Meeting Date: 04/26/22
Application Number: A2982
Staff: N. Lee

Staff Report 22

APPLICANT:

United States Fish and Wildlife Service

PROPOSED ACTION:

Issuance of General Lease – Public Agency Use

AREA, LAND TYPE, AND LOCATION:

Sovereign land in the Yuba River, adjacent to Assessor's Parcel Numbers 006-170-141, -140, -139, -126, -119, and -118; and 005-270-176, -140, and -018, near Marysville, Yuba County.

AUTHORIZED USE:

Habitat restoration, floodplain excavation and grading, creation of a side perennial channel, and riparian revegetation.

TERM:

10 years, beginning April 26, 2022.

CONSIDERATION:

Public use and benefit; with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

SPECIFIC LEASE PROVISIONS:

- In performing the rehabilitation and restoration operations, the Lessee will abide by mitigation measures and Best Management Practices to control turbidity and protect aquatic resources and habitats from excessive siltation in the general vicinity of the Lease Premises.
- At least 24 hours prior to and during the rehabilitation and restoration activities, Lessee will post signs and barriers to minimize potential hazards to the public.

STAFF ANALYSIS AND RECOMMENDATION:

AUTHORITY:

Public Resources Code sections 6005, 6216, 6301, 6303, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

The Applicant has applied for a General Lease – Public Agency Use for habitat restoration, floodplain excavation and grading, creation of a side perennial channel, and riparian revegetation in the lower Yuba River, which will include the gravel bar also known as Long Bar, to be modified as part of a proposed salmonid habitat restoration project (Project).

The proposed Project is a collaborative effort by the Applicant (USFWS), South Yuba River Citizen's League (SYRCL), and the private upland owners, Long Bar Mine, LLC and Western Aggregates, LLC. SYRCL is the recipient of a USFWS Anadromous Fish Restoration Program grant that is funding the Project. SYRCL has construction easement agreements with Long Bar Mine, LLC and Western Aggregates, LLC for the use of the uplands for the Project. All involved parties support the Project.

The Project area is within the Yuba Goldfields, where the respective ownership interests of the State, federal government, and private uplands owners have been historically disputed and not finally resolved. The lower Yuba River within the Long Bar area has been altered over decades from hydraulic mining, dredge mining, and the construction of dams. These activities greatly altered the course of the Yuba River and the habitat conditions under which salmonids historically evolved in the Yuba River. The proposed Project is designed to restore the channel, floodplain, and riparian ecosystem processes, which will improve the rearing habitat for Chinook Salmon and Steelhead. The Project includes floodplain grading, side channel excavation and reconnection, and native vegetation planting. The Project will include a 6,929-foot segment of the lower Yuba River. The total amount of material proposed for removal is estimated to be approximately 380,000 cubic yards, consisting mostly of mining tailings. The material will be disposed of at the Silica Resources Incorporated (SRI) Stringer Pit aggregate operation, which is located on the upland property owned by Long Bar Mine, LLC, adjacent to a large gravel bar on the north side of the river. SRI will sort, process, and sell the material removed pursuant to agreement with the upland owners and the Project contractor, and a discount will be provided to the Project based on the value of the material sold. Project costs will also be greatly reduced (a savings of

approximately $43 million) and carbon emissions minimized due to the on-site disposal of the material.

Due the unresolved nature of the historic boundaries in the Project area and the extensive migration of the material to be removed, it cannot be determined at this time what interest, if any, the State has in any minerals included in the material to be removed as part of the Project. A final resolution of the state's interest in the minerals would require significant time and resources, including protracted litigation with uncertain results. Given this undetermined interest, the overall and primary public benefit of the Project, and the fact that any sale of the material will both offset Project costs and provide a direct Project discount, staff recommends that the Commission authorize the lease, with the consideration being the public use and benefit, and with any benefit to private parties being incidental and allowable consistent with Public Resources Code section 6303.

Approximately 62.4 acres of gravel bar and riparian habitat will be rehabilitated and enhanced. A total of 42.8 acres of the gravel bar will be topographically modified to create and enhance juvenile salmonid rearing habitat through the creation of seasonally or perennially inundated side channels (5.9 acres), backwaters (2.4 acres), flood runner channels (1.9 acres), and backwater channels (5.4 acres), and by lowering floodplain elevations (27.2 acres). This will develop habitat that is inundated by water for the preferred duration and frequency for juvenile salmon rearing.

The proposed Project will take place over 1 to 2 years in the lower Yuba River. The dry floodplain work will be conducted from April 16 through October 31. The in-water work window is from July 15 through September 30. Riparian tree planting will occur between October and February, with a target of late November. The staging area will be located outside of the floodplain. Flood runner slope protection will be installed, and silt curtains will be used to reduce sediment. Limited work will occur in the main channel of the lower Yuba River.

The results of the Project will be a level area with a very slight slope from upstream to downstream and positive drainage into the side channel or backwater. Native riparian trees and shrubs will be planted in select locations, particularly in locations that have been disturbed by construction activities. The proposed revegetation is below the ordinary high-water mark, so no fiber rolls or hydroseeding will occur. After floodplain grading activities have been completed, disturbed areas that contain fine sediment will be stabilized according to the Stormwater Pollution Prevention Plan.

