

STAFF REPORT

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GENERAL LEASE – PUBLIC AGENCY USE

APPLICANT:

City of Sacramento

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

Sovereign land in the American River, below Nimbus Dam near River Mile 22.5, near Rancho Cordova and Fair Oaks, Sacramento County.

AUTHORIZED USE:

Replenishment of spawning gravel and establishment of additional side-channel habitat for the rehabilitation and restoration of Chinook salmon and steelhead spawning and rearing habitat.

LEASE TERM:

20 years, beginning August 23, 2019.

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.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

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

Public Trust and State's Best Interests Analysis:

The Applicant is requesting a General Lease – Public Agency Use, for a proposed habitat rehabilitation and restoration project in the American River, near Rancho Cordova and Fair Oaks, Sacramento County.

The Central Valley Project Improvement Act directs the U.S. Department of the Interior to develop and implement a continuing program for the purpose of restoring and replenishing salmonid spawning gravel lost due to the construction and operation of Central Valley Project dams that have

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reduced the availability of spawning gravel and rearing habitat in the Lower American River. The project's primary goal is to increase and improve Chinook Salmon and steelhead spawning and rearing habitat by replenishing spawning gravel and establishing additional side-channel habitat. This will help address the loss of spawning and rearing habitat caused by the blockage of the river channel by dams and the resultant alteration in flow patterns.

The proposed project is part of the larger, 16-year-long, Lower American River Anadromous Fish Habitat Restoration Project (Plan), created by the U.S. Bureau of Reclamation and the City of Sacramento (City), in association with the Sacramento Area Water Forum. The Plan consists of 10 restoration sites and will be implemented by the City, using City equipment and City employees. In the near future, the City plans to submit an application to amend the proposed lease to include the additional restoration sites.

The proposed project will create two spawning riffles approximately 300 feet wide and a 1,500-foot side channel on the north side of the American River at the Upper Sailor Bar restoration site. The side channel would extend from upstream of the spawning riffles and rejoin the main channel downstream of the spawning riffles. Gravel placement to create the spawning riffles would occur using the "Spawning Habitat Integrated Rehabilitation Approach" (SHIRA) developed by the University of California, Davis. SHIRA integrates widely accepted concepts from hydrology, civil engineering, aquatic biology, riparian ecology, and geomorphology to design alternative river configurations for a degraded section of river using predictive computer models. Gravel used for the project will be sourced less than a mile from the restoration site and will be sorted and cleaned on-site to minimize the negative environmental impacts from transportation.

In a natural system, sediment is constantly entering a river and moving downstream. Thus, one of the principal needs for fall-run Chinook salmon and steelhead is replacement of spawning gravel of an appropriate size and creation of appropriate water depths and velocities at the flows that typically occur during the spawning season. Similar restoration projects in the American River, accomplished by relocating gravel deposits from higher floodplain areas downstream of Folsom Dam and placing it strategically within the river, have been successful with an increase in juvenile fish densities from only 0.1 fish per square meter to 3.25 fish per square meter and a 500 percent increase in spawning.

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The proposed project will enhance fisheries, a recognized Public Trust use. Project activities are designed to minimize potential direct and indirect impacts to listed fish species during construction and installation, while meeting long-term restoration goals. Increasing and improving Chinook salmon and steelhead spawning and rearing habitat would have ecosystem and fisheries benefits extending well beyond the project area, as anadromous fish species inhabiting the Lower American River travel throughout the Central Valley, Sacramento-San Joaquin River Delta, San Francisco Bay Estuary, and portions of the Pacific Ocean throughout their life cycle.

This portion of the American River is seasonally used by the public for fishing and non-motorized boating. Therefore, appropriate measures will be taken to ensure public health and safety and balance the recreational and habitat needs of the area. The lease requires the lessee to post signs and barriers to minimize potential hazards to the public at least 24 hours prior to and during construction. The lease also has a limited term of 20 years that allows the Commission flexibility to determine if the Public Trust needs of the area have changed over time. Furthermore, the Applicant will conduct post-project monitoring through review of spawning surveys, juvenile habitat use surveys, benthic macroinvertebrate surveys, gravel movement surveys, and gravel quality surveys, to evaluate outcomes of the project.

Climate Change:

The project area is located in a portion of the American River that 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 as well as decreased bank stability and structure. Conversely, climate-change induced droughts could decrease river levels and flow for extended periods of time.

The restoration project would include spawning gravel replenishment, floodplain and side channel creation/enhancement, and instream habitat structure placement. The future conditions noted above could increase the likelihood of damage to restored areas within the lease premises during the term of the lease.

