



Central Valley Regional Water Quality Control Board

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER

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Expiration Date:	6 October 2025	Place ID:	867746
Program Type:	Fill/Excavation	WDID No.:	5A57CR00195
		USACE No.:	SPK-2017-00905
			Letter of Permission

Project Type: Channel Construction and Maintenance

Project: Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project (Project)

Applicant: Department of Water Resources

Applicant Contact: Dean Messer
 Department of Water Resources
 3500 Industrial Boulevard
 West Sacramento, CA 95691
 Phone: (916) 376-9700
 Email: Dean.Messer@water.ca.gov

Applicant’s Agent: Analisa Martinez
 Department of Water Resources
 3500 Industrial Boulevard
 West Sacramento, CA 95691
 Phone: (916) 376-9733
 Email: Analisa.Martinez@water.ca.gov

Water Board Staff: Jordan Hensley
 Environmental Scientist
 11020 Sun Center Drive, Suite 200
 Rancho Cordova, CA 95670
 Phone: (916) 464-4812
 Email: Jordan.Hensley@waterboards.ca.gov

Water Board Contact Person: If you have any questions, please call Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) Staff listed above or (916) 464-3291 and ask to speak with the Water Quality Certification Unit Supervisor.

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I. Order

This Clean Water Act (CWA) section 401 Water Quality Certification action and Order (Order) is issued at the request of Department of Water Resources (hereinafter Permittee) for the Project. This Order is for the purpose described in application and supplemental information submitted by the Permittee. The application was received on 30 June 2020. The application was deemed complete on 30 July 2020.

II. Public Notice

The State Water Board provided public notice of the application pursuant to California Code of Regulations, title 23, section 3858 from 3 July 2020 to 24 July 2020. The Central Valley Water Board did not receive any comments during the comment period.

III. Project Purpose

The purpose of the Project is to create more suitable conditions for special-status fish passage and rearing in the Yolo Bypass and Sacramento River Basin in accordance with the National Marine Fisheries Service’s (NMFS) 2009 Biological Opinion and Conference Opinion on the Long Term Operations of the Central Valley Project and the State Water Project, the 2012 Yolo Bypass Salmonid Habitat Restoration and Fish Passage Implementation Plan, the NMFS 2019 Biological Opinion on Long Term Operation of the Central Valley Project and the State Water Project, and the California Department of Fish and Wildlife’s 2020 Incidental Take Permit for Long Term Operation of the State Water Project in the Sacramento-San Joaquin Delta.

IV. Project Description

The 102.8-acre Project consists of increasing flows from the Sacramento River to the Yolo Bypass by constructing a gated notch of the east side of the Fremont Weir and creating additional floodplain habitat.

V. Project Location

County: Yolo

Nearest City: Woodland

Latitude: 38.748336° and Longitude: -121.635708°

Table 1: Section, Township and Range of Project Locations

Location Name	Sections	Townships	Ranges
Intake Channel	27, 28	11N	3E
Headworks	27,28	11N	3E
Transport Channel	27, 28, 33, 34	11N	3E

Location Name	Sections	Townships	Ranges
Tule Channel	3, 10, 33, 34	10N, 11N	3E
Supplemental Fish Passage Facility	29, 32	11N	3E
Agricultural Road Crossing 1	10	10N	3E

Maps showing the Project location are found in Attachment A of this Order.

VI. Project Impact and Receiving Waters Information

The Project is located within the jurisdiction of the Central Valley Water Board. Receiving waters and groundwater potentially impacted by this Project are protected in accordance with the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition, May 2018 (Basin Plan). The plan for the region and other plans and policies may be accessed at the [State Water Resources Control Board's Plans and Policies Web page](http://www.waterboards.ca.gov/plans_policies/) (http://www.waterboards.ca.gov/plans_policies/). The Basin Plan includes water quality standards, which consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies.

Additionally, the Project is subject to applicable State Water Resources Control Board policies and requirements, including the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures). The Procedures include requirements to ensure (1) a sequence of actions has been taken to first avoid, then to minimize, and lastly compensate for adverse impacts that cannot be practicably avoided or minimized to waters of the state; (2) the potential impacts will not contribute to a net loss of the overall abundance, diversity, and condition of aquatic resources, (3) the discharge of dredged or fill material will not violate water quality standards and will be consistent with all applicable water quality control plans and policies for water quality control; and (4) the discharge of dredged or fill material will not cause or contribute to significant degradation of the waters of the state.

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

Permitted actions through this Order will inundate approximately 17,000 to 20,000 acres of floodplain habitat more frequently and for longer periods of time compared to existing conditions. Sediment in Yolo Bypass is enriched with mercury due to historical mercury and/or gold mining and ongoing deposition from the Sacramento River. The Project boundary likely has deposits of mercury-containing sediments.

Studies have shown that inundation and cycles of wetting and drying can cause methylmercury production. Therefore, the Project is expected to create additional methylmercury within the Yolo Bypass.

Methylmercury is a bioaccumulative neurotoxin that is harmful to humans and wildlife when ingested at elevated levels over a sustained period. The portion of the Sacramento River at the Fremont Weir is identified on the Clean Water Act Section 303(d) List as impaired by mercury because of elevated methylmercury concentrations in fish that, when consumed, pose a risk to wildlife and humans.

On 22 April 2010, the Central Valley Water Board adopted the Delta Mercury Control Program (DMCP), an amendment to the Sacramento River and San Joaquin River Basin Plan that implements a program to address mercury and methylmercury impairments in the Delta and Yolo Bypass. The DMCP includes fish-tissue objectives and methylmercury allocations for National Pollutant Discharge Elimination System (NPDES) wastewater facilities, municipal storm water, agricultural lands, wetlands, and open water in the Delta and Yolo Bypass.

Project impact and receiving waters information can be found in Attachment B. Table 1 of Attachment B shows the receiving waters and beneficial uses of waters of the state impacted by the Project. Individual impact location and quantity is shown in Table 2 of Attachment B.

VII. Description of Direct Impacts to Waters of the State

To prepare the sites, sheet pile cofferdams, stoplogs, and screened pumps will be installed to dewater construction and maintenance areas. The Project includes constructing a new intake channel, concrete outlet transition, concrete headworks structure, control building, pedestrian and vehicle bridges, supplemental fish passage, transport channel; improving existing roads, road crossings, and levee cutoff walls; and annual maintenance activities. Annual maintenance activities include dewatering to access maintenance location; removal of debris, built up sediment, and vegetation; inspecting facilities; and servicing structures and equipment.

Portions of the existing concrete Fremont Weir will be demolished, removed, and transported to an appropriate offsite location. Native soil will be excavated and redistributed to create channel features and access to the sites. Clean rock will be placed at the inlet of the intake channel, as a liner for the transport and Tule channels, and in a tributary to Tule Pond to prevent scour. Three 15-foot wide box culverts will be installed in the Tule Canal to replace an earthen road crossing.

The Project will temporarily impact 6.5 acres of stream channel habitat and 35.61 acres of wetland habitat. The Project will permanently impact 5.32 acres of stream channel habitat and 14.82 acres of wetland habitat.

Dewatering will occur within the Project area. Wet concrete will be placed into stream channel and wetland habitat in dry conditions after completely dewatering the

area. The Project will result in the ecological restoration and enhancement of 11.41 acres of stream channel habitat and 62.28 acres of wetland habitat.

Total Project fill/excavation quantities for all impacts are summarized in Tables 2 and 3. Permanent impacts are categorized as those resulting in a physical loss in area and also those degrading ecological condition.

Table 2: Total Project Fill/Excavation Quantity for Temporary Impacts¹

Aquatic Resources Type	Acres	Cubic Yards	Linear Feet
Stream Channel	6.5		
Wetland	35.61		

Table 3: Total Project Fill/Excavation Quantity for Permanent Physical Loss of Area Impacts

Aquatic Resources Type	Acres	Cubic Yards	Linear Feet
Stream Channel	5.32		
Wetland	14.82		

VIII. Description of Indirect Impacts to Waters of the State

The Central Valley Water Board recognizes the potential for indirect impacts to waters of the state associated with the Project. The Project will allow increased flow from the Sacramento River to enter the Yolo Bypass through the gated notch. Water will flow through the notch during periods when the Sacramento River levels are not high enough to overtop Fremont Weir. The additional flow from the gated notch will add water to Yolo Bypass from the Sacramento River during flows that would be considered non-flood events under existing conditions. The increased frequency of inundation from the Sacramento River due to the gated notch will allow greater areas within the bypass to be inundated seasonally.

IX. Avoidance and Minimization

To minimize the potential effects of construction on water quality and resources, the Permittee shall implement all measures required as described in the Order. According to the Permittee, the following measures will be in place during construction activities to avoid, reduce, and minimize impacts to waters of the state:

¹ Includes only temporary direct impacts to waters of the state and does not include area of temporary disturbance which could result in a discharge to waters of the state. Temporary impacts, by definition, are restored to pre-project conditions and therefore do not include a physical loss of area or degradation of ecological condition.

- Temporarily affected habitats would be restored, including planting and seeding the aquatic and upland areas with plant species found in areas of suitable habitat on the Project site and restoring shaded riverine aquatic (SRA) habitat in adjacent areas according to a restoration plan.
- All construction and ongoing operations and maintenance activities shall occur from April 15 through November 1 to avoid ground disturbance in the rainy season.
- Grading spoils generated during construction may be temporarily stockpiled in staging areas located within two miles of Yolo Bypass. Such staging areas shall not contain native or sensitive vegetation communities and shall not support sensitive plant or animal species. Silt fences, non-monofilament fiber rolls, or similar devices shall be installed around the base of the temporary stockpiles to intercept runoff and sediment during storm events. If necessary, temporary stockpiles may be covered with a geotextile material to increase protection from wind and water erosion. Materials used for stabilizing spoils will be selected to be non-injurious to wildlife
- The construction contractor shall install structural or vegetative methods to permanently stabilize all graded or disturbed areas once construction is complete. Structural methods could include installing biodegradable fiber rolls or erosion-control blankets. Vegetative methods could include applying organic mulch and tackifiers, and/or an erosion control native seed mix.
- Equipment and materials shall be staged in designated staging areas that meet the requirements identified above regarding stabilizing grading spoils.
- The construction contractor shall minimize ground disturbance and the disturbance and/or destruction of existing vegetation. This shall be accomplished, in part, through establishing designated equipment staging areas, ingress and egress corridors, equipment exclusion zones and protecting existing trees before beginning any grading operations.
- The construction contractor shall install silt fences, fiber rolls, or similar devices to prevent sediment-laden water from leaving the construction area to the extent feasible in areas where construction is occurring in saturated soils.

X. Compensatory Mitigation

The Permittee has agreed to provide compensatory mitigation for direct impacts, described in section VII for permanent and temporary impacts.

XI. California Environmental Quality Act (CEQA)

On 19 July 2019, the Department of Water Resources, as lead agency, certified an environmental impact report/environmental impact statement (EIR/EIS) (State Clearinghouse (SCH) No. 2013032004) for the Project and filed a Notice of Determination (NOD) at the SCH on 19 July 2019. Pursuant to CEQA, the Central

Valley Water Board has made Findings of Facts (Findings) which support the issuance of this Order and are included in Attachment C.

XII. Petitions for Reconsideration

Any person aggrieved by this action may petition the State Water Board to reconsider this Order in accordance with California Code of Regulations, title 23, section 3867. A petition for reconsideration must be submitted in writing and received within 30 calendar days of the issuance of this Order.

XIII. Fees Received

An application fee of \$169,099.00 was received on 6 July 2020. The fee amount was determined as required by California Code of Regulations, Title 23, sections 3833(b)(3) and 2200(a)(3) and was calculated as Category A - Fill & Excavation Discharges (fee code 84) with the dredge and fill fee calculator.

XIV. Conditions

The Central Valley Water Board has independently reviewed the record of the Project to analyze impacts to water quality and designated beneficial uses within the watersheds of the Project. In accordance with this Order, the Permittee may proceed with the Project under the following terms and conditions:

A. Authorization

Impacts to waters of the state shall not exceed quantities shown in Tables 2 and 3.

B. Reporting and Notification Requirements

The following section details the reporting and notification types and timing of submittals. Requirements for the content of these reporting and notification types are detailed in Attachment D, including specifications for photo and map documentation during the Project. Written reports and notifications must be submitted using the Reporting and Notification Cover Sheet located in Attachment D, which must be signed by the Permittee or an authorized representative.

The Permittee must submit all notifications, submissions, materials, data, correspondence, and reports in a searchable Portable Document Format (PDF). Documents less than 50 MB must be emailed to:
centralvalleysacramento@waterboards.ca.gov

In the subject line of the email, include the Central Valley Water Board Contact, Project name, and WDID No. Documents that are 50 MB or larger must be transferred to a disk and mailed to the Central Valley Water Board Contact.

1. Project Reporting

- a. **Monthly Reporting:** The Permittee must submit a Monthly Report to the Central Valley Water Board on the 1st day of each month beginning the month after the submittal of the Commencement of Construction Notification. Monthly reporting shall continue until the Central Valley Water Board issues a Notice of Project Complete Letter to the Permittee.
- b. **Annual Reporting:** The Permittee shall submit an Annual Report each year on the 1st day of November. Annual reports shall continue until a Notice of Project Complete Letter is issued to the Permittee.

2. Project Status Notifications

- a. **Commencement of Construction:** The Permittee shall submit a Commencement of Construction Report at least seven (7) days prior to start of initial ground disturbance activities and include the corresponding Waste Discharge Identification Number (WDID#) issued under this Order. Additionally, if applicable, the Report shall also include the Enrollee number issued for coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ; NPDES No. CAS000002).
- b. **Request for Notice of Completion of Discharges Letter:** The Permittee shall submit a Request for Notice of Completion of Discharges Letter following completion of active Project construction activities, including any required restoration and permittee-responsible mitigation. This request shall be submitted to the Central Valley Water Board staff within thirty (30) days following completion of all Project construction activities. Upon acceptance of the request, Central Valley Water Board staff shall issue a Notice of Completion of Discharges Letter to the Permittee which will end the active discharge period.
- c. **Request for Notice of Project Complete Letter:** The Permittee shall submit a Request for Notice of Project Complete Letter when construction and/or any post-construction monitoring is complete, and no further Project activities will occur. Completion of post-construction monitoring shall be determined by Central Valley Water Board staff and shall be contingent on successful attainment of restoration and mitigation performance criteria. This request shall be submitted to Central Valley Water Board staff within thirty (30) days following completion of all Project activities. Upon approval of the request, the Central Valley Water Board staff shall issue a Notice of Project Complete Letter to the Permittee which will end the post discharge monitoring period.

3. Conditional Notifications and Reports:

The following notifications and reports are required as appropriate.

a. Accidental Discharges of Hazardous Materials²

Following an accidental discharge of a reportable quantity of a hazardous material, sewage, or an unknown material, the following applies (Water Code, Section 13271):

- i. As soon as (A) Permittee has knowledge of the discharge or noncompliance, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures then:
 - first call – 911 (to notify local response agency)
 - then call – Office of Emergency Services (OES) State Warning Center at:(800) 852-7550 or (916) 845-8911
 - Lastly, follow the required OES, procedures as set forth in the [Office of Emergency Services' Accidental Discharge Notification Web page](http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES-Spill_Booklet_Feb2014_FINAL_BW_Acc.pdf) (http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES-Spill_Booklet_Feb2014_FINAL_BW_Acc.pdf)
 - ii. Following notification to OES, the Permittee shall notify Central Valley Water Board, as soon as practicable (ideally within 24 hours). Notification may be delivered via written notice, email, or other verifiable means.
 - iii. Within five (5) working days of notification to the Central Valley Water Board, the Permittee must submit an Accidental Discharge of Hazardous Material Report.
- b. Violation of Compliance with Water Quality Standards:** The Permittee shall notify the Central Valley Water Board of any event causing a violation of compliance with water quality standards. Notification may be delivered via written notice, email, or other verifiable means.
- i. This notification must be followed within three (3) working days by submission of a Violation of Compliance with Water Quality Standards Report.