The Project is within a 100-year floodplain and will support the preservation and enhancement of the natural and beneficial values of floodplains. Recovering

floodplain inundation will provide a rearing habitat for juvenile salmon that may contribute to improved growing conditions and recovery processes to support native plant recruitment and establishment. The Project activities will likely improve groundwater recharge as floodplain function is restored. The Project will increase the absorption rates for floodwaters in the local area but will not dramatically change the overall runoff patterns. The Project will increase the capacity of the river to convey flood flows in a way that is beneficial to rearing salmonids and poses no increase to the pre-project level of risk to structures, agricultural fields, or mining resources in the area.

A scientific monitoring plan has been developed for the Project, with the primary goal of defining the current state of the system before restoration and determining whether the implemented project is improving the rearing habitat for Chinook Salmon and Steelhead fish species and the overall ecosystem. The monitoring program consists of four conceptual approaches to monitoring: 1) pre-project site description, 2) implementation, 3) effectiveness, and 4) validation. The monitoring of the planting success will occur for three years through the fall of 2024. If there is less than 60 percent survival, then additional native riparian trees will be planted.

Public access to the Yuba River near the project location is constrained due to private ownership of the uplands. Rafting, kayaking, and fishing are possible but are limited due to the public access constraints in the surrounding area. No developed regional or neighborhood parks or other recreational facilities exist within or directly adjacent to the Project site.

The Project will enhance habitat restoration, which will increase salmonid populations in the lower Yuba River and the entire Sacramento River system. Overall, the proposed action is considered beneficial because it will enhance fisheries, which is a recognized Public Trust use. Furthermore, the action will not impede or impair any other Public Trust uses in the area. The lease includes certain provisions protecting the public's use of the proposed lease area by requiring the Applicant to obtain necessary permits. The lease also has a limited term of 10 years that allows the Commission flexibility to determine if the Public Trust needs of the area have changed over time. Furthermore, post-project monitoring will take place after project completion to evaluate outcomes of the project, implementation of the project, and project influences on habitat conditions.

CLIMATE CHANGE:

The Project area is not tidally influenced and therefore, would not be subject to sea level rise. However, as stated in *Safeguarding California Plan: 2018 Update* (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding,

drought, and storms. In rivers, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris. Conversely, prolonged droughts could dramatically reduce river flow and water levels, leading to loss of public access and navigability. Climate change will further influence riverine areas by changing erosion and sedimentation rates, and flooding and storm flow, as well as runoff, will likely increase scour, decreasing bank stability at a faster rate.

Due to these potential changes, any future bank protection could need reinforcement in the future to withstand higher levels of flood exposure and more frequent storm events. Regular maintenance, as referenced in the lease, will reduce the likelihood of severe habitat degradation.

CONCLUSION:

For all the reasons above, staff believes the issuance of this lease will not substantially interfere with Public Trust needs at this location, at this time, and for the foreseeable term of the proposed lease; is consistent with the Public Trust Doctrine; and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. Approval or denial of the application is a discretionary action by the Commission. Each time the Commission approves or rejects a use of sovereign land, it exercises legislatively delegated authority and responsibility as trustee of the State's Public Trust lands as authorized by law. If the Commission denies the application, the Applicant will not be authorized to perform habitat restoration, floodplain excavation and grading, creation of a side perennial channel, and riparian revegetation. Upon expiration or prior termination of the lease, the lessee also has no right to a new lease or a renewal of any previous lease.

2. This action is consistent with the "Meeting Evolving Public Trust Needs" Strategic Focus Area of the Commission's 2021-2025 Strategic Plan.

3. A Mitigated Negative Declaration, State Clearinghouse No. 2021030284, and a Mitigation Monitoring Program (MMP) for this project were prepared by the County of Yuba and adopted on May 6, 2021. Staff reviewed these documents and prepared an independent MMP (attached, Exhibit C) incorporating the County of Yuba's document and recommending adoption by the Commission.

4. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but the activity

will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the California Environmental Quality Act (CEQA) review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVAL OBTAINED:

U.S. Fish and Wildlife Service

APPROVALS REQUIRED:

California Department of Fish and Wildlife
Central Valley Flood Protection Board
Central Valley Regional Water Quality Control Board
National Marine Fisheries Service
State Water Resources Control Board
Feather River Air Quality Management District
U.S. Army Corps of Engineers

EXHIBITS:

A. Land Description
B. Site and Location Map
C. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that a Mitigated Negative Declaration, State Clearinghouse No. 2021030284, and a Mitigation Monitoring Program were prepared by the County of Yuba and adopted on May 6, 2021, for this project and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgment, the scope of activities to be carried out under the lease to be issued by this authorization have been adequately analyzed; that none of the events specified in Public Resources Code section 21166 or the State CEQA Guidelines section 15162 resulting in any new or substantially more severe significant impact has occurred; and, therefore no additional CEQA analysis is required.

Adopt the Mitigation Monitoring Program, as contained in the attached Exhibit C.

SIGNIFICANT LANDS INVENTORY FINDING:
Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

PUBLIC TRUST AND STATE'S BEST INTERESTS:
Find that the proposed lease will not substantially impair the public rights to navigation and fishing or substantially interfere with the Public Trust needs and values at this location, at this time, and for the foreseeable term of the lease; is consistent with the Public Trust Doctrine; and is in the best interests of the State.

AUTHORIZATION:
Authorize issuance of a General Lease – Public Agency Use to the Applicant beginning April 26, 2022, for a term of 10 years, to authorize habitat restoration, excavation and grading, creation of a side channel, and riparian revegetation in the Yuba River, as described in Exhibit A and shown on Exhibit B (for reference purposes only) attached and by this reference made a part hereof; consideration being the public use and benefit, with the State reserving the right, at any time, to set a monetary rent as specified in the lease if the Commission finds such action to be in the State's best interest; and such permitted activity is contingent upon Applicant's compliance with applicable permits, recommendations, or limitations issued by federal, state, and local governments.

