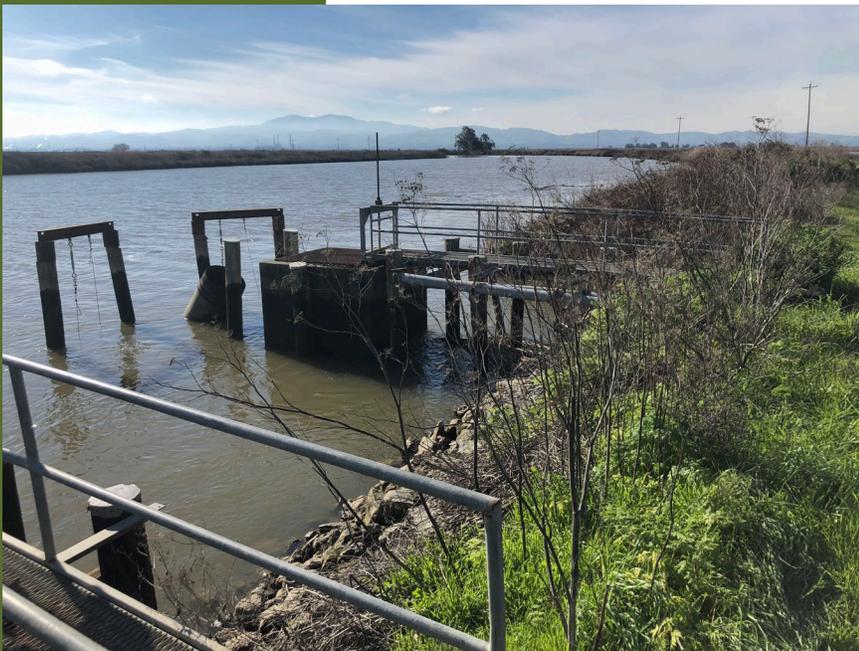




Montezuma Slough Fish Screen Replacement Project

Delta Consistency Determination: Detailed Findings



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1.0 INTRODUCTION

The Montezuma Slough Fish Screen Replacement Project (project) proposes to improve water control infrastructure and associated fish screens in the Grizzly Island Wildlife Area (GIWA). The GIWA is owned by the California Department of Fish and Wildlife (CDFW) and is located within the Suisun Marsh, the largest contiguous estuarine marsh in the United States. This document details findings of the project as a covered action consistent with the Delta Plan, pursuant to Section 85057.5 of the California Water Code.

1.1 Project Background

The purpose of the project is to meet the water delivery and operational needs of the GIWA, enhance interior water conveyance with the installation of additional water control structures, and protect native resident and anadromous fish populations located in Montezuma Slough. The project would replace the existing deteriorated and outdated intake and fish screen facilities with modern technology and corrosive resistant design and would relocate the water intake and fish screen facilities to increase water delivery reliability. In its current location the water intake would convey water into a deteriorating interior ditch that is subject to berm failure. If the berms adjacent to the delivery ditch are further damaged, water delivery to much of GIWA could be temporarily compromised until the berms are repaired. The new location would bypass the interior ditch and deliver water directly into Grizzly Island Ditch. Grizzly Island Ditch is the main water conveyance throughout the GIWA and provides improved access for CDFW maintenance staff, thus improving the overall reliability of water delivery on GIWA.

The project is located in the Suisun Marsh on Grizzly Island, at the southeast end of Grizzly Island Road within the GIWA (Figure 1). The 82-acre project area encompasses a permanent pond, abutting levee roads, and is bound by Montezuma Slough to the east and Grizzly Island Ditch to the south (Figure 2). The latitude and longitude of the approximate center of the project area are 38°05'52.69" North and 121° 53'56.07" West. The project area is within Assessor Parcel Numbers 004-623-0040 and 004-623-0030 in Solano County, California.

1.2 CEQA Compliance

An Environmental Impact Statement/Environmental Impact Report (EIS/EIR) was prepared for the Suisun Marsh Habitat Management, Preservation, and Restoration Plan (SMP) in compliance with the National Environmental Protection Act (NEPA) and the California Environmental Quality Act (CEQA) and certified on December 22, 2011 (State Clearinghouse No. 2003112039). A copy of the Notice of Determination (NOD) was filed with the State Clearinghouse on December 23, 2011. An electronic copy of the SMP EIS/EIR is available online: <https://suisunrcd.org/permits/> (U.S. Bureau of Reclamation, et al., 2011).

The project includes minor modifications to the SMP including the use of exterior sheet pile cofferdams within Montezuma Slough (a tidal slough) and the use of vibratory hammers to install and remove sheet piles. An Addendum was prepared to evaluate the potential effects of the proposed project and determined that the proposed modifications would not result in any new or substantially more significant environmental impacts than those previously identified in the EIS/EIR. No subsequent environmental review is required pursuant to Section 15162 of the CEQA Guidelines.

2.0 PROJECT DESCRIPTION

The project consists of replacement and relocation of existing deteriorated water intake and fish screen facilities, as well as installation of new drainpipes, various interior water control infrastructure improvements, installation of riprap, and interior berm improvements. Each project component is described in the following sections and is shown in Figure 3. See Appendix A for the design plan set.

2.1 Water Intake and Fish Screen Relocation and Replacement

Replacement water intakes and associated fish screens would be constructed approximately 1,500 feet to the southeast of the existing water intake structures. The new intake pipes would be installed through the existing exterior levee that separates a permanent pond and Grizzly Island Ditch from Montezuma Slough. A sheet pile cofferdam in combination with an earthen cofferdam could be used during construction to dewater the work area, if necessary (see Dewatering Activities below). The two new high-density polyethylene (HDPE) pipes would be 42-inches in diameter, slightly smaller than the 48-inch diameter of the existing intake pipes, and would divert water from Montezuma Slough directly into Grizzly Island Ditch. New fish screens would be installed on the Montezuma Slough end of both relocated intake pipes to prevent fish from being entrained into GIWA. The fish screens have been designed by Intake Screens, Inc. (ISI) to meet relevant state and federal fish screening standards. Canal gates would be installed on the ditch end to control water levels. A fence would be constructed around the intake and fish screens to keep the public from entering the facility.

In association with the water intake and fish screen replacement, Grizzly Island Ditch would be cleaned and excavated to construct a ponding basin and riprap would be placed within the ditch to reduce erosion. These activities are further described under Interior Ditch Cleaning and Riprap Placement below. Excavated material generated during construction of the proposed ponding basin would be temporarily used as soil for interior earthen cofferdams (see Dewatering Activities below) and afterward to recontour the existing exterior levee along Montezuma Slough as well as an upland interior berm within GIWA (see below, Existing Berm Improvement). Less than 0.01 acre or approximately 100 square feet of the existing permanent pond (i.e., managed wetland) would be temporarily disturbed during recontouring activities to cover the new pipeline alignment through the exterior levee. This recontoured area would not result in a permanent conversion of wetland. No other wetland impacts would occur as a result of the fish screen installation.

2.2 Interior Ditch Cleaning and Riprap Placement

To reduce erosion at the new discharge location, a ponding basin with a final elevation of -6 feet North American Vertical Datum 1988 (NAVD 88) would be excavated and up to 200 linear feet of riprap would be placed within Grizzly Island Ditch. Interior ditch cleaning and riprap placement is consistent with managed wetland maintenance activities identified in the SMP and evaluated in the EIS/EIR.

2.3 Drainpipe Installation

Once the replacement intake is installed at the new location, the existing water intakes and associated fish screens would be removed and disposed of off-site. Two new 36-inch HDPE drainpipes would be installed at the location where the previous screened intake pipes were removed. The drainpipes would include canal gates on the

inland pond side (northwest) and flap gates on the Montezuma Slough side (southeast) to only allow water to drain from the interior ditch into Montezuma Slough and prevent water from being diverted from Montezuma Slough into the site (i.e., water would only be discharged from the pond/ditch channel to Montezuma Slough). A sheet pile cofferdam in combination with an earthen cofferdam could be used to dewater the work area, if necessary (see Dewatering Activities below).

2.4 New and Replacement Interior Water Control Structures

Three water control structures would be installed or replaced in interior berms to improve water conveyance within GIWA. A new 24-inch HDPE culvert would be installed under the existing berm separating the permanent pond from Dutton's Pond, north of the project area. This culvert would include a canal gate on the southwestern permanent pond side and a flap gate on the northeast end to allow water to only flow north into Dutton's Pond.

In addition, two existing 48-inch culverts located under Grizzly Island Road, connecting Grizzly Island Ditch to the permanent water pond, would be removed and replaced with two new 36-inch HDPE culverts with canal gates on the permanent pond side (north). Canal gates would be used to control water levels in the permanent water pond.

2.5 Existing Berm Improvement

Excavated material generated from construction of the ponding basin within Grizzly Island Ditch that is not used to recontour the existing exterior levee along Montezuma Slough would be used to improve upland berms within the interior of GIWA. Compacted fill would be added to a berm within the interior of GIWA to increase the crown elevation by 0 to 1 foot at side slopes ranging from approximately 2:1 to 5:1. The improvements could be placed along the berm west of the ditch adjacent to the permanent pond or another location depending on GIWA needs at the time of construction.

2.6 Construction Methods

Project construction would utilize fill materials derived on site, resulting in a cut/fill balance. Approximately 1,000 cubic yards of material would be relocated during the construction of the project.

Dewatering Activities

Replacement of the water intakes and fish screen facilities may require the temporary installation of sheet pile cofferdams in Montezuma Slough. Approximately 300 linear feet of sheet pile cofferdam may be installed at the new intake and fish screen location within Montezuma Slough. An additional approximately 300 linear feet of sheet pile cofferdam may also be required at the existing water intake and fish screen facility location to facilitate removal. Dependent on timing and tidal elevations, the exterior sheet pile cofferdam may be omitted at the existing intake site.

In-channel construction activities, including installation of sheet piles, would occur at low tide to avoid potential release of turbid water into Montezuma Slough. If needed, both sheet pile cofferdams would be imported to the project area via haul truck or barge. Sheet piles would likely be pushed into place with an excavator and/or crane. If site conditions require, and if authorized by the regulatory agencies, a vibratory hammer may be used. A

qualified biologist would install a fish seine and monitor installation of the final sheet pile to avoid entrapment of fish in the cofferdam.

Sheet piles would arc against the bank of the exterior levee to isolate the work area from adjacent tidal waters. Approximately 4,500 square feet of surface area would be dewatered at both the existing and proposed water intake locations (see Table 1). Any residual water within the isolated work areas (i.e., between the existing levee and the cofferdam) would be pumped from the work area as needed. Any water pumped out of the work areas would be discharged within an interior wetland unit where any potential sediment could settle out prior to draining to tidal waters. Sheet pile cofferdams would be removed once removal and installment of the water intake and fish screen facilities is complete.

In addition, temporary earthen cofferdams may be placed within interior ditches to facilitate replacement of the water intakes and fish screen facilities. A 120-foot temporary earthen cofferdam would be installed west of the existing intake site (i.e., within an interior ditch), consistent with the SMP. The total surface area that would be dewatered within the interior ditch would be approximately 11,000 square feet (see Table 1). If needed, a temporary earthen cofferdam could be constructed along Grizzly Island Ditch, east of the new intake. The earthen cofferdam would be up to 100 linear feet and dewater a portion of Grizzly Island Ditch within the interior of GIWA. The total maximum surface area that could be dewatered within Grizzly Island Ditch would be 30,000 square feet. Any residual water would be pumped from the work area and discharged within interior wetland units as described above. The earthen cofferdam would be removed after construction is complete.

Biological monitoring would occur as described in the existing U.S. Fish and Wildlife Service (USFWS) Programmatic Biological Opinion and National Marine Fisheries (NMFS) Biological Opinion associated with the Suisun Marsh Habitat Management, Preservation, and Restoration Plan (SMP) Regional General Permits (see Permit Authorizations, Avoidance and Minimization Measures below).

Table 1. Dewatered Work Areas

Work Area	Montezuma Slough (Square Feet)	Interior Ditch (Square Feet)
Northern Work Area ¹	4,500	11,000
Southern Work Area ²	4,500	30,000
Total	9,000	41,000

¹The northern work area includes the dewatered work area required to remove the existing intake and fish screen and install the proposed drainpipe.

²The southern work area includes the dewatered work area required to install the proposed replacement intake and fish screen.

Source: Ducks Unlimited 2023.

Construction Sequence

The following summarizes the anticipated general sequence of construction. Outside of measures to establish the boundary of work areas and to install necessary best management practices (BMPs), these steps are not intended to be comprehensive or prescriptive. The construction contractor may elect to install components in a different

order based on site conditions, available equipment and operators, and project schedule. Details on construction methods are provided in the following sections.

1. Establish work area boundaries and install BMPs.
2. Mobilize equipment and prepare access and staging areas.
3. Clear/grub work areas.
4. Install exterior sheet pile cofferdam around the new water intake and fish screen relocation area to isolate the work area from Montezuma Slough.
5. Install the new water intake and fish screen facilities within the dewatered portion of Montezuma Slough and Grizzly Island Ditch.
6. If needed, install earthen cofferdam within Grizzly Island Ditch.
7. Construct ponding basin, place riprap, and improve the exterior levee at the new water intake location.
8. Remove exterior sheet pile cofferdam and interior earthen cofferdam once new water intake is installed.
9. Install a temporary interior earthen cofferdam west of the existing water intake structure to dewater the work area.
10. If needed, install exterior sheet pile cofferdam around the existing water intake and fish screen work area.
11. Remove existing water intakes and fish screens. Replace with drainpipes.
12. Install new water control structures along interior berms.
13. Remove the interior earthen cofferdam and exterior sheet pile cofferdams. Return interior ditch to pre-construction conditions.
14. Place excess excavated material along interior GIWA berm.
15. Restore temporarily disturbed areas to pre-project conditions.
16. Finalize work and demobilize.

Some of the construction activities could take place concurrently or in tandem, with multiple crews to achieve project goals. Pending receipt of required permits, construction may begin as early as the summer of 2023 and would take approximately one construction season to complete. In-water construction activities within Montezuma Slough would occur during the in-channel work window September 1 through November 30.

Construction Access

The project area would be accessed via Grizzly Island Road. All standard construction equipment would be walked or driven via haul truck down Grizzly Island Road and offloaded. A barge could potentially be utilized within Montezuma Slough during the installation of the sheet pile cofferdam. Sheet piles could be offloaded and installed via a crane and/or long reach excavator staged along the exterior levee top road.

Construction Staging

Equipment would be staged on existing road/levee tops. Given the nature of the site, staging would need to occur within 100 feet of wetlands. Applicable conservation measures and permit conditions listed in the SMP Regional General Permits and associated USFWS and NMFS Biological Opinions would be implemented (see Avoidance and Minimization Measures listed below).

Construction Equipment

Project activities would be implemented using heavy construction equipment such as excavators, front loaders, bulldozer, compactors, cranes, haul trucks, and other similar equipment.

1. Excavators to remove and place soil for the proposed water control structures.
2. Bulldozers to move and shape excavated material within the project area.
3. Front loaders to move equipment and materials within the project area.
4. Haul trucks to transport material within the project area.
5. Cranes for the placement and installation of the sheet piles for the cofferdam within Montezuma Slough.
6. Vibratory Hammer, if needed, for the installation and removal of sheet piles.
7. Work trucks to transport workers to, from, and within the project area.
8. Hand tools to clear vegetation as needed and to compact fill in place.

2.7 Permit Authorizations, Avoidance, and Minimization Measures

In partnership with the Suisun Resource Conservation District, California Department of Water Resources, and the US Bureau of Reclamation, CDFW has obtained permit coverage for wetland management activities conducted in the Suisun Marsh from the U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, USFWS, and NMFS.

Appropriate conservation measures and permit conditions listed in the SMP Regional General Permits and Biological Opinions (see below) would be utilized.

- US Army Corps of Engineers (USACE), Regional General Permit 3 (SPN-2012-00258), dated January 27, 2023.
- San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), Water Quality Certification for the Reissuance of Regional General Permit 3 (CIWQS Reg. Meas. 413754), dated December 22, 2022.
- USFWS Programmatic Biological Opinion (08FBDT00-2016-F-0153 & 08ESMF00-2012-F-0062), dated June 10, 2013, and subsequent amendment dated June 13, 2016.
- NMFS Biological Opinion (2012-02390), dated July 3, 2013.

3.0 CONSISTENCY WITH THE DELTA PLAN

A state or local agency that proposes to undertake a covered action must submit a Certification of Consistency with the Delta Plan to the Delta Stewardship Council, with detailed findings demonstrating that the covered action is consistent with the Delta Plan (Water Code Section 85225). The proposed project is funded by the state and will be carried out on state-owned land. Therefore, CDFW has determined that a consistency determination is required. A Certification of Consistency has been submitted electronically for this project, via the Delta Stewardship Council's website online form. The purpose of this document is to provide detailed findings in support of this Certification of Consistency.