² "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. (Health & Safety Code, Section 25501.)

c. In-Water Work and Diversions:

- i. The Permittee shall notify the Central Valley Water Board at least forty-eight (48) hours prior to initiating work in water or stream diversions. Notification may be delivered via written notice, email, or other verifiable means.
- ii. Within three (3) working days following completion of work in water or stream diversions, an In-Water Work/Diversions Water Quality Monitoring Report must be submitted to Central Valley Water Board staff.

d. Modifications to Project

Project modifications may require an amendment of this Order. The Permittee shall give advance notice to Central Valley Water Board staff if Project implementation as described in the application materials is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority by submitting a Modifications to Project Report. The Permittee shall inform Central Valley Water Board staff of any Project modifications that will interfere with the Permittee's compliance with this Order. Notification may be made in accordance with conditions in the certification deviation section of this Order.

e. Transfer of Property Ownership:

This Order is not transferable in its entirety or in part to any person or organization except after notice to the Central Valley Water Board in accordance with the following terms:

- i. The Permittee must notify the Central Valley Water Board of any change in ownership or interest in ownership of the Project area by submitting a Transfer of Property Ownership Report. The Permittee and purchaser must sign and date the notification and provide such notification to the Central Valley Water Board at least 10 days prior to the transfer of ownership. The purchaser must also submit a written request to the Central Valley Water Board to be named as the permittee in a revised order.
- ii. Until such time as this Order has been modified to name the purchaser as the permittee, the Permittee shall continue to be responsible for all requirements set forth in this Order.

f. Transfer of Long-Term BMP Maintenance:

If maintenance responsibility for post-construction BMPs is legally transferred, the Permittee must submit to the Central Valley Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer or designer specifications. The Permittee must provide such notification to the Central Valley Water Board with a Transfer of Long-Term BMP

Maintenance Report at least 10 days prior to the transfer of BMP maintenance responsibility.

C. Water Quality Monitoring

1. General:

If surface water is present continuous visual surface water monitoring shall be conducted during active construction periods to detect accidental discharge of construction related pollutants (e.g. oil and grease, turbidity plume, or uncured concrete). Sampling is not required in a wetland where the entire wetland is being permanently filled, provided there is no outflow connecting the wetland to surface waters. The Permittee shall perform surface water sampling:

- a. when performing any in-water work;
- b. during the entire duration of temporary surface water diversions;
- c. in the event that the Project activities result in any materials reaching surface waters; or
- d. when any activities result in the creation of a visible plume in surface waters.

2. Accidental Discharges/Noncompliance:

Upon occurrence of an accidental discharge of hazardous materials or a violation of compliance with a water quality standard, Central Valley Water Board staff may require water quality monitoring based on the discharge constituents and/or related water quality objectives and beneficial uses.

3. In-Water Work or Diversions:

During planned in-water work or during the entire duration of temporary water diversions, any discharge(s) to waters of the state shall conform to the following water quality standards:

- a. Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- b. Activities shall not cause pH to be depressed below 6.5 nor raised above 8.5 in surface water.
- c. Activities shall not cause turbidity increases in surface water to exceed:
 - i. where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTU;

- ii. where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;
- iii. where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;
- iv. where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;
- v. where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Averaging periods may only be used with prior permission of the Central Valley Water Board Executive Officer.

For Delta waters, the general objectives for turbidity apply subject to the following: except for periods of storm runoff, the turbidity of Delta waters shall not exceed 50 NTUs in the waters of the Central Delta and 150 NTUs in other Delta waters.

Sampling during in-water work or during the entire duration of temporary water diversions shall be conducted in accordance with Table 4 sampling parameters.³ The sampling requirements in Table 4 shall be conducted upstream out of the influence of the Project, and approximately 300 feet downstream of the work area.

The sampling frequency may be modified for certain projects with written approval from Central Valley Water Board staff. An In-Water Work and Diversion Water Quality Monitoring Report, as described in Attachment D, shall be submitted within two weeks on initiation of in-water construction, and every two weeks thereafter. In reporting the data, the Permittee shall arrange the data in tabular form so that the sampling locations, date, constituents, and concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the Project complies with Order requirements. The report shall include surface water sampling results, visual observations, and identification of the turbidity increase in the receiving water

³ Pollutants shall be analyzed using the analytical methods described in 40 Code of Federal Regulations Part 136; where no methods are specified for a given pollutant, the method shall be approved by Central Valley Water Board staff. Grab samples shall be taken between the surface and mid-depth and not be collected at the same time each day to get a complete representation of variations in the receiving water. A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring shall be maintained onsite.

applicable to the natural turbidity conditions specified in the turbidity criteria in XIV.C.3.

If no sampling is required, the Permittee shall submit a written statement stating, “No sampling was required” within two weeks on initiation of in-water construction, and every two weeks thereafter.

Table 4: Sample Type and Frequency Requirements

Parameter	Unit of Measurement	Type of Sample	Minimum Frequency
pH	Standard Units	Grab	Every 4 hours
Turbidity	NTU	Grab	Every 4 hours
Visible construction related pollutants ⁴	Observations	Visual Inspections	Continuous throughout the construction period

D. Standard

1. This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330, and California Code of Regulations, Title 23, Chapter 28, article 6 commencing with sections 3867-3869, inclusive. Additionally, the Central Valley Water Board reserves the right to suspend, cancel, or modify and reissue this Order, after providing notice to the Permittee, if the Central Valley Water Board determines that: the Project fails to comply with any of the conditions of this Order; or, when necessary to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act (Water Code, section 13000 et seq.) or federal Clean Water Act section 303 (33 U.S.C. section 1313). For purposes of Clean Water Act section 401(d), the condition constitutes a limitation necessary to assure compliance with water quality standards and appropriate requirements of state law.
2. This Order is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to subsection 3855(b) of chapter 28, Title 23 of the California Code of Regulations, and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

⁴ Visible construction-related pollutants include oil, grease, foam, fuel, petroleum products, and construction-related, excavated, organic or earthen materials.

3. This Order is conditioned upon total payment of any fee required under Title 23 of the California Code of Regulations and owed by the Permittee.
4. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law. For purposes of Clean Water Act, section 401(d), the applicability of any state law authorizing remedies, penalties, processes, or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order.

E. General Compliance

1. Failure to comply with any condition of this Order shall constitute a violation of the Porter-Cologne Water Quality Control Act and the Clean Water Act. The Permittee and/or discharger may then be subject to administrative and/or civil liability pursuant to Water Code section 13385.
2. Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses for receiving waters as adopted in the Basin Plans by any applicable Regional Water Board or any applicable State Water Board (collectively Water Boards) water quality control plan or policy. The source of any such discharge must be eliminated as soon as practicable.
3. In response to a suspected violation of any condition of this Order, the Central Valley Water Board may require the holder of this Order to furnish, under penalty of perjury, any technical or monitoring reports the Water Boards deem appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The additional monitoring requirements ensure that permitted discharges and activities comport with any applicable effluent limitations, water quality standards, and/or other appropriate requirement of state law.
4. The Permittee must, at all times, fully comply with engineering plans, specifications, and technical reports submitted to support this Order; and all subsequent submittals required as part of this Order. The conditions within this Order and Attachments supersede conflicting provisions within Permittee submittals.
5. This Order and all of its conditions contained herein continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project. For purposes of Clean Water Act, section 401(d), this condition constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements of state law.

6. The Permittee shall adhere to all requirements in the mitigation monitoring and reporting program (MMRP) which is incorporated herein by reference and any additional measures as outlined in Attachment C, CEQA Findings of Fact.
7. **Construction General Permit Requirement:** The Permittee shall obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ; NPDES No. CAS000002), as amended, for discharges to surface waters comprised of storm water associated with construction activity, including, but not limited to, demolition, clearing, grading, excavation, and other land disturbance activities of one or more acres, or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres.
8. **Delta Regional Monitoring Program (RMP):** The Sacramento River is a listed Clean Water Act (CWA) Section 303(d) waterbody as impaired for chlordane, DDT, diazinon, dieldrin, mercury, polychlorinated biphenyls, and unknown toxicity. The Tule Canal is a listed CWA Section 303(d) waterbody as impaired for boron, indicator bacteria, and salinity. The Delta RMP was created to coordinate the Delta-wide monitoring, reporting, and assessment of water quality necessary for understanding Delta water quality conditions and trends. The current Delta RMP Monitoring Design places a focus on monitoring for constituents that are causing significant impairment in the Delta and include pesticides, toxicity, nutrients, and mercury. Monitoring is occurring now at various locations throughout the Delta. Data from these monitoring studies will be used by the Central Valley Water Board to inform its existing control programs such as the Delta Mercury Control Program, and to inform the development of future control programs.

As mentioned in section VI, the Project is expected to create additional methylmercury within the Yolo Bypass and a cumulative impact in the Sacramento-San Joaquin Delta area due to other restoration projects in the region. The Yolo Bypass and Delta do not have assimilative capacity for any increase in methylmercury.

Permitted actions through this Order will increase flows into the Yolo Bypass creating more frequently inundated floodplain habitat, which have the potential to affect the methylation of mercury within both the Yolo Bypass and Delta. Further, these actions may have other impacts to other constituents that are impairing Delta waters.

In August 2018, the Permittee submitted a Delta RMP Participation Plan (Plan) that addresses multiple restoration and other projects in the Delta and Yolo Bypass, including the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. The Executive Officer approved this Plan on 16 August 2018. The Permittee shall maintain continued adequate participation in the

Delta RMP pursuant to this approved Plan to maintain compliance with this Order.

F. Administrative

1. Signatory requirements for all document submittals required by this Order are presented in Attachment E of this Order.
2. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Wildlife Code, sections 2050-2097) or the federal Endangered Species Act (16 U.S.C. sections 1531-1544). If a “take” will result from any act authorized under this Order held by the Permittee, the Permittee must comply with the California Endangered Species Act and federal Endangers Species Act prior to any construction or operation of the portion of the Project that may result in a take. The Permittee is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.
3. The Permittee shall grant Central Valley Water Board staff, or an authorized representative (including an authorized contractor acting as a Water Board representative), upon presentation of credentials and other documents as may be required by law, permission to:
 - a. Enter upon the Project or compensatory mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records are kept.
 - b. Have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order.
 - c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
 - d. Sample or monitor for the purposes of assuring Order compliance.
4. A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall remain at the Project site for the duration of this Order. The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors.
5. A copy of this Order must be available at the Project site(s) during construction for review by site personnel and agencies. All personnel performing work on the Project shall be familiar with the content of this Order and its posted location at the Project site.

- 6. Lake or Streambed Alteration Agreement:** The Permittee shall submit a signed copy of the California Department of Fish and Wildlife's Lake or Streambed Alteration Agreement or other authorization letter to the Central Valley Water Board immediately upon receipt and prior to any discharge to waters of the state.

G. Construction

1. Dewatering

- a. The Permittee shall develop and maintain on-site a Surface Water Diversion and/or Dewatering Plan(s). The Plan(s) must be developed prior to initiation of any water diversions. The Plan(s) shall include the proposed method and duration of diversion activities and include water quality monitoring conducted, as described in section XIV.C.3, during the entire duration of dewatering and diversion activities. The Plan(s) must be consistent with this Order and must be made available to the Central Valley Water Board staff upon request.
- b. For any temporary dam or other artificial obstruction being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream, to maintain beneficial uses of waters of the state below the dam. Construction, dewatering, and removal of temporary cofferdams shall not violate section XIV.C.3.
- c. The temporary dam or other artificial obstruction shall only be built from clean materials such as sandbags, gravel bags, water dams, or clean/washed gravel which will cause little or no siltation. Stream flow shall be temporarily diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses.
- d. If water is present, the area must be dewatered prior to start of work.
- e. Dewatering will occur within the Project area.
- f. This Order does not allow permanent water diversion of flow from the receiving water. This Order is invalid if any water is permanently diverted as a part of the project.
- g. The Permittee shall work with the Central Valley Water Board to obtain coverage under an NPDES permit for dewatering activities that result in discharges into surface water.
- h. The Permittee shall work with the Central Valley Water Board to obtain coverage under Waste Discharge Requirements (WDRs) for dewatering activities that result in discharges to land.

2. Directional Drilling – Not Applicable

3. Dredging – Not Applicable

4. Fugitive Dust

Dust abatement activities can cause discharges of sediment to streams and uplands through application of water or other fluids. Dust abatement chemicals added to water can be hazardous to wildlife and, if allowed to enter streams, detrimental to water quality. Therefore, dust abatement activities shall be conducted so that sediment or dust abatement chemicals are not discharged into waters of the state. Dust abatement products or additives that are known to be detrimental to water quality or wildlife shall not be used, unless specific management needs are documented, and product-specific application plans are approved by Central Valley Water Board staff.

5. Good Site Management “Housekeeping”

- a. The Permittee shall develop and maintain onsite a project-specific Spill Prevention, Containment and Cleanup Plan outlining the practices to prevent, minimize, and/or clean up potential spills during construction of the Project. The Plan must detail the Project elements, construction equipment types and location, access and staging and construction sequence. The Plan must be made available to the Central Valley Water Board staff upon request.
- b. Refueling of equipment within the floodplain or within 300 feet of the waterway is prohibited. If critical equipment must be refueled within 300 feet of the waterway, spill prevention and countermeasures must be implemented to avoid spills. Refueling areas shall be provided with secondary containment including drip pans and/or placement of absorbent material. No hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, or other construction-related potentially hazardous substances should be stored within a floodplain or within 300 feet of a waterway. The Permittee must perform frequent inspections of construction equipment prior to utilizing it near surface waters to ensure leaks from the equipment are not occurring and are not a threat to water quality.
- c. All materials resulting from the Project shall be removed from the site and disposed of properly.

6. Hazardous Materials

- a. The discharge of petroleum products, any construction materials, hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, raw cement, concrete or the washing thereof, asphalt, paint, coating material, drilling fluids, or other substances potentially hazardous to fish and wildlife resulting from or disturbed by project-related activities is prohibited and shall be prevented from contaminating the soil and/or entering waters of the state. In the event of a prohibited discharge, the Permittee shall comply with notification requirements in sections XIV.B.3.a and XIV.B.3.b.

- b. Wet concrete will be placed into wetland and stream channel habitat after the area has been completely dewatered.
- c. Concrete must be completely cured before coming into contact with waters of the United States and waters of the state. Surface water that contacts wet concrete must be pumped out and disposed of at an appropriate off-site commercial facility, which is authorized to accept concrete wastes.

7. Invasive Species and Soil Borne Pathogens

Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds shall be cleaned to reduce the spread of noxious weeds.

8. Roads

- a. The number of access routes, number and size of staging areas, and the total area of the activity must be limited to the minimum necessary to achieve the project goal. Routes and work area boundaries must be clearly demarcated.
- b. Bridges, culverts, dip crossings, or other structures must be installed so that water and in-stream sediment flow is not impeded. Appropriate design criteria, practices and materials must be used in areas where access roads intersect waters of the state.
- c. Temporary materials placed in any water of the state must be removed as soon as construction is completed at that location, and all temporary roads must be removed or re-contoured and restored according to approved re-vegetation and restoration plans.
- d. Any structure, including but not limited to, culverts, pipes, piers, and coffer dams, placed within a stream where fish (as defined in California Fish and Game Code section 45) exist or may exist, must be designed, constructed, and maintained such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish due to impedance of their upstream or downstream movement. This includes, but is not limited to, maintaining the supply of water and maintaining flows at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. If any structure results in a long-term reduction in fish movement, the discharger shall be responsible for restoration of conditions as necessary (as determined by the Water Board) to secure passage of fish across the structure.
- e. A method of containment must be used below any temporary bridge, trestle, boardwalk, and/or other stream crossing structure to prevent any debris or spills from falling into the waters of the state. Containment must

be maintained and kept clean for the life of the temporary stream crossing structure.

9. Sediment Control

- a. Except for activities permitted by the United States Army Corps of Engineers under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.
- b. Silt fencing, straw wattles, or other effective management practices must be used along the construction zone to minimize soil or sediment along the embankments from migrating into the waters of the state through the entire duration of the Project.
- c. The use of netting material (e.g., monofilament-based erosion blankets) that could trap aquatic dependent wildlife is prohibited within the Project area.
- d. During Project construction, the Permittee shall implement reasonable and feasible practices to control erosion of mercury-containing soils and minimize discharges of mercury and methylmercury. The goal is to minimize erosion of the mercury-containing soils in order to protect beneficial uses in the Yolo Bypass and to reduce mercury and methylmercury loads moving downstream.

10. Special Status Species

Swainson's hawk, western yellow-billed cuckoo, Least Bell's vireo, chinook salmon Central Valley spring-run ESU, chinook salmon Sacramento River winder run ESU, and giant garter snake.

11. Stabilization/Erosion Control

- a. All areas disturbed by Project activities shall be protected from washout and erosion.
- b. Hydroseeding shall be performed with California native seed mix.

12. Storm Water

- a. During the construction phase, the Permittee must employ strategies to minimize erosion and the introduction of pollutants into storm water runoff. These strategies must include the following:
 - i. An effective combination of erosion and sediment control Best Management Practices (BMPs) must be implemented and adequately working prior to the rainy season and during all phases of construction.