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Pursuant to the proposed lease, the Applicant acknowledges that the lease premises and adjacent upland (not within the lease area) are located in an area that may be subject to effects of climate change.

Conclusion:

For all the reasons above, staff believes the proposed lease is consistent with the common law 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. Upon expiration or prior termination of the lease, the lessee has no right to a new lease or to renewal of any previous lease.
2. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction and Key Action 1.2.4 to prioritize the use of sovereign lands where appropriate for open space, wetlands, riparian habitat and habitat preservation, restoration, and enhancement, including through habitat management plans, mitigation agreements with public agencies, private parties and other conservation efforts, consistent with applicable law.
3. A Mitigated Negative Declaration, State Clearinghouse No. 2019069088, was prepared by the City of Sacramento and is expected to be adopted on August 20, 2019, for this project. Staff has reviewed this document.

A Mitigation Monitoring and Reporting Program will be adopted by the City of Sacramento.

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

STAFF REPORT NO. 23 (CONT'D)

APPROVALS OBTAINED:

Central Valley Regional Water Quality Control Board
U.S. Fish and Wildlife Service
NOAA Fisheries

APPROVALS REQUIRED:

California Department of Fish and Wildlife
Central Valley Flood Protection Board
U.S. Army Corps of Engineers
Sacramento County

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. 2019069088, and a Mitigation Monitoring and Reporting Program were prepared by the City of Sacramento and adopted on August 20, 2019, for this project and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgement, 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.

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 common law Public Trust Doctrine; and is in the best interests of the State.

STAFF REPORT NO. 23 (CONT'D)

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.

AUTHORIZATION:

Authorize issuance of a General Lease – Public Agency Use to the Applicant beginning August 23, 2019, for a term of 20 years, for the replenishment of spawning gravel and establishment of additional side-channel habitat for the rehabilitation and restoration of Chinook salmon and steelhead spawning and rearing habitat; 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 if the Commission finds such action to be in the State's best interests.

EXHIBIT A

A 2197

LAND DESCRIPTION

A parcel of submerged land situate in the bed of American River in Sacramento County, California, adjacent to on the right bank Rancho San Juan, approved May 31, 1858 and more particularly described as follows:

Bounded on the east by the most easterly line of Parcel 3 in judgement recorded in Book 2247, Page 437 of Official Records in said county as shown on that amended record of survey dated July 1971 and filed in Book 29, Page 7 of Surveys, Sacramento County records;

Bounded on the south by the low water mark of the American River;

Bounded on the west by a line lying parallel with and 1500 westerly of said most easterly line of Parcel 3;

Bounded on the north by low water mark of the American River.

EXCEPTING THEREFROM any portions lying landward of the low water mark of the left and right banks of the American River.

