STAFF REPORT
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GENERAL LEASE – PUBLIC AGENCY USE

APPLICANT:
Merced Irrigation District

PROPOSED LEASE:
AREA, LAND TYPE, AND LOCATION:
Sovereign land in the Merced River adjacent to 4567 Merced Falls Road, near Snelling, Merced County.

AUTHORIZED USE:
Grading, excavation, and placement of gravel and cobble below the ordinary low-water mark of the Merced River to facilitate the Merced River Floodplain Restoration Project.

LEASE TERM:
5 years, beginning August 23, 2019.

CONSIDERATION:
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.

STAFF ANALYSIS AND RECOMMENDATION:
Authority:
Public Resources Code sections 6005, 6216, 6301, 6505.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

Public Trust and State's Best Interests Analysis:
The Applicant is applying for a General Lease – Public Agency Use, authorizing restoration activities below the ordinary low-water mark of the Merced river to facilitate the proposed Merced River Floodplain Restoration Project (Project).

Over a 2-year period, the proposed Project seeks to restore and enhance ecosystem processes and to increase the natural production of salmonids in the Merced River. Habitat restoration for fisheries is consistent with the Public Trust.

The proposed restoration activities include re-grading and rehabilitating over 7 acres of riparian and upland habitat, 1.7 acres of salmonid spawning habitat, 3.9 acres of seasonally inundated juvenile rearing habitat, and approximately 13 acres of the Merced River channel. Approximately 65,000 cubic yards of material will be excavated to facilitate floodplain lowering and side channel creation; excavated materials will be sorted from dredger tailing piles. The sorted gravel and cobble, if suitable, will be used for river channel rehabilitations including salmonid spawning gravel augmentation. Approximately 38,500 cubic yards of native gravel and cobble obtained through excavation and sorting of the dredger tailings will be used to rehabilitate the channel morphology within the site including gravel bar creation and to create and enhance salmonid spawning riffles. Only the portions of the Project that involve activities below the ordinary low-water mark of the Merced River channel are subject to the Commission's leasing jurisdiction.

Construction equipment and machinery will arrive at the Project site clean, disinfected and free of terrestrial and aquatic remnants. The equipment will travel between the staging area and active site on private roads. On-site equipment will include a rubber-tired, front-end loader, skid-steer excavator, skid-steer loader, and smaller equipment as needed. Temporary stockpiles will be established in the Project area where excavated materials will be processed and sorted by contractors. The temporary stockpiles and equipment associated with material processing will be removed following completion of restoration work.

Gravel will be deposited in-stream and manipulated by a 3- to 5-cubic yard capacity rubber-tired, front-end loader. Placement would start at the river access site and proceed into the river. This will allow the loader to drive on the newly placed gravel. The loader will distribute the gravel along the river bottom to create the habitat and hydraulic conditions necessary for salmonid spawning.

The time frame for the proposed Project is 2 years beginning in the late summer or early fall of 2019. Construction activities would occur between July 15 and October 15 of 2019 and 2020, when flows are low and active salmonid spawning is not occurring. Construction activities will be limited to daylight hours; equipment placement and staging will be contained within the upland parcels.

The proposed Project is located on the lower Merced River approximately 1,500 feet below the Crocker-Huffman Dam, in a primarily agricultural area of Merced County, outside Snelling, California. The adjacent uplands are

private property primarily owned by the Merced Irrigation District; the area immediately adjacent to the restoration site consists of agriculture, undeveloped dredger tailings, and unmaintained wildlife habitat along the Merced River. Upon completion of construction, the proposed Project will not change the nature of the surrounding land uses. The only structure within the Project's grading footprint is a stream-flow gauging station, located outside the lease area, which is owned and operated by the Applicant. The Applicant is aware of potential impacts to the gauging station and has approved this Project despite the potential impacts.

Although access to the undeveloped site is limited, visitors to the area use this section of the Merced River for general recreation, such as fishing and gold panning. Public access to the site is limited due to dense vegetation, with only a few locations where vegetation is clear enough to allow passage between Merced Falls Road and the Merced River. Because of the low levels of public utilization of this site, any impact from the Project on the public's right of access is expected to be minimal.

The Project site is not easily visible to the public. Recreational users have limited visibility of the site, and the proposed Project is not in the viewshed of a scenic highway as defined by the state of California.