As defined by Section 85054 of the Water Code, the coequal goals of the Sacramento-San Joaquin Delta Reform Act of 2009 are the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The project supports the achievement of these coequal goals by improving water control infrastructure to meet the water delivery and operational needs of the GIWA, enhance interior water conveyance with the installation of additional water control structures, and protect native resident and anadromous fish populations located in Montezuma Slough.

Section 3.1 of this document determines whether the project is covered by one or more of the Delta Plan regulatory policies, listed below, and provides an explanation regarding the consistency of the project with each regulatory policy.

- WR P1 (California Code of Regulations (CCR), Title 23, Section 5003): Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance
- WR P2 (CCR Title 23 Section 5004): Transparency in Water Contracting
- ER P1 (CCR Title 23 Section 5005): Delta Flow Objectives
- ER P2 (CCR Title 23 Section 5006): Restore Habitats at Appropriate Elevations
- ER P3 (CCR Title 23 Section 5007): Protect Opportunities to Restore Habitat
- ER P4 (CCR Title 23 Section 5008): Expand Floodplains and Riparian Habitats in Levee Projects
- ER P5 (CCR Title 23 Section 5009): Avoid Introductions of and Habitat Improvements for Invasive Nonnative Species
- DP P1 (CCR Title 23 Section 5010): Locate New Urban Development Wisely
- DP P2 (CCR Title 23 Section 5011): Respect Local Land Use when Siting Water or Flood Facilities or Restoring Habitats
- RR P1 (CCR Title 23 Section 5012): Prioritization of State Investments in Delta Levees and Risk Reduction
- RR P2 (CCR Title 23 Section 5013): Protection for Residential Development in Rural Areas
- RR P3 (CCR Title 23 Section 5014): Protect Floodways
- RR P4 (CCR Title 23 Section 5015): Floodplain Protection

Section 3.2 of this document explains consistency of the project with the Delta Plan general policy and its four subdivisions.

3.1 Covered Action Determination and Regulatory Policy Consistency

WR P1 (CCR, Title 23, Section 5003): Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance

The project does not involve the export, transfer, or use of water in the Delta by a water supplier that has failed to contribute to reduced reliance on the Delta and improved regional self-reliance. As such, Policy WR P1 is not applicable.

WR P2 (CCR Title 23 Section 5004): Transparency in Water Contracting

The project is not part of the State Water Project and/or Central Valley Project and would not affect the contracting process for water from the State Water Project and/or Central Valley Project. As such, Policy WR P2 is not applicable.

ER P1 (CCR Title 23 Section 5005): Delta Flow Objectives

The project is not part of the State Water Resources Control Board's Bay Delta Water Quality Control Plan flow objectives. The project would not affect flows. As such, Policy ER P1 is not applicable.

ER P2 (CCR Title 23 Section 5006): Restore Habitats at Appropriate Elevations

Water conveyance enhancements recognized by the project would support emergent wetland habitats within the sea level rise accommodation band, consistent with the habitats identified for appropriate elevations in Appendix 4 of the Delta Plan. However, the project itself does not propose habitat restoration. As such, Policy ER P2 is not applicable.

ER P3 (CCR Title 23 Section 5007): Protect Opportunities to Restore Habitat

The project is located within the Suisun Marsh, a priority habitat restoration area identified in the Delta Plan. The project supports habitat restoration opportunities within Suisun Marsh by improving water control infrastructure to meet the water delivery and operational needs of the GIWA, enhance interior water conveyance with the installation of additional water control structures, and protect native resident and anadromous fish populations located in Montezuma Slough. The project would result in the replacement of dilapidated fish screens with upgraded fish screens that meet current flow criteria and would protect longfin smelt, delta smelt, and spring- and winter-run salmonids, and other fish from entrainment. The project would not result in significant adverse impacts to the opportunity to restore habitat in priority habitat restoration areas. As such, the project is consistent with Policy ER P3. In addition, Policy ER P3 covers the project as a proposed action within a priority habitat restoration area.

ER P4 (CCR Title 23 Section 5008): Expand Floodplains and Riparian Habitats in Levee Projects

The project is not a levee project and would not affect levees along the Sacramento River, San Joaquin River, North or South Forks of the Mokelumne River, or involve any urban levee improvement project in West Sacramento or Sacramento. As such, Policy ER P4 is not applicable.

ER P5 (CCR Title 23 Section 5009): Avoid Introductions of and Habitat Improvements for Invasive Nonnative Species

Enhanced water conveyance resulting from the project would allow for improved management of existing emergent wetlands to favor native species and limit growth of nonnative invasive species. However, the project would not alter habitats within GIWA or Montezuma Slough. As such, Policy ER P5 is not applicable.

DP P1 (CCR Title 23 Section 5010): Locate New Urban Development Wisely

This project is a water facility improvement project and does not involve any residential, commercial, or industrial development. As such, Policy DP P1 is not applicable.

DP P2 (CCR Title 23 Section 5011): Respect Local Land Use when Siting Water or Flood Facilities or Restoring Habitats

The project includes the installation of water control infrastructure within Grizzly Island Wildlife Area, an unincorporated portion of Solano County, owned and managed by CDFW. The Solano County General Plan designates the project area as Marsh within a Resource Conservation Overlay (Solano County, 2008). The proposed water control infrastructure is compatible with the existing hydrology of the managed wetlands in GIWA. Installation of new infrastructure is consistent with the Solano County General Plan land use designations and policies. As such, the project is consistent with Policy DP P2. In addition, Policy DP P2 covers the project as a proposed action that involves the siting of water management facilities.

RR P1 (CCR Title 23 Section 5012): Prioritization of State Investments in Delta Levees and Risk Reduction

The project is funded by the CDFW and the California Wildlife Conservation Board and is located within GIWA, a complex of seasonal wetlands managed for wildlife habitat and recreational uses. The project does not involve discretionary State investment in Delta flood risk management. As such, Policy RR P1 is not applicable.

RR P2 (CCR Title 23 Section 5013): Protection for Residential Development in Rural Areas

The project is located within GIWA and does not propose new residential development. As such, Policy RR P2 is not applicable.

RR P3 (CCR Title 23 Section 5014): Protect Floodways

The project would involve the construction of water intake and fish screen facilities in Montezuma Slough. As shown on the Best Available Maps completed by DWR in 2008, Montezuma Slough is not a designated floodway or regulated stream. The Federal Emergency Management Agency classifies Montezuma Slough and the adjacent project area within Zone AE, a floodway with a base elevation of 10 feet. Replacement water control infrastructure is proposed by the project are of similar scale to existing facilities in Montezuma Slough and would not impede watercraft from navigating through the channel. The project would not unduly impede the free flow of water or jeopardize public safety. As such, the project is consistent with Policy RR P3. In addition, Policy RR P3 covers the project as a proposed action that would encroach in a floodway that is not either a designated floodway or regulated stream.

RR P4 (CCR Title 23 Section 5015): Floodplain Protection

The project is in the Suisun Marsh and would not involve any encroachment in the Yolo Bypass, Cosumnes River-Mokelumne River Confluence, or Lower San Joaquin River Floodplain Bypass. As such, Policy RR P4 is not applicable.

3.2 General Policy G P1 (CCR Title 23 Section 5002)

General Policy G P1 specifies what must be addressed in a certification of consistency filed by a State or local public agency with regard to a covered action. If a proposed action has been determined to be a covered action, a certification of consistency must: (1) demonstrate consistency with the regulatory policy for covered actions; (2) for all covered actions not exempt from CEQA, include all applicable feasible mitigation measures adopted and incorporated into the Delta Plan unless substitute mitigation measures that the agency that files the certification of consistency finds are equally or more effective; (3) document use of best available science; and (4) assure continued implementation of adaptive management for ecosystem restoration and water management covered actions. See the Delta Plan policy for specific language.

Consistency with Regulatory Policies

The above sections demonstrate the project is a covered action under the following policies, thereby requiring a certification of consistency. Please refer to the explanations under Section 3.1 regarding project consistency with regulatory policies.

- ER P3 (CCR Title 23 Section 5007): Protect Opportunities to Restore Habitat
- DP P2 (CCR Title 23 Section 5011): Respect Local Land Use when Siting Water or Flood Facilities or Restoring Habitats
- RR P3 (CCR Title 23 Section 5014): Protect Floodways

The purpose of the project is to meet the water and operational needs of GIWA, enhance interior water conveyance with the installation of additional water control structures, and protect anadromous fish located in Montezuma Slough through the replacement of existing deteriorated and outdated fish screened intake structures with a current design. These actions would enhance wetland management capabilities within the Suisun Marsh. As such the project is in alignment with the coequal goals of the Delta Plan to provide more reliable water supply and protect, restore, and enhance the Delta ecosystem.

CEQA Mitigation Measures

The SMP Final EIS/EIR was prepared in compliance with NEPA and CEQA and certified on December 22, 2011 (State Clearinghouse No. 2003112039). A CEQA Addendum was prepared to evaluate the potential effects of the proposed project, including the use of sheet pile cofferdams in Montezuma Slough, and determined that the proposed modifications would not result in any new or substantially more significant environmental impacts than those previously identified in the EIS/EIR. The project will implement all applicable environmental commitments and mitigation measures identified in the EIS/EIR and no subsequent environmental review is required pursuant to Section 15162 of the CEQA Guidelines.

A crosswalk table was prepared to demonstrate consistency of all mitigation measures included in the Delta Plan EIR MMRP with environmental commitments and/or mitigation measures for the project. See Appendix B.

Best Available Science

CDFW is committed to utilizing the best available science to design and construct the project. Ongoing research related to waterfowl biology and habitat management continues to progress and provides greater insight on how to manage wetlands. The project design and adaptive management plan are based on best available science, as demonstrated by the following elements:

- Well-stated objectives
- Conceptual models of habitat requirements of sensitive fish and wildlife species
- Best professional judgment of experts

The SMP is a science-based management plan for the Suisun Marsh, including the project area, and addresses water quality, fish entrainment, and the provision of wetlands for migratory waterfowl and other wetland-dependent species (US Bureau of Reclamation, 2011). The project is designed to improve water conveyance throughout managed wetlands in GIWA. Improvements to water control structures enhance water quality, vegetation management, and improve quality of wetland habitat for waterfowl and other wildlife and plant species. In addition, the project would replace deteriorated fish screens with a modernized intake system designed by Intake Screens, Inc., an experienced leader in the field. The new fish screens would be brushed cylinder, self-cleaning, retrievable track systems proven to protect anadromous and resident fish from entrainment and improve access for inspection and maintenance (Intake Screens, Inc., 2023). The fish screen has been designed to meet flow rate criteria for delta smelt and salmonids established by the SMP.

The project design has been prepared in close partnership with CDFW wildlife area managers and biologist, engineers, and other fish and wetland habitat experts. A list of current best available science applicable to the project is included in Appendix C.

Adaptive Management

The project implements the SMP, a collaborative effort of federal, state, and local agencies working with scientists and the public to protect and enhance Suisun Marsh. The project is a result of adaptive management practices in the Suisun Marsh and would replace deteriorating water control infrastructure with updated design to maintain wetland habitats and protect fish species. Relocation of the water intake and fish screen facilities in Montezuma Slough will improve water reliability by avoiding a deteriorating ditch, subject to berm failure, and providing more direct and reliable water conveyance.

Operation of the project would assure continued implementation of adaptive management through regular inspection, maintenance, and repair. CDFW maintains and operates GIWA and has adequate staff and fiscal resources to operate and maintain water control infrastructure installed under the project. In addition, CDFW provided input on project design to ensure project operation allows for efficient use of resources. An Adaptive Management Plan has been prepared for the project and is included in Appendix D.

4.0 REFERENCES

Solano County. 2008. *Solano County General Plan. Chapter 2 Land Use*. Fairfield, CA. August.

U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and California Department of Fish and Game. 2011. *Suisun Marsh Habitat Management, Preservation, and Restoration Plan Environmental Impact Statement/Environmental Impact Report*. Sacramento and Napa, California. November.

Figures

Project Area (82.02 acres)



Yolo County, Maxar, Microsoft

0 125 250 500 Feet

Figure 2. Project Area
Montezuma Slough Fish Screen Replacement Project
Applicant: California Department of Fish and Wildlife
Address: 2548 Grizzly Island Road Suisun, CA 94585
Section/Township/Range: S17, 18, 19, 20; T3N; R1E
Prepared by: Ducks Unlimited, Inc
Date Prepared: March 2023





0 125 250 500 Feet

Figure 3a. Project Components
Montezuma Slough Fish Screen Replacement Project

Applicant: California Department of Fish and Wildlife

Address: 2548 Grizzly Island Road Suisun, CA 94585

Section/Township/Range: S17, 18, 19, 20; T3N; R1E

Prepared by: Ducks Unlimited, Inc

Date Prepared: May 2023

Yolo County, Maxar, Microsoft



Project Area (82.02 acres)

Staging Area

Construction Access

Water Construction Access

Existing Structures

- ◊ Water Control Structure
- ◻ Intake Pipe and Fish Screen
- Fishing Pier
- ☆ Portable Toilet

Proposed Project Component

- ▨ Berm Improvement
- ▨ Compacted Fill
- ▨ Ditch Cleaning
- Fish Screen
- ▨ Riprap
- Water Control Structure
- Earthen Cofferdam
- ▨ Sheet Pile Cofferdam

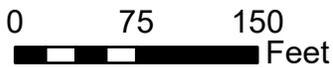
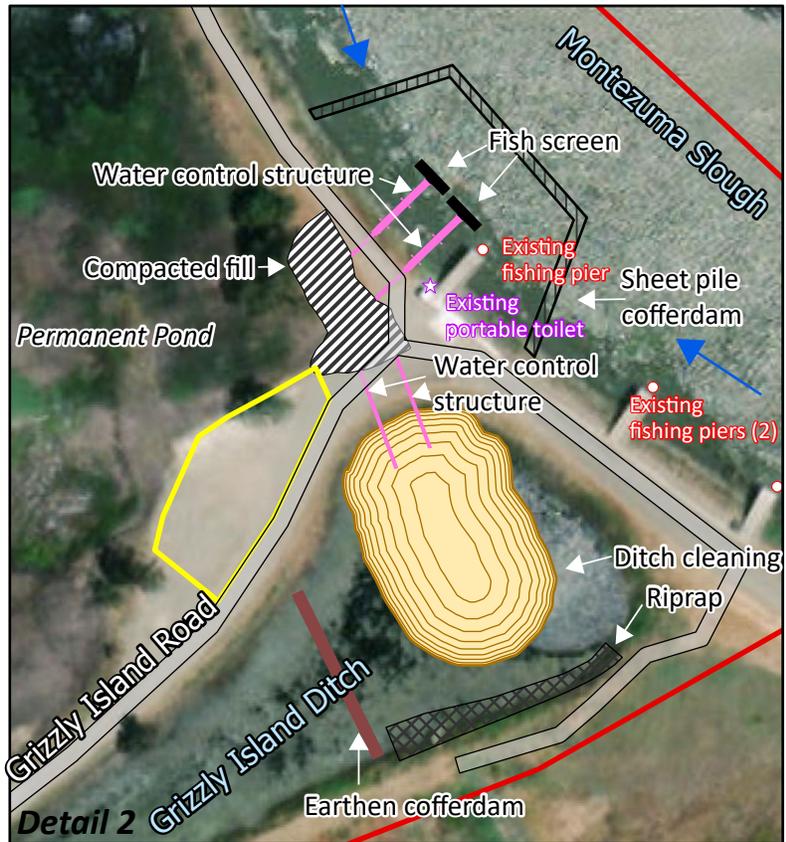
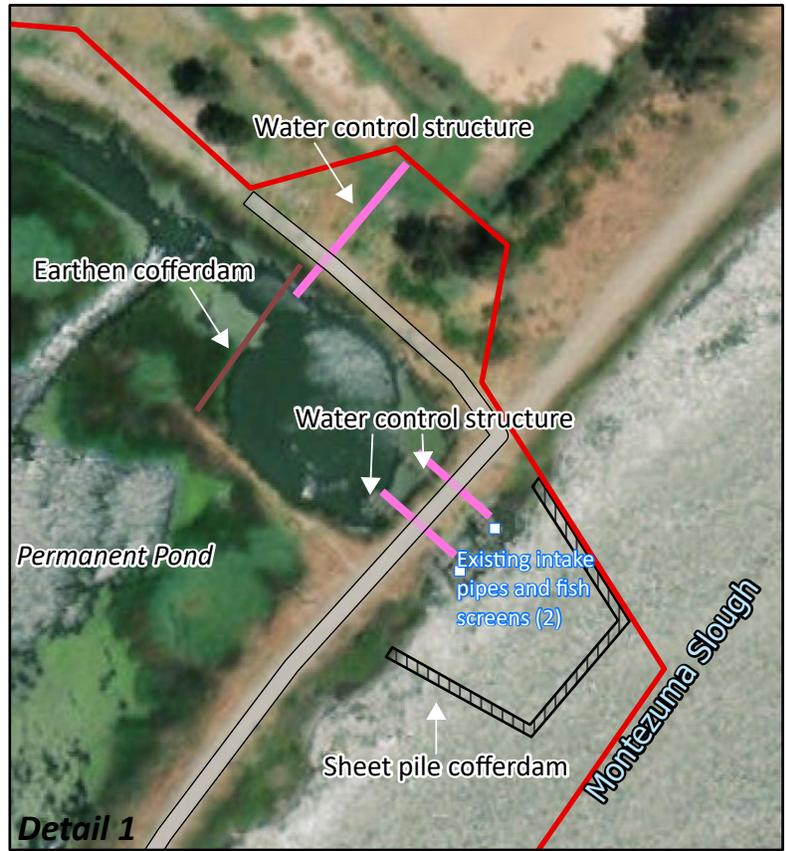


Figure 3b. Project Components - Detailed View Montezuma Slough Fish Screen Replacement Project

Applicant: California Department of Fish and Wildlife

Address: 2548 Grizzly Island Road Suisun, CA 94585

Section/Township/Range: S17, 18, 19, 20; T3N; R1E

Prepared by: Ducks Unlimited, Inc

Date Prepared: May 2023

Yolo County, Maxar



Appendix A: Design Plan Set

Design plan set under separate cover.