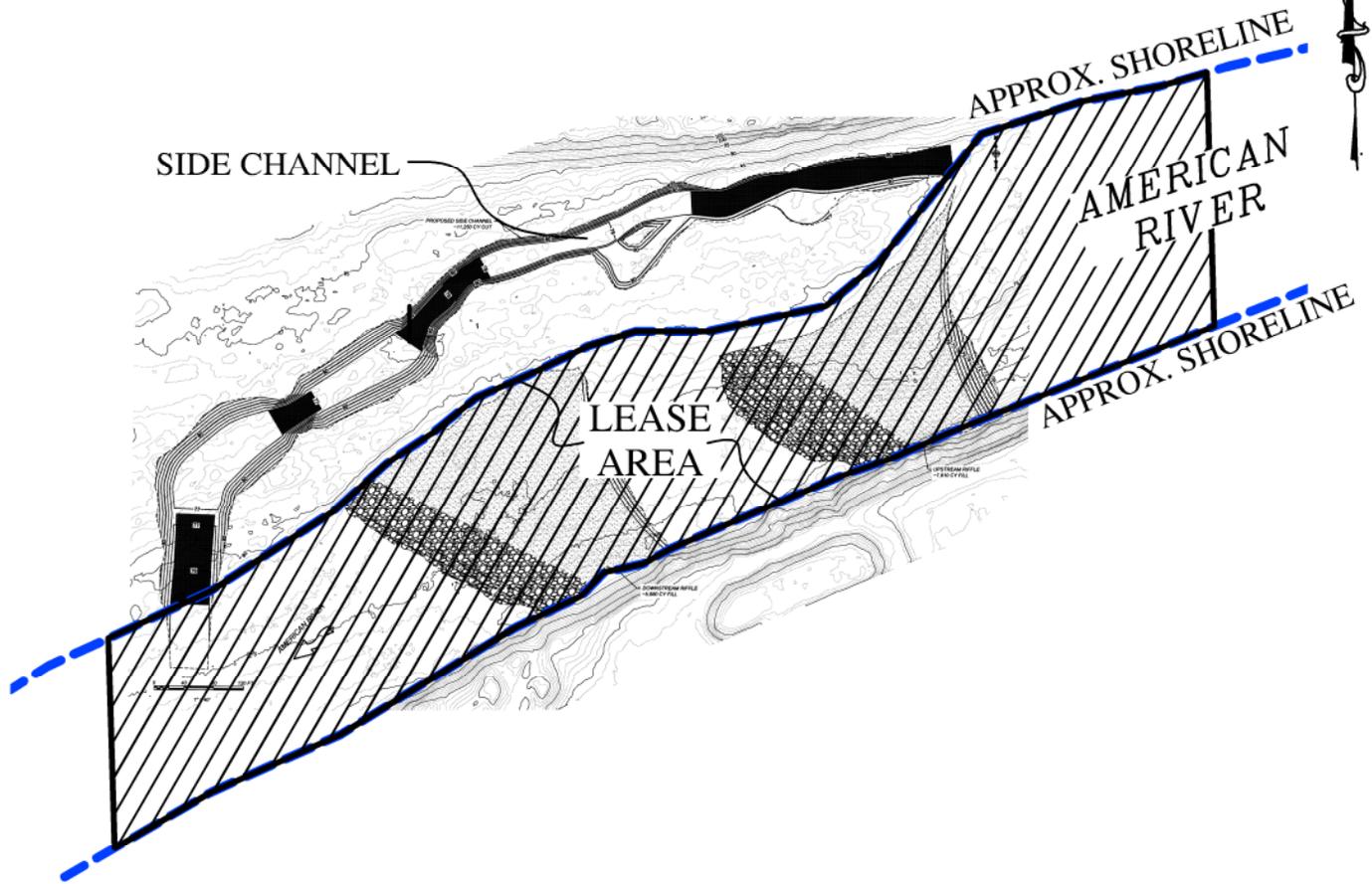
END OF DESCRIPTION

PREPARED 8/09/19 BY THE CALIFORNIA STATE LANDS COMMISSION BOUNDARY UNIT.



NO SCALE

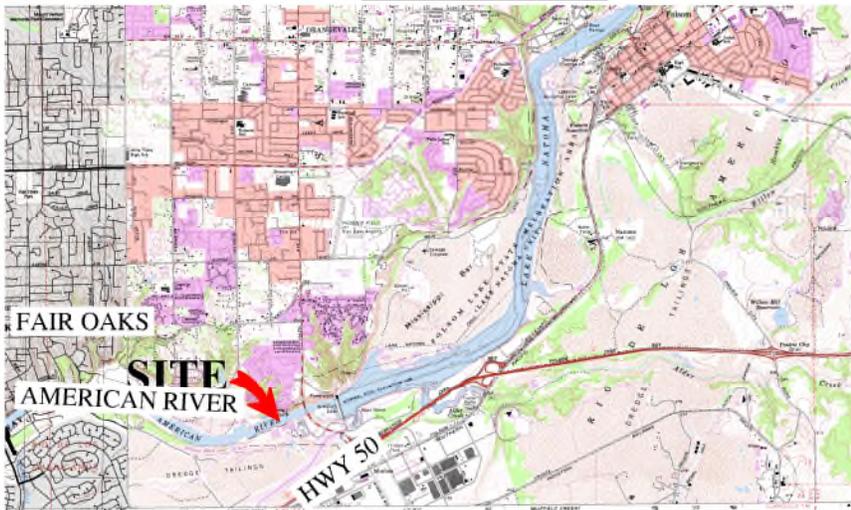
SITE



AMERICAN RIVER UPPER SAILOR BAR, RIVER MILE 22.50
NEAR RANCHO CORDOVA AND FAIR OAKS

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

A 2197
CITY OF SACRAMENTO
GENERAL LEASE -
PUBLIC AGENCY USE
SACRAMENTO COUNTY



EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM
LOWER AMERICAN RIVER ANADROMOUS FISH HABITAT RESTORATION
PROJECT

(A2197, State Clearinghouse No. 2019069088)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Lower American River Anadromous Fish Habitat Restoration Project (Project). The CEQA lead agency for the Project is the City of Sacramento.