The proposed Project is expected to have statewide benefits and is an example of integrated public outreach (coordination with local stakeholders and landowners) and ongoing habitat restoration. The proposed Project will provide local and regional benefits, through restoration and enhancement of ecosystem processes, and improving productive juvenile salmonid rearing habitats to increase natural production of fall and spring-run Chinook Salmon and Rainbow Trout in the Merced River. The proposed Project would also directly address the U.S. Fish and Wildlife Service's Anadromous Fish Restoration Program's goal of doubling natural production of anadromous fish in streams within the Central Valley and the NOAA Fisheries' priority action to increase the quantity and quality of Endangered Species Act-listed Chinook Salmon and California Central Valley steelhead rearing areas. Additionally, the Project would allow for testing of hypotheses regarding a variety of habitat enhancements techniques and subsequent response of juvenile salmonids and non-native predatory species to restored floodplain and off-channel habitats.

The proposed lease is limited to a 5-year term and does not grant the lessee exclusive rights to the lease premises. The proposed lease

requires the lessee to indemnify the State for any liability incurred as a result of the lessee's activities thereon.

Climate Change:

This section of the Merced River is not tidally influenced and 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. Runoff will likely increase scour, decreasing bank stability at a faster rate.

The proposed Project includes habitat restoration activities on and adjacent to the Merced River. The Project is intended to increase the natural production of salmonids in the lower Merced River by improving productive salmonid habitat for adult spawning, egg incubation, and juvenile rearing. This would be accomplished by increasing floodplain and side-channel habitat, improving the low-flow channel, and strategic placement of appropriately sized gravel in spawning riffles and course sediment in oversized sections of the main channel of the Merced River. Native plant restoration will be conducted after contouring of the river channel to enhance fish species populations. The proposed Project is designed to withstand scour pressures, liquefaction, and seismic events. Regular maintenance of the new habitat, as required by the terms of the lease, will reduce the likelihood of severe structural damage or degradation due to climate change over the term of the lease.

Conclusion:

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

3. All necessary right-of-way permissions have already been obtained from other private upland owners for the Project.

4. A Mitigated Negative Declaration, State Clearinghouse No. 2019039146, was prepared by the Merced Irrigation District and adopted on June 6, 2019, for this Project. Staff has reviewed this document.

   A Mitigation Monitoring Program was adopted by the Merced Irrigation District.

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

APPROVALS OBTAINED:

U.S. Fish and Wildlife Service
State Historic Preservation Office
Central Valley Flood Protection Board
U.S. Army Corps of Engineers
NOAA Fisheries
California Department of Fish and Wildlife
Regional Water Quality Control Board

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. 2019039146, and a Mitigation Monitoring Program were prepared by the Merced Irrigation District and adopted on June 6, 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 issuance of this lease is consistent with the common law Public Trust Doctrine, will not substantially interfere with Public Trust needs at this location, at this time, and for the foreseeable term of the proposed lease; and is in the best interests of the State.

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 Merced Irrigation District, beginning August 23, 2019, for a term of 5 years, for grading, excavation, and placement of gravel and cobble below the ordinary low-water mark of the Merced River to facilitate the Merced River Floodplain Restoration Project, 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

A2025

LAND DESCRIPTION

A parcel of sovereign land situate in the bed of the Merced River, lying adjacent to fractional Section 12, Township 5 South, Range 14 East, M.D.B.&M., as shown on Official Government Township Plat approved March 31, 1855, County of Merced, State of California and more particularly described as follows:

Bounded on the east by the east line of Section 12 Township 5 South, Range 14 East, M.D.B.&M., being also the northerly prolongation of that course "North 01° 03' East 3811.60 feet" as described in PARCEL "C" of that certain Grant Deed recorded in Volume 1789 at Pages 283-284, Official Records of said Merced County;

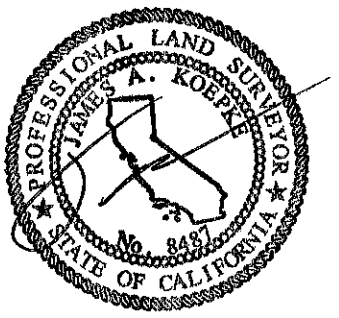
Bounded on the north by the low water mark of the Merced River;

Bounded on the west by the line parallel with and perpendicular 1320 feet west to the southerly prolongation of that course "South 01° 03' West, 725.6 feet" as described in PARCEL "A" of that certain Grant Deed recorded in Volume 1789 at Pages 283-284, Official Records of said Merced County;

Bounded on the south by the low water mark of said Merced River.