Appendix B: Mitigation Measure Matrix

Montezuma Slough Fish Screen Replacement Project - Consistency with Delta Plan Mitigation Measures

The following table details consistency between the project, as evaluated in the Suisun Marsh Habitat Management, Preservation, and Restoration Plan (SMP) Environmental Impact Statement / Environmental Impact Report (EIS/EIR) certified on December 22, 2011 (State Clearinghouse No. 2003112039) and the Addendum prepared in March 2023.

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
Water Resources		
3-1	<ul style="list-style-type: none"> ▪ For construction of new facilities, all typical construction mitigation measures shall be required. Typical mitigation measures include the following construction-related Best Management Practices (BMPs): <ul style="list-style-type: none"> ○ Gravel bags, silt fences, etc., shall be placed along the edge of all work areas in order to contain particulates prior to contact with receiving waters. ○ All concrete washing and spoils dumping shall occur in a designated location. ○ Construction stockpiles shall be covered in order to prevent blowoff or runoff during weather events. ○ Severe weather event erosion control materials and devices shall be stored onsite for use as needed. ○ Soil stabilization, sediment control, wind erosion control, tracking control, non-storm water management, and waste management/materials pollution control. ▪ Apply other BMPs as determined necessary by the regulating entity (city, county). ▪ Any new facility with introduced impervious surfaces shall include stormwater control measures that are consistent with the Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) municipal stormwater runoff requirements. The stormwater control measures shall be designed and implemented to reduce the discharge of stormwater pollutants to the maximum extent practical. Stormwater controls such as bioretention facilities, flow-through planters, detention basins, vegetative swales, covering pollutant sources, oil/water separators, and retention ponds shall be designed to control stormwater quality to the maximum extent practical. ▪ Mitigate sediment contaminant bioavailability impacts through (a) the exclusion of bird use or nesting areas from areas that may have excessive selenium or mercury; (b) minimization of methylmercury production; and/or (c) maximization of contaminant degradation before discharge of water, as appropriate. <p>For any construction activities with the potential to cause in-river sediment disturbance associated with construction:</p> <ul style="list-style-type: none"> ○ Apply BMPs to avoid or reduce temporary increases in suspended sediment. These BMPs for in-channel construction and levee disturbance may include, but are not limited to, silt curtains, cofferdams, the use of environmental dredges, erosion control on all inward levee slopes, and various levee-stabilization techniques, including revegetation. All construction sites will include preparation of a Storm Water Pollution Prevention Plan and BMPs designed to capture spills and prevent erosion to the waterbody. Turbidity shall be monitored up- and downstream of construction sites as a measure of impact. ○ Apply bank stabilization BMPs, as needed, for any in-channel disturbance, such as: ○ A 100-foot vegetative or engineered buffer shall be maintained between the construction zone and surface water body. ○ Native and annual grasses or other vegetative cover shall be established on construction sites 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the Suisun Marsh Habitat Management, Preservation, and Restoration Plan (SMP) Environmental Impact Statement / Environmental Impact Report (EIS/EIR) would be implemented by the project including BMPs addressing construction-related impacts to water resources.</p> <p>Additional BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers (USACE) Permit (SPN-2012-00258).</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>immediately upon completion of work causing disturbance, to reduce the potential for erosion close to a waterway or water body.</p> <p>Dredging would be particularly prone to the production of re-suspended sediment and contaminants, but potential impacts could be reduced, but not necessarily fully mitigated through the use of submerged dredge cutter heads, silt curtains, and cofferdams, depending upon the site-specific soil conditions in the channel.</p>	
3-2	<ul style="list-style-type: none"> ▪ Prior to construction, a survey should be made of all wells located adjacent to the construction site to determine location and depths of the wells and the groundwater surface. During construction of any project that requires dewatering of groundwater, monitoring wells should be installed adjacent to the groundwater dewatering wells or pumps. If the adjacent groundwater declines in a manner that would adversely affect adjacent wells following implementation of dewatering, the dewatering operations should be halted until the following measures are implemented: <ul style="list-style-type: none"> ○ Install sheet piles to reduce the area influenced by shallow groundwater level declines. ○ In case sheet piles are not an option and domestic well yields are affected, water supplies shall be trucked in to satisfy the well user's water supply needs. ○ If sheet piles are not effective and the impact on the well yield is important, such that the trucking in of water is not economically feasible, the affected well shall be deepened. Another option for a well that is deep enough would be to lower the pump bowl such that deepened water can be pumped out of the well. If these two options are not feasible, a new, deeper, replacement well shall be installed for groundwater production. 	<p>Not applicable.</p> <p>The project would not involve the dewatering of groundwater.</p>
Biological Resources		
4-1	<ul style="list-style-type: none"> ▪ Avoid, minimize, and compensate for reduction in area and/or habitat quality of sensitive natural communities, including wetlands, by doing the following: <ul style="list-style-type: none"> ○ Selecting project site(s) that would avoid sensitive natural communities, including jurisdictional wetlands and other waters, vernal pools, alkali seasonal wetlands, riparian habitats, and inland dune scrub. ○ Designing, to the maximum extent practicable, project elements to avoid effects on sensitive natural communities. ○ Replacing, restoring, or enhancing on a "no net loss" basis (in accordance with U.S. Army Corps of Engineers (USACE) and State Water Resources Control Board (SWRCB) requirements), wetlands and other waters of the United States and waters of the State that would be removed, lost, and/or degraded. ○ Where impacts to sensitive natural communities other than waters of the United States or State are unavoidable, compensating for impacts by restoring and/or preserving in-kind sensitive natural communities on-site, or off-site at a nearby site, or by purchasing in-kind restoration or preservation credits from a mitigation bank that services the project site and that is approved by the appropriate agencies, in consultation with applicable regulatory agencies (at ratios that offset temporal loss of habitat value). ▪ Implement advanced mitigation planning for ecosystem restoration prior to construction. ▪ Implement construction best management practices, including: <ul style="list-style-type: none"> ○ Developing and implementing a Stormwater Pollution Prevention Plan (SWPPP). 	<p>Consistent.</p> <p>The project has been designed to avoid permanent impacts to wetlands and to minimize any temporary impacts to sensitive natural communities during construction. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address impacts to wildlife habitat, including wetlands. In addition, Section 3.4 of the California Environmental Quality Act (CEQA) Addendum evaluates project specific impacts to biological resources and found that no significant impacts would occur, and no further mitigation is necessary.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<ul style="list-style-type: none"> ○ Minimizing soil disturbance, erosion, and sediment runoff from project site. ○ Avoiding and minimizing contaminant spills. ○ Minimizing visual and noise disturbance from construction activities. ○ Conducting biological construction monitoring to ensure that implemented Best Management Practices (BMPs) are effective. ▪ Restore areas temporarily affected by construction activities, including: <ul style="list-style-type: none"> ○ Preparing restoration plan for temporary impacts sites for review by resource agencies. ○ Minimizing soil disturbance and stockpiling topsoil for later use in any areas to be graded. ○ Decompacting or amending soil if necessary, before planting and use native species for revegetation. ○ Restoring natural communities with similar or improved function from communities that were affected. ▪ If a project may result in conversion of oak woodlands, as identified in section 21083.4 of the Public Resources Code, one or more of the following mitigation measures shall be implemented: <ul style="list-style-type: none"> ○ Conserve oak woodlands, through the use of conservation easements. ○ Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees. ○ Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of section 1363 of the Fish and Game Code. ▪ An invasive species management plan shall be developed and implemented for any project whose construction or operation could lead to introduction or facilitation of invasive species establishment. The plan shall ensure that invasive plant species and populations are kept below preconstruction abundance and distribution levels. The plan shall be based on the best available science and developed in consultation with Department of Fish and Wildlife (DFW) and local experts, such as the University of California Extension, county agricultural commissioners, representatives of County Weed Management Areas (WMA), California Invasive Plant Council, and California Department of Food and Agriculture. The invasive species management plan will include the following elements: <ul style="list-style-type: none"> ○ Nonnative species eradication methods (if eradication is feasible) ○ Nonnative species management methods ○ Early detection methods ○ Notification requirements ○ Best management practices for preconstruction, construction, and post construction periods ○ Monitoring, remedial actions and reporting requirements ○ Provisions for updating the target species list over the lifetime of the project as new invasive species become potential threats to the integrity of the local ecosystems 	<p>Additional BMPs are identified in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258). Further, conservation measures protecting biological resources are identified in the U.S. Fish and Wildlife Service (USFWS) Biological Opinion and Amendment (08FBDT00-2016-F-0153 & 08ESMF00-2012-F-0062) and the National Marine Fisheries Service (NMFS) Biological Opinion (2012-02390).</p>
4-2	<ul style="list-style-type: none"> ▪ Select project site(s) that would avoid habitats of special-status species (which may include foraging, sheltering, migration and rearing habitat in addition to breeding or spawning habitat), and to the maximum extent practicable, (re)design project elements to avoid effects on such species. ▪ Schedule construction to avoid special-status species' breeding, spawning, or migration locations during the seasons or active periods that these activities occur. ▪ Conduct preconstruction surveys (by a qualified biologist) for special-status species in accordance with U.S. 	<p>Consistent.</p> <p>Project construction would occur within the in-water work window when potential effects to fish are least likely to occur.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) and DFW survey methodologies and appropriate timing to determine presence and locations of any special-status species and their habitat, and avoid, minimize, or compensate for impacts to special-status species in coordination with DFW and USFWS or NMFS.</p> <ul style="list-style-type: none"> ▪ Establish buffers around special-status species habitats to exclude effects of construction activities. The size of the buffer shall be in accordance with USFWS and DFW protocols for the applicable special-status species. If nest tree removal is necessary, remove the tree only after the nest is no longer active, as determined by a qualified biologist. ▪ Conduct construction monitoring (by qualified biologist) to ensure effectiveness of avoidance and minimization measures and implement remedial measures if necessary. ▪ When appropriate, relocate special-status plant and animal species or their habitats from project sites following USFWS, NMFS, and DFW protocols (e.g., for special-status plant species or elderberry shrubs). ▪ Where impacts to special-status species are unavoidable, compensate for impacts by restoring or preserving in-kind suitable habitat on-site, or off-site, or by purchasing restoration or preservation credits (in compliance with the California Endangered Species Act (CESA) and federal Endangered Species Act (ESA) for affected State- or federally-listed species from a mitigation bank that serves the project site and that is approved by the appropriate agencies, in consultation with the appropriate regulatory agencies (at ratios that offset the temporary loss of habitat value). 	<p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address impacts to wildlife habitat, including wetlands. In addition, Section 3.4 of the CEQA Addendum evaluates project specific impacts to biological resources and found that no significant impacts would occur, and no further mitigation is necessary.</p> <p>Additional BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258). Further, conservation measures protecting biological resources are identified in the USFWS Biological Opinion and Amendment (08FBDT00-2016-F-0153 & 08ESMF00-2012-F-0062) and the NMFS Biological Opinion (2012-02390).</p>
4-3	<ul style="list-style-type: none"> ▪ Select project site(s) that would avoid a substantial reduction in fish and wildlife species habitat. ▪ To the maximum extent practicable, design project elements to avoid effects that would lead to a substantial loss of fish and wildlife habitat. ▪ Replace, restore, or enhance habitats for fish and wildlife species that would be lost. ▪ Where substantial loss of habitat for fish and wildlife species is unavoidable, compensate for impacts by preserving in-kind habitat. 	<p>Consistent.</p> <p>The project has been designed to avoid substantial impacts to fish and wildlife species habitat. Once construction is complete, the site would be recontoured to pre-construction conditions. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address impacts to wildlife habitat, including wetlands. In addition, Section 3.4 of the CEQA Addendum evaluates project specific impacts to biological resources and found that no</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
		<p>significant impacts would occur, and no further mitigation is necessary.</p> <p>Additional, BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258). Further, conservation measures protecting biological resources are identified in the USFWS Biological Opinion and Amendment (08FBDT00-2016-F-0153 & 08ESMF00-2012-F-0062) and the NMFS Biological Opinion (2012-02390).</p>
4-4	<ul style="list-style-type: none"> ▪ Protect habitat for migratory waterfowl and shorebirds by expanding existing wildlife refuges and management areas, and establishing new ones in or near wetland areas used by migratory waterfowl and shorebirds. Manage these areas by establishing suitable vegetation, hydrology and other habitat components to optimize the use by migratory waterfowl and shorebirds. ▪ Protect, restore and enhance connectivity of habitats, including but not limited to wetland and riparian habitats that function as migration corridors for wildlife species (similar to how has been implemented through programs such as the California Essential Habitat Connectivity Project). Acquire areas with potential to increase connectivity between existing habitats, protect these areas in perpetuity through the acquisition of conservation easements, deed restrictions, or similar tools, and restore the habitat for wildlife species in these areas. Habitat restoration might be accomplished by establishing suitable hydrology or other physical conditions for desirable vegetation, planting desirable vegetation, fencing and managing grazing, and other means. ▪ Protect migratory pathways for migratory aquatic species such as salmon, steelhead, and sturgeon including those that use Delta tributaries and floodplain habitats by screening new diversions, and screening existing diversions and removing existing migration barriers if the specific proposed project/activity (e.g., increased intake volume through an existing unscreened diversion, new diversion, new barrier, new barrier near an existing unscreened diversion, etc.) exacerbates the negative effect on migratory aquatic species caused by the existing barrier or unscreened diversion. ▪ Avoid or minimize alteration of flow patterns and water quality effects that could disrupt migratory cues for migratory aquatic species by implementing water management measures and establishing programs to reduce water pollution. 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address impacts to wildlife habitat, including wetlands. In addition, Section 3.4 of the CEQA Addendum evaluates project specific impacts to biological resources and found that no significant impacts would occur, and no further mitigation is necessary.</p> <p>Additional, BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258). Further, conservation measures protecting biological resources are identified in the USFWS Biological Opinion and Amendment (08FBDT00-2016-F-0153 & 08ESMF00-2012-F-0062) and the NMFS Biological Opinion</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
		(2012-02390).
4-5	<ul style="list-style-type: none"> ▪ Prior to construction, evaluate impacts to trees or other biological resources protected by local policies and ordinances, and abide by any permit requirements associated with these policies and ordinances. 	<p>Consistent.</p> <p>The project is located in a state-owned wildlife area. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address impacts to biological resources. Section 3.4 of the CEQA Addendum evaluates project specific impacts to biological resources and found that no significant impacts would occur, and no further mitigation is necessary.</p>
Delta Flood Risk		
5-1	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulic study that would assess the need and provide a basis for the design of drainage-related mitigations, such as new onsite drainage systems or new cross drainage facilities. Prepare the study in accordance with applicable standards of Federal Emergency Management Agency (FEMA), USACE, state Department of Water Resources (DWR), Central Valley Flood Protection Board (CVFPB), as well as the local reclamation districts and flood control agencies and the counties and cities. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, and CVFPB. The study would identify potential increases in flood risks, including those that may result from new facilities. ▪ Provide temporary drainage bypass facilities that would reroute drainage around, along, or over the Proposed Project facilities and construction sites. The temporary bypass facilities would be designed in accordance with the results and recommendations of a drainage or hydrologic and hydraulic study and would be in place and fully functional until long-term replacement facilities are completed. ▪ Provide onsite stormwater detention storage at construction and project facility sites that would reduce project- caused short- or long-term increases in drainage runoff. The storage space placement and capacity would be designed based on the drainage or hydrologic and hydraulic study. ▪ Based on the results of the drainage or hydrologic and hydraulic study, arrange the length of any stockpiles or other construction features in the direction of the floodplain flow to maximize surface flows under flood flow conditions. ▪ At in-stream construction sites that might reduce channel capacity, install setback levees or bypass channels to maintain channel capacity and to mitigate hydraulic impacts. ▪ Where low channel velocities might result from construction, implement a sediment management program in order to maintain channel capacity. ▪ Provide cross drainage, replacement drainage paths and facilities, and enlarged flow paths to reroute 	<p>Consistent.</p> <p>The project would improve water control infrastructure in GIWA. The project is not within a bypass, does not include municipal stormwater inputs, and would not modify in-stream capacity or flows. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address impacts to flood risks.</p> <p>Topographic surveys were conducted and identify existing site condition drainage features. Existing site grades are located on the final engineering plan sets. Engineering plans and specifications detail the methods for maintaining drainage at the project site. Cofferdams would be used to isolate in-water work areas and</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>drainage around, under, or over the Proposed Project facilities and to restore the function of any affected existing drainage or flow paths and facilities.</p> <ul style="list-style-type: none"> ▪ Channel modifications for restoration actions would be required to be implemented to maintain or improve flood management functions and would be coordinated with the USACE, DWR, CVFPB, and other flood control agencies to assess the desirability and feasibility for channel modifications. To the extent consistent with floodplain land uses and flood control requirements, if applicable, woody riparian vegetation would be allowed to naturally establish. ▪ For areas that would be flooded as a result of the project, or where existing flooding would be increased in magnitude, frequency, or duration, purchase a flowage easement and/or property at the fair-market value. ▪ Provide a long-term sediment removal program at in-river structures. ▪ To mitigate potential impacts of changes in the timing of reservoir releases or the possible combination of river peak flows, use forecasts to implement coordination of operations with existing reservoirs. 	prevent project construction runoff.
5-2	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulics study that would assess the need and provide a basis for the design of drainage-related mitigations, such as new onsite drainage systems or new cross drainage facilities. Prepare the study in accordance with applicable standards of FEMA, USACE, DWR, CVFPB, as well as the local reclamation districts and flood control agencies and the counties and cities. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, and CVFPB. ▪ Provide onsite stormwater detention storage at construction and project facility sites that would reduce project- caused short- and long-term increases in drainage runoff. The storage space would be designed based on the drainage or hydrologic and hydraulic study. 	<p>Not applicable.</p> <p>The project would improve water control infrastructure in GIWA. Section 5.2 of the SMP EIS/EIR and Section 3.10 of the CEQA Addendum evaluate impacts related to hydrology and determined no significant impacts would occur and no mitigation is needed.</p>
5-4	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulics study that would assess the need and provide a basis for the design of drainage-related mitigations, such as new onsite drainage systems or new cross drainage facilities. Prepare the study in accordance with applicable standards of FEMA, USACE, DWR, CVFPB, as well as the local reclamation districts and flood control agencies and the counties and cities. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, and CVFPB. ▪ Where high channel velocities might result from construction, provide bank protection, such as rip rap, to protect levees from erosion. ▪ Where construction results in longer channel wind fetch lengths, install vegetative buffer zones or wave erosion protection on the water side slope of levees, such as rock or grouted rip rap, and increase levee freeboard to address higher wind and wave runoff. ▪ Based on the drainage or hydrology and hydraulics study, determine any resulting changes to available evacuation plans or emergency response times. ▪ To reduce emergency response times and public safety risks, raise structures and major roads out of the floodplain. ▪ Provide automated flood warning systems. ▪ Develop and implement area-specific evacuation and emergency response plans. ▪ Considering the results of the hydraulics study noted above, perform a seepage and stability analyses that would assess the need and act as a basis for design of other seepage- and stability-related mitigations, such 	<p>Not applicable.</p> <p>The project would improve water control infrastructure in GIWA. Section 5.2 of the SMP EIS/EIR and Section 3.10 of the CEQA Addendum evaluate impacts related to drainage and hydrology and determined no significant impacts would occur and no mitigation is needed.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>as cutoff walls, adjacent levees, setback levees, berms, and subdrainage features. Perform the analyses in accordance with applicable standards of FEMA, USACE, and DWR.</p> <ul style="list-style-type: none"> ▪ Perform research and collect subsurface information in accordance with applicable standards of FEMA, USACE, and DWR and perform settlement analyses that would assess the need for monitoring and potential settlement-related mitigations, such as ground improvement or pre-construction surcharging. Perform the analyses in accordance with applicable standards of USACE. ▪ Perform research and collect subsurface information in accordance with applicable standards of FEMA, USACE, and DWR and perform seismic and liquefaction analyses that would assess the need and provide the basis for design of other seismic-related mitigations, such as ground improvement. Perform the analyses in accordance with applicable standards of USACE and American Society of Civil Engineers and Southern California Earthquake Center. ▪ Prepare and implement a plan for periodic maintenance, inspections, repair, and rehabilitation of new water storage and conveyance facilities that could cause flooding upon failure. ▪ Provide redundancy and safety controls and devices on water storage and conveyance facilities (pump stations, canals, and tunnels) to protect against facility failure and subsequent flooding. ▪ To limit flooding from the unlikely event of a conveyance facility failure, limit extensive flow escape with installation of safety devices such as gated checks. ▪ Construct new evacuation roads and access roads, as necessary. ▪ Conduct Golden Guardian emergency drills.¹ 	
5-5	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulics study that would assess the need and provide a basis for the design of drainage-related mitigations, such as new onsite drainage systems or new cross drainage facilities. Prepare the study in accordance with applicable standards of FEMA, USACE, DWR, CVFPB, as well as the local reclamation districts and flood control agencies and the counties and cities. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, and CVFPB. Provide temporary drainage bypass facilities that would reroute drainage around, along, or over the Proposed Project facilities and construction sites. The temporary bypass facilities would be designed in accordance with drainage or hydrology and hydraulic study and would be in place and fully functional until long-term replacement facilities are completed. ▪ Based on the results of the drainage or hydrologic and hydraulic study, arrange the length of any stockpiles or other construction features in the direction of the floodplain flow to maximize surface flows under flood conditions. ▪ At in-stream construction sites that might reduce channel capacity, install setback levees or bypass channels to maintain channel capacity and to mitigate hydraulic impacts. ▪ Provide cross drainage, replacement drainage paths and facilities, and enlarged flow paths to reroute drainage around, under, or over the Proposed Project facilities and to restore the function of any affected existing drainage or flow paths and facilities. ▪ Channel modifications for restoration actions would be required to be implemented to maintain or improve flood management functions and would be coordinated with the USACE, DWR, CVFPB, and other flood control agencies to assess the desirability and feasibility for channel modifications. To the extent consistent with floodplain land uses and flood control requirements, if applicable, woody riparian vegetation would be allowed to naturally establish. 	<p>Not applicable.</p> <p>The project would improve water control infrastructure in GIWA. Section 5.2 of the SMP EIS/EIR and Section 3.10 of the CEQA Addendum evaluate impacts related to drainage and hydrology and determined no significant impacts would occur and no mitigation is needed.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
Land Use and Planning		
6-1	<ul style="list-style-type: none"> ▪ Minimize physical division of existing established communities or residential areas by designing new facilities and infrastructure to be located underground or with sufficient points of visual and physical access. Examples of methods of minimizing physical division include (but are not limited to): <ul style="list-style-type: none"> ○ Burying or visually masking new infrastructure or facilities; ○ Restoring disturbed landscapes back to preconstruction conditions; ○ Reestablishing access (e.g., reconnecting roads, rebuilding bridges); ○ Relocating landmark buildings; or ○ Implementing other feasible mitigation to reduce the disturbance to a community's physical composition, visual character, or other features integral to the community's identity. 	<p>Not applicable.</p> <p>Section 3.11 of the CEQA Addendum evaluate impacts related to land use and planning. The proposed project would not physically divide an established community as none occur in or immediately adjacent to the Site. No significant impacts would occur, and no mitigation is needed.</p>
6-2	<ul style="list-style-type: none"> ▪ Compensate for the loss or reduction in environmental values protected by the subject plan or policy. For example, if the project would result in conversion of agricultural land to a non-agricultural use, potential mitigation actions could include: <ul style="list-style-type: none"> ○ Recording a deed restriction that ensures permanent conservation and mitigation on other property of equal or greater environmental mitigation value; ○ Creating a buffer or barrier between uses; ○ Redesigning the project or selecting an alternate location that avoids or mitigates the impact; and/or ○ Restoring disturbed land to conditions to provide equal or greater environmental value to the land affected by the covered action. 	<p>Not applicable.</p> <p>As described in Section 3.2 – Agriculture and Forestry Resources, Section 3.4 Biological Resources and Section 3.11 – Land Use and Planning of the CEQA Addendum, the project would not impact agricultural resources and would not convert habitat or land use. No significant impacts would occur, and no mitigation is required.</p>
Agriculture and Forestry Resources		
7-1	<ul style="list-style-type: none"> ▪ Design proposed projects to minimize, to the greatest extent feasible, the loss of the highest valued agricultural land. ▪ For projects that will result in permanent conversion of Farmland, preserve in perpetuity other Farmland through acquisition of an agricultural conservation easement, or contributing funds to a land trust or other entity qualified to preserve Farmland in perpetuity (at a target ratio of 1:1, depending on the nature of the conversion and the characteristics of the Farmland to be converted, to compensate for permanent loss). ▪ Redesign project features to minimize fragmenting or isolating Farmland. Where a project involves acquiring land or easements, ensure that the remaining non-project area is of a size sufficient to allow viable farming operations. The project proponents shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management. ▪ Reconnect utilities or infrastructure that serve agricultural uses if these are disturbed by project construction. If a project temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or 	<p>Not applicable.</p> <p>Section 7.1 of the SMP EIS/EIR and Section 3.2 of the CEQA Addendum evaluate impacts to agriculture and forestry resources. The project would not result in significant impacts and no mitigation is required.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>other infrastructure, the project proponents shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted.</p> <ul style="list-style-type: none"> ▪ Manage project operations to minimize the introduction of invasive species or weeds that may affect agricultural production on adjacent agricultural land. ▪ Establish buffer areas between projects and adjacent agricultural land that are sufficient to protect and maintain land capability and agricultural operation flexibility. Design buffers to protect the feasibility of ongoing agricultural operations and reduce the effects of construction- or operation-related activities (including the potential to introduce special-status species in the agricultural areas) on adjacent or nearby properties. The buffer shall also serve to protect ecological restoration areas from noise, dust, and the application of agricultural chemicals. The width of the buffer shall be determined on a project-by-project basis to account for variations in prevailing winds, crop types, agricultural practices, ecological restoration, or infrastructure. Buffers can function as drainage swales, trails, roads, linear parkways, or other uses compatible with ongoing agricultural operations. 	
7-2	<ul style="list-style-type: none"> ▪ Design proposed projects to minimize, to the greatest extent feasible, conflicts and inconsistencies with land protected by agricultural zoning or a Williamson Act contract and the terms of the applicable zoning/contract. 	<p>Not applicable.</p> <p>Section 7.1 of the SMP EIS/EIR and Section 3.2 of the CEQA Addendum evaluate impacts to agriculture and forestry resources. The project would not result in significant impacts and no mitigation is required.</p>
7-3	<ul style="list-style-type: none"> ▪ Avoid land protected as forestland and timberland through site selection and/or project design. Where feasible, project proponents should take into account the value of the forest, not only in terms of direct products such as wood but also as part of the watershed ecosystem, when selecting a project site. Wherever possible, nonprotected sites should be preferred and selected instead of protected sites. 	<p>Not applicable.</p> <p>Section 7.1 of the SMP EIS/EIR and Section 3.2 of the CEQA Addendum evaluate impacts to agriculture and forestry resources. The project would not result in significant impacts and no mitigation is required.</p>
7-4	<ul style="list-style-type: none"> ▪ For projects that will result in permanent conversion of Forestland, preserve in perpetuity other forestland through a conservation easement or by acquiring lands or contributing funds to a land trust or other agency (at a target ratio of 1:1, depending on the nature of the conversion and the characteristics of the Forestland to be converted, to compensate for permanent loss). ▪ Avoid land protected as forestland and timberland through site selection and/or project design. Where feasible, project proponents should take into account the value of the forest, not only in terms of direct products such as wood, but also as part of the watershed ecosystem, when selecting a project site. When possible, unprotected sites should be preferred and selected instead of protected sites. ▪ When removal of existing forestland or timberlands is required as part of an action, proponents must acquire 	<p>Not applicable.</p> <p>Section 7.1 of the SMP EIS/EIR and Section 3.2 of the CEQA Addendum evaluate impacts to agriculture and forestry resources. The project would not result in significant impacts and no mitigation is required.</p>