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. 2019069088, 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 listed in Table C-1, is incorporated by reference in this Exhibit C. Any mitigation measures adopted by the Commission that differ substantially from those adopted by the lead agency are shown as follows:

- Additions to the text of the mitigation measure are underlined; and
- Deletions of the text of the mitigation measure are shown as ~~strikeout~~ or as otherwise noted.

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	Difference Between CSLC MMP and Lead Agency MMP
Impact BIO (a)	GEO-1, BIO-1, BIO-2, BIO-3, BIO-4	None
Impact BIO (c)	GEO-1, BIO-2	None
Impact BIO (d)	GEO-1, BIO-1, BIO-4	None
Impact GEO (b)	GEO-1	None
Impact GEO (f)	GEO-2	See below
Impact HAZ (a, b)	GEO-1	None
Impact WQ (a)	GEO-1	None
Impact WQ (c ii, iii)	GEO-1	None
Impact NOI (a)	NOI-1	None
Impact REC (a, b)	REC-1, REC-2	None
Impact TCR (a, b)	TCR-1a, TCR-1b	None

Mitigation Measure GEO-2: Conduct Construction Personnel Education, Stop Work if Paleontological Resources are Discovered, Assess the Significance of the Find, and Prepare and Implement a Recovery Plan, as Required.

To minimize the potential for destruction of or damage to potentially unique, scientifically important paleontological resources during project-related earthmoving activities, the City/Water Forum shall require the measures listed below to be implemented to minimize accidental damage to or destruction of unique paleontological resources.

- Before the start of any earthmoving activities, all construction personnel involved with earthmoving activities, including the site superintendent, will be trained regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered.
- If paleontological resources are discovered during earthmoving activities, the construction crew shall notify the City/Water Forum and shall immediately cease work in the vicinity of the find. The City/Water Forum shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with applicable guidelines (Society of Vertebrate Paleontology 1996). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the Water Forum

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

to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.

- California State Lands Commission (Commission) staff shall be notified of any paleontological specimens discovered on lands under the jurisdiction of the Commission. The final disposition of any artifacts or specimens including, but not limited to, those of a paleontological nature from such lands must be approved by the Commission.

ATTACHMENT C-1

**Mitigation Monitoring and Reporting Program Adopted by the
City of Sacramento**

Mitigation Monitoring and Reporting Program

Lower American River Anadromous Fish Habitat Restoration Project

Prepared for:
City of Sacramento

June 2019

Prepared by:



Consulting
Engineers and
Scientists

Mitigation Monitoring and Reporting Program
**Lower American River
Anadromous Fish Habitat
Restoration Project**

SCH# 2019069088

City of Sacramento/Water Forum
1330 21st Street
Sacramento, CA 95811

Contact:

Lilly Allen, Water Forum
Project Coordinator
(916) 808-1993

Prepared by:

GEI Consultants, Inc.
2868 Prospect Park Drive, Suite 400
Sacramento, CA 95670

Contact:

Erica Bishop
Environmental Project Manager
(916) 631-4513

June 2019

Project No. 1804694.1

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Mitigation Monitoring and Reporting Program

In accordance with the California Environmental Quality Act (CEQA), the Bureau of Reclamation (Reclamation) and City of Sacramento (City), in association with the Sacramento Area Water Forum (Water Forum) prepared an Environmental Assessment/Initial Study/proposed Mitigated Negative Declaration (EA/IS/MND), in June 2019 to provide the public and responsible and trustee agencies with information about the potential environmental impacts associated with implementation of the Lower American River Anadromous Fish Habitat Restoration Project (hereafter referred to as the “project”).

The EA/IS/MND concludes that implementation of the proposed project would generate significant and potentially significant adverse effects on the environment. The EA/IS/MND identifies feasible mitigation measures that avoid, mitigate, or reduce these impacts to a less-than-significant level.

Section 21081.6(a)(1) of the California Public Resources Code (PRC) and Section 15097 of the State CEQA Guidelines require a public agency to adopt a reporting and monitoring program on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental impacts on the physical environment.

This Mitigation Monitoring and Reporting Program (MMRP) will be used by the City/Water Forum to ensure that mitigation measures identified in the MND are implemented as described in the MND and that their implementation is documented.

The MMRP is presented in tabular format. The table columns contain the following information:

Mitigation Number: Lists the mitigation measures by number, as designated in the MND.

Mitigation Measure: Provides the text of the mitigation measures, each of which has been adopted and incorporated into the project.