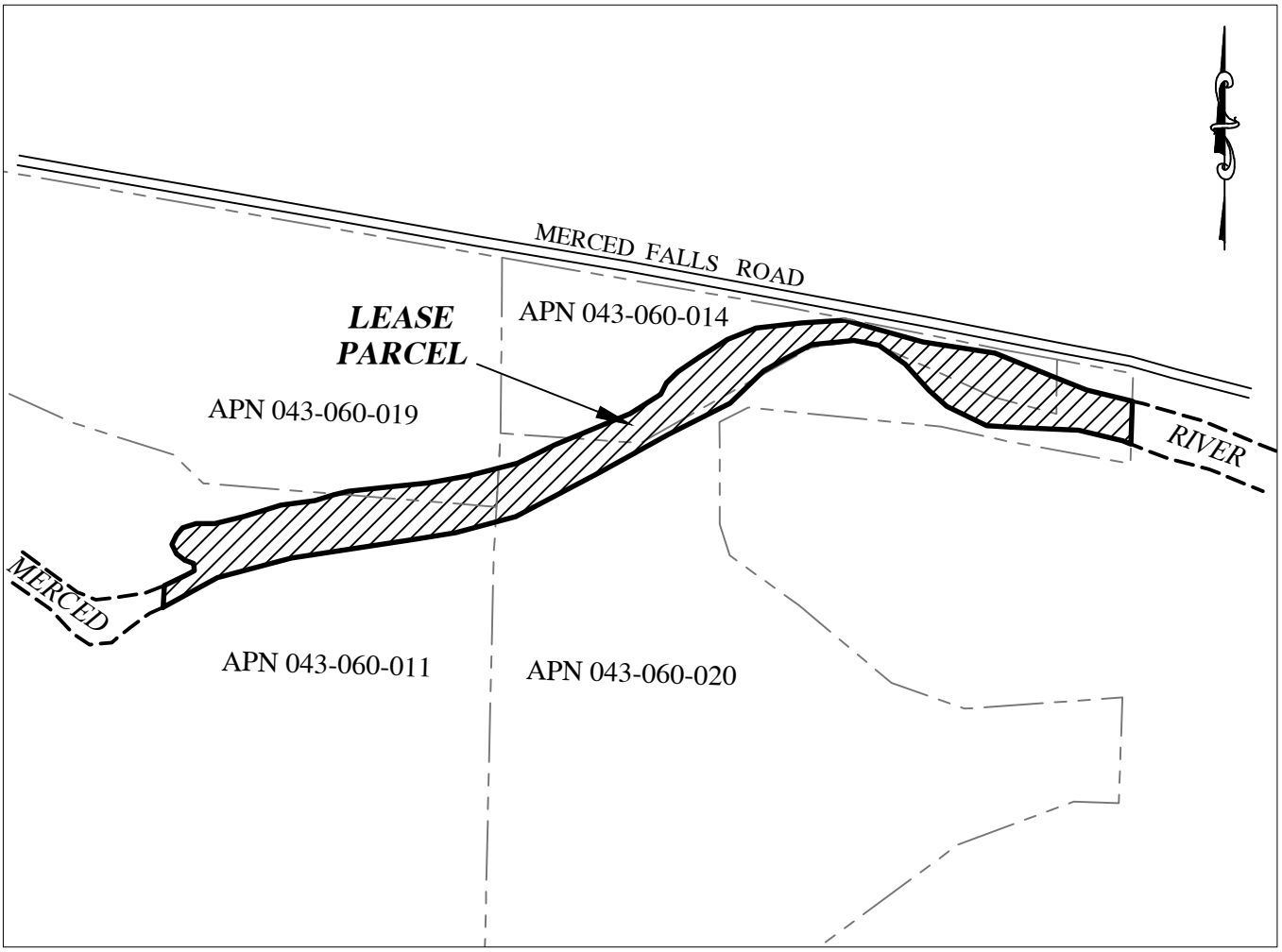
END OF DESCRIPTION

Prepared 04/16/19 by the California State Lands Commission Boundary Unit.