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	the property at fair market value.	
Visual Resources		
8-1	<ul style="list-style-type: none"> ▪ Use compatible colors for proposed structural features, such as intakes, pumping plants, and surge towers. Use earth tone paints and stains with low levels of reflectivity. ▪ Minimize the vertical profile of proposed structures as much as possible. Where possible, use subgrades for floors of structures. Use landscaped berms instead of walls to mask views of structures from high-visibility sites. Use green roof design where roof structures would be highly visible. ▪ Use vegetation plantings on proposed facility walls, such as climbing plants, espaliers, and other forms that soften the appearance of structures. ▪ Develop a landscaping plan for all proposed structures. Provide vegetative screening to soften views of structures. Landscaping should complement the surrounding landscape. ▪ Round the tops and bottoms of spoil disposal areas, and contour the faces of slopes to create more natural-looking landforms. Create visual diversity by planting vegetation with diverse growth forms on the spoil disposal areas; plant with more than just grasses. ▪ Landscape parking areas at proposed facilities, and include low-impact design features, such as permeable pavers, tree basins, and bioswales, that reduce stormwater runoff and enhance visual quality. ▪ Conduct only partial vegetative clearing of the limits of construction rather than clear the entire area; partial clearing would leave islands of vegetation and result in a more natural look. Use irregular clearing shapes with feathered edges instead of hard edges to promote a more natural effect. ▪ Develop design form and materials with a goal to achieve aesthetic visual character instead of a strictly utilitarian objective. Use cast natural form elements or natural materials for facing to achieve texture and color compatible with the adjacent landscape; natural materials would be preferable for areas of high visibility and public use. Landscape areas adjacent to facilities. Use natural materials, such as wood and stone, for signage at proposed facilities. ▪ Develop aesthetically pleasing landscaping for relocated roads at the shoulders, intersections, and on- and off- ramps from highways. Design turnouts and scenic vista points where appropriate for relocated roads with high visibility and high public use. ▪ To the extent consistent with the safety and reliability of the electric grid, as well as site-specific considerations, use single-pole electrical transmission towers instead of lattice-form towers for proposed large electrical transmission lines, and put transmission lines underground along areas with high visibility and high public use. ▪ Consider developing aesthetically well-designed visitor centers, vantage areas, or observation decks at appropriate facilities with interpretation features, walking paths, and other features. Although developing visitor centers would not reduce a visual impact, it would have the effect of making the facilities features of interest to the touring public. 	<p>Consistent.</p> <p>See Section 7.6 of the SMP EIS/EIR and Section 3.1 of the CEQA Addendum. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to protect visual resources.</p>
8-2	<ul style="list-style-type: none"> ▪ Implement elements of Mitigation Measure 8-1 for temporary construction activities and new facilities that are visible from scenic vistas and designated roads and highways as appropriate. ▪ Replace all scenic resources (e.g., large trees) that would be removed for the Proposed Project, when feasible. Identify compensatory mitigation for visual or aesthetic resources by providing improvements to areas with existing diminished scenic quality. 	<p>Consistent.</p> <p>See Section 7.6 of the SMP EIS/EIR and Section 3.1 of the CEQA Addendum. Environmental commitments included in Chapter 2</p>

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		of the SMP EIS/EIR would be implemented by the project to protect visual resources.
8-3	<ul style="list-style-type: none"> ▪ Use shields for proposed lighting facilities, and direct lighting downward and inward toward the facilities. 	<p>Not applicable.</p> <p>The project does not propose lighting facilities.</p>
Air Quality		
9-1	<ul style="list-style-type: none"> ▪ Use equipment and vehicles that are compliant with Air Resource Board (ARB) requirements and emission standards for on-road and off-road fleets and engines. New engines and retrofit control systems should reduce NO_x and PM from diesel-fueled on-road and off-road vehicles and equipment. ▪ Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage should be posted for construction workers at all entrances to the site. ▪ Maintain all equipment in proper working condition according to manufacturer's specifications. ▪ Use electric equipment when possible. Use lower-emitting alternative fuels to power vehicles and equipment where feasible. ▪ Use low Volatile Organic Compounds (VOC) coatings and chemicals; minimize chemical use. ▪ Prepare a dust control plan and apply dust control measures at the construction sites. ▪ To minimize track-out of dirt and mud from dirt and gravel roads, all trucks and equipment, including their tires, shall be washed prior to leaving the site. Only exteriors of trucks and equipment are to be washed (no engine degreasing), no detergents or chemicals shall be used in the wash water, and off-site runoff of rinse water shall be prevented. ▪ For projects involving land fallowing, land conversion, or other agricultural operations, implement applicable BMPs from agencies such as the U.S. Department of Agriculture Natural Resources Conservation Service to reduce potential dust emissions. <p>BMPs for fallowed lands could include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ Implement conservation cropping sequences and wind erosion protection measures, such as: <ul style="list-style-type: none"> ○ Plan ahead to start with plenty of vegetation residue, and maintain as much residue on fallowed fields as possible. Residue is more effective for wind erosion protection if left standing. ○ If residues are not adequate, small grain can be seeded about the first of the year to take advantage of the winter rains and irrigated with a light irrigation if needed to get adequate growth. ○ Avoid any tillage if possible. ○ Avoid any traffic or tillage when fields are extremely dry to avoid pulverization. ▪ Apply soil stabilization chemicals to fallowed lands. ▪ Re-apply drain water to allow protective vegetation to be established. ▪ Reuse irrigation return flows to irrigate windbreaks across blocks of land including many fields to reduce wind fetch and reduce emissions from fallowed, farmed, and other lands within the block. Windbreak species, management, and layout would be optimized to achieve the largest feasible dust emissions 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project including BMPs addressing construction-related impacts to air quality.</p> <p>Mitigation Measures AQ-MM-1 through AQ-MM-4 of the SMP EIS/EIR would be implemented by the project limiting construction activity, reducing construction emissions, implementing all BAAQMD mitigation measures, and limiting restoration and management activity. See Section 3.3 of the CEQA Addendum.</p> <p>Additional BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258).</p>

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	<p>reduction per unit water available for their irrigation. Windbreak corridors would provide ancillary aesthetic and habitat benefits.</p> <p>Project-specific lists of mitigation measures should also include the recommendations or requirements of the local air district(s). For example, the Bay Area Air Quality Management District (BAAQMD) lists the following basic and additional mitigation measures to reduce emissions from project construction (BAAQMD, 2010. California Environmental Quality Act Air Quality Guidelines. December 2010. San Francisco, California. Site accessed February 8, 2011. http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx).</p> <p>Basic Construction Mitigation Measures Recommended for ALL Proposed Projects</p> <ol style="list-style-type: none"> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. 8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. <p>Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold</p> <ol style="list-style-type: none"> 1. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. 2. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. 3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. 4. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. 5. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. 6. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. 7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. 8. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. 	

