Modesto Irrigation District Comprehensive Water Resources Management Plan Final Programmatic Environmental Impact Report

Prepared for

Modesto Irrigation District

April 2023

CH2M HILL, Inc.
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Contents

SECTION 1

Introduction

1.1 Background

On November 21, 2022, the Modesto Irrigation District (MID or District) distributed to public agencies and the general public a Draft Programmatic Environmental Impact Report (Draft PEIR) evaluating and disclosing the anticipated environmental impacts (and benefits) associated with the implementation of the District's proposed Comprehensive Water Resources Management Plan (CWRMP or Proposed Program). The CWRMP was developed to provide a roadmap intended to guide staff in modernizing the MID irrigation water delivery system. MID identified the following goals that reflect the District's long-term priorities and will guide decision making over the planning horizon through 2040:

- Provide a high level of customer service and meet customers' evolving water delivery needs
- Ensure compliance with Senate Bill (SB) X7-7, Water Conservation Act of 2009
- Implement irrigation infrastructure improvements for the stewardship of MID's water resources and increased operational reliability

The Draft PEIR included a summary of the proposed projects and actions within the Proposed Program and the associated environmental impacts resulting in mitigation measures. The Draft PEIR disclosed potential impacts of the overall Proposed Program to the extent projects and actions are known. MID intends to use this PEIR as the basis for California Environmental Quality Act (CEQA) compliance for future actions associated with implementation of the Proposed Program, including subsequent project-specific environmental review, as necessary.

In accordance with CEQA Guidelines, a 45-day public review period of the Draft PEIR was completed on January 9, 2023. During this review period, comments from two public agencies evaluating the Draft PEIR were submitted to the lead agency, the District (no other comments were received). Comments received on the Draft PEIR and responses to those comments are included in Section 2 of this Final PEIR.

1.2 Contents of this Final PEIR

This document is organized as follows:

Section 1 – Introduction: Summarizes the contents of this Final PEIR and identifies MID's Proposed Program.

Section 2 – Comments and Responses to Comments on the Draft PEIR: Includes a copy of all comment letters submitted to the District during the review period and contains responses to significant environmental issues raised, in accordance with CEQA Guidelines Sections 15088(b) and 15132. Some comments have resulted in minor revisions to the Draft PEIR.

Section 3 – Revisions to the Draft PEIR: Presents minor revisions to the Draft PEIR, which do not alter the Draft PEIR's conclusions regarding the significance of the Proposed Program's environmental impacts. Text revisions are identified by strikeouts where text is removed, and italics where text is added. All revisions to the Draft PEIR are compiled herein.

The Final PEIR consists of the Draft PEIR dated November 2022, State Clearinghouse Number 2018092056, and this document, which includes minor revisions to the Draft PEIR and responses to comments received during public review.

1.3 Identification of the Proposed Program

The Proposed Program was selected as the District's preferred approach given it best aligns with MID's goals and provides maximum flexibility for future decision making. The Proposed Program identifies the capital improvement projects and annual maintenance activities necessary for MID to meet these goals. The Proposed Program includes 72 projects grouped into the following five overall categories:

- **Regulating Reservoirs** – three regulating reservoirs proposed to meet future water delivery demands for customers and increase operational flexibility
- **Canal, Lateral, and Tunnel Improvements** – projects proposed to ensure canal, lateral, and tunnel operational reliability
- **Flow Control** – projects to provide operational reliability necessary to maintain a high level of customer service
- **Groundwater Management** – projects that include well testing, maintenance and rehabilitation, and replacing existing wells for conjunctive use
- **Measurement and Automation** – projects to minimize operational spills and service interruptions, replace aging supervisory control and data acquisition (SCADA) infrastructure, and achieve SB X7-7 compliance

Implementation of the Proposed Program will require a significant investment and a long-term effort to implement program components over time. The Proposed Program includes projects that would require further definition to fully evaluate the potential impacts and were, therefore, described and assessed at a broad, programmatic level of analysis in the PEIR. Such projects are anticipated to require subsequent environmental documentation, as necessary. The intended use of this PEIR is to (1) serve as a first-tier document for future implementation of the less-defined portions of the Proposed Program and (2) provide full compliance with CEQA requirements for the well-defined portions of the Proposed Program. Implementation of the Proposed Program would occur in several phases over the planning horizon through 2040.