NO SCALE

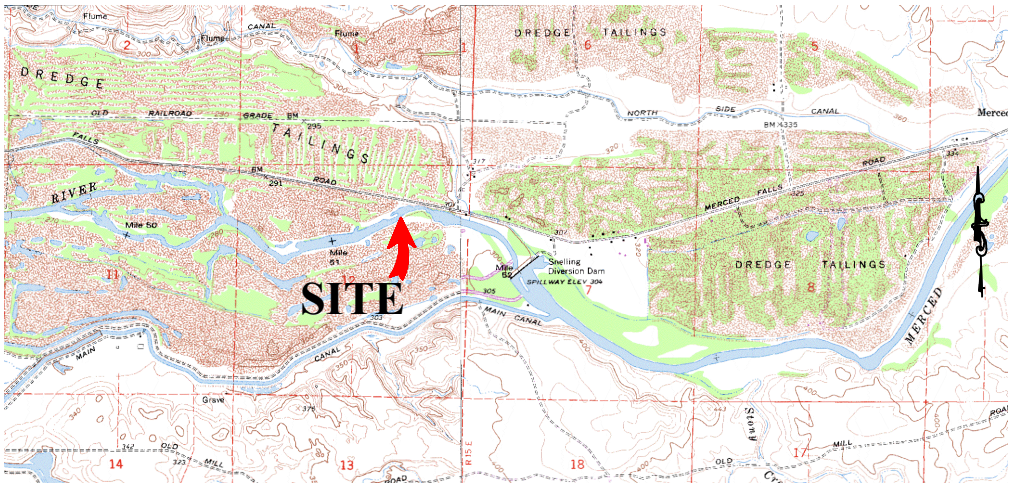
SITE



MERCED RIVER WEST OF CROCKER HUFFMAN DIVERSION DAM

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

A2025
MERCED IRRIGATION DISTRICT
APNs 043-060-011, -014, -019 & -020
GENERAL LEASE - PUBLIC AGENCY USE
MERCED COUNTY

TS 04/16/19

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

MERCED IRRIGATION DISTRICT'S MERCED RIVER INSTREAM AND OFF-CHANNEL HABITAT REHABILITATION PROJECT

(A2025, State Clearinghouse No. 2019039146)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Merced Irrigation District's Merced River Instream and Off-Channel Habitat Rehabilitation Project (Project).

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 an 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 approved an MND, State Clearinghouse No. 2019039146, adopted an MMP 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 segments of the Project area within the Commission's jurisdiction include the channel of the Merced River as depicted in Figure 1 of the Adopted MND. The full text of each mitigation measure, as set forth in the MMP 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 <u>underlined</u>; and
- Deletions of the text of the mitigation measure are shown as ~~strikeout~~ or as otherwise noted.

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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]	Difference Between CSLC MMP and Lead Agency MMP
Air Quality: EC-1	**EC-1:** Reduce Dust and Air Quality Impacts	None
Biological Resources: EC-2	**EC-2:** Adaptive Construction Approach to Protect Elderberry Plants, Monitor Survival, and Mitigate for Loss	None
Biological Resources: EC-3	**EC-3:** Monitor for Fish and Wildlife to Prevent Impacts	None
Biological Resources: EC-4	**EC-4:** Protect and Compensate for Native Trees	None
Biological Resources: EC-5	**EC-5:** Work Outside of Critical Periods for Special Status Species	None
Biological Resources: EC-6	**EC-6:** Monitor for Bats to Prevent Impacts	None
Water Quality: EC-7	**EC-7:** Monitor Water Quality and Prevent Impacts	None
Water Quality: EC-8	**EC-8:** Use Clean Equipment and Biodegradable Lubricants	None
Water Quality: EC-9	**EC-9:** Prevent Spread of New Zealand Mudsnails and other Aquatic Invasive Species	None
Noise: EC-10	**EC-10:** Reduce Impacts from Noise	None
Cultural Resources: EC-11	**EC-11:** Inadvertent Discoveries of Objects of Cultural Significance	See MM EC-11 below
Recreation: EC-12	**EC-12:** Signs and construction monitor to warn public of construction activity	None

Mitigation Measure EC-11: Inadvertent Discoveries of Objects of Cultural Significance: If any objects of cultural significance are unearthed during the construction process, work shall be halted immediately until a qualified archeologist can assess the significance of the new find. If human remains are unearthed during the construction process, the Proposed Action team shall comply with the California Health and Safety Code Section 7050.5, which states that no further disturbance shall occur until the County Coroner has investigated the situation following the Public Resource Code Section 5097.98.