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	<p>9. Minimizing the idling time of diesel powered construction equipment to two minutes.</p> <p>10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet- average 20 percent NO_x reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.</p> <p>11. Use low VOC (i.e., reactive organic gases or ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).</p> <p>12. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NO_x and PM.</p> <p>13. Require all contractors to use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines.</p>	
9-2	<ul style="list-style-type: none"> ▪ Applicants should develop and implement a project-specific Odor Management Plan. Odor control measures that can be incorporated into this plan include, but are not limited to, the following: <ul style="list-style-type: none"> ○ A list of potential odor sources ○ Identification and description of the most likely sources of odor ○ Identification of potential, intensity, and frequency of odor from likely sources ○ A list of odor control technologies and management practices that could be implemented to minimize odor releases ○ A protocol for monitoring, recording, reporting and responding to odor events, including notification of the local and downwind jurisdictions of projects that may result in odor complaints, including contact numbers for responsible individuals during construction. If odor an event occurs, construction activity should be suspended until conditions change, removing the cause and resultant odors, or until alternate management practices are implemented that significantly reduce the odors. 	<p>Not applicable.</p> <p>The project does not anticipate having any odor release. The brief usage of heavy equipment, which operates routinely in the GIWA under most normal circumstances, is not expected to create any additional discernible pollutants or odors. See Section 5.7 of the EIS/EIR.</p>
9-3	<p>The Air Quality Technical Report prepared for the Proposed Project should evaluate human health risks from potential exposures of sensitive receptors to substantial pollutant concentrations on a project-specific basis. The need for a human health risk analysis should be evaluated using approved screening tools, and discussed with the local Air Quality Management District (AQMD) or Air Pollution Control District (APCD) at the time of preparation of the Air Quality Technical Report.</p> <p>If the health risk is determined to be significant on a project-specific basis, control measures should be implemented to reduce health risks to levels below the applicable air district threshold.</p> <p>Implementation of one or more of the following requirements, where feasible and appropriate would reduce the effects of Impact 9-3a, Construction or Operation of Projects Would Expose Sensitive Receptors to Substantial Pollutant Concentrations:</p> <ul style="list-style-type: none"> ▪ Implement Mitigation Measure 9-1 to reduce air emissions and air quality impacts from construction and operations of the Proposed Project. ▪ Use equipment with diesel engines designed or retrofitted to minimize DPM emissions, usually through the use of catalytic particulate filters in the exhaust. ▪ Use electric equipment to eliminate local combustion emissions. 	<p>Not applicable.</p> <p>See Section 5.7 of the EIS/EIR and Section 3.3 of the CEQA Addendum. No significant impact related to exposure of sensitive receptors to substantial pollutant concentrations would occur and mitigation measures are not required.</p>

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	<ul style="list-style-type: none"> ▪ Use alternative fuels, such as compressed natural gas or liquefied natural gas. <p>If the project would result in significant emissions of airborne, naturally occurring asbestos or metals from excavation, hauling, blasting, tunneling, placement, or other handling of rocks or soil, a dust mitigation and air monitoring plan would be required to specify site-specific measures to minimize emissions and that airborne concentrations of the toxic air contaminants (TACs) of concern do not exceed regulatory or risk-based trigger levels.</p>	
Cultural Resources		
10-1	<ul style="list-style-type: none"> ▪ Before any ground-disturbing activities begin, conduct intensive archaeological surveys, including subsurface investigations to identify the locations, extent, and integrity of presently undocumented archaeological resources that may be located in areas of potential disturbance. In addition, if ground-disturbing activities are planned for an area where a previously documented prehistoric archaeological site has been recorded but no longer may be visible on the ground surface, conduct test excavations to determine whether intact archaeological subsurface deposits are present. Also conduct surveys at the project site for the possible presence of cultural landscapes and traditional cultural properties. ▪ If potentially CRHR-eligible prehistoric or historic-era archeological resources are discovered during the survey phase, additional investigations may be necessary. These investigations could include, but not necessarily be limited to, measures providing resource avoidance, archival research, archaeological testing and California Register of Historical Resources (CRHR) eligibility evaluations, and contiguous excavation unit data recovery. In addition, upon discovery of potentially CRHR-eligible prehistoric resources, coordinate with the NAHC and the Native American community to provide for an opportunity for suitable individuals and tribal organizations, including federally recognized tribes, to comment on the proposed research. ▪ If CRHR-eligible archaeological resources or cultural landscapes/properties are present and would be physically impacted, specific strategies to avoid or protect these resources should be implemented if feasible. These measures may include: <ul style="list-style-type: none"> ○ Planning construction to avoid the sensitive sites ○ Deeding the sensitive sites into permanent conservation easements ○ Capping or covering archaeological sites ○ Planning parks, green space, or other open space to incorporate the sensitive sites ○ Granting of cultural easements to Native American tribes for the purpose of protecting cultural resource properties ▪ If federal agencies are participants in the activity and Section 106 of the National Historic Preservation Act applies, conduct formal consultation with the State Historic Preservation Officer, Tribal Historic Preservation Officer (THPO) or Tribal Administrator for tribes that do not have a THPO, and the Native American community. Potential adverse effects on cultural resources recommended as eligible for listing in the National Register of Historic Places (NRHP) will be resolved through the development of a memorandum of agreement and/or a program-level agreement. ▪ As part of efforts to identify, evaluate, and consider cultural resources, including prehistoric sites, Native American human remains, and traditional cultural properties, Native Americans would be consulted. The California Native American Heritage Commission (NAHC) would be asked to provide a list of Native Americans who should be contacted concerning an identified future project. The NAHC would also be asked to search its Sacred Lands Files. Native Americans identified by the NAHC would be contacted by letter to request information on cultural resources of importance. They also would be asked to identify concerns they 	<p>Consistent.</p> <p>See Section 7.7 of the SMP EIS/EIR and Section 3.5 of the CEQA Addendum. Pursuant to Mitigation Measure CUL-MM-7 and CUL-MM-8 of the SMP EIS/EIR, National Historic Preservation Act Section 106 Consultation with the State Historic Preservation Office has been completed. The Project would implement Mitigation Measure CUL-MM-6 and environmental commitments requiring the contractor to stop work if previously unknown historic or archeological artifacts are discovered during construction activities.</p>

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	<p>have about the project. THPOs and Tribal Administrators of federally recognized tribes would be contacted and asked to search their files and provide information necessary for the identification and consideration of cultural resources.</p> <ul style="list-style-type: none"> ▪ Before any project-specific ground-disturbing activities begin, conduct investigations to identify submerged cultural resources. These investigations would include review of State Lands Commission (SLC) Shipwrecks Database and other SLC files, and remote sensing surveys conducted under the direction of a qualified maritime archaeologist. If avoidance of significant submerged cultural resources is not feasible, a permit from SLC may be necessary to conduct resource documentation and possible salvage of artifacts, ship components, and other data and objects. ▪ If CRHR-eligible archaeological resources, including submerged or buried shipwrecks or other maritime-related cultural resources, are discovered during construction activities, work would halt within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist or maritime archaeologist as appropriate. In addition, SLC would be consulted. 	
10-2	<p>The identification, evaluation, and determination of disposition of Native American human remains shall be conducted in accordance with Native American consultation procedures described below and in Mitigation Measure 10-1. The location, content, and character of Native American human remains are confidential and shall not be released to the public. Native American human remains and associated funerary objects shall be treated with the utmost respect and in accordance with the direction of the identified Most Likely Descendant (MLD).</p> <ul style="list-style-type: none"> ▪ If human remains are encountered during ground-disturbing construction activities, stop work that would potentially affect the find and contact the county coroner. <ul style="list-style-type: none"> ○ In accordance with the California Health and Safety Code and the California Native American Grave Protection and Repatriation Act (CNAGPRA), if human remains are uncovered during ground-disturbing activities, the contractor shall immediately halt potentially damaging excavation in the area of the burial and notify the county coroner, a professional archaeologist to determine the nature of the remains, and a representative of California Indian tribes. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by telephone within 24 hours of making that determination (Health and Safety Code section 7050[c]). ○ Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated Most Likely Descendent (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code section 5097.9. ○ Upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. ○ A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or 	<p>Consistent.</p> <p>See Section 7.7 of the SMP EIS/EIR and Section 3.18 of the CEQA Addendum. The Project would implement environmental commitments requiring the contractor to stop work if previously unknown historic or archeological artifacts are discovered during construction activities. In the event that previously unidentified resources and/or buried human remains are encountered during construction, BMPs, including stop work measures, would be implemented to protect tribal cultural resources.</p>

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	<p>other culturally appropriate treatment may be discussed. California Public Resources Code section 5097.9 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. The following is a list of site protection measures that the landowner shall employ:</p> <ul style="list-style-type: none"> ▪ Record the site with the NAHC or the appropriate information center. ▪ Use an open space or conservation zoning designation or easement. ▪ Record a document with the county in which the property is located. <p>○ The landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance if the NAHC is unable to identify a MLD or if the MLD fails to make a recommendation within 48 hours after being granted access to the site. The landowner or his or her authorized representative may also reinter the remains in a location not subject to further disturbance if he or she rejects the recommendation of the MLD and mediation by the NAHC fails to provide measures acceptable to the landowner.</p> <ul style="list-style-type: none"> ▪ If the discovery of human remains occurs on lands owned and administered by a federal agency, the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) will apply. NAGPRA requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items in their collections, notify native groups of their holdings, and provide an opportunity for repatriation of these materials. The act also requires planning for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony. 	
10-3	<ul style="list-style-type: none"> ▪ Inventory and evaluate historic-era buildings, structures, and linear features. Conduct cultural resources studies to determine whether historic-era buildings, structures, and linear features in the project area are eligible for listing in the CRHR. ▪ Before construction activities begin, an inventory and evaluation of historic-era resources in the project area should be conducted under the direct supervision of an architectural historian meeting the Secretary of the Interior's Professional Qualification Standards for history or architectural history. The documentation should include conducting an intensive field survey, background research on the history of the project area, and property-specific research. Based on this research, the eligibility of historic-era resources located in the project area should be evaluated by the architectural historian using criteria for listing in the CRHR. The resources would be recorded on DPR 523 forms and the findings documented in a technical report. If federal funding or approval is required, then the project implementation agencies would comply with Section 106 of the National Historic Preservation Act. ▪ Identify measures to avoid significant historic resources. Avoidance through project redesign is the preferred mitigation measure for mitigating potential effects on historic-era buildings, structures, linear features, and archaeological sites that appear to be eligible for listing in the NRHP or CRHR. ▪ Record photographic and written documentation to Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) standards. If avoidance of a significant historic resource is not feasible, the lead agency should ensure that HABS/HAER documentation is completed. Through HABS/HAER documentation, a qualified architectural historian and qualified photographer should formally document the historic resource through large-format photography, measured drawings, written architectural descriptions, and historical narratives. The completed documentation should be submitted to the Library of 	<p>Consistent.</p> <p>See Section 7.7 of the SMP EIS/EIR and Section 3.5 of the CEQA Addendum. Pursuant to Mitigation Measure CUL-MM-7 and CUL-MM-8 of the SMP EIS/EIR, National Historic Preservation Act Section 106 Consultation with the State Historic Preservation Office has been completed. The Project would implement Mitigation Measure CUL-MM-6 and environmental commitments requiring the contractor to stop work if previously unknown historic or archeological artifacts are discovered during construction activities.</p>

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	<p>Congress.</p> <ul style="list-style-type: none"> ▪ Conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings in the event of relocation. If any historic buildings, structures, or levees are relocated or altered, the lead agency should ensure that any changes to significant buildings or structures conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Implementation of this measure can mitigate potential changes to significant architectural resources. ▪ Conform to the Secretary of the Interior's Guidance for the Treatment of Cultural Landscapes to preserve landscapes' historic form, features, and details that have evolved over time. 	
10-4	<ul style="list-style-type: none"> ▪ Mitigation Measures 10-1 and 10-3 will also mitigate Impact 10-4, Disturbance or Destruction of Cultural Landscapes and Traditional Cultural Properties. However, to mitigate Impact 10-4, Mitigation Measure 10-1 surveys and Mitigation Measure 10-3 inventories would focus on cultural landscapes and traditional cultural properties. 	<p>Consistent.</p> <p>See Section 7.7 of the SMP EIS/EIR and Section 3.5 of the CEQA Addendum. Pursuant to Mitigation Measure CUL-MM-7 and CUL-MM-8 of the SMP EIS/EIR, National Historic Preservation Act Section 106 Consultation with the State Historic Preservation Office has been completed. The Project would implement Mitigation Measure CUL-MM-6 and environmental commitments requiring the contractor to stop work if previously unknown historic or archeological artifacts are discovered during construction activities.</p>
Geology and Soils		
11-1	<ul style="list-style-type: none"> ▪ For construction that occurs in an Alquist-Priolo Special Studies Zone, a determination must be made by a licensed practitioner (California Certified Engineering Geologist) that no fault traces are present within the building footprint of any structure intended for human occupancy. The standard of care for such determinations includes direct examination of potentially affected subsurface materials (soil and/or bedrock) by logging of subsurface trenches. Uncertainties regarding the exact locations of future ground ruptures associated with such determinations generally are resolved by providing a minimum setback of 50 feet from any known surface trace of an active fault. For critical structures, such as hospitals, dams, and emergency facilities, more stringent mitigation measures are required, including but not limited to greater structural setbacks and heavier reinforcement against strong ground motion, in compliance not only with California regulations but in many cases in compliance with additional Federal regulations. ▪ Lead agencies shall ensure that geotechnical design recommendations are included in the design of facilities and construction specifications to minimize the potential impacts from seismic events and the 	<p>Not applicable.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the CEQA Addendum. The proposed project is not located within the Alquist-Priolo Special Studies Zone.</p>