EXHIBIT A

A 2982

LAND DESCRIPTION

A parcel of submerged land situate in the bed of the Yuba River, lying adjacent to fractional Sections 22, 23 26 and 27 of Township 16 North, Range 5 East, MDM, as shown on Official Government Township Plat approved August 6, 1867, County of Yuba, State of California, more particularly described as follows:

> BOUNDED on the west by the southerly prolongation of the westerly line of N ¼. SE 1/4, Section 22 of said Township as shown on said plat; BOUNDED on the north by the low water mark of the right bank of the Yuba River; BOUNDED on the east by the southerly prolongation of the westerly line of Lot 1, Section 23 of said Township as shown on said plat; BOUNDED on the south by the low water mark of the right bank of the Yuba River.

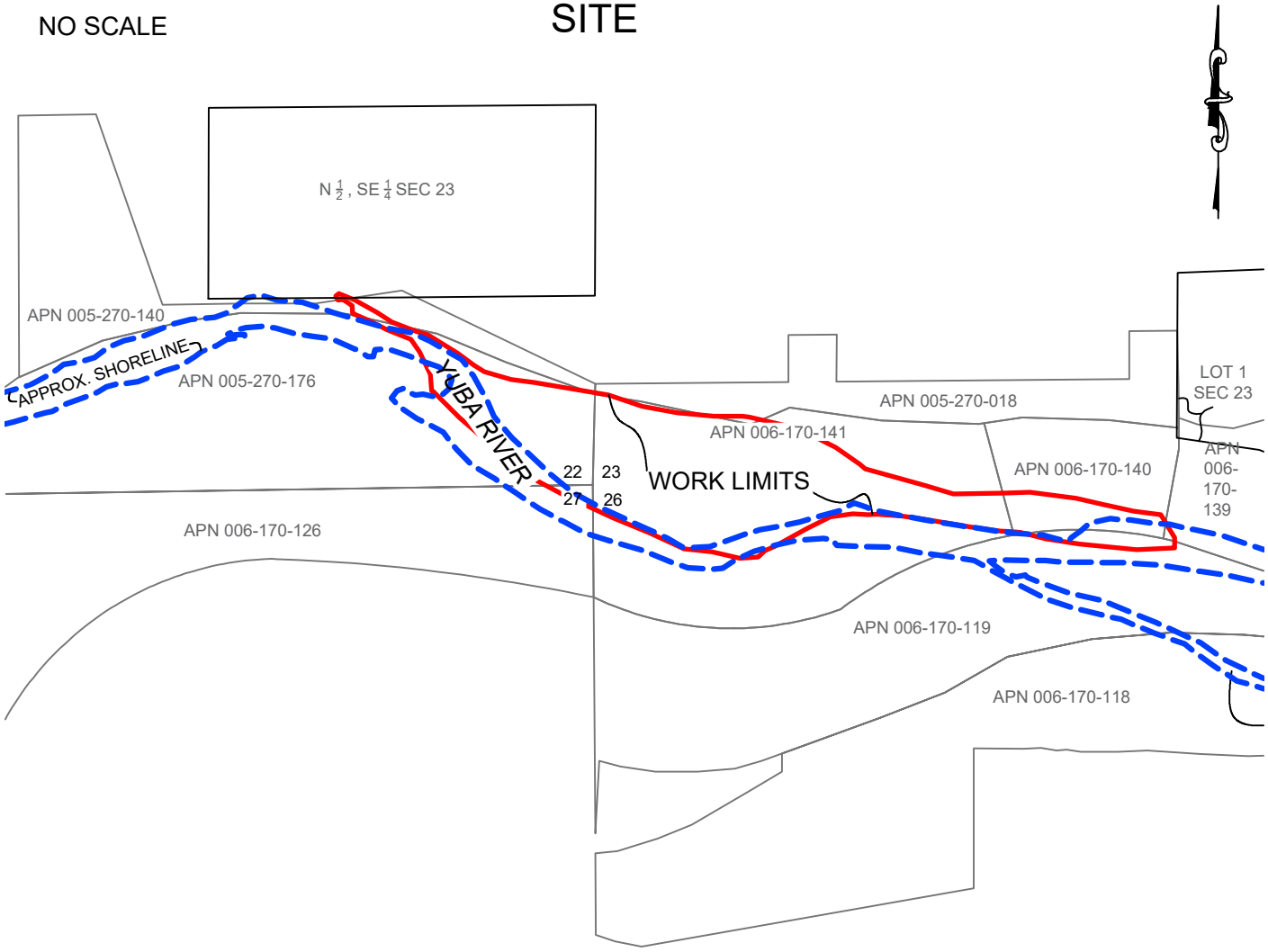
END OF DESCRIPTION

This description is based on Applicant provided design plans for a proposed salmon habitat restoration project, together with any and all appurtenances pertaining thereto, to be built at a later date within the Lease time frame. This description is to be updated once final as-built plans are submitted.

Prepared 4/13/2022 by the California State Lands Commission Boundary Unit.