Timing/Schedule: Lists the time frame in which the mitigation measure is expected to take place.

Implementation Responsibility: Identifies the entity responsible for implementing the mitigation measure.

Completion of Implementation: The City/Water Forum is responsible for reporting on implementation of the mitigation measures. The “Completion of Implementation” column is to be used by SWID to indicate when implementation of a mitigation measure has been completed. SWID, at its discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors.

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
Biological Resources				
BIO-1	<p>Minimize Injury and Mortality of Special-Status Fish Species.</p> <p>The City/Water Forum and its construction contractor(s) shall implement the following measures to avoid and minimize direct injury and mortality of special-status fish:</p> <ul style="list-style-type: none"> ▪ In-water work shall be restricted to July 1 through September 30, with consideration of the spatial and temporal distribution of spawning and incubating steelhead and fall-run Chinook salmon. Work past September 30 would be with approval from the National Marine Fisheries Service. ▪ Construction may be conducted year-round in areas, such as floodplains and side channels, when flowing water is absent due to separation from the main channel by gravel berms that are either naturally present or artificially created. ▪ In-water work in floodplains and side channels shall be limited to inlet/outlet areas during the last stage of reconnection to the main channel if working outside of the instream work timing window. ▪ Instream habitat structures shall be placed when fish do not have access to the affected areas, or within timing windows, as described above. ▪ Measures such as slow, deliberate equipment operation shall be implemented during in-water work to alert fish to equipment operation in the channel before gravel is placed. ▪ Before project activities begin, worker awareness training shall be provided to inform agency staff and contractors of the need to avoid and minimize potential impacts on special-status fish and the possible penalties for not complying with these requirements. The training shall include, at a minimum, species identification, habitat requirements, and required practices for fish avoidance and protection. An appointed representative shall be identified to employees and contractors to ensure that questions regarding avoidance and protection measures are addressed in a timely manner. ▪ A biological monitor shall monitor in-water construction activities to confirm proper implementation of conservation measures and water quality protection measures. 	Before and during ground-disturbing activities.	City/Water Forum and Construction Contractor(s)	
BIO-2	<p>Avoid and Minimize Impacts on Waters of the United States and Water of the State.</p> <p>The City/Water Forum and its construction contractor(s) shall implement the following measures to avoid and minimize direct fill of waters of the United States and waters of the State in the Lower American River and minimize impacts on seasonal wetland habitats at the borrow sites.</p> <ul style="list-style-type: none"> ▪ Ground disturbance shall be limited to gravel augmentation restoration sites and borrow sites. Existing access routes shall be used to obtain access to restoration and borrow sites. The total area of the project activity shall be limited to the minimum necessary. Borrow extraction areas and staging areas shall be placed to 	Before and during ground-disturbing activities.	City/Water Forum	

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>avoid and limit disturbance to the Lower American River and seasonal wetland habitats and shall provide a 250-foot setback from seasonal wetland habitats, to the extent feasible.</p> <ul style="list-style-type: none"> ▪ Before the commencement of construction activities, high-visibility fencing shall be erected to protect areas of the Lower American River at gravel augmentation sites and identified seasonal wetland habitats at borrow sites that are located adjacent to disturbance areas but can be avoided from encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed only when the construction within a given area is completed. Limits of waters of the United States and wetlands shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas. ▪ A qualified biologist shall monitor all construction activities in waters of the United States to ensure that avoidance and minimization measures are being properly implemented and no unauthorized activities occur. The qualified biologist shall be empowered to stop construction activities that threaten to cause unanticipated and/or unauthorized significant adverse project impacts to allow resolution of these potential impacts by the City/Water Forum and U.S. Bureau of Reclamation. Project activity shall not resume until the conflict has been resolved. ▪ Authorization for direct fill of jurisdictional habitat in the American River and modification of seasonal wetlands at the borrow sites shall be obtained, as required, from the U.S. Army Corps of Engineers (Corps), Central Valley Regional Water Quality Control Board (RWQCB), and CDFW. <ul style="list-style-type: none"> ○ Clean Water Act (CWA) Section 404: Before any ground-disturbing project activities begin in areas containing wetlands or waters, a qualified biologist shall conduct a formal delineation of waters of the United States for CWA Section 404 permitting. The findings shall be documented in a detailed report as part of the formal Section 404 wetland delineation process. ○ Authorization for fill of jurisdictional waters of the United States shall be secured from the Corps via the Section 404 permitting process before project construction. Any mitigation measures determined necessary during the 404 permitting process shall be implemented during project construction. ○ CWA Section 401: Water quality certification pursuant to Section 401 of the CWA shall be obtained from the Central Valley RWQCB before starting project construction in any areas that may contain waters of the State. Any measures required as part of the issuance of water quality certification shall be implemented. ○ Fish and Game Code Section 1602 or similar agreement: A CDFW lake and streambed alteration agreement or similar approval shall be obtained 			