H. Mitigation for Temporary Impacts

1. The Permittee shall restore all areas of temporary impacts, including Project site upland areas, which could result in a discharge to waters of the state to pre-construction contours and conditions upon completion of construction activities as described in a final restoration plan.
2. The Permittee submitted a draft restoration plan on 30 June 2020 that met the requirements of Section IV.A.2.d of the Procedures. The final restoration plan shall be submitted for written acceptance by Central Valley Water Board staff prior to the Commencement of Construction notification. The final restoration plan shall describe the restoration of all temporarily disturbed areas to pre-project conditions.
2. The Central Valley Water Board may extend the monitoring period beyond requirements of the final restoration plan upon a determination by Executive Officer that the performance standards have not been met or are not likely to be met within the monitoring period.
3. If restoration of temporary impacts to waters of the state is not completed within 365 days of the impacts, compensatory mitigation may be required to offset temporal loss of waters of the state.
4. Total required Project compensatory mitigation information for temporary impacts is summarized in Table 5. [Establishment (Est.), Re-establishment (Re-est.), Rehabilitation (Reh.), Enhancement (Enh.), Preservation (Pres.), Unknown]

Table 5: Required Project Mitigation Quantity for Temporary Impacts by Method

Aquatic Resource Type	Mitigation Type	Units	Est.	Re-est.	Reh.	Enh.	Pres.	Unknown
Stream Channel	Permittee Responsible	Acres		6.5				
Wetland	Permittee Responsible	Acres		35.61				

I. Compensatory Mitigation for Permanent Impacts:

Compensatory Mitigation is for permanent physical loss and permanent ecological degradation of a water of the state.

1. Compensatory Mitigation Plan

- a. The Permittee has submitted a draft compensatory mitigation plan as part of a complete application. The Permittee shall provide a final compensatory mitigation plan for written acceptance by Central Valley

Water Board staff. Impacts to waters of the state are not authorized and shall not occur until a compensatory mitigation plan has been approved by Central Valley Water Board staff. Upon acceptance by Central Valley Water Board staff, the Permittee shall implement the approved plan.

- b.** The final compensatory mitigation plan shall include all plan elements as outlined in the Procedures. The level of detail in the final plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the adverse impacts attributed to the Project considering the overall size and scope of impact.

2. Irrevocable Letter of Credit – Not Applicable

3. Permittee-Responsible Compensatory Mitigation Responsibility – Not Applicable

4. Purchase of Mitigation Credits by Permittee for Compensatory Mitigation

- a.** A copy of the fully executed agreement for the purchase of mitigation credits shall be provided to the Central Valley Water Board prior to the initiation of in water work.
 - b.** The Permittee shall retain responsibility for providing the compensatory mitigation and long-term management until Central Valley Water Board staff has received documentation of the credit purchase and the transfer agreement between the Permittee and the seller of credits.

5. Total Required Compensatory Mitigation

- a.** The Permittee is required to provide compensatory mitigation for the authorized impact to 5.32 acres of stream channel habitat and 14.82 acres of wetland habitat by purchasing a minimum of 5.32 riparian or riverine habitat credits and 14.82 wetland habitat credits from a United States Army Corps of Engineers approved mitigation bank.
 - b.** Total required Project compensatory mitigation information for permanent physical loss of area is summarized in Table 6. [Establishment (Est.), Re-establishment (Re-est.), Rehabilitation (Reh.), Enhancement (Enh.), Preservation (Pres.), Unknown].

Table 6: Total Required Project Compensatory Mitigation Quantity for Permanent Physical Loss of Area

Aquatic Resource Type	Mitigation Type	Units	Est.	Re-est.	Reh.	Enh.	Pres.	Unknown
Riparian/ Stream Channel	Mitigation Bank Credits	Acres						5.32
Wetland	Mitigation Bank Credits	Acres						14.82

J. Ecological Restoration and Enhancement

The quantity of waters of the state permanently gained by the Project is shown in Table 7.

Table 7: Total Ecological Restoration and Enhancement Quantity

Aquatic Resource Type	Restoration Type	Units	Est.	Re-est.	Reh.	Enh.	Pres.	Unknown
Stream Channel	Permittee-Responsible	Acres				11.41		
Wetland	Permittee-Responsible	Acres				62.28		

K. Certification Deviation

1. Minor modifications of Project locations or predicted impacts may be necessary as a result of unforeseen field conditions, necessary engineering re-design, construction concerns, or similar reasons. Some of these prospective Project modifications may have impacts on water quality. Some modifications of Project locations or predicted impacts may qualify as Certification Deviations as set forth in Attachment F. For purposes of this Certification, a “Certification Deviation” is a Project locational or impact modification that does not require an immediate amendment of the Order, because the Central Valley Water Board has determined that any potential water quality impacts that may result from the change are sufficiently addressed by the Order conditions and the CEQA Findings. After the termination of construction, this Order will be formally amended to reflect all authorized Certification Deviations and any resulting adjustments to the amount of water resource impacts and required compensatory mitigation amounts.

- 2.** A Project modification shall not be granted a Certification Deviation if it warrants or necessitates changes that are not addressed by the Order conditions or the CEQA environmental document such that the Project impacts are not addressed in the Project's environmental document or the conditions of this Order. In this case a supplemental environmental review and different Order will be required.

XV. Water Quality Certification

I hereby issue the Order for the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project, WDID# 5A57CR00195, certifying that as long as all of the conditions listed in this Order are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards).

The Central Valley Water Board will file a Notice of Determination (NOD) at the SCH within five (5) working days of issuance of this Order. This discharge is also regulated pursuant to State Water Board Water Quality Order No. 2003-0017-DWQ which authorizes this Order to serve as Waste Discharge Requirements pursuant to the Porter-Cologne Water Quality Control Act (Water Code, section 13000 et seq.).

Except insofar as may be modified by any preceding conditions, all Order actions are contingent on: (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions of this Order and the attachments to this Order; and, (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies, the Regional Water Boards' Water Quality Control Plans and Policies.

Original Signed By Adam Laputz for:

Patrick Pulupa, Executive Officer
Central Valley Regional Water Quality Control Board

- Attachment A:** Project Maps
- Attachment B:** Receiving Waters, Impacts, and Mitigation Information
- Attachment C:** CEQA Findings of Facts
- Attachment D:** Report and Notification Requirements
- Attachment E:** Signatory Requirements
- Attachment F:** Certification Deviation Procedures

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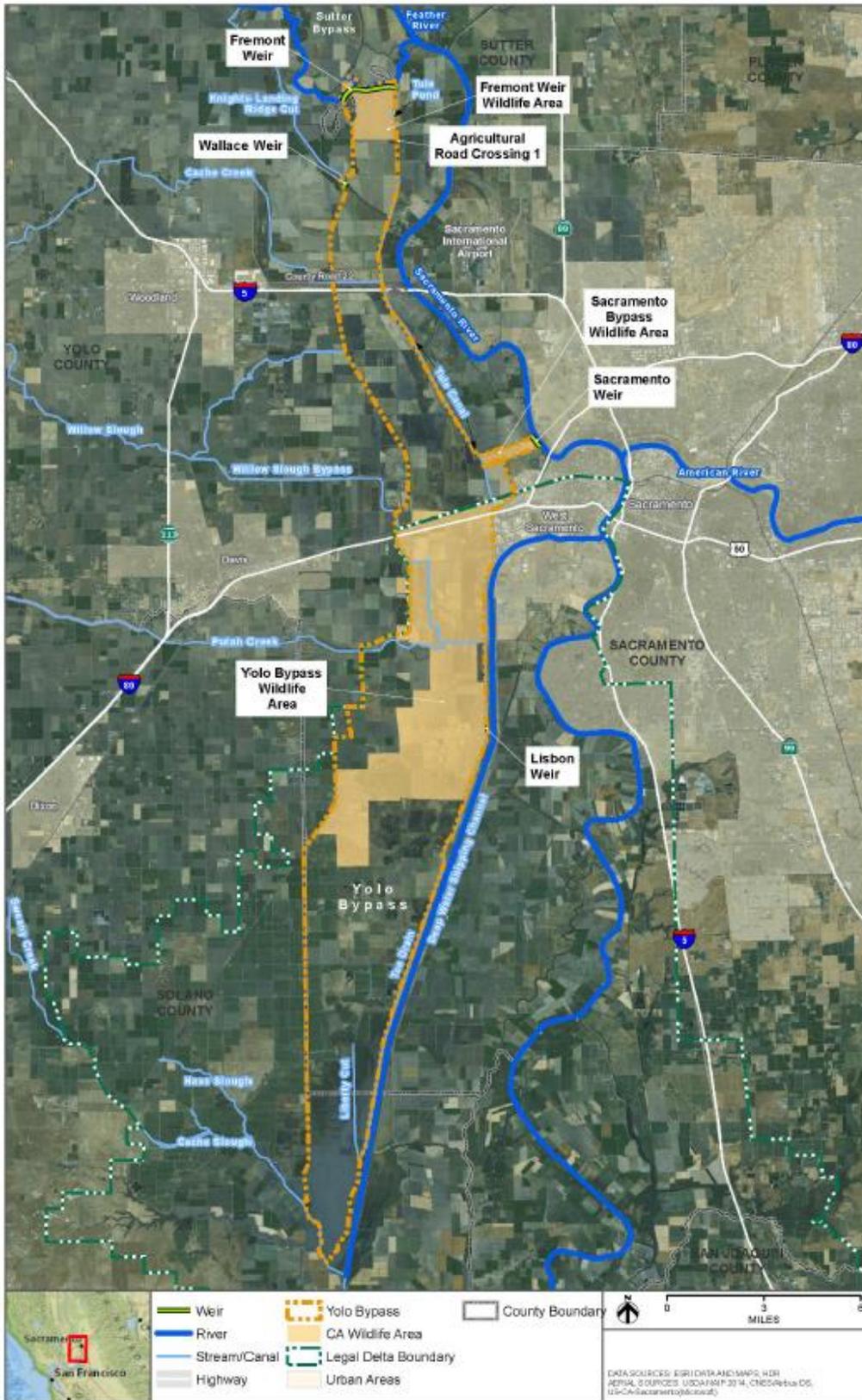