NO SCALE

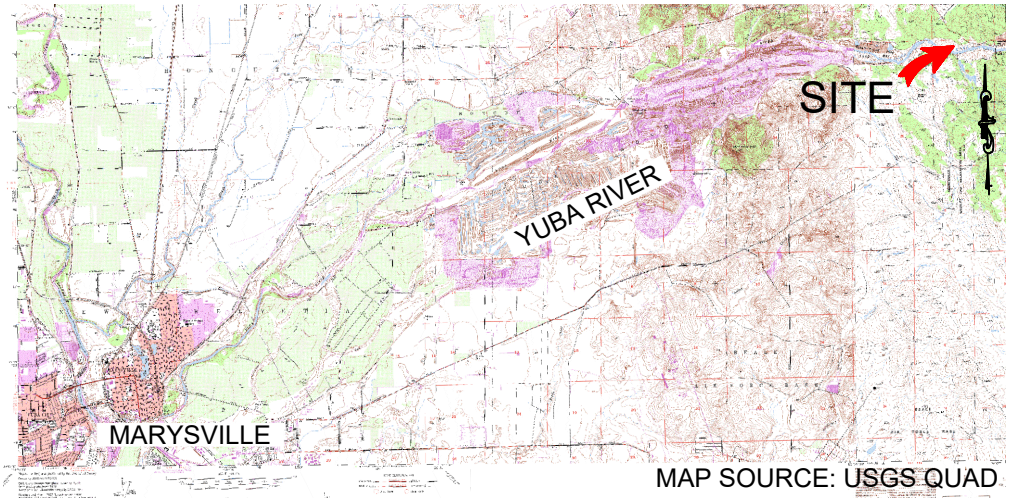
SITE



SALMON HABITAT RESTORATION NEAR MARYSVILLE

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

THIS EXHIBIT IS SOLELY FOR PURPOSES OF GENERALLY DEFINING THE LEASE PREMISES, IS BASED ON UNVERIFIED INFORMATION PROVIDED BY THE LESSEE OR OTHER PARTIES AND IS NOT INTENDED TO BE, NOR SHALL IT BE CONSTRUED AS, A WAIVER OR LIMITATION OF ANY STATE INTEREST IN THE SUBJECT OR ANY OTHER PROPERTY.

EXHIBIT B

A2982
US FISH & WILDLIFE
GENERAL LEASE -
PUBLIC AGENCY USE
YUBA COUNTY

MJF 4/13/2022

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

LONG BAR SALMONID HABITAT RESTORATION PROJECT ON THE LOWER YUBA RIVER
(A2982, State Clearinghouse No. 2021030284)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Long Bar Salmonid Habitat Restoration Project on the Lower Yuba River (Project). The CEQA lead agency for the Project is the County of Yuba.

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to impose feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:[1]

> *In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.*

The lead agency adopted an MND, State Clearinghouse No. 2021030284, adopted a Mitigation Monitoring and Reporting Program (MMRP) for the whole of the Project (see Exhibit C, Attachment C-1), and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table C-1 below. The full text of each mitigation measure, as set forth in the MMRP prepared by the CEQA lead agency and provided in Attachment C-1, is incorporated by reference in this Exhibit C.

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[1] The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM)[2]
Fugitive Dust	• Reduce Dust Impacts
Impacts to Valley Elderberry Longhorn Beetle	• Protect Elderberry Plants and Special Status Plants with Buffer • Transplant Unavoidable Elderberry Plants to Suitable Locations
Impacts to Riparian Trees and Sensitive Natural Communities	• Protect and Compensate for Native Trees
Impacts to Special Status Wildlife Species	• Work Outside of Critical Periods for Sensitive Species • Monitor for Wildlife to Prevent Impacts
Impacts to Bats	• Protect and Compensate for Native Trees • Monitor for Bats to Prevent Impacts
Impacts to Turbidity and Sedimentation in Special Status Fish Species Habitat	• Work Outside of Critical Periods for Sensitive Species • Monitor Water Quality and Prevent Impacts
Impacts to Mercury Levels in Special Status Fish Species Habitat	• Monitor Water Quality and Prevent Impacts • Monitor Mercury Levels and Minimize Impacts
Impacts to Contaminants in Special Status Fish Species Habitat	• Use Clean Equipment and Biodegradable Lubricants
Impacts to Spread of Invasive Species in Special Status Fish Species Habitat	• Prevent Spread of Aquatic Invasive Species
Impacts to Noise in Special Status Fish Species Habitat and from In-water Construction Activities	• Construction Approach to Minimize Impacts to Fish • Fish Relocation to Minimize Impact to Fish from Construction Activities • Exclusion of Fish from Construction Areas to Prevent Impacts • Reduce Impacts from Noise
Impacts from Physical Habitat Modification	• Construction Approach to Minimize Impacts to Fish

[2] See Attachment C-1 for the full text of each MM taken from the MMRP prepared by the CEQA lead agency.

Potential Impact	Mitigation Measure (MM)[2]
Impacts from Inadvertent Discovery of Cultural and Native American Objects of Cultural Significance	• Inadvertent Discoveries of Objects of Cultural Significance
Impacts to Water Quality	• Monitor Water Quality and Prevent Impacts
Impacts from Noise	• Reduce Impacts from Noise
Impacts to Recreation	• Public Safety • Monitor Water Quality and Prevent Impacts

ATTACHMENT C-1

Mitigation Monitoring Program

Adopted by County of Yuba

ATTACHMENT C-1

MITIGATION MONITORING AND REPORT PROGRAM:
LONG BAR SALMONID HABITAT RESTORATION PROJECT ON THE LOWER YUBA RIVER MITIGATED NEGATIVE DECLARATION

This Mitigation Monitoring and Reporting Program (MMRP) was prepared in accordance with Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. Section 15097 requires that a lead agency establish a program to report on or monitor measures adopted as part of the environmental review process to mitigate or avoid significant effects on the environment. The MMRP for the Long Bar Salmonid Habitat Restoration Project is presented here as Table 1. As the Lead Agency, the U.S. Fish and Wildlife Service is responsible for enforcement of the adopted mitigation measures.
This MMRP is designed to ensure that the mitigation measures necessary to reduce significant impacts identified in the Long Bar Salmonid Habitat Restoration Initial Study and Proposed Mitigated Negative Declaration (IS/MND) are implemented. The components of the MMRP Table 1 are listed below:

Mitigation Measures: The mitigation measures are taken verbatim from the Long Bar Salmonid Habitat Restoration Project IS/MND.