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

California State Lands Commission (Commission) staff shall be notified of any California Register of Historic Resources or National Register of Historic Resources-eligible resources or 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 an archaeological, cultural, historical, or paleontological nature from such lands must be approved by the Commission. The archaeologist shall complete a report of the excavations and findings, and the report shall be submitted to the regional office of the California Historic Resources Information System (CHRIS) and Merced County.

ATTACHMENT C-1

Mitigation Monitoring Program Adopted by

Merced Irrigation District

MITIGATION MONITORING AND REPORTING PROGRAM: MERCED IRRIGATION DISTRICT'S MERCED RIVER INSTREAM AND OFF-CHANNEL HABITAT REHABILITATION PROJECT					
Mitigation Measure(s)	Timing/ Milestone	Responsible Entity	Mitigation Action	Monitoring and Enforcement Responsibility	Check off Date/Initials
Air Quality					
EC-1: Reduce Dust and Air Quality Impacts Following methods in the Stillwater Sciences (2004) Mercury Assessment, total mercury from sediments will be evaluated to ensure samples are below or within the range of background levels, as defined by Goldfield sediments analyzed for the Western Aggregate Reclamation Plan (0.03 mg/kg to 0.59 mg/kg) (SMGB, 2014). 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 to assess contamination potential. As a further precaution, mercury levels will be measured before, during, and after restoration activities in the Proposed Project area.	Ongoing prior to, during and after restoration activities	Project Applicant/ Contractor	Use qualified QSP and implement measures	Project Applicant/ Contractor	
Biological Resources					
EC-2: Adaptive Construction Approach to Protect Elderberry Plants, Monitor Survival, and Mitigate for Loss Pre-project elderberry plant surveys were conducted to assess impacts to the Valley Elderberry Longhorn Beetle (VELB, *Desmocerus californicus* ssp. *dimorphus*), and	Prior to initiation of restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

surveyors identified 678 elderberry (*Sambucus* spp.) shrubs with stem diameter greater than 1 inch at ground level within the Proposed Action footprint (7). Complete avoidance may be assumed when there is at least a 20-ft (6 m) buffer around the drip line of an elderberry plant (USFWS 2017b). To avoid direct mortality to VELB from crushing by heavy equipment or through destruction of their elderberry shrub habitat during construction, elderberry plants shall be clearly marked prior to construction and intrusion into the prescribed 20-foot buffer zone shall be avoided, as possible. If any mortality of elderberry shrubs occurs, USFWS shall be consulted immediately and appropriate mitigation will be implemented.					
EC-3: Monitor for Fish and Wildlife to Prevent Impacts Pre-construction surveys shall be conducted by qualified wildlife biologists, who shall determine the use of the Proposed Action Area by special status wildlife species. Surveys shall focus on identification of potential American badger (*Taxidea taxus*) dens and other potential wildlife species within the construction footprint and a minimum 500 ft (152.4 m) buffer around the construction footprint. If American badger dens are located within the construction footprint or buffer area, CDFW shall be consulted prior to initiation of construction for further instruction on methods to avoid direct impacts to American badger. Pre-construction surveys shall also determine the use of the Proposed Action construction footprint by San Joaquin kit fox (*Vulpes macrotis mutica*). These surveys shall focus on identification of potential, atypical, active, and natal (USFWS 1999b) kit fox dens. If potential kit fox dens are located within the construction or buffer area, a minimum of five consecutive nights of camera/scent stations and	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