During the planning and design phases for future projects, the District would evaluate the potential environmental impacts of constructing a particular project. This evaluation and siting process would be conducted for all projects to determine whether additional environmental documentation beyond this PEIR would be required and to potentially screen out locations (where feasible) that would result in the potential for significant impacts. A standardized approach would be used, including completion of a Site-specific Project Environmental Evaluation Checklist (EEC; Appendix A) to determine whether additional site-specific resource evaluations are necessary for any given project. This standard approach would determine whether additional CEQA analysis is required and provide a consistent process for identifying potential impacts and implementing mitigation requirements identified in this PEIR, as well as other mitigation measures that may be identified in subsequent site-specific environmental documents.

1.4 No Project (Program)/Identification of the Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires that if the environmentally superior alternative is the No Project (Program) Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Program Alternative evaluated in the Draft PEIR is based on the No Action Alternative in the CWRMP. The No Program Alternative represents a future in which the District would continue present practices in the absence of the Proposed Program. Under the No Program Alternative, MID would maintain the existing level of service to its customers, only invest in projects to address major service liabilities, and only provide the minimum resources needed to comply with SB X7-7 and other regulatory requirements. Because the Proposed Program includes a number of specific projects, which will improve water management, both the No Program Alternative and the Proposed Program would be anticipated to be individually environmentally superior in some respects, depending on the specific project and its implementation.

SECTION 2

Comments and Responses to Comments on the Draft PEIR

2.1 Comments and Responses

The following section presents comments received on the Draft PEIR and responses to those comments. Comments were received from the following public agencies:

- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife

A copy of the original comment letters is presented on the left side of the following pages, with individual comments numerically identified. Responses to individual comments are provided to the right of the letter. Comments that require changes to the text of the Draft PEIR are identified in the response, and changes are provided in Section 3 of this Final PEIR.

2.2 Master Responses

Two master responses were prepared for the California Department of Fish and Wildlife (CDFW) letter.

CDFW Master Response 1

CDFW Master Response 1 applies to individual comments pertaining to the following species:

- least Bell's vireo (Comment 2-1)
- riparian brush rabbit and riparian woodrat (Comment 2-5)
- crotch bumble bee, Morrison bumble bee, and obscure bumble bee (Comment 2-12)
- other state Species of Special Concern (Comment 2-13) specifically:
  - Merced kangaroo rat

CDFW Master Response 1. These species were considered in the Biological Resources Technical Memorandum (Appendix E of the Draft PEIR) but were not carried forward in the Draft PEIR because of the low likelihood of occurrence in the Program Area. Based on CDFW's recommendation, they have been added to the list of species considered under the biological resources project commitments in Section 2.4, Project Commitments; and CDFW's recommended mitigation measures have been added to Table 3.4-4, Summary of Mitigation Measures for MID Project Impacts on Biological Resources. The addition of CDFW's recommended mitigation measures would not result in any new impacts not previously identified in the Draft PEIR. Any associated revisions to the Draft PEIR are included as errata as detailed in Section 3.1 of this Final PEIR. The mitigation measures added to Table 3.4-4 will be incorporated into the Mitigation Monitoring and Reporting Program for the Proposed Program.

CDFW Master Response 2

CDFW Master Response 2 applies to individual comments pertaining to the following species:

- Swainson's hawk (Comment 2-2)
- white-tailed kite (Comment 2-3)
- tricolored blackbird (Comment 2-4)
- California tiger salamander (Comment 2-6)
- vernal pool fairy shrimp, vernal pool tadpole shrimp, and conservancy fairy shrimp (Comment 2-7)
- special-status plants (including Sanford's arrowhead) (Comment 2-8)

- burrowing owl (Comment 2-9)
- special-status bat species (Comment 2-10)
- western pond turtle (Comment 2-11)
- other state Species of Special Concern (Comment 2-13), specifically:
  - American badger
  - California legless lizard
  - Blainville's horned lizard
  - western spadefoot