Figure 1 – Project Location Map

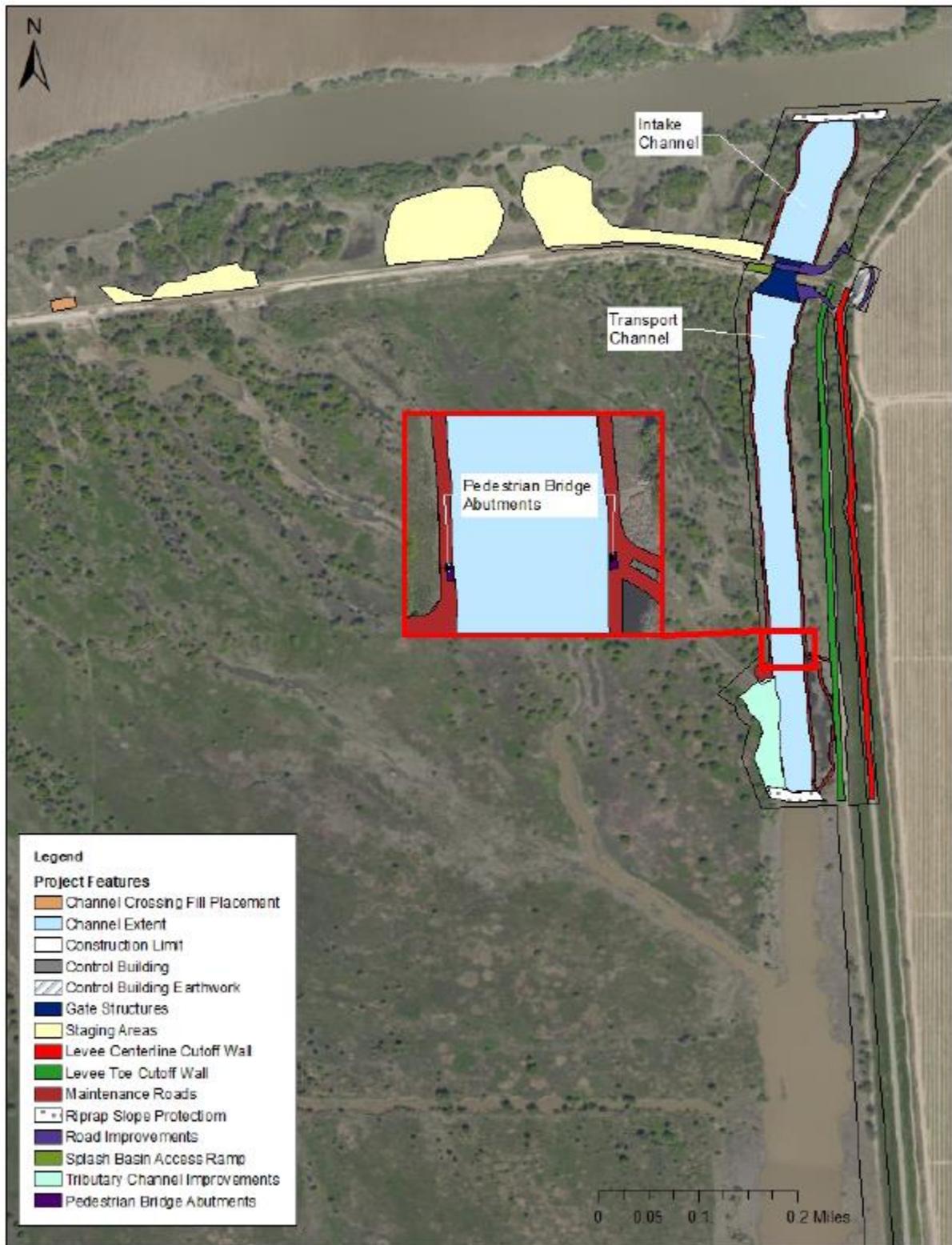


Figure 2 – Site Impact Map 1a

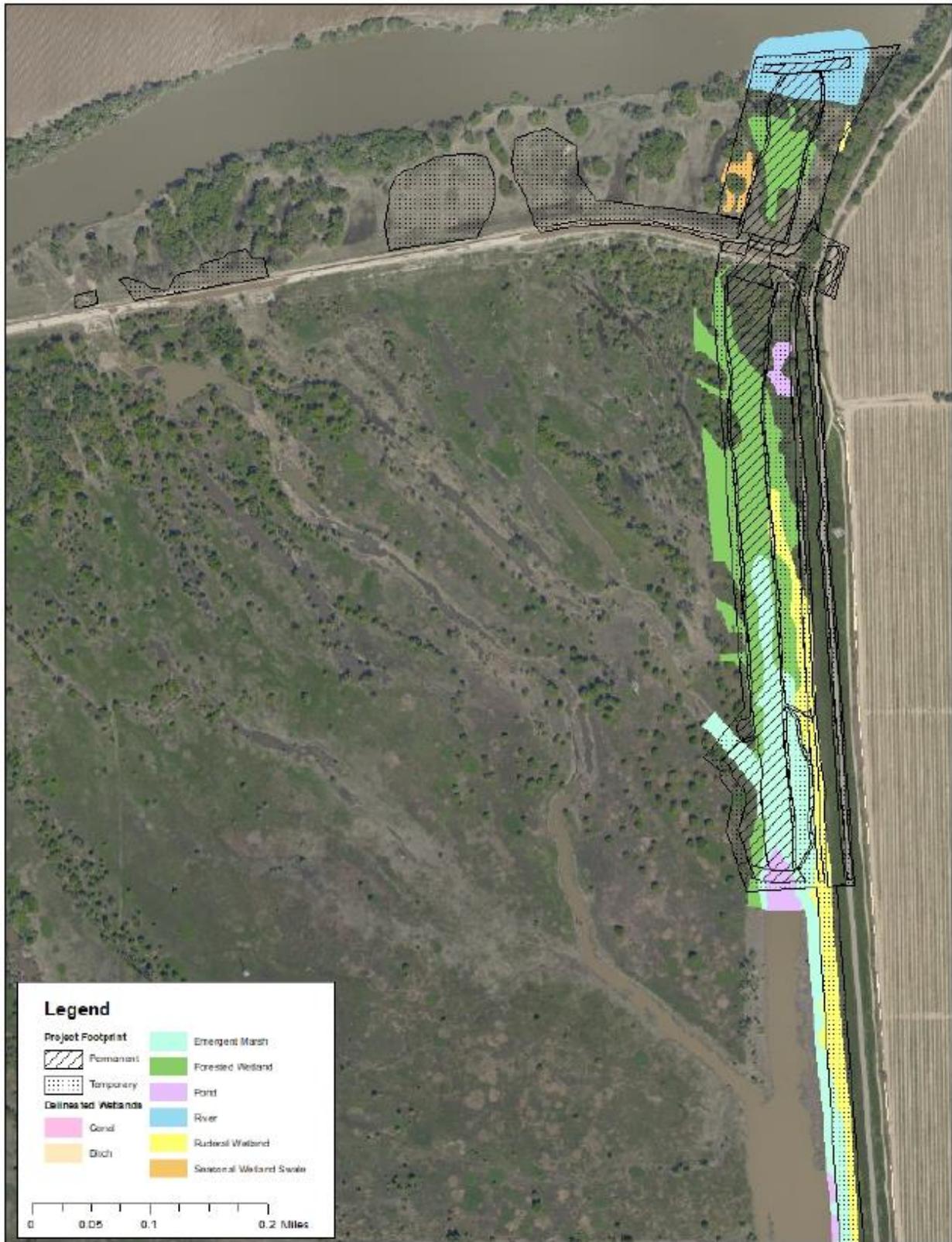


Figure 3 – Site Impact Map 1b

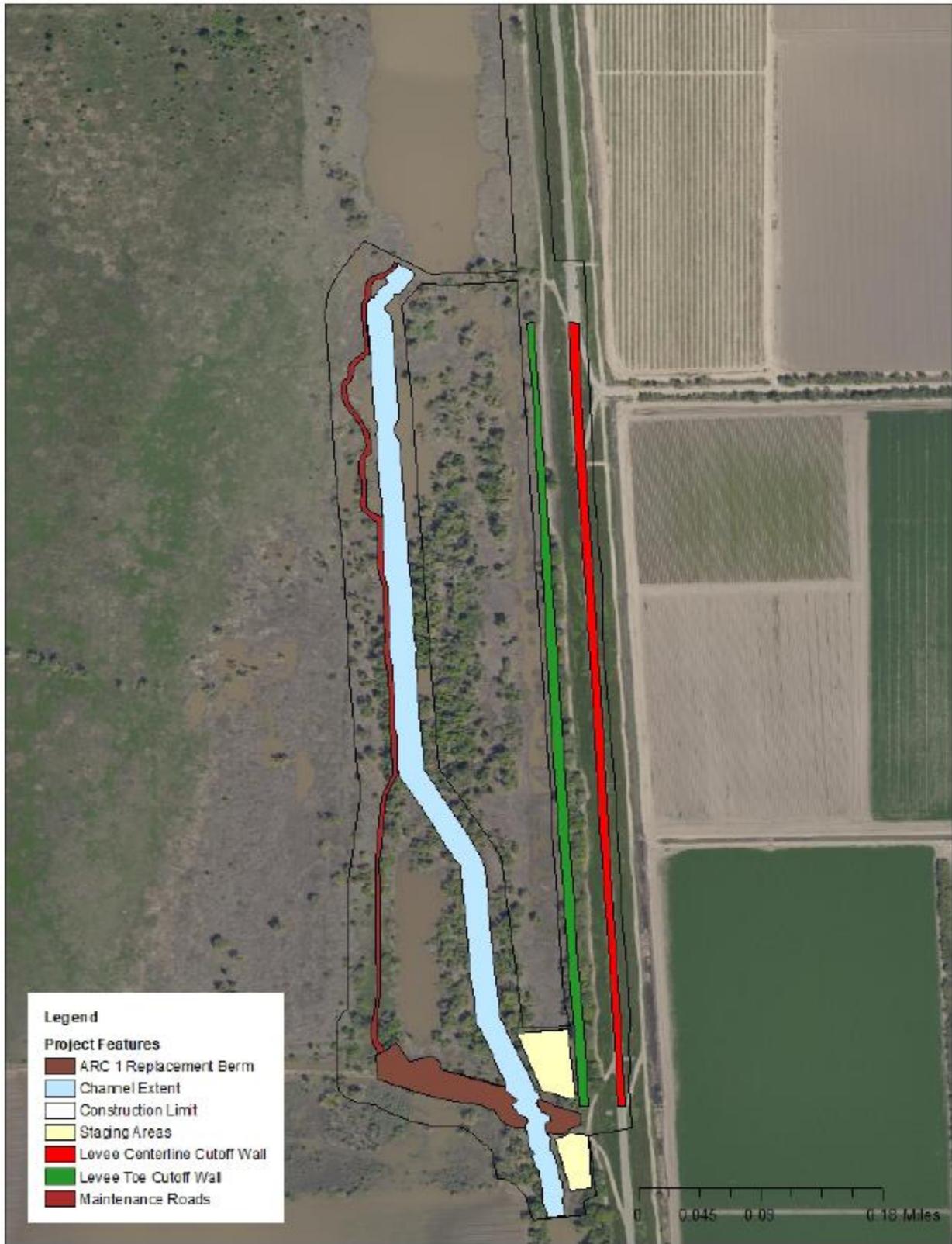


Figure 4 – Site Impact Map 2a



Figure 5 – Site Impact Map 2b



Figure 6 – Site Impact Map 3a

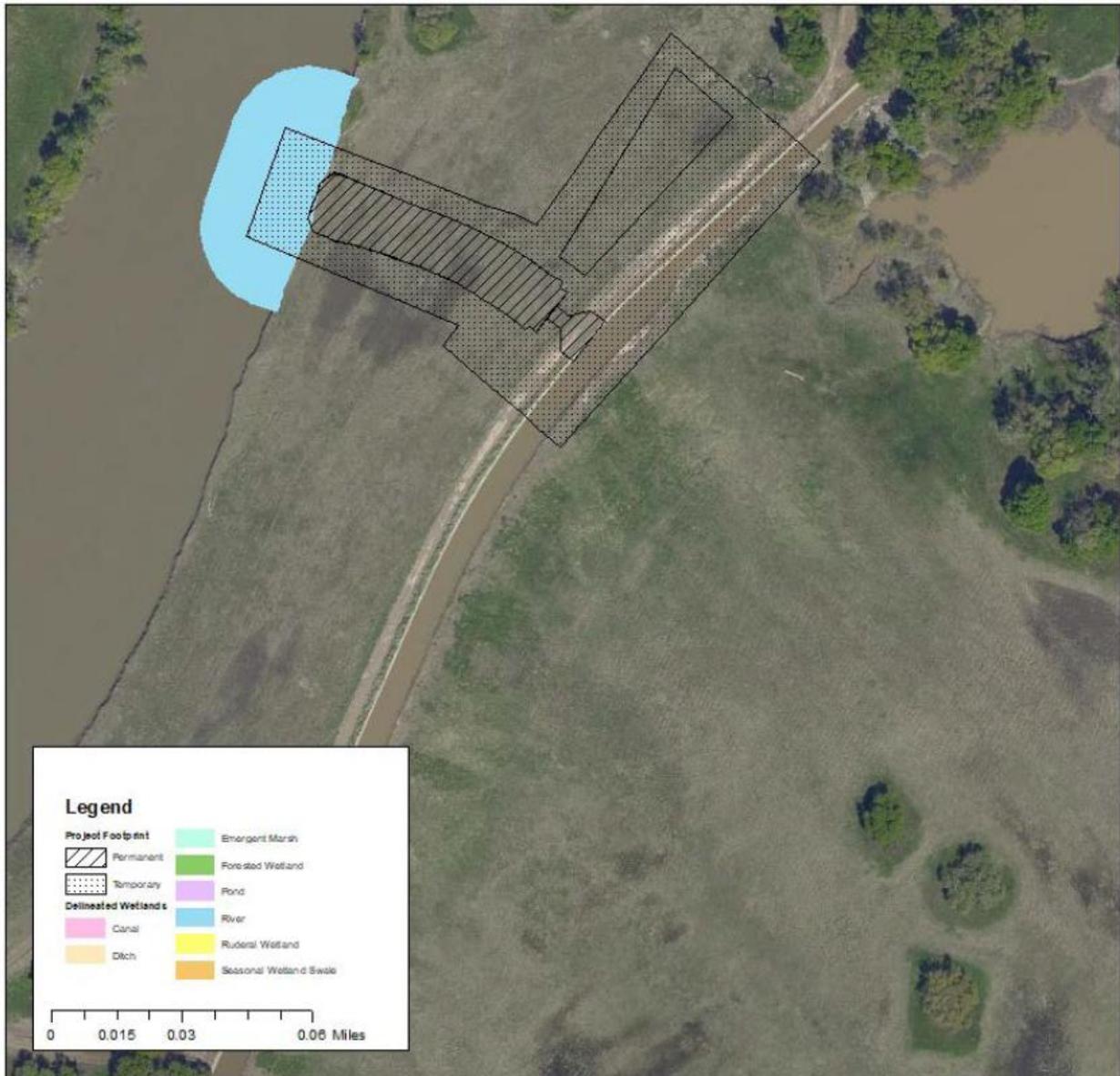


Figure 7 – Site Impact Map 3b

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Receiving Waters, Impacts and Mitigation Information

The following table shows the receiving waters associated with each impact site.

Table 1: Receiving Water(s) Information

Impact Site ID	Waterbody Name	Impacted Aquatic Resources Type	Water Board Hydrologic Units	Receiving Waters	Receiving Waters Beneficial Uses	303d Listing Pollutant	California Rapid Assessment Method ID
Canal	Tule Canal	Stream Channel	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	Boron, Indicator Bacteria, Salinity	N/A
Emergent Marsh	Yolo Bypass	Wetland	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A
Forested Wetland	Yolo Bypass	Wetland	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A
Pond	Yolo Bypass	Stream Channel	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A

Impact Site ID	Waterbody Name	Impacted Aquatic Resources Type	Water Board Hydrologic Units	Receiving Waters	Receiving Waters Beneficial Uses	303d Listing Pollutant	California Rapid Assessment Method ID
River	Sacramento River	Stream Channel	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	Chlordane, DDT, Diazinon, Dieldrin, Mercury, PCBs, Toxicity	N/A
Ruderal Wetland	Yolo Bypass	Wetland	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A
Seasonal Wetland Swale	Yolo Bypass	Wetland	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A
Non-verified Forested Wetland	Yolo Bypass	Wetland	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A
Non-verified Pond	Yolo Bypass	Stream Channel	510.00 Sacramento Delta Hydrologic Unit	Yolo Bypass	AGR, REC-1, REC-2, WARM, MIGR, SPWN, WILD	N/A	N/A

Individual Direct Impact Locations

The following tables show individual impacts.

Table 2: Individual Temporary Fill/Excavation Impact Information

Impact Site ID	Latitude	Longitude	Indirect Impact Requiring Mitigation?	Acres	Cubic Yards	Linear Feet
Canal	38.748336°	-121.635708°	No	0.15		
Emergent Marsh	38.748336°	-121.635708°	No	7.63		
Forested Wetland	38.748336°	-121.635708°	No	18.40		
Pond	38.748336°	-121.635708°	No	3.64		
River	38.748336°	-121.635708°	No	1.61		
Ruderal Wetland	38.748336°	-121.635708°	No	6.98		
Seasonal Wetland Swale	38.748336°	-121.635708°	No	0.35		
Non-verified Forested Wetland	38.748336°	-121.635708°	No	2.25		
Non-verified Pond	38.748336°	-121.635708°	No	1.10		

Table 3: Individual Permanent Fill/Excavation Impact Information

Impact Site ID	Latitude	Longitude	Indirect Impact Requiring Mitigation?	Acres	Cubic Yards	Linear Feet
Canal	38.748336°	-121.635708°	No	1.04		
Emergent Marsh	38.748336°	-121.635708°	No	4.21		
Forested Wetland	38.748336°	-121.635708°	No	10.19		
Pond	38.748336°	-121.635708°	No	3.36		
River	38.748336°	-121.635708°	No	0.92		
Ruderal Wetland	38.748336°	-121.635708°	No	0.16		
Seasonal Wetland Swale	38.748336°	-121.635708°	No	0.04		
Non-verified Forested Wetland	38.748336°	-121.635708°	No	0.22		

Compensatory Mitigation Information

The following table(s) show individual compensatory mitigation information and locations.

Mitigation Bank Compensatory Mitigation Site Information

Mitigation Bank Name:	TBD
Website:	TBD

Mitigation Bank Contact Name:	TBD
Phone:	-
Email:	-

Mitigation Location - County:	TBD
Latitude:	-
Longitude:	-

Table 4: Mitigation Type Information

Aquatic Resource Credit Type	Acres	Linear Feet	Number of Credits Purchased
Riparian or Stream Channel	5.32		TBD
Wetland	14.82		TBD

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A. Environmental Review

On 19 July 2019, the Department of Water Resources, as lead agency, certified a Final Environmental Impact Report (FEIR) (State Clearinghouse (SCH) No. 2013032004) for the Project and filed a Notice of Determination (NOD) at the SCH on 19 July 2019. The Central Valley Water Board is a responsible agency under CEQA (Public Resources Code, section 21069) and in making its determinations and findings, must presume that the Department of Water Resources' certified environmental document comports with the requirements of CEQA and is valid. (Public Resources Code, section 21167.3). The Central Valley Water Board has reviewed and considered the environmental document and finds that the environmental document prepared by the Department of Water Resources addresses the Project's water quality impacts. (California Code of Regulations, Title 14, section 15096, subd. (f).) The environmental document includes the mitigation monitoring and reporting program (MMRP) developed by the Department of Water Resources for all mitigation measures that have been adopted for the Project to reduce potential significant impacts. (Public Resources Code, section 21081.6, subd. (a)(1); California Code of Regulations, Title 14, section 15091, subd. (d).)

B. Incorporation by Reference

Pursuant to CEQA, these Findings of Facts (Findings) support the issuance of this Order based on the Project FEIR, the application for this Order, and other supplemental documentation.

All CEQA project impacts, including those discussed in subsection C below, are analyzed in detail in the Project FEIR which is incorporated herein by reference. The Project FEIR is available at:

https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=30484.

Requirements under the purview of the Central Valley Water Board in the MMRP are incorporated herein by reference.

The Permittee's application for this Order, including all supplemental information provided, is incorporated herein by reference.

C. Findings

The FEIR describes the potential significant environmental effects to water quality. Having considered the whole of the record, the Central Valley Water Board makes the following findings.

- (1) Findings regarding impacts that will be mitigated to a less than significant level. (Public Resources Code, section 21081, subd. (a)(1); California Code of Regulations, Title 14, section 15091, subd. (a)(1).)

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

a.i. Potential Significant Impact:

The Project may result in less than significant impacts with mitigation incorporated to flood control, surface water supply, water quality, ground water, and aquatic resources from Project activities

a.ii. Facts in Support of Finding:

Mitigation Measure HAZ-1

The Lead Agencies and the contractor will prepare a Construction Risk Management Plan (CRMP) that will include procedures to follow to identify soil contamination during excavation activities and the handling and disposal of any contaminated soil. The CRMP will also require California Department of Water Resources (DWR) to obtain an opinion through the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) Well Review Program prior to working near the sites. The CRMP will also identify procedures to follow for removal, handling, and disposal if underground storage tanks or other hazardous materials are found during construction of the site. The CRMP will be included in the final plans and specifications for project implementation.

Mitigation Measure WQ-1

The Lead Agencies or their construction contractor shall develop and implement a Spill Prevention, Control, and Countermeasure Plan (SPCCP) to minimize the potential for, and effects from, spills of hazardous, toxic, and petroleum substances during construction and maintenance. The SPCCP shall be completed before construction activities begin. Implementation of this measure shall comply with State and Federal water quality regulations. The SPCCP shall describe spill sources and spill pathways in addition to the actions that shall be taken in the event of a spill (e.g., an oil spill from engine refueling shall be cleaned up immediately with oil absorbents) or the exposure of an undocumented hazard. The SPCCP shall outline descriptions of containment facilities and practices such as double-walled tanks, containment berms, emergency shut-offs, drip pans, fueling procedures, and spill response kits. It shall also describe how and when employees are trained in proper handling procedures and spill prevention and response procedures.

The Lead Agencies shall review and approve the SPCCP before the onset of construction activities and shall routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The Lead Agencies shall notify its contractors immediately if there is a noncompliance issue and shall require compliance.

If a spill is reportable, the construction contractor's superintendent shall notify the Lead Agencies, and the Lead Agencies shall take action to contact the appropriate safety and cleanup crews to ensure the SPCCP is followed. A written description of reportable releases shall be submitted to the Central

Valley Water Board and the California Department of Toxic Substances Control. This submittal shall contain a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases shall be documented on a spill report form.