Timing/Milestone: Identifies a schedule for conducting each mitigation action.

Responsible Entity: Identifies the entity responsible for implementing specific mitigation measures.

Mitigation Action: Identifies the specific action or actions that must be completed to implement the mitigation measure.

Monitoring and Enforcement Responsibility: Identifies the department/agency, consultant, or other entity responsible for overseeing that mitigation occurs.

Check off Date/Initials: To be filled out when individual mitigation is complete.

TABLE 1. MITIGATION MONITORING AND REPORTING PROGRAM:
LONG BAR SALMONID HABITAT RESTORATION PROJECT

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
Reduce Dust Impacts The following dust reduction measures will be implemented during movement of materials from the construction area to the processing plant to reduce construction-related emissions: • wet materials to limit visible dust emissions using water; • provide at least 6 in (15.2 cm) of freeboard space from the top of the container; or, • cover the container. Implement the following dust reduction measure during cobble placement to reduce construction-related emissions: • limit or promptly remove	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
any of mud or dirt on construction equipment and vehicles at the end of each workday, or once every 24 hours. Water trucks would be used to wet down construction access roads, staging areas, and restoration activity zones to minimize dust production.					
Protect Elderberry Plants and Special Status Plants with Buffer Each year, before beginning construction activities, a pre-project special status plant survey will be conducted of the Proposed Project site. If elderberry shrubs (or other special status plants) are identified in subsequent surveys they will be avoided. Complete avoidance of	Prior to initiation of restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
elderberry plants may be assumed when there is at least a 100-ft (30.5 m) buffer around the plant. However, 20 ft buffers will be established and maintained for all elderberry plants with stems measuring 1 in or greater in diameter at ground level which will be retained in situ (83 plants). All buffer zones will be flagged and Proposed Project activities will be adjusted to ensure no activities occur in the buffer area, thereby minimizing any negative effects on valley elderberry longhorn beetle. No insecticides, herbicides, fertilizers, or other chemicals that might harm valley elderberry longhorn beetle or its host plant will be used for the Proposed Project (USFWS 1999).					
Transplant Unavoidable Elderberry Plants to Suitable Locations	Prior to initiation of	Project Applicant/	Implement specified	Project Applicant/	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
During the pre-project survey, a number of elderberry shrubs with ground-level stem diameter greater than 1 in were identified within the affected area that cannot be avoided by the Proposed Project through use of 20 ft buffers. These unavoidable elderberry shrubs will be transplanted to a restoration area following the USFWS transplanting guidelines, with the exception of the prescribed time period (USFWS 1999). The USFWS transplanting guidelines prescribe that elderberry plants should be transplanted when dormant between November and the first two weeks of February (USFWS 1999). Heavy equipment to be used for transplanting may not be able to access the site to perform the transplanting during this time period due to potential high flows	restoration activities	Contractor	mitigation measures	Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
in the Yuba River. Therefore, we propose to transplant the elderberry plants within the site when they no longer have green leaves, which can be as early as September (CFS unpublished data). These dormant elderberry plants will be transplanted into appropriately sized pre-dug holes in the restoration area using a 5 yard front-end loader. All transplanted elderberry bushes will be transplanted in groupings and will be transplanted to areas designed to be between the 1.75 and 10 year return interval flow events and within 2 to 12 ft relative elevation of 2,000 cfs (Figures 5 and 6), which are the areas within the site which currently support elderberry plants. Transplanted elderberries will be monitored in years 1, 2, 3, and 10, with a target minimum					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
survival rate of at least 60%. If necessary, replacement plants will be added to the restoration area to maintain survival above 60%.					
Protect and Compensate for Native Trees Native trees, such as Fremont cottonwood (*Populus fremontii*), willows (*Salix* spp.), and Alder (*Alnus rhombifolia*) with a diameter-at-breast-height (DBH) of 6 in (15.2 cm) or greater will be protected with 30-ft (9.1-m), 10-ft (3-m), and 10-ft (3-m) buffers, respectively. Native trees will be marked with flagging if close to the work area to prevent disturbance. To compensate for the removal of riparian shrubs and trees during Proposed Project implementation, the plans will identify tree and shrub species that will be planted, how, where,	Prior to initiation of restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
and when they will be planted, and measures to be taken to ensure a minimum performance criteria of 60% survival of planted trees for a period of three consecutive years. Irrigation will not be used, but the return of inundation to the floodplain is expected to promote growth of native riparian species. The tree plantings will be based on native tree species compensated for in the following manner: • Oaks having a DBH of 3 – 5 in (7.6 – 12.7 cm) will be replaced in-kind, at a ratio of 3:1, and planted during the winter dormancy period in the nearest suitable location to the area where they were removed. Oaks with a DBH of greater than 5 in will be replaced in-kind at					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
a ratio of 5:1. • Riparian trees (i.e., willow, cottonwood, poplar, alder, ash, etc.) and shrubs will be replaced in-kind and on site, at a ratio of 3:1, and planted in the nearest suitable location to the area where they were removed.					
Construction Approach to Minimize Impacts to Fish The construction approach will allow fish to move progressively downstream and away from the impact area as construction moves from upstream to downstream through the backwater channel. The majority of the in-water work will involve the filling in and creation of a side channel through the ponds and backwater.	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
Before in-water work starts in a section of the channel a qualified fisheries biologist will survey the area and determine whether there is a suitable egress route for fish to move downstream and away from the construction area. If a suitable downstream egress route is not present, most likely because an area is deemed too shallow, then the problem area will be altered such that it becomes suitable. An excavator would likely be used to deepen the problem area and would work from downstream to upstream to discourage fish from migrating downstream until the egress route is completed. Once suitable downstream egress has been established, in-stream construction will begin at the most upstream section of the channel and work progressively					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
downstream and across the channel. The listed fish species most likely to be present are juvenile CCV Steelhead from 7 to 30 cm (3 – 12 in) fork length and possibly juvenile CV spring-run Chinook Salmon that are demonstrating the yearling life history strategy from 7 to 12 cm (3 – 5 in) fork length. Juvenile CCV steelhead and Chinook Salmon are highly mobile and would be expected to easily move downstream and away from the impact area with a suitable egress route. Juvenile CCV steelhead and Chinook Salmon are not likely to be present in the ponds or the majority of the backwater, since they are not juvenile salmonid habitat. During pre-project surveys juvenile Chinook Salmon were only observed in the observed in the backwater in winter and					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
spring when flows were sufficient to allow access (CFS unpublished data). Juvenile *O. mykiss* were never observed in the backwater (CFS unpublished data). Once work proceeds past an area, fish will be able to return to use the newly created habitat through upstream migration. If a qualified fisheries biologist, with input from the contractor, determines that in-stream work in an area cannot be performed using the construction approach then fish relocation will be performed to avoid fish injury and mortality and minimize disturbance.					
Fish Relocation to Minimize Impact to Fish from Construction Activities If fish relocation needs to be performed, a qualified fisheries	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
biologist will determine which fish relocation method is most appropriate for the area. Fish relocation will most likely initially be attempted by trying to herd the fish out of the work area as this would minimize impacts to fish as they would not be handled and transported. The following guidelines will apply to fish relocation through herding. • Before fish relocation through herding begins, a qualified fisheries biologist will identify the most appropriate method and approach. Prior to beginning the fisheries biologist will ensure that the location to which fish are herded contains suitable habitat. • The fish relocation through					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
herding will be conducted under the supervision of a qualified fisheries biologist. The method that will most likely be used will be to install an exclusion screen or block-net above the upstream most work area. An appropriately sized seine that covers the width of the channel, operated by qualified personnel, will be pulled in the downstream direction until it is below the bottom of the work area. The net will then be fastened in place, blocking the entire channel until a temporary block net can be installed. The temporary block-net will be installed immediately upstream of the seine net such that fish have been herded					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
downstream and cannot return upstream. A minimum of three seine hauls will be performed. For each haul, when the seine approaches the block-net, the block-net will be removed until the seine has passed downstream of its location and will then be re-installed immediately upstream of the seine. After the final pass, as determined by the fisheries biologist, the block-net will be left in place or replaced with an exclusion screen to prevent fish from moving upstream. • After the area has been adequately seined, based on the judgement of a qualified fish biologist, the area will once again be					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
surveyed for fish. The fisheries biologist will determine the most appropriate method to survey the area for remaining fish. • If the survey results in an estimate of greater than 95% of individuals that were present prior to relocation efforts being absent after relocation efforts and no listed species are observed, the fish relocation effort will be considered successful and construction activities can commence. If initial relocation efforts are deemed unsuccessful, the fisheries biologist will determine whether further herding with a seine should be conducted until the					