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>by the City for all activities that will substantially divert or obstruct the natural flow of water; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Any conditions of issuance of the lake and streambed alteration agreement, including avoidance, minimization and compensation measures, shall be implemented as part of project implementation.</p>			
BIO-3	<p>Minimize Effects to Valley Elderberry Longhorn Beetle. The City/Water Forum and its construction contractor(s) shall implement the following measures to avoid and minimize potential adverse effects on VELB during project implementation.</p> <ul style="list-style-type: none"> ▪ Before project activities begin, worker awareness training shall be provided to inform agency staff and contractors of the need to avoid and minimize potential impacts on VELB and its host plant and the possible penalties for not complying with these requirements. The training shall include, at a minimum, species identification, habitat requirements, and required practices for their avoidance and protection. An appointed representative shall be identified to employees and contractors to ensure that questions regarding avoidance and protection measures are addressed in a timely manner. ▪ All elderberry shrubs on or adjacent to work areas shall be temporarily fenced and designated as environmentally sensitive areas. These areas shall be avoided by all construction personnel. Fencing shall be placed at least 20 feet from the dripline of each shrub, unless otherwise approved by USFWS. ▪ Dirt roadways and disturbed areas within 100 feet of elderberry shrubs shall be watered at least twice a day to minimize dust emissions. 	Before and during ground-disturbing activities.	City/Water Forum and Construction Contractor(s)	
BIO-4	<p>Minimize Effects on Special-status Species and Nesting Birds. The City/Water Forum and its construction contractor(s) shall implement the following measures to avoid and minimize potential adverse effects on special-status species and nesting birds during project implementation:</p> <ul style="list-style-type: none"> ▪ Before project activities begin, worker awareness training shall be provided to inform agency staff and contractors of the need to avoid and minimize potential impacts on special-status species and nesting birds and the possible penalties for not complying with these requirements. The training shall include, at a minimum, species identification, habitat requirements and required practices for their avoidance and protection. An appointed representative shall be identified to employees and contractors to ensure that questions regarding avoidance and protection measures are addressed in a timely manner. ▪ If vegetation removal is required during the bird nesting season (February 1 through August 15), surveys for active bird nests shall be conducted by a qualified 	Before and during ground-disturbing activities.	City/Water Forum and Construction Contractor(s)	

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>biologist in areas of suitable nesting vegetation designated for removal. A minimum of one survey shall be conducted no more than 7 days before vegetation removal occurs. If active nests are found, removal of vegetation in which the nests are located shall be delayed until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.</p> <ul style="list-style-type: none"> ▪ Preconstruction surveys will be conducted by a certified arborist to identify the species of trees and any sensitive habitats (i.e., nesting, critical habitat designations, etc.), and an acceptable replacement ratio determined in coordination with CDFW. ▪ Preconstruction surveys for special-status plant species, including Sanford's arrowhead, shall be conducted by a qualified biologist, and the City will coordinate with CDFW if the species is found within the project boundary subject to ground disturbance. ▪ Preconstruction surveys for special-status reptiles, including Western pond turtle, shall be conducted by a qualified biologist, and the City will coordinate with CDFW if the species is observed within the project boundary subject to ground disturbance. ▪ Preconstruction surveys for active nests of burrowing owl, Swainson's hawk, white-tailed kite, bank swallow, purple martin, and colonial nesting herons and egrets shall be conducted by a qualified biologist in all areas of suitable nesting habitat that could be disturbed by project activities. A minimum of two surveys shall be conducted within 14 days before project activities begin, including at least one survey no more than 7 days before activities begin. ▪ Appropriate buffers shall be established and maintained around active nest sites to avoid nest failure from project activities. The appropriate size and shape of the buffers shall be determined by a qualified biologist and may vary depending on the nest location, nest stage, construction activity, and existing disturbance levels. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall occur within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use. 			
Geology and Soils				
GEO-1	<p>Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.</p> <p>When required, the City/Water Forum shall prepare and implement the appropriate Stormwater Pollution Prevention Plan (SWPPP), or Stormwater Management Plan (SWMP), as needed, to prevent and control pollution and to minimize and control runoff and erosion in compliance with state and local laws. The SWPPP or SWMP shall</p>	Before and during construction.	City/Water Forum and Construction Contractor(s).	