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	presence of adverse soil conditions. Recommended measures to address adverse conditions shall conform to applicable design codes, guidelines, and standards.	
11-2	<ul style="list-style-type: none"> ▪ Require adherence, at minimum, to the precepts of the current approved version of the International Building Code (IBC). Included in the IBC are measures for mitigation of the impacts of strong ground motion on constructed works. In addition to the California –required conformance with the IBC, for critical structures, such as dams (including levees), hospitals, and emergency facilities, additional construction requirements are codified in federal statutes and the regulations of various federal agencies. Lead agencies will, by force of law, require conformance with these codified mitigation measures. 	<p>Not applicable.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the CEQA Addendum. The proposed project does not include a facility or structure subject to the IBC.</p>
11-3	<ul style="list-style-type: none"> ▪ For projects that would result in significant or potentially significant grading operations, a geotechnical investigation shall be performed and a geotechnical report prepared. The geotechnical report shall include a quantitative analysis to determine whether excavation or fill placement would result in a potential for damage due to soil subsidence during and/or after construction. Project designs shall incorporate measures to reduce the potential damage to an insignificant level, including but not limited to removal and recompaction of existing soils susceptible to subsidence, ground improvement (such as densification by compaction or grouting, soil cementation), and reinforcement of structural components to resist deformation due to subsidence. The site-specific potential for and severity of cyclic seismic loading shall be analyzed in the assessment of subsidence for specific projects. ▪ A geotechnical investigation shall be performed by an appropriately licensed professional engineer and/or geologist to determine the presence and thickness of potentially liquefiable sands that could result in loss of bearing value during seismic shaking events. Project designs shall incorporate measures to mitigate the potential damage to an insignificant level, including but not limited to ground improvement (such as grouting or soil cementation), surcharge loading by placement of fill, excavation, soil mixing with non-liquefiable finer-grained materials and replacement of liquefiable materials at shallow depths, and reinforcement of structural components to resist deformation due to liquefaction. An analysis of site-specific probable and credible seismic acceleration values, in accordance with current applicable standards of care, shall be performed to provide for suitable project design. ▪ For projects that would result in construction of wells intended for groundwater extraction, a hydrogeological/geotechnical investigation shall be performed in accordance with the current standards of care for such work by an appropriate licensed professional engineer or geologist to identify and quantify the potential for groundwater extraction-induced subsidence. The study shall include an analysis of existing conditions and modeling of future conditions to assess the potential for aquifer compaction/consolidation. ▪ For projects that would result in construction of surface reservoirs and canals a hydrogeological/geotechnical investigation shall be performed by a licensed professional engineer or geologist to identify and quantify the potential for seeps and springs to develop in areas adjacent to the proposed improvements and to propose mitigation measures. Mitigation of such seepage could include, without limitation, additives to concrete that reduce its permeability, construction of impervious liner systems, and design and construction of subdrainage (passive control) or dewatering systems (active control). <p>Geotechnical investigations and preparation of geotechnical reports shall be performed in the responsible care of California licensed geotechnical professionals including professional civil engineers, certified geotechnical engineers, professional geologists, certified engineering geologists, and certified hydrogeologists, all of whom should be</p>	<p>Not applicable.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the CEQA Addendum. Grading associated with the project is limited to installation of water control infrastructure and minor levee improvements. In this case no Geotechnical Report was deemed necessary.</p>

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	practicing within the current standards of care for such work.	
11-4	<ul style="list-style-type: none"> ▪ Any covered action that would have significant soil erosion and topsoil loss impacts (Impact 11-4) shall incorporate specific measures for future projects that would expand the use of BMPs or optional erosion control measures listed in the SWPPPs. The SWPPP shall identify an effective combination of BMPs to reduce erosion during construction and to prevent erosion during operation. Examples of typical BMPs include: <ul style="list-style-type: none"> ○ Erosion control measures such as silt fencing, sand bags, straw bales and mats, and rice straw wattles shall be placed to reduce erosion and capture sediment. Straw used for erosion control shall be new cereal grain straw derived from rice, wheat, or barley; free of mold and noxious weed seed; and neither derived from dry-farmed crops nor previously used for stable bedding. Clearance shall be obtained from the County Agricultural Commissioner before straw obtained from outside the county is delivered to the work site. Monitoring requirements of the newly revised General Construction Permit shall be implemented, and more effective BMPs shall be identified and installed if runoff samples indicate excessive turbidity. ○ During construction activities, topsoil shall be removed, stockpiled, and saved for reapplication following completion of construction. The top 6 inches shall be salvaged and reapplied to a comparable thickness. Soil material shall be placed in a manner that minimizes compaction and promotes plant reestablishment. ○ If catch basins are used for sediment capture, the site shall be graded to ensure stormwater runoff flows into the basins, and basins shall be designed for the appropriate storm interval as provided in the General Construction Permit. ○ Temporary work areas shall be surfaced with a compacted layer of well-graded gravel. They may be covered with a thin asphalt binder. Where expansive or compressible soils are present in temporary work areas, construction trailers shall be supported with concrete pads or footings. ○ Dust control shall conform to all federal, State, and local requirements and may include use of water trucks, street sweepers, or other methods described in the SWPPP. ○ Spoils shall be placed in 12-inch-thick loose lifts and compacted to reduce erosion and minimize future subsidence. Placement of peat spoils shall be on agricultural land where possible. Following construction, spoils sites shall be restored to avoid erosion. 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project including BMPs addressing construction-related impacts to soil erosion. See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the CEQA Addendum.</p> <p>Additional BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258).</p>
11-5	<ul style="list-style-type: none"> ▪ In areas where expansive clays exist, a hydrogeological/geotechnical investigation shall be performed by a licensed professional engineer or geologist to identify and quantify the potential for expansion, particularly differential expansion of clayey soils due to leakage and saturation beneath new improvements. Measures could include, but are not limited to removal and recompaction of problematic expansive soils, soil stabilization, and/or reinforcement of constructed improvements to resist deformation due to expansion of subsurface soils. 	<p>Not applicable.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the CEQA Addendum. No significant impact related to expansive clays would occur and mitigation measures are not required.</p>
11-6	<ul style="list-style-type: none"> ▪ For projects that would result in construction of canals, storage reservoirs and other surface impoundments, project design shall provide for protection from leakage to the subsurface. Measures could include, but are not limited to rendering concrete less permeable by specifying concrete additives such as bentonite, design 	<p>Consistent.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the</p>

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	<p>of impermeable liner systems, design of leakage collection and recovery systems, and construction of impermeable subsurface cutoff walls.</p> <ul style="list-style-type: none"> ▪ For ecosystem restoration projects that might cause subsurface seepage of nuisance water onto adjacent lands: <ul style="list-style-type: none"> ○ Perform seepage monitoring studies by measuring the level of shallow groundwater in the adjacent soils, to evaluate the baseline conditions. Continue monitoring for seepage during and after the project implementation. ○ Develop a seepage monitoring plan if subsurface seepage constitutes nuisance water to the adjacent land. ○ Implement seepage control measures if adjacent land is not useable, such as installing subsurface agricultural drainage systems to avoid raising water levels into crop root zones. Cutoff walls and pumping wells can also be used to mitigate for the occurrence of subsurface nuisance water. 	<p>CEQA Addendum. Engineering plans and specifications detail the methods for berm compaction and standards of care at the project site. See engineering plans, General and Technical Specifications.</p>
11-7	<ul style="list-style-type: none"> ▪ For projects that would result in construction of levees, surface impoundments and other fill embankments project design shall incorporate fill placement in accordance with local and State regulations and in accordance with the prevailing standards of care for such work. Measures could include, but are not limited to blending of soils most susceptible to landsliding with soils having higher cohesion characteristics, installation of slope stabilization measures, designing top-of-slope berms or v-ditches, terrace drains and other surface runoff control measures, and designing slopes at lower inclinations. 	<p>Consistent.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.7 of the CEQA Addendum. Engineering plans and specifications detail the methods for berm compaction and standards of care at the project site. See engineering plans, General and Technical Specifications.</p>
11-8	<ul style="list-style-type: none"> ▪ A geotechnical investigation shall be performed and a geotechnical report prepared. The geotechnical report shall include a quantitative analysis to determine whether on-site soils would be suitable for an on-site wastewater treatment system. If it is determined that the soil could not support a conventional on-site treatment system, non- conventional systems shall be analyzed. Potential alternative systems include (SWRCB, 2011, Onsite Wastewater Treatment System Scoping Document. http://www.swrcb.ca.gov/water_issues/programs/owts/index.shtml): <ul style="list-style-type: none"> ○ Containment systems that do not generate waste ○ Anoxic and anaerobic systems ○ Attached and suspended growth aerobic treatment systems ○ Natural treatment systems ○ Disinfection systems ○ Engineered-fill leach fields ○ Monitoring control systems 	<p>Not applicable.</p> <p>The proposed project does not propose a wastewater treatment system.</p>
11-9	<ul style="list-style-type: none"> ▪ For projects that would result in significant or potentially significant risk to structures due to the presence of highly organic soils, lead agencies shall require geotechnical evaluation prior to construction to identify measures to mitigate organic soils. The following measures may be considered: <ul style="list-style-type: none"> ○ Over-excavation and import of suitable fill material 	<p>Not applicable.</p> <p>All structures would be built within existing levees that include a mix of native soil and engineered fill. The</p>

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	<ul style="list-style-type: none"> ○ Structural reinforcement of constructed works to resist deformation ○ Construction of structural supports below the depth of highly organic soils into materials with suitable bearing strength 	site consists of Valdez silty clay loam, there are no known highly organic soils within the project area.
Paleontological Resources		
12-1	<ul style="list-style-type: none"> ▪ During the project-level analysis, a Paleontological Resources Monitoring and Recovery Plan (PRMRP) shall be developed and implemented for all actions. The PRMRP shall include protocols for paleontological resources monitoring in those areas where sediment with moderate to high paleontological sensitivity would be affected by construction-related excavations. The PRMRP also shall set forth the following procedures: <ul style="list-style-type: none"> ○ Confirming the paleontological sensitivity (high, moderate, or low) of the areas to be impacted through review of project-level geological and geotechnical data ○ Determining the qualifications of the paleontologist as established by the Society of Vertebrate Paleontology (SVP) (SVP, 1991. Standard Measures for assessment and mitigation of adverse impacts to nonrenewable paleontological resources. Society of Vertebrate Paleontology News Bulletin 152:2 – 5; SVP, 1995. Assessment and mitigation of adverse impacts to nonrenewable paleontological resources: Standard guidelines. Society of Vertebrate Paleontology News Bulletin 163: 22 – 27; SVP, 1996. Conditions of Receivership for Palaeontologic Salvage Collections. Society of Vertebrate Paleontology News Bulletin. Vol. 166, pp. 31 – 32 ○ The assessment and recovery of discovered fossil resources ○ The preparation and curation of fossil finds <p>The PRMRP would provide guidelines for the establishment of a yearly or biannual monitoring program led by a qualified paleontologist to determine the extent of fossiliferous sediment being exposed and affected by erosion, and determine whether paleontological resources are being lost. If loss of scientifically significant paleontological resources can be documented, then a recovery program should be implemented.</p>	<p>Not applicable.</p> <p>See Section 3.7 of the CEQA Addendum. Because of its geologic history, the project area is considered an unlikely environment for the presence of paleontological resources and for unique geologic features. No known paleontological resources or sites occur in the Project Area. No significant impacts to paleontological resources would occur and mitigation measures are not required.</p>
Mineral Resources		
13-1	<ul style="list-style-type: none"> ▪ Ensure land use compatibility between existing mineral resource extraction activities and projects, activities or actions that may be implemented as the result of the Proposed Project. ▪ Maintain adequate buffer between future projects and designated MRZ-2 sectors. ▪ Explore opportunities to classify and designate new MRZ-2 sectors (e.g., in existing MRZ-3 sectors) to ensure that important mineral resources are conserved and continue to be available for future construction needs. ▪ Ensure future land use changes within designated mineral resource extraction areas recognize mineral resource extraction as a compatible use. ▪ Limit use of construction aggregate to local sources with sufficient capacity to meet both project and future local development needs, to the extent possible. ▪ Use recycled aggregate where possible, to decrease the demand for new aggregate. 	<p>Not applicable.</p> <p>See Section 5.3 of the SMP EIS/EIR and Section 3.12 of the CEQA Addendum. No mineral resources have been identified within the project area. No significant impacts to mineral resources would occur and mitigation measures are not required.</p>
13-2	<ul style="list-style-type: none"> ▪ Ensure access is maintained to existing, active mineral resource extraction sites both during and after project construction. ▪ Implement recommendations identified in Division of Oil, Gas, and Geothermal Resources of the U.S. 	<p>Not applicable.</p> <p>See Section 5.3 of the SMP</p>

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	<p>Geological Survey (DOGGR) construction site well review program (DOC 2007, California Department of Conservation, Division of Oil, Gas and Geothermal Resources, Well Review Program: Introduction and Application.), such as:</p> <ul style="list-style-type: none"> ○ For all future projects, identify all existing natural gas well sites and oil production facilities within or in close proximity to the project area. ○ Identify any oil and natural gas well within 100 feet of any navigable body of water or watercourse perennially covered by water or any officially recognized wildlife preserve as a “critical well” (California Code of Regulations, Title 14, Chapter 4, Article 2, Section 1720(a)(2)(B) and (C)). The DOC requires that a “critical well” include more stringent blowout prevention equipment than non-critical wells based on pressure testing and rating. ○ Identify safety measures to prevent unauthorized access to equipment. ○ Include safety shut-down devices on oil and natural gas wells and other equipment, as appropriate. ○ Notify DOC of new oil and natural gas wells or changes in oil and natural gas well operations or physical conditions, receive written approval from DOC of the changes, and receive written notification of DOC’s inspection of new or changed equipment. The approvals will be primarily related to the ability to: (1) protect all subsurface hydrocarbons and fresh water, (2) protect the environment, (3) use adequate blowout prevention equipment, and (4) use approved drilling and cementing techniques. ○ If any plugged/abandoned or unrecorded oil and natural gas wells are uncovered during construction, the DOC should be notified, the wells should undergo remedial well plugging actions, and no structures should be constructed over the abandoned oil and natural gas wells. ○ If oil and natural gas wells are under the jurisdiction or a lease from the California State Lands Commission, project proponents should provide additional plans and environmental documentation as required prior to modification of the oil or natural gas wells. 	<p>EIS/EIR and Section 3.12 of the CEQA Addendum. No mineral resources have been identified within the project area. No significant impacts to mineral resources would occur and mitigation measures are not required.</p>
Hazards and Hazardous Materials		
14-1	<ul style="list-style-type: none"> ▪ Refueling and maintenance of vehicles and equipment to occur only in designated areas that are either bermed or covered with concrete, asphalt, or other impervious surfaces to control potential spills. ▪ Refueling of vehicles and equipment to occur only when employees are present. ▪ Vehicle and equipment service and maintenance conducted only by authorized personnel. ▪ Refueling conducted only with approved pumps, hoses, and nozzles. ▪ Catch-pans placed under equipment to catch potential spills during servicing. ▪ All disconnected hoses placed in containers to collect residual fuel from the hoses. ▪ Vehicle engines shut down during refueling. ▪ No smoking, open flames, or welding allowed in refueling or service areas. ▪ Refueling performed away from bodies of water to prevent contamination of water in the event of a leak or spill. ▪ When refueling is completed, the service truck to leave the project site. ▪ Service trucks provided with fire extinguishers and spill containment equipment, such as absorbents. ▪ Should a spill contaminate soil, the soil shall be placed in containers and disposed of as appropriate. All containers used to store hazardous materials to be inspected at least once per week for signs of leaking or failure. All maintenance and refueling areas to be inspected monthly. Results of inspections to be recorded 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project including BMPs addressing construction-related impacts to hazards and hazardous materials.</p> <p>See Section 7.8 of the SMP EIS/EIR and Section 3.9 of the CEQA Addendum.</p> <p>Additional BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality</p>

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	<p>in a logbook maintained onsite.</p> <ul style="list-style-type: none"> ▪ Provision of an automatic sprinkler system for indoor hazardous material storage areas. ▪ Provision of an exhaust system for indoor hazardous material storage areas. ▪ Separation of incompatible materials by isolating them from each other with a noncombustible partition. ▪ Spill control in all storage, handling, and dispensing areas. ▪ Separate secondary containment for each chemical storage system. The secondary containment is required to hold the entire contents of the tank plus the volume of water for the fire suppression system that could be used for fire protection for a period of 20 minutes in the event of a catastrophic spill. <p>In the unlikely event of a spill, the spill shall be reported to the appropriate regulatory agencies and contaminated soil shall be cleaned, treated, and/or removed in accordance with regulatory requirements. Small spills shall be contained and cleaned up immediately by trained, onsite personnel. Larger spills shall be reported via emergency phone numbers to obtain help from offsite containment and cleanup crews. All personnel working on the project during the construction phase shall be trained in handling hazardous materials and the dangers associated with hazardous materials. An onsite health and safety person shall be designated to implement health and safety guidelines and to contact emergency response personnel and the local hospital, if necessary.</p> <p>If there is a large spill from a service or refueling truck, contaminated soil shall be placed into barrels or trucks by service personnel for offsite disposal at an appropriate facility in accordance with law. If a spill involves hazardous materials quantities equal to or greater than the specific Reportable Quantities as required by regulatory agencies (42 gallons for petroleum products), all federal, State, and local reporting requirements shall be followed. In the event of a fire or injury, the local fire department shall be called.</p>	<p>Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258).</p>
14-2	<ul style="list-style-type: none"> ▪ To reduce the risk due to increased exposure to materials that could be released during soil disturbance, worker training programs and breathing apparatus shall be provided. Monitoring programs shall be implemented as areas are excavated to determine the potential for exposure to soil organisms or other constituents. ▪ To reduce risk to the community due to increased exposure to materials that could be released during soil disturbance, public outreach programs shall be conducted to educate the public of the types of construction activities and risks that could occur. In areas near extreme hazards, such as construction in areas with identified petroleum-product pipelines or soils with high concentrations of petroleum products, warning sirens shall be used at construction sites to immediately notify workers and residents. Emergency procedures shall be included in the education and outreach programs for the workers and the community. 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project including BMPs addressing construction-related impacts to hazards and hazardous materials.</p> <p>See Section 7.8 of the SMP EIS/EIR and Section 3.9 of the CEQA Addendum.</p> <p>Additional BMPs are addressed in the Regional Water Quality Control Board 401 Water Quality Certification (WDID# 2 CW449407) and the US Army Corp of Engineers Permit (SPN-2012-00258).</p>
14-3	<ul style="list-style-type: none"> ▪ Freshwater habitat management to include water-control-structure management, vegetation management, mosquito predator management, drainage improvements, and other best management practices, and 	<p>Not applicable.</p>