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success criteria is met or relocation using a capture method will be employed. If fish relocation using herding is not successful or the fisheries biologist decides it is not feasible, then fish capture and relocation will be used. The following guidelines will apply to fish capture and relocation. • Before fish relocation begins, a qualified fisheries biologist will identify the most appropriate release location(s). Release locations will have water temperatures within 2°C of the capture location, offer suitable habitat for released fish, and will be selected to minimize the likelihood that fish will re-enter the work area or become impinged					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
on the exclusion net or screen. • The method used to capture fish will depend on the nature of the work site, and will be selected by a qualified fisheries biologist who is experienced with fish capture and handling. Areas of complex habitat may require the use of electrofishing equipment, whereas in other areas fish may be captured through seining or dip netting. Electrofishing will only be performed by properly trained personnel following NMFS guidelines (2000). Electrofishing will only be performed if seining and/or dip netting is not feasible. • Handling of salmonids will					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
be minimized. When it is necessary, personnel will only handle fish with wet hands or nets. • Fish will be held temporarily in cool, shaded water. Overcrowding in buckets will be avoided by using at least two buckets and no more than 25 fish will be kept in a five gallon 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 bucket until the time of release. The water temperature in each bucket will be monitored and partial water changes or the addition of ice will be conducted as necessary to					