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events, techniques to control pollutant discharge, and an erosion control plan. Regardless of the need for a SWPPP or SWMP, construction techniques and BMPs will be identified and implemented, as appropriate to reduce the potential for runoff, exposure to hazardous materials, and manage turbidity. Construction techniques will include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that specify erosion and sedimentation control measures to be implemented, may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers re-seeding with native species and mulching to revegetate disturbed areas. If suitable vegetation cannot reasonably be expected to become established, non-erodible material will be used for such stabilization.</p> <p>If required, the SWPPP or SWMP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials business plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to spills. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment, including during gravel processing.</p> <p>The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions through amendments approved by the Central Valley RWQCB, if necessary.</p> <p>The City and all contractors will abide by regulations governing hazardous materials transport are included in CCR Title 22, the California Vehicle Code (CCR Title 13), and the State Fire Marshal Regulations (CCR Title 19). Transport of hazardous materials can only be conducted under a registration issued by the California Department of Toxic Substances Control. Construction contractors would be required to use, store, and transport hazardous materials in compliance with federal, state, and local regulations during project construction.</p>			
GEO-2	<p>Conduct Construction Personnel Education, Stop Work if Paleontological Resources are Discovered, Assess the Significance of the Find, and Prepare and Implement a Recovery Plan, as Required.</p> <p>To minimize the potential for destruction of or damage to potentially unique, scientifically important paleontological resources during project-related earthmoving activities, the City/Water Forum shall require the measures listed below to be implemented to minimize accidental damage to or destruction of unique paleontological resources.</p>	During construction.	City/Water Forum and Construction Contractor(s).	

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>Before the start of any earthmoving activities all construction personnel involved with earthmoving activities, including the site superintendent, will be trained regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered.</p> <p>If paleontological resources are discovered during earthmoving activities, the construction crew shall notify the City/Water Forum and shall immediately cease work in the vicinity of the find. The City/Water Forum shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with applicable guidelines (Society of Vertebrate Paleontology 1996). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the Water Forum to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.</p>			
Noise				
<p>NOI-1</p>	<p>Implement Noise Controls.</p> <p>The City/Water Forum will implement four BMPs for the control of construction noise levels. Implementation of the following BMPs generally reduces construction-generated noise levels by 15 dB to 25 dB.</p> <ul style="list-style-type: none"> ▪ Construction operations and the hauling of gravel would be limited to Monday through Friday, except holidays, from 7 a.m. to 6 p.m. ▪ Provide and maintain noise control devices for construction equipment. Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc.). ▪ Coordinate routes and arrange equipment to minimize disturbance to noise-sensitive uses. Construction equipment usage shall be arranged to minimize travel adjacent to occupied residences and turned off during prolonged periods of non-use. ▪ Designate a disturbance coordinator to respond to all public complaints. 	<p>During construction.</p>	<p>City/Water Forum and Contractor(s).</p>	
Recreation				
<p>REC-1</p>	<p>Prepare and Implement a Trail/Traffic Control and Road Maintenance Plan.</p> <p>Before the start of project-related construction activities, the City/Water Forum shall prepare and implement a plan to manage expected construction-related traffic to the extent feasible, and to avoid and minimize potential traffic congestion during project-related construction. The traffic control and road maintenance plan shall outline the phasing of activities and the use of specific routes to and from the work site locations to minimize the daily volume of traffic on individual roadways.</p>	<p>Before, during, and after construction.</p>	<p>City/Water Forum and Contractor(s).</p>	