track stations shall be placed by the den entrances in order to determine if the den is in use by kit fox. If active or natal dens are confirmed, CDFW and USFWS shall be consulted for further instructions on methods to avoid direct impacts to this species. Protocol-level surveys shall also be implemented for other state and federally-listed species including Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), bald eagle (*Haliaeetus leucocephalus*), yellow-breasted chat (*Icteria virens*), Chinook Salmon, CCV steelhead, and western pond turtle (*Actinemys marmorata*). This includes pre-construction surveys conducted no more than 10 days before Proposed Action implementation by qualified wildlife and fisheries biologists. A minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species; a 500-foot no-disturbance buffer around migratory bird species; and a half mile buffer for nest of listed species and fully protected species (including Swainson's hawk, white-tailed kite and bald eagle) shall be established until breeding season is over or young have fledged. If such a buffer cannot be reasonably accomplished, CDFW shall be consulted. Fish surveys shall be conducted by a qualified biologist and if spawning salmon are observed within the construction footprint, construction shall cease and CDFW and USFWS contacted immediately to determine the appropriate course of action.					
EC-4: Protect and Compensate for Native Trees Native trees, such as Fremont Cottonwood, willows, and alder, with a dbh of 6 in (15.2 cm) or greater shall be protected with 30-ft (9.1-m), 10-ft (3-m), and 10-ft (3-m) buffers, respectively. Native trees shall be marked with flagging if close to the work area to prevent disturbance. To	Prior to initiation of restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

compensate for the removal of riparian shrubs and trees during Proposed Action implementation, the plans shall identify tree and shrub species to be planted, how, where, and when they would be planted, and measures to be taken to ensure a minimum performance criteria of 70% survival of planted trees. Irrigation shall not be used, as the return of inundation to the floodplain is expected to promote survival and growth of native riparian species. The tree plantings shall 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) shall 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 shall be replaced in-kind at a ratio of 5:1. • Riparian trees (i.e., willow, cottonwood, poplar, alder, ash, etc.) and shrubs shall be replaced in-kind within the Proposed Action boundary, at a ratio of 3:1, and planted in the nearest suitable location to the area where they were removed.					
EC-5: Work Outside of Critical Periods for Special Status Species To avoid impacts to special status species, all ground disturbing activities shall be conducted during the period of 15 July through 15 November. No in-stream work would be conducted after 15 October to avoid impacts to spawning Chinook Salmon. Nesting birds and raptors are protected under the MBTA and CDFG Code, and trees and shrubs within the Proposed Action Area likely provide nesting habitat for songbirds and raptors. If construction activities occur during the potential breeding season (February	Prior to initiation of restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

through August) a qualified biologist shall conduct surveys for active nests and/or roosts within a ½ mile radius of the Proposed Action Area no more than 10 days prior to the start of construction. A minimum no disturbance buffer shall be delineated around active nests (size of buffer will depend 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.					
EC-6: Monitor for Bats to Prevent Impacts The Proposed Action construction shall occur outside the critical period for bats (after 15 July). Before any ground disturbing activities, a qualified biologist shall survey for the presence of associated habitat types for the bat species of concern. If bats are present, the biologist shall apply a minimum 300 ft (91.4 m) no-disturbance buffer around roosting bats, maternity roosts or winter hibernacula until all young bats have fledged.	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	
Water quality					
EC-7: Monitor Water Quality and Prevent Impacts During in river work, turbidity and total suspended solids shall be monitored with intermittent 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 for the Proposed Action. Specifically, sampling shall be performed immediately upstream from the Proposed Action Area and approximately 300 feet downstream of the active work area during construction. Activities shall not cause in surface waters:	Ongoing prior to, during and after restoration activities	Project Applicant/ Contractor	Use qualified QSP and implement measures	Project Applicant/ Contractor	

a) turbidity to exceed 2 NTU's where natural turbidity is less than 2 NTU; b) where natural turbidity is between 1 and 5 NTUs, increases exceeding 1 NTU; c) where natural turbidity is between 5 and 50 NTUs, increase exceeding 20 percent; d) where natural turbidity is between 50 and 100 NTUs, increases exceeding 10 NTUs; e) where natural turbidity is greater than 100 NTUs, increase exceeding 10 percent. Activities shall not cause settleable material to exceed 0.1 ml/L in surface waters as measured in surface waters downstream from the Proposed Action Area. Activities shall not cause pH to be depressed below 6.5 nor raised above 8.5 as measured in surface waters downstream from the Proposed Action Area. The Proposed Action shall not discharge petroleum products into surface water. The Central Valley Water Board shall be notified immediately of any spill of petroleum products. During gravel processing, gravel shall be cleaned prior to placement within the riverbed in a manner that removes any fine-grained sediment (< 6mm size fraction) (fines) that could potentially contain concentrations of mercury. Daily fines samples shall be collected from processed material and analyzed for total mercury. Borrow areas shall be re-graded to ensure the areas do not become potential mercury methylation spots. Fines separated from gravel shall not re-enter the Merced River. New shallow water areas shall have continuous flow and shall not become stagnant. Floodplains shall be re-vegetated to minimize transport of any mercury-containing sediment.					