CDFW Master Response 2. The measures included in the Draft PEIR in Table 3.4-4, Summary of Mitigation Measures for MID Project Impacts on Biological Resources, have been replaced with CDFW's recommended mitigation measures. CDFW's recommended mitigation measures are similar in nature to the measures included in the Draft PEIR and would not result in any new impacts not previously identified. Any associated revisions to the Draft PEIR are included as errata as detailed in Section 3.1 of this Final PEIR. The mitigation measures added to Table 3.4-4 will be incorporated into the Mitigation Monitoring and Reporting Program for the Proposed Program.

No. 1

2.3 Comment Letter No. 1

Central Valley Regional Water Quality Control Board
Dated January 9, 2023

Central Valley Regional Water Quality Control Board

9 January 2023

Jesse Franco
Modesto Irrigation District
1231 11th Street
Modesto, CA 95354
jesse.franco@mid.org

COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN, SCH#2018092056, STANISLAUS COUNTY

Pursuant to the State Clearinghouse's 17 November 2022 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Environmental Impact Report* for the Comprehensive Water Resources Management Plan, located in Stanislaus County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore, our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

1-1

1-1 The Water Quality Control Plan (Basin Plan) is described in the Draft PEIR in Section 3.8.1, Regulatory Setting, under Section 3.8.1.2, State. Beneficial uses under the Basin Plan are identified in Section 3.8.2.2, Water Quality. Impacts to water quality are described in Section 3.8.3.3, Impacts Associated with the Proposed Program. The Proposed Program will comply with applicable laws and regulations.

Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

1-1 cont.

Antidegradation Considerations
All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

1-2

II. Permitting Requirements

Construction Storm Water General Permit
Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

1-3

Central Valley Regional Water Quality Control Board, Continued

1-2 The Proposed Program does not include wastewater discharge; therefore, the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy within the Basin Plan are not applicable.

1-3 The Draft PEIR includes project commitments in Section 2.4.4, Geology and Soils/Hydrology and Water Quality, that identify best management practices to be included for projects that may require a stormwater pollution prevention plan under the Construction General Permit Order. The Proposed Program will comply with applicable laws and regulations.

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]
The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

1-4

Industrial Storm Water General Permit
Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

1-5

Clean Water Act Section 404 Permit
If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act

1-6

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Central Valley Regional Water Quality Control Board, Continued

1-4 Phase I and II Municipal Separate Storm Sewer System (MS4) Permits are not applicable to the Proposed Program.

1-5 The Industrial Storm Water General Permit is not applicable to the Proposed Program.

1-6 Section 1.8, Potentially Required Permits and Approvals, in the Draft PEIR identifies a Clean Water Act Section 404 Permit from U.S. Army Corps of Engineers (USACE) as a potential requirement for the Proposed Program. The federal Clean Water Act, Section 404 is described in Section 5.2.1 of the Draft PEIR. Mitigation Measure MM-BR-2 Wetland and Riparian Habitats in the Draft PEIR has been modified to include CDFW's recommendation that formal stream mapping and wetland delineation be conducted by a qualified biologist or hydrologist, as warranted, to determine the baseline location, extent, and condition of streams (including any floodplain) and wetlands within and adjacent to the project area. Field delineation of wetlands identified as being potentially adversely affected by the construction of various project facilities under the Proposed Program will provide the information necessary to support a Clean Water Act 404(b)(1) analysis. The Proposed Program will comply with applicable laws and regulations.

Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

1-6 cont.

Clean Water Act Section 401 Permit – Water Quality Certification
If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

1-7

Waste Discharge Requirements – Discharges to Waters of the State
If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

1-8

Dewatering Permit
If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage

1-9

Central Valley Regional Water Quality Control Board, Continued

1-7 Section 1.8, Potentially Required Permits and Approvals, in the Draft PEIR identifies a Clean Water Act Section 401 Water Quality Certification as a potential requirement for the Proposed Program. The federal Clean Water Act, Section 401 is described in Section 3.8.1, Regulatory Setting, for hydrology and water quality and Section 5.2.6, Clean Water Act Section 401, Water Quality Certification, of the Draft PEIR. The Proposed Program will comply with applicable laws and regulations.