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

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	<p>The items listed below will be included, as terms of the construction contracts:</p> <ul style="list-style-type: none"> ▪ Limit all heavy construction work to occur only between 8:00 am and 6:00 pm on weekdays, avoid hauling on public roads during weekends and holidays, and confine weekend/holiday work to less disruptive tasks using materials previously hauled to the site, to ensure that most construction work occurs when recreational use of the project areas is lightest. ▪ During construction, ensure that nearby trails are signed, cautioning users that equipment would be crossing. ▪ Provide a site-specific access plan specifying the roadways on which construction workers are allowed travel to access the work sites. ▪ Prohibit construction workers from accessing work sites from any locations other than those specified in the plan. ▪ Provide clearly marked bicycle detours to address bicycle route closures or if bicyclist safety would be otherwise compromised. ▪ Post warnings about the potential presence of slow-moving vehicles. 			
REC-2	<p>Prepare and Implement a Boater Safety Plan.</p> <p>Recognizing the high recreational use of the Lower American River, the following safety measures will be implemented as part of the Boater Safety Plan to reduce risk during the design and construction of all in-river habitat elements:</p> <ul style="list-style-type: none"> ▪ In-river safety personnel will be posted upstream of each site when boater traffic is heavy, typically Fridays and will implement the following safety measures: <ul style="list-style-type: none"> ○ Verbally communicate with recreational boaters to warn them of ongoing downstream in-river work, ○ Communicate via radio with downstream construction equipment operators to temporarily stop in-river work until boater traffic has safely passed the restoration site, and ○ Post signs upstream of construction areas to warn boaters of the location and schedule of upcoming in-river work. ▪ Designs for gravel augmentation will ensure that restoration and enhancement activities do not impede navigation within the main channel. The appropriate minimum channel width and depth will be decided on a site-by-site basis during design with the modeling and construction to ensure adequate recreational and emergency access. The City/Water Forum will consult with County Parks to ensure boating access. ▪ Habitat structures will be placed at the stream margins or within side channels and outside of the main channel flow and thus away from areas where the majority of boater traffic will occur. 	During and after construction.	City/Water Forum and Contractor(s).	

Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<ul style="list-style-type: none"> ▪ The natural wood material will be angled diagonally down river to reduce the chances of hazardous contact with swimmers, boaters, anglers, and material. ▪ If any woody material that is placed in the river is washed downstream and, in the judgment of County Parks, becomes a safety hazard, the Water Forum would coordinate wood removal with County Parks and pay existing County contractors to have it removed or moved to a safe location. 			
Tribal Cultural Resources				
TCR-1a	<p>Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities</p> <p>The City/Water Forum shall require the contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, as well as culturally affiliated Native American tribes. The City/Water Forum may invite Native American representatives from interested culturally affiliated Native American tribes to participate. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations.</p> <p>The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.</p>	During construction.	City/Water Forum and Contractor(s).	
TCR-1b	<p>In the Event that Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.</p> <p>If tribal cultural resources (such as Native American archaeological materials, sacred objects, unusual amounts of bone or shell, artifacts, or human remains and associated objects and materials) are encountered at the project site during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City/Water Forum representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources or tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:</p>	During construction.	City/Water Forum and Contractor(s).	

	<ul style="list-style-type: none"> ▪ Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. ▪ Recommendations for avoidance of cultural resources or tribal cultural resources will be reviewed by the /Water Forum representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project site to avoid cultural resources or tribal cultural resources, modification of the design to eliminate or reduce impacts to tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource. ▪ Native American representatives from interested culturally affiliated Native American tribes will be invited to review and comment on these analyses and shall have the opportunity to meet with the City/Water Forum representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified. ▪ If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and tribes will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes. ▪ The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area". <p>If a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of tribal cultural resources:</p> <ul style="list-style-type: none"> ▪ Each resource will be evaluated for California Register of Historical Resources- (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable. <p>If a tribal cultural resource is determined to be eligible for listing in the CRHR, the City/Water Forum will avoid damaging effects to the resource in accordance with California Public Resources Code Section 21084.3, if feasible. The City/Water Forum shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City/Water Forum and with interested culturally affiliated Native</p>			
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Table 1. Lower American River Anadromous Fish Habitat Restoration Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>American tribes that respond to the City's invitation. As part of the site investigation and resource assessment, the City/Water Forum and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City/Water Forum to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City/Water Forum representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested 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.</p> <p>Native American representatives from interested culturally affiliated Native American Tribes and the City/Water Forum representative will also consult to develop measures for long-term management of any discovered Native American cultural resources or tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.</p> <p>If the City/Water Forum determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:</p> <ul style="list-style-type: none"> ▪ Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria. ▪ Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following: <ul style="list-style-type: none"> ○ Protect the cultural character and integrity of the resource. ○ Protect the traditional use of the resource. ○ Protect the confidentiality of the resource. ○ Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places. 			

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	<ul style="list-style-type: none"> ○ Protect the resource. The title to all archaeological sites, and historic or cultural resources on or in submerged lands of California is vested in the state and under the jurisdiction of the California State Lands Commission (Pub. Resources Code, § 6313). Additionally, the final disposition of archaeological, historical, and paleontological resources recovered on state lands under the jurisdiction of the California State Lands Commission must be approved by the Commission. 			

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