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maintain a stable water temperature (within 2°C of initial water temperature). Fish will not be held for more than 30 minutes. If water temperature reaches or exceeds NMFS limits, fish will be released and relocation operations will cease. • If fish are abundant, capture will cease periodically to allow release and minimize the time fish are held in containers. • Fish will not be anesthetized or measured. However, they will be visually identified to species level, and year classes will be estimated and recorded. • When feasible, initial fish relocation efforts will occur several days prior to the					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
scheduled start of construction. The fisheries biologist will perform a final survey on the day before or the day of construction. • Reports on fish relocation activities will be submitted to CDFW and NMFS within 6 months of the relocation effort. • If mortality during relocation exceeds 2%, relocation will cease and CDFW and NMFS will be contacted as soon as possible.					
Exclusion of Fish from Construction Areas to Prevent Impacts Fish exclusion screens or nets may be used in strategic locations at various times to prevent fish from being impacted by construction	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
activities. Exclusion will prevent fish from accessing areas from which they were relocated.					
Work Outside of Critical Periods for Sensitive Species Table 14 lists the critical periods when disturbance could result in significant impacts to individuals or populations of special status species. To avoid these impacts, all Proposed Action in-water activities will be conducted during the period 15 July through 30 September, which is outside the listed critical periods for the majority of the species. Surveys will be performed for species which have critical periods overlapping with the in-water work window or dry-ground work window (16 April to 31 October) which may be impacted by the Proposed Action activities. If special status or	Prior to restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
sensitive species are identified within the area which may be impacted by Proposed Action activities, then buffers will be established and/or CDFW and USFWS will be consulted. Nesting birds and raptors are protected under the MBTA and California Fish and Game Code, and trees and shrubs within the Action Area likely provide nesting habitat for songbirds and raptors. If tree removal is unavoidable, it will occur during the non-breeding season (mid-September). If other construction activities must occur during the potential breeding season (1 February- 31 August) surveys for active nests and/or roosts will be conducted by a qualified biologist no more than 10 days prior to the start of construction. A minimum no disturbance buffer will be					

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
delineated around active nests (note, size of buffer depends on species encountered) until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.					
Monitor for Bats to Prevent Impacts For bat species, before any ground disturbing activities, a qualified biologist will survey for the presence of associated habitat types for the bat species of concern. If bats are present, suitable avoidance and conservation measures will be implemented, including a minimum 300 ft (91.4 m) buffer of roosting bats, maternity roosts or winter hibernacula until all young	Prior to restoration activities	Project Applicant/ Contractor	Hire qualified biologist to perform surveys; if necessary, implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
bats have fledged.					
Use Special Transportation Routes and Work Areas Special transportation routes and work areas will be designated to avoid damaging trees and shrubs in riparian habitats, especially those sensitive species described above. Potential impacts to the riparian vegetation could occur during heavy equipment operation. These impacts will be minimized to the greatest extent practicable by selecting travel routes that avoid or minimize damage. Heritage size trees (i.e., greater than 24 in [40.6 cm] in diameter) near the work area will be identified, flagged and fenced prior to construction to prevent unintended damage. If damage cannot be avoided, these trees will be replaced at a ratio	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
prescribed in **Mitigation Measure 5 - Protect and Compensate for Native Trees.**					
Monitor for Wildlife to Prevent Impacts Pre-construction surveys by qualified biologists will be conducted no more than 10 days prior to the start of construction. Pre-construction surveys will be conducted by qualified wildlife biologists, who will determine the use of the Action Area by American badgers; surveys will focus on identification of potential badger dens within, and a minimum 250 ft (76.2 m) buffer, around the Action Area. If badger dens are located within the construction or buffer area, prior to initiation of construction CDFW will be consulted for further instructions on methods to avoid	Prior to restoration activities	Project Applicant/ Contractor	Hire qualified biologist to perform surveys; if necessary, implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
direct impacts to this species. Protocol-level surveys will also be implemented for other state and federally-listed species such as Foothill Yellow-legged Frog, Swainson's Hawk, White-tailed Kite, Bald Eagle, Chinook Salmon, CCV steelhead, and Western Pond Turtle, which may be impacted by restoration activities (Swainson's Hawk Technical Advisory Committee 2000). This includes pre-construction surveys conducted no more than 15 days before Proposed Action construction activities by qualified wildlife and fisheries biologists. Surveys for active nests will be performed using qualified biologists no more than 10 days prior to the start of disturbance activities. A minimum no-disturbance buffer of 250 ft					

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around active nests of non-listed bird species; a 500-ft no-disturbance buffer around migratory bird species; and a half mile buffer for nest of listed species and fully protected species (including White-tailed Kite and Bald Eagle) will be established until breeding season is over or young have fledged. If such a buffer cannot be accomplished, CDFW will be consulted. If Foothill Yellow Legged Frog or Western Pond Turtle are present in Action Areas that will be disturbed then CDFW will be consulted for further instructions on methods to avoid direct impacts to these species.					
Monitor Water Quality and Prevent Impacts During in-water work, turbidity will be monitored with intermittent	Ongoing prior to, during and after	Project Applicant/ Contractor	Use qualified QSP and implement measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
grab samples from the river, and construction curtailed if turbidity exceeds criteria established by the Regional Water Quality Control Board in its Clean Water Act §401 Water Quality Certification. Only clean native sediment from within the Action Area will be used to create riffles and perform other topographic modification. As appropriate, silt curtains will be used along the river corridor to capture floating materials or sediments mobilized during construction activities, and prevent water quality impacts. Stream bank impacts will be isolated and minimized to reduce bank sloughing. Banks will be stabilized with revegetation following Proposed Action activities, as appropriate. A Spill Prevention and Response	restoration activities				