Mitigation Measure WQ-2

Prior to initiating construction and maintenance activities, the construction contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) that describes best management practices (BMPs) that shall be implemented to control accelerated erosion, sedimentation, and other pollutants during and after Project construction. Specific BMPs that shall be incorporated into the SWPPP shall be site-specific and shall be prepared in accordance with the regional water board field manual. The SWPPP shall include, but not be limited to, the following standard erosion- and sediment-control BMPs:

- Timing of construction. All construction and ongoing operations and maintenance activities shall occur from April 15 through November 1 to avoid ground disturbance in the rainy season.
- Stabilize grading spoils. Grading spoils generated during construction may be temporarily stockpiled in staging areas located within two miles of Yolo Bypass. Such staging areas shall not contain native or sensitive vegetation communities and shall not support sensitive plant or animal species. Silt fences, non-monofilament fiber rolls, or similar devices shall be installed around the base of the temporary stockpiles to intercept runoff and sediment during storm events. If necessary, temporary stockpiles may be covered with a geotextile material to increase protection from wind and water erosion. Materials used for stabilizing spoils will be selected to be non-injurious to wildlife
- Permanent site stabilization. The construction contractor shall install structural or vegetative methods to permanently stabilize all graded or disturbed areas once construction is complete. Structural methods could include installing biodegradable fiber rolls or erosion-control blankets. Vegetative methods could include applying organic mulch and tackifiers, and/or an erosion-control native seed mix.
- Staging of construction equipment and materials. Equipment and materials shall be staged in designated staging areas that meet the requirements identified above regarding stabilizing grading spoils.
- Minimize soil and vegetation disturbance. The construction contractor shall minimize ground disturbance and the disturbance and/or destruction of existing vegetation. This shall be accomplished, in part, through establishing designated equipment staging areas, ingress and

egress corridors, equipment exclusion zones and protecting existing trees before beginning any grading operations.

- Install sediment barriers. The construction contractor shall install silt fences, fiber rolls, or similar devices to prevent sediment-laden water from leaving the construction area to the extent feasible in areas where construction is occurring in saturated soils.

Mitigation Measure WQ-3

The Basin Plan for the Sacramento River and San Joaquin River basins (Fourth Edition) (Central Valley Water Board 2016) contains turbidity objectives. Specifically, the plan states that where natural turbidity is between five and 50 NTUs, turbidity levels may not be elevated by 20 percent above ambient conditions; where ambient conditions are between 50 and 100 NTUs, conditions may not be increased by more than 10 NTUs; and where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent. A sampling plan shall be developed and implemented based on specific site conditions and in consultation with the Central Valley Water Board. If turbidity limits exceed basin plan standards, construction-related earth-disturbing activities shall slow to a point that would alleviate the problem.

- (2) Findings regarding mitigation measures which are the responsibility of another agency. (Public Resources Code, section 21081, subd. (a)(2); California Code of Regulations, Title 14, section 15091, subd. (a)(2)).

There are changes or alterations that are within the responsibility and jurisdiction of another public agency and not the jurisdiction of the Central Valley Water Board. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

a.i. Potential Significant Impact:

The Project may result in less than significant impacts with mitigation incorporated to biological resources from Project activities.

a.ii. Facts in Support of Finding:

Mitigation Measure TERR-1

The Project biologist shall monitor the Project site immediately prior to and during construction to identify the presence of invasive plants (those identified by California Invasive Plant Council (Cal-IPC) as having a moderate or high level of invasiveness or plants considered locally invasive) and recommend measures to avoid their inadvertent spread in association with construction and maintenance. The Project biologist shall prepare an invasive plant management plan based on the results of this field survey. The contractor shall be responsible for implementing the recommendations in the management plan. In addition, the contractor shall implement the following

BMPs to prevent the introduction and spread of invasive plant species during construction and maintenance:

- All construction and maintenance equipment shall be washed and cleaned of debris prior to entering the Project area to prevent entry of new invasive plant species to the Project area.
- Straw bales and other vegetative materials used for erosion control shall be certified weed-free.
- All revegetation materials (e.g., seed mixes and mulches) shall consist of native plant species from the Yolo Bypass, certified weed-free, and all seeds and container plants shall be obtained from locally adapted genetic stock that is also free from fungal pathogens (*Phytophthora* spp.)
- In areas requiring weed control, effective methods for removal may vary depending on the species that is being controlled (typical methods include hand removal, mowing, or herbicide application). Herbicides shall be used consistent with Federal, State, and local requirements (including requirements or restrictions on the use of herbicides that are specified by resource agencies to prevent impacts to aquatic habitats, listed plant or wildlife species, or their habitat). All herbicides shall be used under the advisement of a certified Pesticide Control Advisor and shall be applied by an operator with a Qualified Applicator's License.
- Insecticides, herbicides, fertilizers, and other chemicals that could harm special-status plant species or plants that provide habitat for special-status wildlife species shall not be used within 100 feet of such species and shall not be used without prior approval from the Lead Agencies.
- Affected areas shall be replanted with native vegetation approved by the Lead Agencies.

Mitigation Measure TERR-2

Prior to the commencement of construction or ongoing maintenance activities, the Lead Agencies shall designate a Project biologist (a person with, at minimum, a bachelor's degree in biology, ecology, or environmental studies with familiarity with particular species with the potential to be impacted by the Project, including valley elderberry longhorn beetle, giant garter snake, western pond turtle, Swainson's Hawk, Least Bell's Vireo, Western Yellow-Billed Cuckoo, and Bank Swallow) who shall be responsible for overseeing compliance with protective measures for terrestrial biological resources during clearing and work activities within and adjacent to areas of sensitive vegetation communities. The Project biologist shall be familiar with the local vegetation communities, plants, and wildlife and shall maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. The Project biologist may

designate qualified biologists or biological monitors to help oversee Project compliance or conduct focused surveys for special-status species. These biologists shall have familiarity with the species for which they would be conducting focused surveys or monitoring construction activities.

The Project biologist or qualified biologist shall review final plans, designate areas that need temporary fencing, and monitor construction activities within and adjacent to areas with native vegetation communities or special-status plant and animal species. The qualified biologist shall monitor activities within designated areas during critical times, such as vegetation removal, initial ground-disturbing activities, and the installation of BMPs and fencing to protect native species, and shall ensure that all avoidance and minimization measures are properly constructed and followed. The qualified biologist shall check construction barriers or exclusion fencing and shall provide corrective measures to the contractor to ensure the barriers or fencing are maintained throughout construction. The qualified biologist shall have the authority to stop work if a special-status wildlife species is encountered within the Project area during construction. Construction activities shall cease until the Project or qualified biologist determine(s) that the animal will not be harmed or that it has left the construction area on its own. The appropriate regulatory agency(ies) shall be notified within 24 hours of sighting of a special-status wildlife species. The Project or qualified biologist shall conduct pre-maintenance surveys as needed in sensitive habitat areas or areas that could support special-status plant or animal species.

Mitigation Measure TERR-3

Prior to the start of construction, all Project personnel and contractors who will be on site during construction shall complete mandatory worker environmental awareness program training conducted by the Project biologist or a designated qualified biologist. Any new Project personnel or contractors that come onboard after the initiation of construction shall also be required to complete the mandatory worker environmental awareness before they commence with work. The training shall advise workers of potential impacts to sensitive vegetation communities and special-status plant and wildlife species and the potential penalties for impacts to such habitat and species. At a minimum, the program shall include the following topics: occurrences of the special-status species and sensitive vegetation communities in the Project area (including communities subject to United States Army Corps of Engineers (USACE) and California Department of Fish and Wildlife (CDFW) jurisdiction), a physical description, life history, habitat requirements, sensitivity to human activities, legal protection and penalties for violations of Federal and State laws, reporting requirements, work features designed to reduce the impacts, and general plant- and wildlife-protection measures. Construction personnel shall be informed of the procedures to follow should a Federally or State-listed species be encountered during construction. Special-status species that should be covered in the training include valley elderberry

longhorn beetle, giant garter snake, western pond turtle, special-status birds (tricolored blackbird, bank swallow, Swainson's hawk, least bell's vireo, Western yellow-billed cuckoo), migratory birds, special status bats, and American badger. Sensitive vegetation communities that should be covered in the training include black willow thickets, box elder forest, California and hardstem bulrush marsh, Fremont cottonwood forest, mixed hardwood forest, sandbar willow thickets, and valley oak woodland.

Included in this program shall be color photos of the special-status species and sensitive vegetation communities, which shall be shown to Project personnel. Following the education program, the photos shall be posted in the contractor and resident engineer's office, where the photos shall remain through the duration of construction work. Photos of the habitat in which special-status species are found shall also be posted on site. The contractor shall be required to provide the Lead Agencies with evidence of the employee training (e.g., a sign-in sheet) on request. Project personnel and contractors shall be instructed to immediately notify the Project biologist or designated biologist of any incidents that could affect sensitive vegetation communities or special-status species. Incidents could include fuel leaks or injury to any wildlife. The Project biologist shall be responsible for notifying the appropriate regulatory agency within 72 hours of any similar incident.

Mitigation Measure TERR-4

The construction contractor and maintenance personnel shall implement the following general wildlife-protection measures during construction and maintenance:

- Limit construction and maintenance activities to daylight hours to the extent feasible. If nighttime activities are unavoidable, then workers shall direct all lights for nighttime lighting into the work area and shall minimize the lighting of natural habitat areas adjacent to the work area. Light glare shields shall be used to reduce the extent of illumination into sensitive habitats. If the work area is located near surface waters, the lighting shall be shielded such that it does not shine directly into the water.
- Both prior to construction and maintenance, clearing of vegetation, in areas with suitable habitat for special-status bird species shall not be conducted during the nesting season (February 15 through August 31) to avoid impacts on nesting birds, as feasible. If vegetation must be cleared between February 15 and August 31, then pre-construction surveys shall be conducted per MM-TERR-16.
- Confine clearing to the minimal area necessary to facilitate construction and maintenance activities. Dispose of cleared vegetation and spoils daily at a permanent offsite spoils location or at a temporary onsite location that will not create habitat for special-status wildlife species. Spoils and dredged material shall be disposed of at an

approved site or facility in accordance with all applicable Federal, State, and local regulations.

- Maintain equipment to comply with noise standards (e.g., exhaust mufflers, acoustically attenuating shields, shrouds, or enclosures).
- Avoid wildlife entrapment by completely covering or providing escape ramps for all excavated steep-walled holes or trenches more than 1 foot deep at the end of each construction workday. The qualified biologist shall inspect open trenches and holes and shall remove or release any trapped wildlife found in the trenches or holes prior to filling by the construction and maintenance contractors.
- Special-status wildlife can be attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar features; construction equipment; or construction debris left overnight in areas that may be occupied by special-status species that could occupy such structures shall be inspected by a qualified biologist prior to being used for construction. Such inspections shall occur at the beginning of each day's activities for those materials to be used or moved that day. If necessary, and under the direct supervision of the biologist, the structure may be moved up to one time to isolate it from construction activities, until the special-status species has moved from the structure of their own volition, has been captured and relocated, or has otherwise been removed from the structure.
- Capture and relocation of trapped or injured wildlife listed under Endangered Species Act (ESA) or California Endangered Species Act (CESA) can only be performed by personnel with appropriate state and/or federal permits. Any sightings and any incidental take shall be reported to the Lead Agencies via email within one working day of the discovery. A follow-up report shall be sent to these agencies, including dates, locations, habitat description, and any corrective measures taken to protect special-status species encountered. For each special-status species encountered, the biologist shall submit a completed California Natural Diversity Database (CNDDDB) field survey form (or equivalent) to the Lead Agencies no more than 90 days after completing the last field visit to the Project site.
- The Lead Agencies shall be notified within one working day of the discovery of, injury to, or mortality of a special-status species that results from Project-related construction activities or is observed at the Project site. Notification shall include the date, time, and location of the incident or of the discovery of an individual special-status species that is dead or injured. For a special-status species that is injured, general information on the type or extent of injury shall be included. The location of the incident shall be clearly indicated on a USGS 7.5-minute

quadrangle and/or similar map at a scale that will allow others to find the location in the field, or as requested by the Lead Agencies. The biologist is encouraged to include any other pertinent information in the notification.

- Minimize the spread of dust from work sites to sensitive natural communities or sensitive species habitats on adjacent lands by use of a water truck.
- Prior to the start of construction and maintenance activities each day, the Project biologist or designated biologist shall inspect the work area and any equipment or material left on site overnight for special-status wildlife species.
- Observe posted speed limit signs on local roads and observe a 15-mile-per-hour speed limit along ingress and egress routes. Extra caution shall be used on cool days when giant garter snakes may be basking on roads.
- Dispose of food-related and other garbage in wildlife-proof containers and remove the garbage from the Project area daily during the construction and maintenance periods. Vehicles carrying trash will be required to have loads covered and secured to prevent trash and debris from falling onto roads and adjacent properties.
- To avoid injury or death to wildlife, no firearms will be allowed on the Project site except for those carried by authorized security personnel or local, State, or Federal law enforcement officials.
- To prevent harassment, injury, or mortality of sensitive wildlife by dogs or cats, no canine or feline pets will be permitted in the active construction area.
- Plastic monofilament netting or similar material will not be used for erosion control because smaller wildlife may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackifier hydroseeding compounds. This limitation shall be communicated to the contractor through specifications or special provisions included in the construction bid solicitation package.
- Rodenticides and herbicides shall be used in accordance with the manufacturer recommended uses and applications and in such a manner as to prevent primary or secondary poisoning of special-status fish, wildlife, and plant species and depletion of prey populations upon which they depend. All uses of such compounds shall observe label and other restrictions mandated by the United States Environmental Protection Agency (USEPA), the California Department of Pesticide Regulation, and other appropriate State and Federal regulations, as well as additional Project-related restrictions imposed by the Lead Agencies.

- Retain a qualified biologist to be present or on call during construction and maintenance activities with the potential to affect sensitive biological resources. The qualified biologist shall conduct monitoring per MM-TERR-2.

Mitigation Measure TERR-5

All native or sensitive habitat areas outside of and adjacent to the designated Project limits of disturbance shall be designated as Environmentally Sensitive Areas on Project maps. Prior to construction, the Lead Agencies shall delineate the Project limits, including construction, staging, lay-down, and equipment storage areas, and erect the construction boundary, with fencing or flagging, along the perimeter of the identified construction area to protect adjacent sensitive habitats and sensitive plant populations. Environmentally Sensitive Areas shall be clearly delineated with fencing or flagging or other BMPs prior to construction to inform construction personnel where the Environmentally Sensitive Areas are located. The fences and flags shall be marked clearly in the field and confirmed by the Project biologist prior to any clearing, and the marked boundaries shall be maintained throughout the duration of construction work. No personnel, equipment, or debris shall be allowed within the Environmentally Sensitive Areas. Fences and flags shall be installed by the contractor in a manner that does not impact habitats to be avoided and such that it is clearly visible to personnel on foot and operating heavy equipment. Ten days prior to initiating construction, the contractor shall submit to Lead Agencies final plans for initial clearing and grubbing of habitat and Project construction. Temporary construction fences and markers shall be maintained in good repair by the contractor and shall be removed upon completion of Project construction.

No work activities, materials, or equipment storage or access shall be permitted outside the Project limits without permission from the Lead Agencies. All parking and equipment storage by the contractor related to the Project shall be confined to the Project limits. Undisturbed areas and sensitive habitat outside and adjacent to the Project limits shall not be used for parking or equipment storage. Project-related vehicle traffic shall be restricted to the Project limits and established roads and construction access points.

Mitigation Measure TERR-6

All construction-related vehicles and equipment storage shall occur in the designated staging areas. These areas shall not contain native or sensitive vegetation communities and shall not support sensitive plant or wildlife species. Project-related vehicle traffic shall be restricted to established roads and the Project disturbance limits as described above and all motor vehicles operating within the Project limits shall observe a speed limit of 15 miles per hour to avoid striking giant garter snake or other special-status wildlife species. Dirt access roads, haul roads, and spoils areas shall be watered at least twice each day when being used during construction dry periods.

Mitigation Measure TERR-7

Prior to the start of construction activities, valley elderberry longhorn beetle habitat surveys shall be conducted by a qualified biologist that has been approved by the Lead Agencies in the Project construction area and within 165 feet of the Project construction area. All elderberry shrubs with stems one inch or greater in diameter at ground level shall be recorded, tallied by diameter size class, and designated as to whether the elderberry shrub is in a riparian or non-riparian area. Exit hole surveys are not essential in riparian areas but shall be conducted in non-riparian areas. Elderberry shrubs shall be marked with flags for avoidance during construction, if feasible.