1-8 The role of the State Water Resource Control Board and Regional Water Quality Control Boards in regulation of discharges of waste to water or land that could affect surface water or groundwater under the Porter-Cologne Water Quality Control Act is described in the Draft PEIR in Section 3.8.1.2, State. Impact HR-1 in the Draft PEIR determined that with implementation of a stormwater pollution prevention plan, construction would not violate water quality standards nor waste discharge requirements, and impacts would be less than significant. Similarly, as described in Impact HR-1, operation of the Proposed Program would not violate any water quality standards or waste discharge requirements, and impacts on water quality would be less than significant. The Proposed Program will comply with applicable laws and regulations.

1-9 Comment noted. Any construction dewatering that potentially would occur as part of the Proposed Program will comply with applicable laws and regulations.

under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

1-9 cont.

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

1-10

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

1-11

If you have questions regarding these comments, please contact me at (916) 464-4684 or Peter.Minkel2@waterboards.ca.gov.

Peter Minkel

Peter Minkel
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Central Valley Regional Water Quality Control Board, Continued

1-10 Comment noted. Any construction dewatering that potentially would occur as part of the Proposed Program will comply with applicable laws and regulations.

1-11 The Proposed Program does not include discharge of waste to surface waters of the State; therefore, coverage under a National Pollutant Discharge Elimination System permit is not anticipated to be required.

No. 2

2.4 Comment Letter No. 2

California Department of Fish and Wildlife
Dated January 9, 2023

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

January 9, 2023

Jesse Franco
Civil Engineering Manager
Modesto Irrigation District
Water Operations
Post Office Box 4060
Modesto, California 95352
jesse.franco@mid.org

Subject: Draft Program Environmental Impact Report
State Clearinghouse No. 2018092056, Stanislaus County

Dear Jesse Franco:

The California Department of Fish and Wildlife (CDFW) received the Draft Program Environmental Impact Report (PEIR) regarding the Comprehensive Water Resources Management Plan (Project) from the Modesto Irrigation District (Modesto ID) for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

We applaud Modesto ID taking a Districtwide programmatic approach to CEQA and appreciate the opportunity to provide comments and recommendations regarding Project activities that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW Role

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in the trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

California Department of Fish and Wildlife, Continued

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Bird Protection: CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs, and nests include section 3503 (regarding unlawful take, possession, or needless destruction of the nest or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird).

Water Rights: The capture of unallocated stream flows to artificially recharge groundwater aquifers is subject to appropriation and approval by the State Water Resources Control Board (SWRCB) pursuant to Water Code section 1200 et seq. CDFW, as Trustee Agency, is consulted by SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Certain fish and wildlife are reliant upon aquatic and riparian ecosystems, which in turn are reliant upon adequate flows of water. CDFW therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance, and proper stewardship of those resources. CDFW provides, as available, biological expertise to review and comment on environmental documents and impacts arising from Project activities.

PROJECT DESCRIPTION SUMMARY

Lead Agency: Modesto ID

Description: Modesto ID conducted an evaluation of its water resources, on-farm systems, land use patterns and projections, infrastructure, and finances. As a result of this assessment, Modesto ID has developed and intends to implement the Comprehensive Water Resources Management Plan (Project) to address Modesto ID's long-term customer and water management goals, and the specific infrastructure and operational needs throughout the Modesto ID irrigation conveyance system. The Project supports Modesto ID's goals through approximately 2040.

The draft PEIR includes approximately 100 activities grouped into the following five overall categories:

California Department of Fish and Wildlife, Continued

- **Three Regulating Reservoirs** – new structures to meet future water delivery demands for customers and increase operational flexibility.
- **Canal, Lateral, and Tunnel Improvements** – to ensure canal, lateral, and tunnel operational reliability.
- **Flow Control** – to provide operational reliability necessary to maintain a high level of customer service.
- **Groundwater Management** – including well testing, maintenance, rehabilitation, and replacing existing wells for conjunctive use.
- **Measurement and Automation** – minimizing operational spills and service interruptions, replacing aging supervisory control and data acquisition infrastructure, and achieving SB X7-7, Water Conservation Act of 2009, compliance.

