure HYD-1</p> <p>Project operations will be adaptively managed based on flow, temperature and aquatic habitat monitoring results. These monitoring results will be presented to regulatory agency staff on an annual basis and/or as required by final permit conditions. In coordination with regulatory agency staff, the project team will adapt project operations as necessary to optimize aquatic habitat benefits resulting from the project while reducing impacts to a less than significant level. This may include changes to diversion timing/rates, changes to flow release timing/rates, and/or other changes to project operations.</p>	<p>Right Holder</p>	<p>During Construction</p>	<p>Division of Water Rights</p>