Prior to conducting maintenance activities, a qualified biologist shall determine if any elderberry shrubs that are one inch or greater at ground level are present within the maintenance area. If elderberry shrubs smaller than that size are present, they shall be removed or transplanted to an approved off-site mitigation area. If elderberry shrubs one-inch or greater at ground level are present, then the Lead Agencies shall consult with United States Fish and Wildlife Service (USFWS) in accordance with MM-TERR-9 and MM-TERR-10.

Mitigation Measure TERR-8

Elderberry shrubs mapped during pre-construction surveys shall be avoided to the extent practicable during construction activities. For all elderberry shrubs identified for avoidance, an avoidance buffer of 165 feet or more shall be established prior to construction activities. The avoidance buffer shall consist of a physical barrier, such as flags, exclusion fences, or K-Rail barriers, and shall be maintained for the duration of Project construction. The following protective measures shall be taken to ensure that elderberry shrubs in the buffer zone are not impacted:

- Prior to construction, all buffer areas surrounding elderberry shrubs to be avoided shall be fenced and/or flagged as close to the construction limits as feasible. In areas where encroachment of the 165-foot buffer has been approved by USFWS, a minimum setback of at least 20 feet from the dripline of each elderberry shrub shall be provided to avoid damaging or killing the plant. A 20-foot avoidance buffer shall be established around all elderberry shrubs with stems one inch or greater in diameter at ground level during maintenance. These areas shall be avoided by all maintenance personnel and maintenance activities. Mowing shall not occur within five feet of any elderberry stem one inch or greater in diameter at ground level. Vegetation within five feet of any elderberry stem one inch or greater in diameter at ground level shall be removed by hand only.
- The contractor and all Project personnel and contractors that will be on site during construction shall be briefed regarding the status of the beetle and the need to protect its elderberry host plant, the need to

avoid damaging elderberry shrubs and possible penalties for noncompliance with these requirements.

- To the extent feasible, all activities within 165 feet of an elderberry shrub shall be conducted outside of the valley elderberry longhorn beetle flight season (March-July).
- Signs shall be erected every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs shall be clearly readable from 20 feet and must be maintained for the duration of Project construction.
- If there is damage within the 165-foot buffer areas, erosion control measures and revegetation with appropriate native plant species shall be conducted with approval from USFWS.
- No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its elderberry host plant shall be used in the 165-foot buffer areas.
- The Lead Agencies shall provide a written description to USFWS regarding how the buffer areas are to be restored, protected, and maintained after construction is completed.

Mitigation Measure TERR-9

The Lead Agencies shall consult with USFWS prior to any ground disturbance within 165 feet of an elderberry shrub. In areas where encroachment into the 165-foot buffer zone is necessary, a minimum setback of at least 20 feet from the dripline of the elderberry shrub shall be established per MM-TERR-8. The Lead Agencies shall provide USFWS with a map identifying the avoidance area and a list of proposed avoidance measures.

Mitigation Measure TERR-10

The Lead Agencies shall identify measures to relocate (transplant) or replace elderberry shrubs with stems measuring one inch or greater in diameter at ground level if an adequate buffer cannot be provided, if trimming is required, if a shrub cannot be avoided during construction and must be removed, or if indirect effects will result in the death of stems or the entire shrub. The Lead Agencies shall prepare a mitigation plan for impacts to elderberry shrubs. This plan shall include transplantation procedures that comply with USFWS's Framework for Assessing Impacts to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (USFWS 2017). These procedures include requirements for a qualified biologist to perform exit-hole surveys prior to transplanting and to monitor elderberry shrub transplantation, information on timing of transplantation during the non-growing season (approximately

November through mid-February), the need for compliance with the most current version of the American National Standards Institute A300 (Part 6) guidelines for transplanting (<http://www.tcia.org/>), and specific methods to follow during transplantation, including how far to cut back stems, how large a hole to excavate, and proper planting and watering techniques to minimize stress and maximize transplantation survival.

For unavoidable adverse impacts to valley elderberry longhorn beetle or its habitat, compensatory mitigation will be coordinated with USFWS. General guidelines require transplanting elderberry shrubs to designated mitigation areas at a mitigation ratio determined during consultation with USFWS (typically a minimum of 3:1 for acres of suitable riparian habitat that would be permanently impacted and a minimum of 1:1 for acres of occupied elderberry shrubs in non-riparian habitat). In addition, two credits at a USFWS-approved bank shall be purchased for each impacted shrub in riparian areas, and one credit shall be purchased for each impacted shrub in non-riparian areas. Associated native plant species might need to be planted to provide a more diverse native vegetation community at a mitigation ratio determined during consultation with USFWS. Planted and seeded areas might be subject to monitoring and performance standards. Alternatively, mitigation credits might be purchased from an approved mitigation bank. The mitigation plan must be approved by USFWS during formal consultation and could include, but would not necessarily be limited to, identified locations for transplanted or replacement elderberry shrubs, appropriate replacement ratios, and success standards, monitoring, and reporting requirements (per USFWS 2017 guidelines). Consultation with USFWS shall be completed prior to removal, trimming, or thinning of any elderberry shrubs.

Mitigation Measure TERR-11

Impacts to sensitive vegetation communities shall be mitigated through the establishment, enhancement, or preservation of habitat either in the Fremont Weir Wildlife Area (FWWA) or in the Yolo Bypass at a minimum 1:1 ratio based on either acreage or habitat function (riparian communities will be mitigated at a 3:1 ratio). Sensitive vegetation communities include habitats with potential to support Federally and/or State threatened or endangered species, USACE wetlands, and CDFW riparian areas (open water, temperate freshwater floating mat, water primrose wetlands, California and hardstem bulrush marsh, black willow thickets, box elder forest, Fremont cottonwood forest, mixed hardwood forest, and valley oak woodland). Final mitigation ratios will be determined in consultation with each relevant regulatory agency. USACE wetland habitat and valley oak woodland will require a minimum of 1:1 establishment or substantial restoration to comply with Federal wetland policy and local oak woodland policy. Establishment and enhancement will be provided on site where feasible. If sufficient suitable area is not available near the Project impact area, then offsite mitigation options will be pursued. Offsite options may include in-lieu fee payments or purchase of mitigation credits at a

mitigation bank approved by the Lead Agencies, as applicable. A restoration plan shall be prepared for mitigation and onsite restoration of temporary impacts, including detailing of topsoil stockpiling for areas with native vegetation and/or seeds of special-status plants, as feasible. These plans will detail the communities to be restored, locations for restoration, container plant palettes and/or seed mixes, and maintenance and monitoring requirements. Seed mixes shall consist of plant species native to the Project area and shall be free from noxious weed species.

Mitigation Measure TERR-12

The following measures shall be implemented to avoid or minimize impacts to giant garter snake and its aquatic and upland habitats:

- A qualified giant garter snake biologist approved by the Lead Agencies shall be present to monitor construction and maintenance activities in or within 200 feet of suitable giant garter snake aquatic or upland habitat. The qualified biologist shall be present during vegetation removal in giant garter snake habitat and shall walk ahead of the removal of emergent wetland and herbaceous upland vegetation.
- Disturbance to suitable aquatic and upland sites in or near the Project footprint shall be avoided to the extent feasible, and the loss of aquatic habitat and grassland vegetation shall be minimized through adjustments to project design, as practicable.
- The qualified biologist shall conduct pre-construction surveys in suitable giant garter snake habitat for a period of three days prior to the installation of all SWPPP BMPs, vegetation clearing within or adjacent to aquatic habitat, and the establishment of staging areas within 200 feet of aquatic habitat. Within the Project footprint where burrows are present in upland habitat within 200 feet of suitable aquatic habitat, all burrows shall be avoided until the qualified biologist has conducted burrow monitoring for a period of three days and cleared the area. To the extent practicable, construction activities shall be avoided within 200 feet of the banks of giant garter snake aquatic habitat. Ground disturbance shall be confined to the minimal area necessary to facilitate construction activities. To the maximum extent feasible, movement of heavy equipment shall be confined to existing roads.
- The qualified biologist shall conduct giant garter snake surveys if construction activities stop for a period of two weeks or more.
- To the extent practicable, all construction activity in suitable giant garter snake habitat shall be conducted during the giant garter snake active period (May 1 to October 1) to lessen the risk of direct mortality. Only construction or maintenance activities within 200 feet of suitable giant garter snake habitat that have started prior to October 1 shall continue outside the active season, with Lead Agency approval. No

new construction or maintenance work activities within 200 feet of suitable giant garter snake habitat shall be started after October 1.

- Prior to the start of construction activities and during the active period for giant garter snakes (beginning May 1), the qualified biologist shall determine where exclusion fencing will be installed to protect giant garter snake habitat adjacent to the defined Project footprint and minimize the potential for giant garter snakes to enter the construction work area. The construction contractor shall install exclusion fences along the edges of construction areas that are within 200 feet of suitable giant garter snake aquatic habitat. Avoided habitat shall be designated as Environmentally Sensitive Areas on final construction plans. The exclusion fencing shall consist of a material that snakes cannot get through or become entangled in. The exclusion fence shall be buried at least six inches below ground to prevent animals from entering below the fence, with at least 20 inches exposed above ground. The fence shall be inspected daily prior to Project activity for maintenance and shall remain in place throughout the construction period. Maintenance shall include removal of vegetation and debris material that can be used to traverse the fence, patching any holes within the fence, ensuring the fence is intact and upright, and filling new burrows that go under the fence once a qualified biologist has inspected such burrows to ensure no special-status wildlife species are occupying them. Any necessary repairs shall be immediately addressed. If work extends beyond October 1, the exclusion fencing shall be maintained to prevent giant garter snakes from entering the construction limits and utilizing upland areas for overwintering.
- If exclusion fencing is found to be compromised, the qualified biologist shall conduct a survey immediately preceding construction activity that occurs in designated giant garter snake habitat or in advance of any activity that may result in take of the species. The biologist shall search along exclusion fences and in pipes and beneath vehicles before they are moved.
- If a giant garter snake is observed in the construction area, all construction activities shall cease and a qualified biologist shall be notified immediately. If possible, the snake should be allowed to leave on its own and activities shall not resume until the snake has moved out of the area on its own. Alternatively, the qualified biologist may capture and relocate the snake unharmed to suitable aquatic habitat a minimum of 200 feet outside of the work area in a location that is identified by the qualified biologist prior to commencement of construction. If the snake does not leave on its own and cannot be relocated unharmed, construction activities within 200 feet of the snake shall stop to prevent harm to the snake. The Lead Agencies shall be

notified by telephone or email within 24 hours of a giant garter snake observation during construction activities.

- A qualified biologist shall be available on an on-call basis during maintenance activities with the potential to affect giant garter snake. If needed, a qualified biologist shall be maintained on site during maintenance activities to ensure protection of giant garter snake. The biologist shall have the authority to stop work if a giant garter snake is encountered within the maintenance area. If a giant garter snake is observed in the maintenance area, all activities within 200 feet of the snake will stop to prevent harm to the snake.
- After April 15, any dewatered habitat shall be allowed to dry (no standing water) for at least 15 consecutive days prior to excavating or filling of the dewatered habitat.

Mitigation Measure TERR-13

After completion of construction activities, the construction contractor shall remove any temporary fill, construction debris, and stockpiled materials. Giant garter snake aquatic and upland habitat subject to temporary disturbance shall be recontoured to pre-Project conditions as feasible, upland areas (grassland, riparian scrub, riparian forest, and riparian woodland) shall be reseeded with native seed mixes and/or container plant palettes approved by the Lead Agencies, and aquatic vegetation shall be allowed to recolonize. This restoration effort will require maintenance, monitoring, and achievement of success criteria per MM-TERR-11.

Mitigation Measure TERR-14

The permanent loss of giant garter snake aquatic and upland habitat resulting from Project construction shall be compensated for through a combination of onsite and/or offsite restoration, enhancement, and/or purchase of mitigation credits at a conservation bank approved by the Lead Agencies. A qualified biologist familiar with giant garter snake and its habitat that has been approved by the Lead Agencies shall conduct focused habitat assessment surveys in the Project area when final plans and specifications have been completed for the selected alternative. The biologist shall conduct an assessment of the suitability of the habitat to support giant garter snake, including an evaluation of habitat suitability for burrows and foraging. The functions and values of the affected area shall also be evaluated to establish appropriate performance standards for the mitigation site, which shall be documented in a final habitat mitigation plan.

Mitigation Measure TERR-15

A qualified biologist shall conduct surveys for western pond turtle in suitable upland and aquatic habitat within 48 hours prior to the start of construction or maintenance activities. If there is a lapse in construction or maintenance activities of two weeks or more, the area shall be resurveyed within 24 hours

prior to the recommencement of work. If western pond turtles are observed in the Project area during construction, construction activities in the vicinity shall cease until protective measures are implemented or a qualified biologist has determined that western pond turtles will not be harmed. A qualified biologist may move the western pond turtle(s) to a suitable location outside of the Project footprint. The Lead Agencies shall be notified if any western pond turtles are relocated. If western pond turtles are observed in the Project area during maintenance, activities shall be postponed until the turtles have left the work area on their own accord or until a qualified biologist has relocated it to a suitable location outside the work area or determined the turtle will not be disturbed by maintenance activities.

Mitigation Measure TERR-16

Preconstruction nesting bird surveys shall be conducted by a qualified avian biologist within 14 days prior to construction or maintenance activities in all suitable nesting habitats in the Project area if such activities will take place between February 1 and September 30. Nesting surveys shall be conducted in accordance with the recommended timing, methodology, and or/protocol for each federally and/or state-listed bird species. A qualified biologist that has been approved by the Lead Agencies shall conduct passive surveys within 500 feet of proposed construction activities to determine the presence of Western yellow-billed cuckoo, least bell's vireo, bank swallow, and other nesting birds protected by the Migratory Bird Treaty Act or pursuant to Fish and Game Code 3503.5 during the nesting season. Surveys shall also include a 0.5-mile radius outside the Project area for Swainson's hawk. If there is a break in construction of one week or more, surveys shall be conducted prior to the re-initiation of construction.

Nesting birds and offspring shall not be disturbed or killed, and nests and eggs shall not be destroyed. If nesting birds are found, the qualified avian biologist shall establish suitable buffers (no less than 500 feet from an active raptor nest or nest of a federally or state-listed species and no less than 300 feet from other active special-status bird nests) prior to construction or maintenance activities to minimize indirect impacts. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material. The precise buffer distance shall be determined based on the species, type of construction activities, and line of sight to the work area. No work shall be conducted within the buffer. The established buffer(s) shall remain in effect until the young have fledged and are independent or the nest has been abandoned as confirmed by the qualified avian biologist. If non-listed special-status birds are showing signs of agitation within the established buffer(s) due to noise or other effects, the buffer(s) shall be expanded to prevent birds from abandoning their nest. The biologist shall have the authority to halt work if there are any signs of distress or disturbance that may lead to nest abandonment. Work will not resume until corrective measures have been taken or it is determined that continued activity would not

adversely affect nest success. No construction or maintenance activities, including tree removal, shall occur in the buffer zone until the young have fledged or the nest is no longer active, as confirmed by the qualified biologist.

If active Western Yellow-billed Cuckoo or Least Bell's Vireo nests are identified within 500 feet of noise-generating construction or maintenance activities and noise is in excess of 60 dBA (decibel A weighted) hourly Leq (equivalent continuous noise level), or if noise is in excess of ambient noise levels if ambient noise levels exceed 60 dBA hourly Leq, measures will be implemented to reduce noise levels to 60 dBA hourly Leq or to ambient noise levels if ambient noise levels exceed 60 dBA hourly Leq at the nest location. Noise monitoring shall occur during the breeding season and shall be reported daily to the USFWS. A qualified biologist shall ensure that avoidance and minimization measures are implemented such that adverse effects to Western yellow-billed cuckoo and Least Bell's Vireo do not occur because of the adjacent construction activities (e.g., noise and lighting). If the qualified biologist suspects that avoidance and minimization measures are ineffective and Project activities may adversely affect Western yellow-billed cuckoo or least bell's vireo, culpable activities will be suspended within 500 feet of active nesting territories until nesting activity is completed and fledglings are no longer in the area or until effective avoidance and minimization measures can be identified, implemented, and demonstrated to be effective. If measures cannot be identified, implemented, and demonstrated to be effective to avoid adverse effects to these species, then Project construction shall stop until consultation with the USFWS to address unanticipated impacts to these species has been completed.