The Project includes several activities that are well defined and others that are currently more conceptual in nature.

Location: The Project area includes the Modesto ID service area and locations outside the Modesto ID service area, including lands within unincorporated Stanislaus County and the Cities of Modesto, Riverbank, and Waterford.

Objectives and Needs: Although this document is being prepared to satisfy CEQA requirements, Modesto ID has developed a purpose and need that can be used for subsequent documentation, as necessary, to complete future, potential National Environmental Policy Act requirements. As the lead agency under CEQA, Modesto ID's primary objectives include the following:

- Provide a high level of customer services and meet customer's evolving water delivery needs
- Ensure compliance with Senate Bill (SB) X7-7, Water Conservation Act of 2009
- Implement irrigation infrastructure improvements for the stewardship of Modesto ID's water resources and increased operational reliability

COMMENTS AND RECOMMENDATIONS

Biological Resources

CDFW offers the comments and recommendations below to assist the Modesto ID in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife, i.e., biological resources.

California Department of Fish and Wildlife, Continued

Editorial comments or other suggestions may also be included to improve the document. Based on a review of the Project description, a review of California Natural Diversity Database (CNDDB) records, and a review of aerial photographs of the Project boundary and surrounding habitat several special-status species could potentially be impacted by Project activities, particularly those that involve construction activities or diversion and/or modification of stream flows. Project-related construction activities within the Project boundary, including but not limited to construction and operation of water recharge facilities and introduction of surface water flows for storage could impact the special-status plant and wildlife species and habitats known to occur in the area.

The following special status species and habitats are known to occupy the Project area, including the State and federal endangered least Bell's vireo (*Vireo bellii pusillus*) and riparian brush rabbit (*Sylvilagus bachmani riparius*); the federal endangered and State species of special concern riparian (San Joaquin Valley) woodrat (*Neotoma fuscipes riparia*); the State threatened Swainson's hawk (*Buteo swainsoni*) and tricolored blackbird (*Agelaius tricolor*); the State fully-protected white-tailed kite (*Elanus leucurus*); the State and federal threatened California tiger salamander – central California Distinct Population Segment (DPS) (*Ambystoma californiense* pop. 1); the federal endangered vernal pool tadpole shrimp (*Lepidurus packardi*) and Conservancy fairy shrimp (*Branchinecta conservation*); the federal threatened vernal pool fairy shrimp (*Branchinecta lynchi*); the State candidate endangered crotch bumble bee (*Bombus crotchii*); the State and federal endangered and California Rare Plant Rank (CRPR) 1B.1 Hartweg's golden sunburst (*Pseudobahia bahifolia*) and hairy Orcutt grass (*Orcuttia pilosa*); the State endangered, federal threatened, and CRPR 1B.2 succulent owl's-clover (*Castilleja campestris* var. *succulenta*); the State endangered and CRPR 1B.1 Delta button celery (*Eryngium racemosum*); the State endangered, federal threatened, and CRPR 1B.1 Colusa grass (*Neostapfia colusana*); the federal threatened and CRPR 1B.2 Hoover's spurge (*Euphorbia hooveri*); the CRPR 1A Hoover's cryptantha (*Cryptantha hooveri*); the CRPR 1B.1 alkali-sink goldfields (*Lasthenia chrysantha*) and lesser saltscale (*Atriplex minuscula*); the CRPR 1B.2 California alkali grass (*Puccinellia simplex*) and Sanford's arrowhead (*Sagittaria sanfordii*); the CRPR 2B.2 dwarf downingia (*Downingia pusilla*); and the State species of special concern burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), Northern California legless lizard (*Anniella pulchra*), Blainville's horned lizard (*Phrynosoma blainvillii*), Merced kangaroo rat (*Dipodomys heermanni dixoni*), Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), western pond turtle (*Emys marmorata*), and western spadefoot (*Spea hammondii*). Suitable habitat for the rare and endemic obscure bumble bee (*Bombus caliginosus*) and Morrison bumble bee (*Bombus morrisoni*) occurs in the Project vicinity. Other species of birds, amphibians, reptiles, mammals, fish, and plants also compose the local ecosystem within the Project boundary.