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Plan will also be developed as part of the Long Bar Best Management Practices Plan (BMP Plan), as well as a Stormwater Pollution Prevention Plan (SWPPP). All pertinent staff will be trained on and familiarized with these plans. Copies of the plans and appropriate spill prevention equipment referenced in them will be made available at the site and staff will be trained in its use. Spill prevention kits will be in close proximity to construction areas, and workers will be trained in their proper use.					
Monitor Mercury Levels and Mitigate for Impacts Sediment and aqueous total mercury levels will be measured before, during, and after restoration activities in the Action Area. Following methods in the	Ongoing prior to, during and after restoration activities	Project Applicant/ Contractor	Use qualified QSP and implement measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
Stillwater Sciences (2004) Mercury Assessment, total mercury from areas of Proposed Action exposed fine sediments (<63 µm) will be evaluated to determine if they are considered elevated by the Central Valley Regional Water Quality Control Board (0.10 mg/kg or greater). Aqueous raw total mercury will also be tested to ensure that it is below the California Toxics Rule for a drinking water source of 50 ng/L. It is unlikely that excavation and regrading activities may uncover mercury hot spots and or mobilize mercury in the aquatic food web; however, if samples are found with mercury levels above established standards, work will be halted in the vicinity of the elevated mercury area to assess contamination potential. If, sediment total mercury levels					

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meet the elevated criteria then the mitigation action(s) defined in the Proposed Action 401 water quality certification will be implemented.					
Use Clean Equipment and Biodegradable Lubricants All equipment will be clean and those performing in-water work will use biodegradable lubricants and hydraulic fluids. All equipment will be inspected daily for fuel, lubrication, and coolant leaks; and, for leak potentials (e.g. cracked hoses, loose filling caps, stripped drain plugs). Vehicles are to be fueled and lubricated in a designated staging area located outside the stream channel and banks. Front-end loaders will be wheeled (rubber tire) to minimize impacts. Construction specifications will require that any	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
equipment used in or near the river is properly cleaned to prevent any hazardous materials from entering the river, and containment material will be on site in case of an accident. Contracted personnel will regularly monitor contractors to ensure environmental compliance. Spill prevention kits will be located close to construction areas, with workers trained in their use.					
Prevent Spread of Aquatic Invasive Species To minimize the chance that aquatic invasive plants and invertebrates will be transported and spread to other sections of the Yuba River or other water bodies on equipment, construction specifications will	Prior to restoration activities	Project Applicant/ Contractor	Implement mitigation measures specified in ISRAP	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
require that equipment be steam cleaned immediately after the work is completed and before being used in other water bodies. An Invasive Species Risk Assessment and Planning (ISRAP) protocol will be developed, and all appropriate staff will be trained as to its purpose and implementation before construction begins. The plan will be used to prevent the spread of invasive species during construction. Additional measures may be taken at the recommendation of CDFW.					
Reduce Impacts from Noise To mitigate noise related impacts, the Proposed Action will require all contractors to comply with the following operational parameters: • restrict construction activities to time periods	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
under which the aggregate plant is allowed to operate; • install and maintain sound-reducing equipment and muffled exhaust on all construction equipment.					
Inadvertent Discoveries of Objects of Cultural Significance The following mitigation measure would be implemented as the Proposed Action would not have a Tribal or Archeological Monitor present during ground disturbing activities. Cultural items include darkened soil (midden), shell fragments, faunal bone fragments, fire affected rock and clay, isolated artifacts, bowl mortars, handstones and pestles, flaked stone, and human remains. Recommendations of the treatment of a Tribal Cultural	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
Resource (TCR) will be documented in the project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record. If adverse impacts to a TCR, unique archeological, or other cultural resources occurs, then consultation with the United Auburn Indian Community of the Auburn Rancheria (UAIC) and other by traditionally and culturally affiliated Native American Tribes regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA guidelines section 15370 will					

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occur. • If potentially significant TCRs, cultural or archeological resources are discovered during ground disturbing construction activities, all work will cease within 100 feet of the find. UAIC's Tribal Historic Preservation Department and Mooretown Rancheria Tribal Historic Preservation Officer will be immediately contacted to assess the significance of the find, according to Section 15064.5 of the CEQA Guidelines, and make recommendations for appropriate treatment. • A qualified cultural resources specialist meeting the Secretary of the					

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Interior's Standards and Qualifications for Archeology, may also assess the significance of the find in join consultation with Tribal Representatives from UAIC and Mooretown Rancheria to ensure that Tribal values are considered. Work will remain suspended or slowed within 100 feet of the find until the resource is evaluated, which will occur within one day, but no more than two days, of the find. • The Proposed Action applicant will coordinate with UAIC's Tribal Historic Preservation Department and Mooretown Rancheria Tribal Historic Preservation					

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Officer all necessary investigations and treatment of the discovery under the requirements of CEQA, including AB 52. Preservation in place would be the preferred alternative under CEQA and Tribal protocols, and every effort will be made to preserve the resources in place, including through project redesign. • The contractor will implement any measures deemed by Yuba County to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, the use of a paid Tribal Monitor, and facilitating the					

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appropriate Tribal treatment of the find, as necessary. The final disposition of archaeological, historical, and paleontological resources recovered on State lands under the jurisdiction of the State Lands Commission must be approved by the Commission					
Public Safety During construction, signs will be posted upstream and downstream of the work zone to warn river users of the potential hazards created by heavy equipment and how to safely avoid the work zone. The importance of monitoring for the presence of rafters and boaters will be part of the initial construction crew safety training and this will be reiterated during	Prior to and ongoing during restoration activities	Project Applicant/ Contractor	Implement mitigation measure specified	Project Applicant/ Contractor	

Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
weekly BMP meetings.					