Mitigation Measure TERR-17

Surveys for roosting special-status bats (including pallid bat, western red bat, and other native bat species) shall be conducted in the Project area by a qualified bat biologist where suitable habitat that might be removed, altered, or indirectly impacted during construction or maintenance is present. A qualified biologist shall conduct a habitat assessment for potentially suitable bat habitat within six months prior to construction activities. In addition, focused bat surveys shall be conducted within 48 hours prior to the start of construction activities and tree removal, irrespective of the time of year construction is to start. If there is a lapse in construction activities of two weeks or greater, the area shall be resurveyed within 24 hours prior to recommencement of work. Surveys shall also be conducted within 48 hours prior to the start of maintenance activities. Locations with potential for roosting or that are suitable as a maternity roost shall be surveyed by a qualified bat biologist using an appropriate combination of structure inspection, exit counts, acoustic surveys, or other methods. Surveys shall be conducted during the appropriate season and time of the day or night to ensure detection of day- and night-roosting bats (i.e., preferably one daytime and one nighttime survey

shall be conducted at each location with suitable roosting habitat during the maternity season, April 15 through August 31, if feasible).

If a bat roost is present in the Project area in a tree that does not need to be removed, a no-disturbance buffer (typically 300 feet) shall be established and maintained throughout construction or during maintenance. If a maternity roost is identified, a no-disturbance buffer shall be established and maintained until a qualified biologist determines that the roost is no longer active.

If a bat roost is detected in a tree that needs to be removed, passive exclusion shall include monitoring the roost for three days to determine whether the roost is active. If the roost is determined by a qualified biologist to support a reproductive female with young, the roost shall be avoided until it is no longer active. If the roost remains active during the three monitoring days and observations confirm it is not a maternity colony, a temporary bat exclusion device shall be installed under the supervision of a qualified bat biologist. At the discretion of the qualified bat biologist, an alternative roosting structure(s) might be constructed and installed prior to installation of exclusion devices. Exclusion shall be conducted between August 31 and October 15 to avoid trapping flightless young inside during the summer months or torpid (overwintering) individuals during the winter. If it cannot be determined by a qualified biologist whether an active roost site supports a maternity colony, the roost site shall not be disturbed, and construction within 300 feet shall be postponed or halted until the roost is vacated and the young are able to fly.

Exclusion efforts shall be monitored on a weekly basis, continued for the duration of Project construction, and removed when no longer necessary. The following measures are also proposed to further reduce the potential for impacts to roosting and foraging special-status bats, including pallid bat and western red bat, and other native bat species, if present:

- All construction or maintenance work conducted near active roosts shall take place during the day to the extent feasible. If this is not feasible, impacts will be minimized by directing lighting and noise away from night roosting and foraging areas to the extent feasible.
- Combustion equipment (such as generators, pumps, and vehicles) shall not be parked or operated near an active roost. Construction and maintenance personnel shall not be present directly under a roosting colony. In addition, care will be taken to ensure that construction and maintenance activities do not severely restrict airspace access to the roosts.
- Tree trimming and/or tree removal associated with construction or maintenance in areas with suitable bat habitat shall only be conducted during seasonal periods of bat activity (from August 31 through October 15, a period prior to hibernation when young are self-sufficiently volant, and from March 1 to April 15 to avoid hibernating

bats and prior to formation of maternity colonies), as feasible, under supervision of a qualified biologist.

- Trees shall be trimmed and/or removed in a two-phased removal system conducted over two consecutive days under the supervision of a qualified biologist. Prior to tree removal or trimming, each tree shall be shaken gently, and several minutes shall pass before felling trees or limbs to allow bats time to arouse and leave the tree. The biologist shall search downed vegetation for dead or injured bats and report any dead or injured special-status bats to the Lead Agencies. On the first day (in the afternoon), limbs and branches shall be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree shall be removed.
- Project proponents shall consult with a qualified bat biologist to determine suitable buffers around roost and/or hibernaculum sites. Buffers may vary depending on species and Project activity being performed.
- If bats are showing signs of distress, construction and maintenance activities shall be modified to prevent bats from abandoning their roost or altering their feeding behavior, as determined by a qualified biologist. At any time, the qualified biologist shall have the authority to stop work if there are any signs of distress or disturbance that could lead to roost abandonment. Construction and maintenance work shall not continue until corrective measures have been taken or it is determined by a qualified biologist that continued activity would not adversely affect roost success.

Mitigation Measure TERR-18

A qualified biologist shall conduct pre-construction surveys for American badger and badger dens in suitable habitat at least 48 hours prior to the start of construction activities. If there is a lapse in construction activities of two weeks or greater, the area shall be resurveyed within 24 hours prior to the recommencement of work. If a potential American badger den is identified in the Project area, an appropriate avoidance buffer shall be established, and Project activities shall avoid American badger dens and associated habitat. If avoidance is not possible, then den exclusion shall take place between September 1 and January 1. The Project shall mitigate for the loss of habitat by preserving in perpetuity existing occupied habitat at a 1:1 ratio.

Mitigation Measure TERR-19

A qualified biologist shall conduct pre-construction surveys for special-status plant species with the potential to occur in the alkaline grassland portions of the Project construction area (heartscale, San Joaquin spearscale, Heckard's

pepper grass, California alkali grass, and saline clover). Surveys shall be conducted during the flowering period for each special-status plant species. If one or more special-status plant species are detected, then a qualified biologist shall flag populations that can be avoided, monitor activities near special-status plant species populations during construction, monitor collection of seeds from populations that cannot be avoided, monitor topsoil collection in areas with special-status plants (where feasible), and monitor replacement of topsoil and/or seeding of special-status plant species after construction is completed.

Mitigation Measure FISH-1

As mitigation for loss of riparian and shaded riverine aquatic (SRA) habitat, degraded habitat would be restored or preserved to provide riparian and/or SRA habitat at or near the areas affected by construction of the intake facilities. If sufficient suitable area is not available near the Project Area, then offsite mitigation options will be pursued. Proposed restoration activities would include re-vegetation with native riparian species to provide SRA and/or riparian habitat that would provide instream or overhead cover for fish species of focused evaluation. As a component of SRA habitat, riparian tree species, such as alders, cottonwoods, and willows, would be planted. In addition to habitat restoration actions, due to the importance of instream woody material (IWM) to juvenile fishes in the Sacramento River (USFWS 2000), any IWM that is moved or altered by construction or maintenance activities would stay on site or be replaced with a functional equivalent to the extent practicable. The specific restoration activities and mitigation ratios would depend on considerations that are not known at this time, including the location and environmental setting of the location where the restoration will occur or if offsite mitigation options are pursued. However, monitoring of restoration actions would be conducted for 15 years to ensure that restored habitat is functioning as intended, and is able to provide the same or increased areal extent of SRA habitat of the same or higher quality than the SRA habitat which was degraded or removed.

Mitigation Measure FISH-2

If an impact pile driver is necessary to construct the cofferdam in the wet, mitigation measures would be implemented to reduce the underwater noise, such as placing a bubble curtain system underwater. This mitigation measure would also include underwater sound monitoring during impact pile-driving activities to minimize the potential for sound levels to exceed those which may adversely affect fish. Because both juvenile and adult life stages of fish species of focused evaluation may be present during pile driving in the Sacramento River, underwater noise thresholds to be applied include a peak level of 206 dB and an accumulated sound exposure level (SEL) of 183 dB.

Mitigation Measure FISH-3

Implementation of a Fish Rescue and Salvage Plan would limit the number of fishes that may potentially be entrained and stranded during construction. A Fish Rescue and Salvage Plan would be prepared and approved by the Lead Agencies and implemented before construction to minimize the number of fish stranded within the cofferdam during placement and removal and to minimize fish stranding associated with dewatering activities in the Tule Canal. It also is anticipated that this plan would stipulate that at least one resource agency biologist shall be on site to assist with fish rescue activities and ensure that cofferdam construction and removal procedures have been implemented according to resource agency standards and protocols. A list of approved equipment (e.g., dip nets, seines, backpack electrofishers, fyke nets) will be included in the Fish Rescue and Salvage Plan. Equipment used for the stranding event will be chosen at the discretion of the onsite biologist.

Mitigation Measure FISH-4

The construction contractor and operations and maintenance personnel shall implement the following general fish-protection measures during construction:

- Limit construction and maintenance activities to daylight hours.
- Construction activities will occur outside of the flood season (i.e., during April 15 through November 1).
- Confine clearing to the minimal area necessary to facilitate construction and maintenance activities.
- Clearly delineate the Project area limits by using fencing, flagging, or other means prior to construction activities.
- Keep construction equipment and materials as far away from suitable aquatic and riparian habitat as practicable.
- Retain a qualified biologist (approved by Lead Agencies) to be present or on call during construction and maintenance activities with the potential to affect sensitive biological resources. The biological monitor shall be on site during ground-disturbing activities occurring in the wet or adjacent to potential fish-bearing waterbodies. The biological monitor shall ensure that any construction barrier is maintained, and construction activities allow for fish species in the vicinity to move away from the construction area on their own volition.

Mitigation Measure FISH-5

To mitigate for the potential delay or blockage of adult fish passage in the Tule Canal associated with the proposed water control structures and bypass channels, hydraulic and fish passage monitoring would be conducted downstream of the water control structures and in the bypass channels. Monitoring activities would include telemetry of tagged adult white sturgeon (as a surrogate for green sturgeon) approaching and passing through the bypass channels and measurement of depths and velocities downstream of

and within the bypass channels. Monitoring would be conducted for a specified number of years per the MMRP to ensure that the water control structures and fish passage facilities are operating and functioning to provide suitable fish passage conditions. Performance objectives would include providing suitable passage conditions for adult salmon and sturgeon 100 percent of the time that passage is expected to be provided under existing conditions and providing successful passage to all tagged adult sturgeon attempting to migrate upstream, as described below.

The percentage of successfully tagged sturgeon will be quantified for the first three years of operation. If less than 100 percent of tagged sturgeon successfully pass through the bypass channels during the first three-year period of operation, operations-related and structural modifications of the facility will be considered and evaluated for an additional three years. If less than 100 percent of tagged sturgeon successfully pass through the modified bypass channel, the Tule Canal water control structures operation will be restricted to an open position during the sturgeon migration period (after February 15) for an additional three-year period. During these initial nine years, the percentage of successfully tagged fish will be quantified. If the percentage of successful pass attempts by tagged sturgeon is greater with the water control structures remaining open, they will be left open when sturgeon are anticipated to be present, beginning February 15 of each year. If sturgeon passage does not increase during this period, structural changes to the water control structures and bypass channels may be scoped and evaluated through an independent NEPA and CEQA process, which is not part of the Project alternative.

As part of this measure, attraction flows in the bypass channels would be monitored in comparison to flows at Knights Landing Ridge Cut to assess whether the attraction flows in the bypass channels were sufficient to attract adult fish species of focused evaluation such as green sturgeon, white sturgeon, Chinook salmon, and steelhead.

In consultation with CDFW, National Marine Fisheries Service (NMFS) and USFWS, tagging and monitoring of additional fish species, such as Chinook salmon, steelhead, Sacramento splittail, and Pacific lamprey, would occur to assess attraction and passage efficiency at the bypass channels.

- (3) Findings regarding significant water quality or supply impacts being authorized due to specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers that cannot feasibly be mitigated to a less than significant level. (Public Resources Code, section 21081, subd. (a)(3); California Code of Regulations, Title 14, section 15091, subd. (a)(3).)

Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers,

make infeasible the mitigation measures or project alternatives identified in the FEIR.

a.i. Significant Effects:

The Project may result in significant and unavoidable impacts to water quality impacts from Project-related flow through the bypass that increases the rate and area of inundation and increase the amount of sediment and constituencies of concern entering the bypass.

a.ii. Facts in Support of Finding:

Mitigation Measure WQ-4

The Lead Agencies shall develop and implement a program to reduce, minimize, or eliminate increases in water quality constituents. This mitigation measure will be focused on mercury and methylmercury since other water quality parameters are not likely to be adversely affected.

The program shall develop a monitoring plan, including frequent sampling and reporting, particularly for existing constituents of concern. The Lead Agencies shall coordinate with the implementation of the current Total Maximum Daily Loads (TMDLs) to share monitoring information and contribute to the efforts to reduce constituents of concern within the Yolo Bypass. Monitoring efforts could include collection of water quality (through the water column), soil, and fish and invertebrate tissue monitoring within the Yolo Bypass and the Delta. If monitoring levels are found to be above water quality objectives, Lead Agencies will consider means to reduce discharges throughout the bypass region.

As an example, monitoring information may identify time periods where increased inundation is associated with sharp increases in methylmercury production. In these cases, operations of the gated notch could be managed to limit the inundation associated with increased methylmercury production.

D. Statement of Overriding Considerations

The Department of Water Resources FEIR identifies certain significant impacts to the environment that cannot be avoided or substantially lessened with the application of feasible mitigation measures or feasible alternatives. Because there are significant and unavoidable impacts the Central Valley Water Board provides this Statement of Overriding Considerations in compliance with CEQA. (Public Resources Code, section 21081, subd (b); California Code of Regulations, Title 14, section 15093.)

The significant and unavoidable impacts and the benefits related to implementing the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project are disclosed in the Department of Water Resources FEIR, CEQA Findings of Fact, and Statement of Overriding Considerations. The unavoidable impacts to water quality are discussed in subsection C above.

The Central Valley Water Board has considered the economic, legal, social, technological, and other benefits of the Project against its significant unavoidable impacts to water quality and finds that the specific economic, legal, social, and technological benefits of implementing the Project outweigh the significant and unavoidable impacts to water quality.

E. Determination

The Central Valley Water Board has reviewed and considered the environmental document and supplemental information provided by the Department of Water Resources and has reached its own conclusion to approve this Project. The Central Valley Water Board will file a NOD with the SCH within five (5) working days from the issuance of this Order. (California Code of Regulations, Title 14, section 15096.)

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REPORTS AND NOTIFICATION REQUIREMENTS

I. Report Submittal Instructions

- A.** Check the box on the Report and Notification Cover Sheet next to the report or notification you are submitting. **(See your Order for specific reports required for your Project)**
- **Part A (Monthly & Annual Reports):** These reports will be submitted monthly and annually until a Notice of Project Complete Letter is issued.
 - **Part B (Project Status Notifications):** Used to notify the Central Valley Water Board of the status of the Project schedule that may affect Project billing.
 - **Part C (Conditional Notifications and Reports):** Required on a case by case basis for accidental discharges of hazardous materials, violation of compliance with water quality standards, notification of in-water work, or other reports.
- B.** Sign the Report and Notification Cover Sheet and attach all information requested for the Report Type.
- C.** Electronic Report Submittal Instructions:
- Submit signed Report and Notification Cover Sheet and required information via email to: centralvalleysacramento@waterboards.ca.gov and cc: Jordan.Hensley@waterboards.ca.gov
 - Include in the subject line of the email:
ATTN: Jordan Hensley; Project Name; and WDID No. 5A57CR00195

III. Definition of Reporting Terms

- A. Active Discharge Period:** The active discharge period begins with the effective date of this Order and ends on the date that the Permittee receives a Notice of Completion of Discharges Letter or, if no post-construction monitoring is required, a Notice of Project Complete Letter. The Active Discharge Period includes all elements of the Project including site construction and restoration, and any Permittee responsible compensatory mitigation construction.
- B. Request for Notice of Completion of Discharges Letter:** This request by the Permittee to the Central Valley Water Board staff pertains to projects that have post construction monitoring requirements, e.g. if site restoration was required to be monitored for 5 years following construction. Central Valley Water Board staff will review the request and send a Completion of Discharges Letter to the Permittee upon approval. This letter will initiate the post-discharge monitoring period and a change in fees from the annual active discharge fee to the annual post-discharge monitoring fee.
- C. Request for Notice of Project Complete Letter:** This request by the Permittee to the Central Valley Water Board staff pertains to projects that either have completed post-construction monitoring and achieved performance standards or have no post-construction monitoring requirements, and no further Project activities are planned. Central Valley Water Board staff will review the request and send a Project Complete Letter to the Permittee upon approval. Termination of annual invoicing of fees will correspond with the date of this letter.
- D. Post-Discharge Monitoring Period:** The post-discharge monitoring period begins on the date of the Notice of Completion of Discharges Letter and ends on the date of the Notice of Project Complete Letter issued by the Central Valley Water Board staff. The Post-Discharge Monitoring Period includes continued water quality monitoring or compensatory mitigation monitoring.
- E. Effective Date:** 7 October 2020

IV. Map/Photo Documentation Information

When submitting maps or photos, please use the following formats.