The Tuolumne, Stanislaus, and San Joaquin Rivers are adjacent to the Modesto ID service area boundary, which overlaps the Project area. These rivers support the federal threatened Central Valley steelhead DPS (*Oncorhynchus mykiss irideus* pop. 11), and the State species of special concern fall-run Central Valley Chinook salmon (*Oncorhynchus tshawyscha*). The San Joaquin River supports the nonessential experimental population of spring run Central Valley Chinook salmon, for which the San Joaquin River Restoration Program goal is to restore a self-sustaining fishery. Additionally, CDFW documented the presence of the experimental spring-run Chinook salmon in the Tuolumne and Stanislaus Rivers during 2021 escapement surveys, documenting the San Joaquin River as a migratory corridor for spring/fall Chinook and steelhead and likely providing rearing habitat. Other special status fish species known to occur within one or more of the three river systems include the federal threatened green sturgeon – southern DPS (*Acipenser medirostris* pop. 1), and the State species of special concern hardhead (*Mylopharodon conocephalus*) and white sturgeon (*Acipenser transmontanus*).

Surface and ground water dependent ecosystems, including Great Valley Valley Oak Riparian Forest, Great Valley Mixed Riparian Forest, vernal pool, swale, riparian, wetland, and oak woodland habitats are present within the three watersheds and other areas within the Project boundary. The western area of the Project boundary is located in close proximity to Caswell Memorial State Park and the San Joaquin River National Wildlife Refuge.

Please note that the CNDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDB but where there is suitable habitat and features capable of supporting species. A lack of an occurrence record in the CNDDB does not mean a species is not present. In order to adequately assess any potential Project-related impacts to biological resources, surveys conducted by a qualified wildlife biologist/botanist during the appropriate survey period(s) and using the appropriate protocol survey methodology are warranted in order to determine whether or not any special status species are present at or near the Project area.

I. Mitigation Measure or Alternative and Related Impact Shortcoming

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Least Bell's Vireo (LBV)

Issues and Impacts: LBV occurrences have been documented within the Project area and suitable riparian habitat for nesting occurs in the Project vicinity (CDFW 2022a). Suitable LBV habitat includes rivers and streams with dense riparian

2-1

California Department of Fish and Wildlife, Continued

2-1 Refer to CDFW Master Response 1. CDFW's Recommended Mitigation Measures 1 through 5 for least Bell's vireo have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1k.

California Department of Fish and Wildlife, Continued

vegetation. Review of aerial imagery indicates that suitable habitat for LBV occurs within the Project area.

Breeding habitat loss resulting from urban development, water diversion, and spread of agricultural is the primary threat to LBV, and the primary cause of decline for this species has been the loss and alteration of riparian woodland habitats (USFWS 2006). Fragmentation of their preferred habitat has also increased their exposure to brown-headed cowbird (*Molothrus ater*) parasitism (Kus and Whitfield 2005). Current threats to their preferred habitat include colonization by non-native plants and altered hydrology (diversion, channelization, etc.) (USFWS 2006). Suitable nesting habitat is present within or adjacent to the Project site. Without appropriate avoidance and minimization measures, potential significant impacts associated with Project activities may include nest abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

Recommended Mitigation Measure 1: LBV Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of any Project construction activities, to determine where the Project site or its immediate vicinity contains suitable habitat for LBV. Although LBV inhabit riparian woodlands, the species has also been found to benefit from non-riparian systems including brushy fields, second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands (Kus et al. 1989).

Recommended Mitigation Measure 2: Focused LBV Surveys
CDFW recommends that a qualified wildlife biologist conduct surveys following the survey methodology developed by USFWS (2001) prior to initiation of Project construction within the Project area and a 500-foot buffer around the Project area. In addition, if Project construction will take place during the species' nesting season (April 1 through August 31), CDFW recommends that additional preconstruction surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of Project activities such as construction or habitat removal.