Sediment fencing shall be used along the river corridor to capture floating materials or sediments mobilized during construction activities, and prevent water quality impacts. Stream bank impacts shall be isolated and minimized to reduce bank sloughing. Banks shall be stabilized with revegetation following Proposed Action activities, as appropriate. A SWPPP shall be developed as part of the BMPs. All pertinent staff shall be trained on and familiarized with these plans. Copies of the plans and appropriate spill prevention equipment referenced in them shall be made available onsite and staff shall be trained in its use. Spill prevention kits shall be in close proximity to construction areas, and workers trained in their proper use.					
EC-8: Use Clean Equipment and Biodegradable Lubricants All equipment shall be clean and use biodegradable lubricants and hydraulic fluids. All equipment working within the stream channel shall be inspected daily for fuel, lubrication, and coolant leaks; and, for leak potentials (e.g. cracked hoses, loose filling caps, stripped drain plugs). Vehicles shall be fueled and lubricated in a designated staging area located outside the stream channel and banks. Clean gravels shall be added to the river using the front-end loaders. Front-end loaders shall be wheeled (rubber tire) to minimize impacts. Construction specifications shall require that any equipment used in or near the river is properly cleaned to prevent any hazardous materials from entering the river, and containment material shall be available onsite in case of an accident. Spill prevention kits shall be located close to construction areas, with workers trained in its use. Contracted construction managers shall regularly monitor construction personnel to ensure environmental	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

compliance.					
EC-9: Prevent Spread of New Zealand Mudsnails and other Aquatic Invasive Species New Zealand mudsnails (*Potamopyrgus antipodarum*), an introduced species, has been identified in numerous rivers of the Central Valley, including in the Merced River. To minimize the chance that the snails may be transported and spread to other water bodies on equipment, construction specifications shall 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 shall be developed, and all appropriate staff shall be trained as to its purpose and implementation before construction begins. The ISRAP shall be used to prevent the spread of invasive species during Proposed Action construction.	Prior to initiation of restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	
Noise					
EC-10: Reduce Impacts from Noise To mitigate noise related impacts, the Proposed Action shall require all contractors to comply with the following operational parameters: • restrict construction activities to time periods between 7:00 am and 5:00 pm when there is the least potential for disturbance; • locate the sorting station away from edge of property and adjacent homes; and • install and maintain sound-reducing equipment and muffled exhaust on all construction equipment.	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	

Cultural resources					
EC-11: Inadvertent Discoveries of Objects of Cultural Significance If any objects of cultural significance are unearthed during the construction process, work shall be halted immediately until a qualified archeologist can assess the significance of the new find. If human remains are unearthed during the construction process, the Proposed Action team shall comply with the California Health and Safety Code Section 7050.5, which states that no further disturbance shall occur until the County Coroner has investigated the situation following the Public Resource Code Section 5097.98.	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	
Recreation					
EC-12. Signs and construction monitor to warn public of construction activity. Signs shall be placed at Merced ID's newly constructed access site, a non-motorized boating put-in located within the Project boundary informing the public about the Project and warning them that potentially dangerous heavy equipment is being operated. A highly visible warning sign shall be placed on the bank approximately 100 feet upstream of instream construction activity, informing any individuals floating down the river about the construction activity and directing them to a safe path to avoid construction activity. In addition, during all instream construction activity, a construction monitor with a radio shall be positioned upstream of the instream construction activity and next to the channel to communicate with the public and with heavy equipment operators to ensure safe passage through the construction area.	Ongoing during restoration activities	Project Applicant/ Contractor	Implement specified mitigation measures	Project Applicant/ Contractor	