A. Map Format Information:

Preferred map formats of at least 1:24000 (1" = 2000') detail (listed in order of preference):

- **GIS shapefiles:** The shapefiles must depict the boundaries of all project areas and extent of aquatic resources impacted. Each shape should be attributed with the extent/type of aquatic resources impacted. Features and boundaries should be accurate to within 33 feet (10 meters). Identify datum/projection used and if possible, provide map with a North American Datum of 1983 (NAD83) in the California Teale Albers projection in feet.

- **Google KML files** saved from Google Maps: My Maps or Google Earth Pro. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. Include URL(s) of maps. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
 - **Other electronic format** (CAD or illustration format) that provides a context for location (inclusion of landmarks, known structures, geographic coordinates, or USGS DRG or DOQQ). Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
 - Aquatic resource maps marked on paper **USGS 7.5-minute topographic maps** or **Digital Orthophoto Quarter Quads (DOQQ)** printouts. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
- B. Photo-Documentation:** Include a unique identifier, date stamp, written description of photo details, and latitude/longitude (in decimal degrees) or map indicating location of photo. Successive photos should be taken from the same vantage point to compare pre/post construction conditions.

V. Report and Notification Cover Sheet

Project: Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project
Permittee: Department of Water Resources
WDID: 5A57CR00195
Reg. Meas. ID: 438962
Place ID: 867746
Order Effective Date: 7 October 2020
Order Expiration Date: 6 October 2025

VI. Report Type Submitted

A. Part A – Project Reporting

Report Type 1 Monthly Report
Report Type 2 Annual Report

B. Part B – Project Status Notifications

Report Type 3 Commencement of Construction
Report Type 4 Request for Notice of Completion of Discharges Letter
Report Type 5 Request for Notice of Project Complete Letter

C. Part C – Conditional Notifications and Reports

Report Type 6 Accidental Discharge of Hazardous Material Report
Report Type 7 Violation of Compliance with Water Quality Standards Report
Report Type 8 In-Water Work/Diversions Water Quality Monitoring Report
Report Type 9 Modifications to Project Report
Report Type 10 Transfer of Property Ownership Report
Report Type 11 Transfer of Long-Term BMP Maintenance Report

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

Print Name¹ **Affiliation and Job Title**

Signature **Date**

¹STATEMENT OF AUTHORIZATION (include if authorization has changed since application was submitted)

I hereby authorize _____ to act in my behalf as my representative in the submittal of this report, and to furnish upon request, supplemental information in support of this submittal.

Permittee's Signature **Date**

***This Report and Notification Cover Sheet must be signed by the Permittee or a duly authorized representative and included with all written submittals.**

A. Part A – Project Reporting

1. Report Type 1 - Monthly Report

- a. Report Purpose** - Notifies Central Valley Water Board staff of the Project status and environmental compliance activities on a monthly basis.
- b. When to Submit** - On the 1st day of each month after the submittal of the Commencement of Construction Notification until a Notice of Project Complete Letter is issued to the Permittee.
- c. Report Contents** -
 - i. Construction Summary

Describe Project progress and schedule including initial ground disturbance, site clearing and grubbing, road construction, site construction, and the implementation status of construction storm water Best Management Practices (BMPs). Best Management Practices (BMPs) is a term used to describe a type of water pollution or environmental control. If construction has not started, provide estimated start date.
 - ii. Event Summary

Describe distinct Project activities and occurrences, including environmental monitoring, surveys, and inspections.
 - iii. Photo Summary

Provide photos of Project activities. For each photo, include a unique site identifier, date stamp, written description of photo details, and latitude/longitude (in decimal degrees) or map indicating location of photo. Successive photos should be taken from the same vantage point to compare pre/post construction conditions.
 - iv. Compliance Summary
 - List name and organization of environmental surveyors, monitors, and inspectors involved with monitoring environmental compliance for the reporting period.
 - List associated monitoring reports for the reporting period.
 - Summarize observed incidences of non-compliance, compliance issues, minor problems, or occurrences.
 - Describe each observed incidence in detail. List monitor name and organization, date, location, type of incident, corrective action taken (if any), status, and resolution.

2. Report Type 2 - Annual Report

- a. **Report Purpose** - Notify the Central Valley Water Board staff of Project status during both the active discharge and post-discharge monitoring periods.
- b. **When to Submit** - Annual reports shall be submitted each year on the 1st day of November. Annual reports shall continue until a Notice of Project Complete Letter is issued to the Permittee.
- c. **Report Contents** - The contents of the annual report shall include the topics indicated below for each project period. Report contents are outlined in Annual Report Topics below.

During the Active Discharge Period

- **Topic 1: Construction Summary**
- **Topic 2: Mitigation for Temporary Impacts Status**
- **Topic 3: Compensatory Mitigation for Permanent Impacts Status**

During the Post-Discharge Monitoring Period

- **Topic 2: Mitigation for Temporary Impacts Status**
- **Topic 3: Compensatory Mitigation for Permanent Impacts Status**

- i. Annual Report Topic 1 - Construction Summary

When to Submit - With the annual report during the Active Discharge Period.

Report Contents - Project progress and schedule including initial ground disturbance, site clearing and grubbing, road construction, site construction, and the implementation status of construction storm water best management practices (BMPs). If construction has not started, provide estimated start date and reasons for delay.

- 1) Map showing general Project progress.
- 2) If applicable:
 - a) Summary of Conditional Notification and Report Types 6 and 7 (Part C below).
 - b) Summary of Certification Deviations. See Certification Deviation Attachment for further information.

- ii. Annual Report Topic 2 - Mitigation for Temporary Impacts Status

When to Submit - With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.

Report Contents -

- 1) Planned date of initiation and map showing locations of mitigation for temporary impacts to waters of the state and all upland areas of temporary disturbance which could result in a discharge to waters of the state.
- 2) If mitigation for temporary impacts has already commenced, provide a map and information concerning attainment of performance standards contained in the restoration plan.
- iii. Annual Report Topic 3 - Compensatory Mitigation for Permanent Impacts Status

When to Submit - With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.

Report Contents - *If not applicable report N/A.

1) Part A. Permittee Responsible

- a) Planned date of initiation of compensatory mitigation site installation.
- b) If installation is in progress, a map of what has been completed to date.
- c) If the compensatory mitigation site has been installed, provide a final map and information concerning attainment of performance standards contained in the compensatory mitigation plan.

2) Part B. Mitigation Bank or In-Lieu Fee

- a) Status or proof of purchase of credit types and quantities.
- b) Include the name of bank/ILF Program and contact information.
- c) If ILF, location of project and type if known.

B. Part B – Project Status Notifications

1. Report Type 3 - Commencement of Construction

- a. **Report Purpose** - Notify Central Valley Water Board staff prior to the start of construction.
- b. **When to Submit** - Must be received at least seven (7) days prior to start of initial ground disturbance activities.
- c. **Report Contents** -
 - i. Date of commencement of construction.
 - ii. Anticipated date when discharges to waters of the state will occur.
 - iii. Project schedule milestones including a schedule for onsite compensatory mitigation, if applicable.
 - iv. Construction Storm Water General Permit WDID No.

- v. Proof of purchase of compensatory mitigation for permanent impacts from the mitigation bank or in-lieu fee program.

2. Report Type 4 - Request for Notice of Completion of Discharges Letter

- a. Report Purpose** - Notify Central Valley Water Board staff that post-construction monitoring is required and that active Project construction, including any mitigation and permittee responsible compensatory mitigation, is complete.
- b. When to Submit** - Must be received by Central Valley Water Board staff within thirty (30) days following completion of all Project construction activities.
- c. Report Contents** -
 - i. Status of storm water Notice of Termination(s), if applicable.
 - ii. Status of post-construction storm water BMP installation.
 - iii. Pre- and post-photo documentation of all Project activity sites where the discharge of dredge and/or fill/excavation was authorized.
 - iv. Summary of Certification Deviation discharge quantities compared to initial authorized impacts to waters of the state, if applicable.
 - v. An updated monitoring schedule for mitigation for temporary impacts to waters of the state and permittee responsible compensatory mitigation during the post-discharge monitoring period, if applicable.

3. Report Type 5 - Request for Notice of Project Complete Letter

- a. Report Purpose** - Notify Central Valley Water Board staff that construction and/or any post-construction monitoring is complete, or is not required, and no further Project activity is planned.
- b. When to Submit** - Must be received by Central Valley Water Board staff within thirty (30) days following completion of all Project activities.
- c. Report Contents** -
 - i. Part A: Mitigation for Temporary Impacts
 - 1) A report establishing that the performance standards outlined in the restoration plan have been met for Project site upland areas of temporary disturbance which could result in a discharge to waters of the state.
 - 2) A report establishing that the performance standards outlined in the restoration plan have been met for restored areas of temporary impacts to waters of the state. Pre- and post-photo documentation of all restoration sites.
 - ii. Part B: Permittee Responsible Compensatory Mitigation

- 1) A report establishing that the performance standards outlined in the compensatory mitigation plan have been met.
 - 2) Status on the implementation of the long-term maintenance and management plan and funding of endowment.
 - 3) Pre- and post-photo documentation of all compensatory mitigation sites.
 - 4) Final maps of all compensatory mitigation areas (including buffers).
- iii. Part C: Post-Construction Storm Water BMPs and Monitoring
- 1) Date of storm water Notice of Termination(s), if applicable.
 - 2) Report status and functionality of all post-construction BMPs.

C. Part C – Conditional Notifications and Reports

1. Report Type 6 - Accidental Discharge of Hazardous Material Report

- a. **Report Purpose** - Notifies Central Valley Water Board staff that an accidental discharge of hazardous material has occurred.
- b. **When to Submit** - Within five (5) working days of notification to the Central Valley Water Board of an accidental discharge. Continue reporting as required by Central Valley Water Board staff.
- c. **Report Contents** -
 - i. The report shall include the OES Incident/Assessment Form, a full description and map of the accidental discharge incident (i.e. location, time and date, source, discharge constituent and quantity, aerial extent, and photo documentation). If applicable, the OES Written Follow-Up Report may be substituted.
 - ii. If applicable, any required sampling data, a full description of the sampling methods including frequency/dates and times of sampling, equipment, locations of sampling sites.
 - iii. Locations and construction specifications of any barriers, including silt curtains or diverting structures, and any associated trenching or anchoring.

2. Report Type 7 - Violation of Compliance with Water Quality Standards Report

- a. **Report Purpose** - Notifies Central Valley Water Board staff that a violation of compliance with water quality standards has occurred.
- b. **When to Submit** - The Permittee shall report any event that causes a violation of water quality standards within three (3) working days of the noncompliance event notification to Central Valley Water Board staff.

- c. **Report Contents** - The report shall include: the cause; the location shown on a map; and the period of the noncompliance including exact dates and times. If the noncompliance has not been corrected, include: the anticipated time it is expected to continue; the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and any monitoring results if required by Central Valley Water Board staff.

3. Report Type 8 - In-Water Work and Diversions Water Quality Monitoring Report

- a. **Report Purpose** - Notifies Central Valley Water Board staff of the start and completion of in-water work. Reports the sampling results during in-water work and during the entire duration of temporary surface water diversions.
- b. **When to Submit** – At least forty-eight (48) hours prior to the start of in-water work. Within three (3) working days following the completion of in-water work. Surface water monitoring reports to be submitted two (2) weeks on initiation of in-water construction and during entire duration of temporary surface water diversions. Continue reporting in accordance with the approved water quality monitoring plan or as indicated in XIV.C.3.
- c. **Report Contents** - As required by the approved water quality monitoring plan or as indicated in XIV.C.3.

4. Report Type 9 - Modifications to Project Report

- a. **Report Purpose** - Notifies Central Valley Water Board staff if the Project, as described in the application materials, is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority.
- b. **When to Submit** - If Project implementation as described in the application materials is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority.
- c. **Report Contents** - A description and location of any alterations to Project implementation. Identification of any Project modifications that will interfere with the Permittee's compliance with the Order.

5. Report Type 10 - Transfer of Property Ownership Report

- a. **Report Purpose** - Notifies Central Valley Water Board staff of change in ownership of the Project or Permittee-responsible mitigation area.
- b. **When to Submit** - At least 10 days prior to the transfer of ownership.
- c. **Report Contents** -

- i. A statement that the Permittee has provided the purchaser with a copy of this Order and that the purchaser understands and accepts:
 - 1) the Order's requirements and the obligation to implement them or be subject to administrative and/or civil liability for failure to do so; and
 - 2) responsibility for compliance with any long-term BMP maintenance plan requirements in this Order. Best Management Practices (BMPs) is a term used to describe a type of water pollution or environmental control
- ii. A statement that the Permittee has informed the purchaser to submit a written request to the Central Valley Water Board to be named as the permittee in a revised order.

6. Report Type 11 - Transfer of Long-Term BMP Maintenance Report

- a. **Report Purpose** - Notifies Central Valley Water Board staff of transfer of long-term BMP maintenance responsibility.
- b. **When to Submit** - At least 10 days prior to the transfer of BMP maintenance responsibility.
- c. **Report Contents** - A copy of the legal document transferring maintenance responsibility of post-construction BMPs.

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SIGNATORY REQUIREMENTS

All Documents submitted in compliance with this Order shall meet the following signatory requirements:

- A.** All applications, reports, or information submitted to the Central Valley Water Quality Control Board (Central Valley Water Board) must be signed and certified as follows:
 - 1.** For a corporation, by a responsible corporate officer of at least the level of vice-president.
 - 2.** For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
 - 3.** For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

- B.** A duly authorized representative of a person designated in items 1.a through 1.c above may sign documents if:
 - 1.** The authorization is made in writing by a person described in items 1.a through 1.c above.
 - 2.** The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - 3.** The written authorization is submitted to the Central Valley Water Board Staff Contact prior to submitting any documents listed in item 1 above.

- C.** Any person signing a document under this section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

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CERTIFICATION DEVIATION PROCEDURES

I. Introduction

These procedures are put into place to preclude the need for Order amendments for minor changes in the Project routing or location. Minor changes or modifications in project activities are often required by the Permittee following start of construction. These deviations may potentially increase or decrease impacts to waters of the state. In such cases, a Certification Deviation, as defined in Section K of the Order, may be requested by the Permittee as set forth below:

II. Process Steps

- A. Who may apply:** The Permittee or the Permittee's duly authorized representative or agent (hereinafter, "Permittee") for this Order.
- B. How to apply:** By letter or email to the 401 staff designated as the contact for this Order.
- C. Certification Deviation Request:** The Permittee will request verification from the Central Valley Water Board staff that the project change qualifies as a Certification Deviation, as opposed to requiring an amendment to the Order. The request should:
1. Describe the Project change or modification:
 - a. Proposed activity description and purpose;
 - b. Why the proposed activity is considered minor in terms of impacts to waters of the state;
 - c. How the Project activity is currently addressed in the Order; and,
 - d. Why a Certification Deviation is necessary for the Project.
 2. Describe location (latitude/longitude coordinates), the date(s) it will occur, as well as associated impact information (i.e., temporary or permanent, federal or non-federal jurisdiction, water body name/type, estimated impact area, etc.) and minimization measures to be implemented.
 3. Provide all updated environmental survey information for the new impact area.
 4. Provide a map that includes the activity boundaries with photos of the site.
 5. Provide verification of any mitigation needed according to the Order conditions.
 6. Provide verification from the CEQA Lead Agency that the proposed changes or modifications do not trigger the need for a subsequent environmental document, an addendum to the environmental document, or a supplemental EIR. (Cal. Code Regs., tit. 14, §§ 15162-15164.)
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D. Post-Discharge Certification Deviation Reporting:

1. Within 30 calendar days of completing the approved Certification Deviation activity, the Permittee will provide a post-discharge activity report that includes the following information:
 - a. Activity description and purpose;
 - b. Activity location, start date, and completion date;
 - c. Erosion control and pollution prevention measures applied;
 - d. The net change in impact area by water body type(s) in acres, linear feet and cubic yards;
 - e. Mitigation plan, if applicable; and,
 - f. Map of activity location and boundaries; post-construction photos.

E. Annual Summary Deviation Report:

1. Until a Notice of Completion of Discharges Letter or Notice of Project Complete Letter is issued, include in the Annual Project Report (see Construction Notification and Reporting attachment) a compilation of all Certification Deviation activities through the reporting period with the following information:
 - a. Site name(s);
 - b. Date(s) of Certification Deviation approval;
 - c. Location(s) of authorized activities;
 - d. Impact area(s) by water body type prior to activity in acres, linear feet and cubic yards, as originally authorized in the Order;
 - e. Actual impact area(s) by water body type in, acres, linear feet and cubic yards, due to Certification Deviation activity(ies);
 - f. The net change in impact area by water body type(s) in acres, linear feet and cubic yards; and
 - g. Mitigation to be provided (approved mitigation ratio and amount).