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	<p>coordination with the DFG and local mosquito and vector control agencies regarding these strategies and specific techniques to help minimize mosquito production.</p> <ul style="list-style-type: none"> ▪ Maintenance of permanent ponds that increase the diversity of waterfowl yet decrease the introduction of vectors through constant circulation of water, vegetation control, and periodic draining of ponds. ▪ Tidal management focused on mosquito problems arising from the residual tidal and floodwaters remaining in depressions and cracked ground (SCMAD 2011. San Joaquin County Mosquito and Vector Control District. http://www.sjmosquito.org/). ▪ Avoidance of ponding in tidal marsh habitat or in areas within the waterside of setback levees. Design of ecosystem restoration areas, waterfowl hunting areas, setback levees, parks, canals, and surface water storage facilities to minimize standing water, or use of other methods such as mosquito fish to reduce mosquito breeding. 	<p>See Section 7.8 of the SMP EIS/EIR. No significant impacts regarding mosquito or vector control for managed wetland activities were identified and mitigation measures are not required.</p>
14-4	<ul style="list-style-type: none"> ▪ Avoid creating hazardous wildlife attractants within a distance of 10,000 feet of an Airport Operations Area. ▪ Maintain a distance of 5 statute miles between the farthest edge of the Airport Operations Area and hazardous wildlife attractants. 	<p>Not applicable.</p> <p>See Section 7.1 of the SMP EIS/EIR and Section 3.9 of the CEQA Addendum. The project area is not located near an airport. No significant impacts regarding airport operations were identified and mitigation measures are not required.</p>
14-5	<ul style="list-style-type: none"> ▪ Prepare and implement a fire management plan to minimize potential for wildland fires. 	<p>Not applicable.</p> <p>See Section 3.20 of the CEQA Addendum. No significant impacts regarding wildland fires were identified and mitigation measures are not required.</p>
Noise		
15-1	<ul style="list-style-type: none"> ▪ Limit the hours of operation at noise-generation sources located near or adjacent to noise-sensitive areas, wherever practicable, to reduce the level of exposure to meet applicable local standards. ▪ Locate construction equipment away from sensitive receptors, to the extent feasible, to reduce noise levels below applicable local standards. ▪ Maintain construction equipment to manufacturers' recommended specifications, and equip all construction vehicles and equipment with appropriate mufflers and other approved noise-control devices. ▪ Limit idling of construction equipment to the extent feasible to reduce the time that noise is emitted. ▪ Conduct individual traffic noise analysis of identified haul routes and provide mitigation, such as reduced speed limits, at locations where noise standards cannot be maintained for sensitive receptors. ▪ Incorporate use of temporary noise barriers, such as acoustical panel systems, between construction 	<p>Consistent.</p> <p>See Section 5.8 of the SMP EIS/EIR and Section 3.13 of the CEQA Addendum. The project is not located near sensitive receptors. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address noise-related</p>

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	<p>activities and sensitive receptors if it is concluded that they would be effective in reducing noise exposure to sensitive receptors.</p> <ul style="list-style-type: none"> ▪ Near sensitive receptors, avoid or minimize use of construction equipment known to generate high levels of ground borne vibration (for example, pile drivers). 	impacts.
15-2	<ul style="list-style-type: none"> ▪ Conduct a preliminary ground borne vibration analysis report to determine future construction-related ground borne vibration levels based on, but not limited to, a detailed equipment list, hours of operation and distances to sensitive receptors located within 500 feet of project sites. ▪ Provided that future ground borne vibration results in significant impacts at sensitive receptors, the following measures shall be implemented: <ul style="list-style-type: none"> ○ Designate a complaint coordinator and post this person's contact information in a location near construction areas where it is clearly visible to the nearby receptors most likely to be affected. The coordinator will manage complaints and concerns resulting from activities that cause vibrations. The severity of the vibration concern should be assessed by the coordinator and, if necessary, evaluated by a qualified noise and vibration control expert. ○ Vibration monitoring will be conducted before and during vibration generating operations occurring within 100 feet of historic structures. Every attempt will be made to limit construction-generated vibration levels during pile driving and other ground borne noise and vibration-generating activities in the vicinity of the historic structures in accordance with recommendations of the appropriate agency with authority. ○ Adjacent historic features will be covered or temporarily shored, as necessary, for protection from vibrations, in consultation with the appropriate cultural resources authority. ○ Pile driving required within a 50-foot radius of residences will use alternative installation methods where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers). This would reduce the number and amplitude of blows required to seat the pile. ○ Pile-driving activities conducted within 285 feet of sensitive receptors will occur during daytime hours to avoid sleep disturbance during evening and nighttime hours. 	<p>Not applicable.</p> <p>See Section 5.8 of the SMP EIS/EIR and Section 3.13 of the CEQA Addendum. The project is not located within 500 feet of sensitive receptors.</p>
15-3	<ul style="list-style-type: none"> ▪ Identify noise-sensitive receptors in the vicinity of project activities and design projects to minimize exposure of sensitive receptors to long-term, operational noise sources (for example, water pumps) to reduce noise levels below applicable local standards. ▪ Conduct a preliminary noise analysis report to determine future operation-related noise and distances to sensitive receptors. Provided that future operation-related noise results in significant at sensitive receptors, incorporate into construction design measures such as a structure encasing the new noise generating infrastructure. Materials (masonry brick, metal shed, wood) used to house the infrastructure will be of solid construction and void of gaps at the ground, roof line, and joints. All vents will include acoustically rated louvers. ▪ Locate dog parks no closer than 200 feet from the nearest residential property line and at least 75 feet from habitat for noise-sensitive wildlife species. ▪ Locate parking lots no closer than 65 feet from the nearest residential property line and at least 25 feet from habitat for noise-sensitive wildlife species unless a detailed noise study is conducted that determines that placement of parking lots closer than the distances specified above will not result in noise levels that exceed 	<p>Not applicable.</p> <p>See Section 5.8 of the SMP EIS/EIR and Section 3.13 of the CEQA Addendum. The project is not located near sensitive receptors.</p>

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	<p>67 dBA at the nearest residential property line or 60 dBA from noise-sensitive habitat, or appropriate mitigation measures, including permanent noise barriers, can be incorporated to reduce noise levels to equal the ambient noise level or referenced thresholds for residential property and noise sensitive habitat.</p> <ul style="list-style-type: none"> ▪ Locate playing fields no closer than located at least 125 feet from the nearest residential property line and at least 50 feet from habitat for noise-sensitive wildlife species unless a detailed noise study is conducted that determines that placement of playing fields closer than the distances specified above will not result in noise levels that exceed 67 dBA at the nearest residential property line or 60 dBA from noise-sensitive habitat, or appropriate mitigation measures, including permanent noise barriers, can be incorporated to reduce noise levels to equal the ambient noise level or referenced thresholds for residential property and noise sensitive habitat. 	
Population and Housing		
16-1	<ul style="list-style-type: none"> ▪ Require compliance with applicable local policies and regulations regarding the provision of affordable housing. ▪ Construct replacement housing if existing housing will be displaced. 	<p>Not applicable.</p> <p>See Section 3.14 of the CEQA Addendum. No housing construction or displacement is associated with the proposed project.</p>
Public Services		
17-1	<ul style="list-style-type: none"> ▪ Establish construction fee schedules by local agencies for the new or modified facilities to fund additional emergency services potentially required during construction. If emergency services are not needed, a portion of the fees could be refunded. ▪ Develop worker training programs to reduce construction and operations risks. ▪ Develop appropriate emergency access routes and equipment for both land and water access, if applicable (such as in the Delta), that provides for adequate response time. If use of an existing emergency access route becomes limited due to new or modified facilities, additional routes or placement of duplicate equipment on each side of the route limitation could be considered. ▪ Develop traffic plans and emergency response plans for construction and operations phases of new facilities. ▪ Develop all facilities, including parks and ecosystem restoration areas, in accordance with applicable fire codes and regulations, and with adequate fire equipment access routes, occupancy limitations, and fire-protection equipment. 	<p>Not applicable.</p> <p>See Section 7.3 of the SMP EIS/EIR and Section 3.15 of the CEQA Addendum. The project would not impact public services or emergency response times and no mitigation is required.</p>
Recreation		
18-1	<ul style="list-style-type: none"> ▪ If the substantial impairment, degradation, or elimination of recreational facilities occurs, replacement facilities of equal capacity and quality with ongoing funding provided for maintenance of these facilities. ▪ If degradation or impairment of recreational facilities, settings, and activities occur from implementation of water use efficient practices and water conservation measures at recreational areas, the park and recreation 	<p>Not applicable.</p> <p>See Section 7.4 of the SMP EIS/EIR and Section 3.16 of the CEQA Addendum. Potential</p>

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	<p>areas shall be redeveloped with drought-tolerant plant materials, water efficient irrigation systems, and synthetic turf substitutes where appropriate, in such a way as to retain recreational facilities and use areas.</p> <ul style="list-style-type: none"> ▪ If the volume of water exported from the Delta declines over multiple years, the lead agencies that implement local water supplies may be unable to develop a long-term replacement water supply for the south-of-Delta surface water reservoirs with recreation uses. At these sites, facilities must be modified (including access facilities, as necessary) to accommodate lower water elevations or more frequent fluctuations in water elevations that could occur more frequently in the Proposed Project than under existing conditions. 	<p>impacts to recreation would be temporary and would not be significant. No mitigation is required.</p>
18-2	<ul style="list-style-type: none"> ▪ If substantial temporary or permanent impairment, degradation, or elimination of recreational facilities causes users to be directed towards other existing facilities, lead agencies shall coordinate with impacted public and private recreation providers to direct displaced users to under-utilized recreational facilities. ▪ Lead agencies shall provide additional operations and maintenance of existing facilities in order to prevent deterioration of these facilities. ▪ If possible, lead agencies shall provide temporary replacement facilities. ▪ If the increase in use is temporary, once use is decreased back to existing conditions, degraded facilities shall be rehabilitated or restored. ▪ Where impacts to existing facilities are unavoidable, compensate for impacts through mitigation, restoration, or preservation off-site or creation of additional permanent new replacement facilities. 	<p>Not applicable.</p> <p>See Section 7.4 of the SMP EIS/EIR and Section 3.16 of the CEQA Addendum. Potential impacts to recreation would be temporary and would not be significant. No mitigation is required.</p>
18-3	<ul style="list-style-type: none"> ▪ Projects shall be sited in areas that would have minimal adverse physical effect on the environment. ▪ Where impacts to the environment are unavoidable, compensate for impacts through mitigation, restoration, or preservation off-site or creation of additional permanent new replacement facilities. 	<p>Consistent.</p> <p>See CEQA Addendum. The project has been designed to have minimal adverse physical effects on the environment and mitigation measures have been identified when necessary.</p>
Traffic and Transportation		
19-1	<ul style="list-style-type: none"> ▪ Avoid modifications to federal, State, and county highways, local roadways, and bridges that may reduce vehicle capacity, to the extent feasible. ▪ Develop and implement a traffic control plan to reduce effects of roadway construction activities, including full and partial lane closures, bicycle and pedestrian facility closures, and reduced access to adjacent properties. Minimize lane closures during morning and evening peak hours. Limit lane closures near the affected segment. Reroute bicycle and pedestrian access around the project area. Prevent bicyclists and pedestrians from entering the work area. ▪ As part of the traffic control plan, identify specific project-vehicle access routes that would avoid additional traffic in residential areas or would adversely affect other sensitive land uses, where feasible. ▪ Install roadway status signs at strategic locations in the Delta to inform the public of roadway closures and limits to ingress to/egress from Delta Islands. The signs shall include maps showing the relative locations of road closures and access restrictions to other Delta features. 	<p>Not applicable.</p> <p>See Section 5.6 of the SMP EIS/EIR and Section 3.17 of the CEQA Addendum. No significant impacts regarding traffic and transportation were identified and mitigation measures are not required. In addition, environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<ul style="list-style-type: none"> ▪ For project operations that increase traffic, prepare a traffic study. Determine haul routes that would be used. Evaluate the levels of service at affected intersections and road segments during the peak a.m. and peak p.m. periods. Model changes in traffic with project traffic. If the level of service is maintained at levels acceptable to the appropriate agency, then no additional mitigation is required. If project traffic causes an intersection or road segment to perform below the minimum level of service standard, then select an alternate route for project traffic or schedule project trips for non-peak-hour periods. If alternate routes are not feasible, then design and construct facility improvements to intersections or road segments to maintain the acceptable level of service. ▪ During the planning and analysis of site-specific actions, coordinate with Caltrans and/or other local agencies with jurisdiction over transportation system features for the purpose of minimizing impacts on bridges, roadways, culverts, or other features that may be affected. Agencies responsible for constructing and maintaining levees on which a public roadway may be located shall also be consulted to ensure consistency with levee design criteria. ▪ For roads that will be flooded during floodplain operation, prepare and implement vehicular traffic detour planning as necessary. Provide convenient and parallel vehicular traffic detours for routes closed because of inundation. A detour plan shall be prepared and implemented in accordance with current Caltrans Standard Plans and Specifications. (A temporary crossing structure, for example a Bailey Bridge, may be used to maintain circulation and avoid a detour plan.) The detour plan shall be implemented before roadway inundation. The detour plan will include an assessment of existing roadway conditions, whether paved or unpaved, and provisions for repair and maintenance if the roadway conditions are substantially degraded from increased use. After the detour route is identified and before flood flows are released that would overtop roads, the condition of the detour road surface will be assessed and documented. The documentation will be submitted to the local agency responsible for maintenance of the road. After the detour is no longer needed, the condition of the road surface will be assessed and documented. The documentation will identify substantial changes in the condition of the road surface, such as potholing or rutting. Repair and maintenance actions needed to restore the road surface to pre-detour conditions will be identified. In coordination with the local maintenance agency, the repair and maintenance actions may be conducted by the agency conducting the floodplain operation or by the local maintenance agency to be proportionately reimbursed by the flood management authority. The detour plan will prioritize paved roads for use as detour routes. If use of paved roadway detours is not feasible during flood flow road inundation periods, the detour plan will require that visible dust emissions from unpaved detour routes will be limited to the percent opacity indicated by the appropriate air pollution control district. The following dust control measures may be used to stabilize unpaved roadways: <ul style="list-style-type: none"> ○ Watering ○ Uniform layer of washed gravel ○ Roadmix ○ Paving Any other method that can be demonstrated to the satisfaction of the appropriate air pollution control district that effectively limits visible dust emission to the local percent opacity standard and meets the conditions of a stabilized unpaved road. <ul style="list-style-type: none"> ▪ Traffic impact reports shall be prepared that meet the applicable agencies' standards to assess potential impacts on appropriate street segments and intersections. The traffic impact reports shall identify impacts 	

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>that exceed the agencies' guidelines for significance and identify appropriate mitigation. Acceptable mitigation measures may include:</p> <ul style="list-style-type: none"> ○ Turn restrictions ○ Roadway widening to add lanes or shoulders ○ Redesign of freeway on- and off-ramps ○ Median construction/modification to restrict access ○ Flaring of intersections to add turn lanes ○ Provision of passing lanes or turnouts ○ Acceleration and deceleration lanes ○ Removal of obstructions ○ Roundabouts ○ Restriping to add lanes with or without parking removal and restrictions ○ Protected left-turn pockets or free right-turn lanes ○ Parking restrictions, daily or during peak hours ○ Fair share contributions to approved projects identified in the agency's Capital Improvement Plan ○ Fair share contributions to traffic signals identified in the agency's traffic signal plan. <ul style="list-style-type: none"> ▪ Prepare and implement a waterway traffic control plan to ensure safe and efficient vessel navigation during construction in waterways. The plan shall identify vessel traffic control measures to minimize congestion and navigation hazards to the extent feasible. Construction areas in the waterway will be barricaded or guarded by readily visible barriers or other effective means to warn boaters of their presence and restrict access. Warning devices and signage will be consistent with the California Uniform State Waterway Marking System and effective during non-daylight hours and periods of dense fog. ▪ Where temporary partial channel closure is necessary, a temporary channel closure plan shall be developed. The waterway closure plan will identify and implement alternate detour routing and procedures for notifying boaters of construction activities and partial closures, including coordination with the U.S. Coast Guard, local boating organizations and marinas. ▪ To the extent feasible, ensure that safe boat access to public launch and docking facilities, businesses, and residences is maintained. ▪ Coordinate with transit system operators to establish appropriate alternate transit system routes to be rerouted during construction activities, as appropriate. ▪ Boat passage facilities shall be provided as an integral component of operable gate facilities, when feasible. Boat passage facilities shall be designed to provide uninterrupted boat passage when gate are in the "up" position. Floating docks with mooring bits shall be provided along the shoreline on both sides of the boat passage facility for boaters to use while they await passage. Floating barriers will guide boats into the passage facility chambers. ▪ Implement a program to provide boater education on procedures for waiting at and using the boat passage facility. ▪ Minimize impacts on bicycle and pedestrian circulation where feasible by avoiding impacts, minimizing closure of paths, and providing for temporary or permanent relocation of the facility to the extent feasible. Consult with the appropriate public works department to determine the most feasible alignment for facility relocation. 	

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
19-2	<ul style="list-style-type: none"> ▪ Develop and implement a program that will include procedures for routine inspections and emergency facility operation to allow safe navigation should the facility become damaged or malfunction. The program will include the following specific components: <ul style="list-style-type: none"> ○ Routine inspections and correction procedures to ensure that facility safety features are in good working order. ○ Routine inspections and correction procedures for navigational hazards around facilities, including floating or submerged debris and the formation of shoals. ○ Contingency and emergency operating procedures to address the possibility that a boat colliding with the flow control facilities will damage the facilities or otherwise render them unable to operate as engineered, and provisions to allow safe navigation. 	<p>Not applicable.</p> <p>See Section 5.6 of the SMP EIS/EIR and Section 3.17 of the CEQA Addendum. No significant impacts regarding traffic and transportation were identified and mitigation measures are not required. In addition, environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project.</p>
19-3	<ul style="list-style-type: none"> ▪ Coordinate with responsible local agencies to establish appropriate emergency routes during construction activities and before existing emergency routes are reclassified to a nonemergency route use. ▪ Phase construction activities, and use multiple routes to and from offsite locations to minimize the daily amount of traffic on individual roadways. ▪ Post warnings about the potential presence of slow-moving vehicles. ▪ Use traffic-control personnel when appropriate. ▪ Place and maintain barriers, and install traffic-control devices necessary for safety, as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones and in accordance with city and county requirements. ▪ Notify appropriate emergency service providers of project construction throughout the construction period to ensure that emergency access through construction areas is maintained. 	<p>Consistent.</p> <p>Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address potential temporary traffic impacts during project construction.</p>
19-4	<ul style="list-style-type: none"> ▪ Projects where construction- and operations conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities should implement Mitigation Measure 19-1, above. The portion of the measure that addresses minimizing impacts on bicycle and pedestrian circulation also would be applicable to this measure. 	<p>Not applicable.</p> <p>See Section 5.6 of the SMP EIS/EIR and Section 3.17 of the CEQA Addendum. No significant impacts regarding traffic and transportation were identified and mitigation measures are not required. The project would not conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities.</p>
Utilities and Service Systems		
20-1	<ul style="list-style-type: none"> ▪ Establish construction debris disposal fee schedules to promote recycling and minimize solid waste. ▪ Limit disposal of construction debris and other solid waste at local landfills if the landfills have limited capacity. 	<p>Not applicable.</p> <p>See Section 7.3 of SMP EIS/EIR</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<ul style="list-style-type: none"> ▪ Dispose of all construction debris at landfills and disposal facilities that are licensed for the type of wastes to be disposed. If the landfills and disposal facilities are not located near future construction sites, include analysis of transportation of solid waste in future environmental documentation for specific projects. ▪ Require construction contractors to prepare construction debris management plans and require reuse or recycling of construction debris. ▪ Develop project-specific solid waste plans to maximize practices that reduce and recycle solid waste and sludge generated by water, wastewater, and stormwater treatment facilities; and collect, recycle, or compost litter and solid waste generated at new facilities designed for visitor use (such as parks and visitor centers). 	and Section 3.19 of the CEQA Addendum. No significant impacts regarding utilities were identified and mitigation measures are not required.
20-2	<ul style="list-style-type: none"> ▪ Relocate or modify existing water, wastewater, and stormwater facilities or electricity transmission systems in a manner that does not affect current operational reliability to existing and projected users. ▪ Coordinate utility relocation and modification with utility providers and local agencies to integrate potential other construction projects and minimize disturbance to the communities. ▪ Verify utility locations through field surveys and services such as Underground Service Alert. 	<p>Consistent.</p> <p>See Section 7.3 of SMP EIS/EIR and Section 3.19 of the CEQA Addendum. Electricity transmission lines may be relocated as part of the project. Any relocation of transmission systems would be coordinated with utility providers and would not impact other users.</p>
Climate Change and Greenhouse Gas Emissions		
21-1	<ul style="list-style-type: none"> ▪ Implement GHG mitigation measures listed in the most recent California Air Pollution Control Officers Association (CAPCOA), BAAQMD, and other air district guidance documents (e.g., CAPCOA, 2010. Quantifying Greenhouse Gas Mitigation Measures. A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. Sacramento, California. August, p. 210-232; BAAQMD, 2011. California Environmental Quality Act Air Quality Guidelines. San Francisco, California. Updated May 2011, p. 8-6). Current versions of such guidance documents list the following for construction: <ol style="list-style-type: none"> 1. Use alternative fuels for construction equipment. 2. Use electric and hybrid construction equipment. 3. Limit construction equipment idling beyond regulatory requirements. 4. Institute a heavy-duty off-road vehicle plan. 5. Implement a construction vehicle inventory tracking system. 6. Use local building materials for at least ten percent of total materials. 7. Recycling or reusing at least 50 percent of construction waste or demolition materials. <p>In addition, the California Attorney General's Office has developed a list of various measures that may reduce GHG emissions at the individual project level. A selected list of those proposed measures that could be applied to DWR projects was appended to the DWR guidance document, titled Guidance for Quantifying Greenhouse Gas Emissions and Determining the Significance of their Contribution to Global Climate Change for CEQA Purposes (DWR, 2010c. Guidance for Quantifying Greenhouse Gas Emissions and Determining the Significance of their Contribution to Global Climate Change for CEQA Purposes. California Department of Water Resources Internal Guidance Document. CEQA Climate Change Committee. Sacramento, CA. January, Appendix B). As appropriate, the measures can be included as design features of a project, required as changes to the project, or imposed as mitigation (whether undertaken</p>	<p>Consistent.</p> <p>See Sections 5.7 and 5.9 of SMP EIS/EIR and Sections 3.6 and 3.8 of the CEQA Addendum. Environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address climate change and greenhouse gas emissions.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>directly by the project proponent or funded by mitigation fees). The measures are examples; the list is not intended to be exhaustive. The following may serve as BMPs to be considered and implemented (as applicable) during design, construction, operation, and maintenance of project facilities.</p> <p>Efficiency</p> <ol style="list-style-type: none"> 1. Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use. 2. Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings. 3. Install light colored "cool" roofs, cool pavements, and strategically placed shade trees. 4. Install energy efficient heating and cooling systems, appliances and equipment, and control systems. 5. Install light-emitting diodes for street and other outdoor lighting. 6. Limit the hours of operation of outdoor lighting. 7. Provide education on energy efficiency. <p>Renewable Energy</p> <ol style="list-style-type: none"> 1. Install solar and wind power systems and energy-efficient heating ventilation and air conditioning. 2. Install solar panels over parking areas. 3. Use combined heat and power in appropriate applications. <p>Water Conservation and Efficiency</p> <ol style="list-style-type: none"> 1. Create water-efficient landscapes. 2. Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls. 3. Use reclaimed water for landscape irrigation. Install the infrastructure to deliver and use reclaimed water. 4. Design buildings to be water-efficient. Install water-efficient fixtures and appliances. 5. Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff. 6. Restrict the use of water for cleaning outdoor surfaces and vehicles. 7. Implement low-impact development practices that maintain the existing hydrologic character of the site to manage stormwater and protect the environment. (Retaining stormwater runoff on-site can drastically reduce the need for energy-intensive imported water at the site.) 8. Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project. 9. Provide education about water conservation. <p>Solid Waste Measures</p> <ol style="list-style-type: none"> 1. Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). 2. Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas. 3. Recover by-product methane to generate electricity. <p>Transportation and Motor Vehicles</p> <ol style="list-style-type: none"> 1. Limit idling time for commercial vehicles, including delivery and construction vehicles. 2. Use low or zero-emission vehicles, including construction vehicles. 	

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
	<p>3. Institute a heavy-duty off-road vehicle plan and a construction vehicle inventory tracking system for construction projects.</p> <p>4. Promote ride sharing.</p> <p>5. Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).</p> <p>6. Increase the cost of driving and parking private vehicles by, e.g., imposing tolls and parking fees.</p> <p>7. Provide shuttle service to public transit/[work sites].</p> <p>8. Provide information on all options for individuals and businesses to reduce transportation-related emissions.</p> <p>Carbon Offsets</p> <p>1. If, after analyzing and requiring all reasonable and feasible on-site mitigation measures for avoiding or reducing greenhouse gas-related impacts, the lead agency determines that additional mitigation is required, the agency may consider additional off-site mitigation. The project proponent could, for example, fund off-site mitigation projects (e.g., alternative energy projects, or energy or water audits for existing projects) that will reduce carbon emissions, conduct an audit of its other existing operations and agree to retrofit, or purchase carbon “credits” from another entity that will undertake mitigation.</p> <p>2. The topic of offsets can be complicated, and a full discussion is outside the scope of this summary document. Issues that the lead agency should consider include:</p> <ul style="list-style-type: none"> a. The location of the off-site mitigation. (If the off-site mitigation is far from the project, any additional, non-climate related benefits of the mitigation will be lost to the local community.) b. Whether the emissions reductions from off-site mitigation can be quantified and verified. c. Whether the mitigation ratio should be greater than 1:1 to reflect any uncertainty about the effectiveness of the offset. <p>SmartWay Truck Efficiency The strategy involves requiring existing trucks/trailers to be retrofitted with the best available “SmartWay Transport” and/or ARB approved technology. Technologies that reduce GHG emissions from trucks may include devices that reduce aerodynamic drag and rolling resistance. Aerodynamic drag may be reduced using devices such as cab roof fairings, cab side gap fairings, cab side skirts, and on the trailer side, trailer side skirts, gap fairings, and trailer tail. Rolling resistance may be reduced using single wide tires or low-rolling resistance tires and automatic tire inflation systems on both the tractor and the trailer.</p> <p>Tire Inflation Program The strategy involves actions to ensure that vehicle tire pressure is maintained to manufacturer specifications.</p> <p>Blended Cements The strategy to reduce CO2 emissions involves the addition of blending materials such as limestone, fly ash, natural pozzolan and/or slag to replace some of the clinker in the production of Portland cement.</p> <p>Anti-idling Enforcement The strategy guarantees emission reductions as claimed by increasing compliance with anti-idling rules, thereby reducing the amount of fuel burned through unnecessary idling. Measures may include enhanced field enforcement of anti-idling regulations, increased penalties for violations of anti-idling regulations, and restriction on registrations of heavy-duty diesel vehicles with uncorrected idling violations.</p>	

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
21-2	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulics study that would assess the need and provide a basis for the design for flood protection of the facilities constructed along waterways. Prepare the study in accordance with applicable standards of Federal Emergency Management Agency (FEMA), USACE, DWR, Central Valley Flood Protection Board, San Francisco Bay Conservation and Development Commission (BCDC), as well as the local reclamation districts and flood control agencies and the counties and cities. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, Central Valley Flood Protection Board, and BCDC. ▪ Design intakes/diversions and outfalls to be operated at multiple surface water elevations between existing conditions and maximum projected surface water elevations during a high flow event with sea level rise for the life of the facility. ▪ Prepare a hydrogeologic study that would assess long-term groundwater recharge and safe yield of wells and wellfields under a sustainable groundwater management plan. If the wells can be used to a greater degree in some years in a manner that would support the sustainable groundwater management plan to avoid long-term groundwater overdraft, wells could be drilled to deeper depths than would be required under existing conditions. 	<p>Consistent.</p> <p>See Sections 5.2, 5.7, and 5.9 of SMP EIS/EIR and Sections 3.6, 3.8, and 3.10 of the CEQA Addendum. The project has been designed to meet water intake flow criteria and to be maintained and varying water levels.</p> <p>In addition, environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address climate change and greenhouse gas emissions.</p> <p>A BCDC permit application has been submitted and any permit conditions will be included in final engineering design for the project.</p>
21-3	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulics study that would assess the need and provide a basis for the design for ecosystem habitat restoration, including adjacent areas that would allow for migration of the habitat to higher elevations as the surface water elevations increase. Prepare the study in accordance with applicable standards of FEMA, USACE, DWR, and BCDC. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, Central Valley Flood Protection Board, and BCDC. 	<p>Consistent.</p> <p>See Sections 5.2, 5.7, and 5.9 of SMP EIS/EIR and Sections 3.6, 3.8, and 3.10 of the CEQA Addendum. The project has been designed to meet water intake flow criteria and to be maintained and varying water levels.</p> <p>In addition, environmental commitments included in Chapter 2 of the SMP EIS/EIR would be implemented by the project to address climate change and greenhouse gas emissions.</p> <p>A BCDC permit application has been submitted and any permit conditions will be included in final engineering design for the project.</p>

Delta Plan Mitigation Measure Number	Delta Plan Mitigation Measure	Project Consistency
21-4	<ul style="list-style-type: none"> ▪ Prepare a drainage or hydrology and hydraulics study that would assess the need and provide a basis for the design for projects that reduce risks of floods in the Delta. Prepare the study in accordance with applicable standards of FEMA, USACE, DWR, and BCDC. Design subsequent mitigation measures in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, Central Valley Flood Protection Board, and BCDC. ▪ Based on the results of the drainage or hydrologic and hydraulic study, arrange the length of flood management facilities in the direction of the floodplain flow to maximize surface flows under flood conditions. ▪ Install setback levees or bypass channels to maintain channel capacity and to mitigate hydraulic impacts of high flow events and higher surface water elevations due to climate change and sea level rise. ▪ Channel modifications for restoration actions would be required to be implemented to maintain or improve flood management functions and would be coordinated with the USACE, DWR, Central Valley Flood Protection Board, BCDC, and other flood control agencies to assess the desirability and feasibility for channel modifications. To the extent consistent with floodplain land uses and flood control requirements, if applicable, woody riparian vegetation would be allowed to naturally establish. 	<p>Not applicable.</p> <p>The proposed project is not a flood risk reduction project.</p>
<p>Notes:</p> <p>¹ First implemented in 2004, Golden Guardian, California’s Annual Statewide Exercise Series, has become the most comprehensive state-level exercise series program in the country. The goal of Golden Guardian is to exercise and assess emergency operations plans, policies, and procedures for all-hazards/catastrophic incidents at the local, regional, and state levels, as described in subsection 5.3.7.2.2 of the Recirculated Draft EIR.</p>		

Appendix C: List of Best Available Science

Montezuma Slough Fish Screen Replacement Project List of Best Available Science

- Flosi, G., S. Downie, J. Hopelain, M. Bird, R. Coey, and B. Collins. 1998. *California Salmonid Stream Habitat Restoration Manual, Fourth Edition*. California Department of Fish and Game. Updated March 2004.
- Kimmerer, W.J. 2008. *Losses of Sacramento River Chinook salmon and delta smelt to entrainment in water diversions in the Sacramento–San Joaquin Delta*. San Francisco Estuary and Watershed Science, 6(2).
- Smith et al., 1995. *A Guide to Wetland Habitat Management in the Central Valley*. California Department of Fish and Game and California Waterfowl Association.
- Mefford, B., P.E. 2014. *Pocket Guide to Screening Small Water Diversions*. US Bureau of Reclamation. August.
- National Oceanic and Atmospheric Administration. National Marine Fisheries Service Southwest Region. 1997. *Fish Screen Criteria for Anadromous Salmonids*. January.
- Young, P.S., Swanson, C., Cech Jr, J.J. 2010. *Close encounters with a fish screen III: behavior, performance, physiological stress responses, and recovery of adult Delta Smelt exposed to two-vector flows near a fish screen*. Transactions of the American Fisheries Society, 139(3), 713-726.

Appendix D: Adaptive Management Plan

Adaptive Management Plan under separate cover.