Recommended Mitigation Measure 3: LBV Nest Avoidance Buffers
If an LBV nest is found during protocol or preconstruction surveys, CDFW recommends maintaining a minimum 500-foot no-disturbance buffer until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest site or parental care.

Recommended Mitigation Measure 4: LBV Habitat Mitigation
CDFW recommends that impacts to known nest trees be avoided at all times of year. Regardless of nesting status, if potential or known LBV nesting habitat is removed, CDFW recommends that it be replaced with appropriate native tree species, planted at a ratio of 3:1 (replaced to removed), in an area that will be protected in perpetuity, to offset the loss of nesting habitat.

2-1 cont.

Recommended Mitigation Measure 5: LBV Take Authorization
If a 500-foot no-disturbance nest buffer is not feasible, consultation with CDFW is warranted and acquisition of an Incidental Take Permit (ITP) for LBV may be necessary prior to project implementation, to avoid unauthorized take, pursuant to Fish and Game Code section 2081, subdivision (b). Alternatively, the applicant can assume presence of LBV within the Project area and obtain an ITP.

2-1 cont.

COMMENT 2: Swainson's Hawk (SWHA)

Issues and Impacts: SWHA have been documented in areas of suitable habitat within the Project vicinity (CDFW 2022a). Undeveloped and agricultural land in the surrounding area provide suitable foraging habitat for SWHA, and any trees in or near the Project area may also provide suitable nesting habitat. SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat limits their local distribution and abundance (CDFW 2016). Approval of the Project may lead to subsequent ground-disturbing activities that involve noise, groundwork, construction of structures, and movement of workers that could affect nests and has the potential to result in nest abandonment and loss of foraging habitat. In addition, conversion of undeveloped and agricultural land can directly influence distribution and abundance of SWHA, due to the reduction in foraging habitat. Groundwater pumping, surface water diversion, and habitat conversion may result in loss of riparian habitat and subsequent loss of nesting habitat.

Mitigation Measure MM-BR-1c states that if active Swainson's hawk nests are detected during preconstruction surveys, a no-disturbance buffer zone of 500 feet would be implemented during the nesting season Without appropriate avoidance and minimization measures for SWHA, potential significant impacts that may result from Project activities include nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality.

2-2

Recommended Mitigation Measure 6: Focused SWHA Surveys
CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the entire survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) prior to any Project construction activities.

Recommended Mitigation Measure 7: SWHA Avoidance
CDFW recommends that if Project-specific construction activities will take place during the SWHA nesting season (i.e., March 1 through September 15) and active SWHA nests are present, a minimum ½-mile no-disturbance buffer be delineated and maintained around each nest, regardless of when or how it was detected, until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

California Department of Fish and Wildlife, Continued

2-2 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 6 through 10 for Swainson's hawk have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1c, replacing the text of Mitigation Measure MM-BR-1c in the Draft PEIR.

Recommended Mitigation Measure 8: SWHA Take Authorization
CDFW recommends that in the event an active SWHA nest is detected, and a ½-mile no-disturbance buffer is not feasible, consultation with CDFW occur to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b) is necessary to comply with CESA. Alternately, the applicant can assume presence of SWHA and obtain an ITP.

Recommended Mitigation Measure 9: Loss of SWHA Foraging Habitat
CDFW recommends compensation for the loss of SWHA foraging habitat as described in the CDFW *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks* (Staff Report) (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur for any project proposed within 10 miles from known nest sites.

Recommended Mitigation Measure 10: SWHA Tree Removal
CDFW recommends that the removal of known SWHA nest trees, even outside of the nesting season, be replaced with appropriate native tree species planting at a ratio of 3:1 at or near the Project area or in another area that will be protected in perpetuity, to offset the local and temporal impacts of nesting habitat loss.

2-2 cont.

COMMENT 3: White-tailed Kite:

This species occurs in the vicinity of the Project boundary. Mitigation Measure MM-BR-1c states that if active white-tailed kite nests are detected during preconstruction surveys, a no-disturbance buffer zone of 500 feet will be implemented during the nesting season (March 1 through September 15). Without appropriate avoidance and minimization measures for white-tailed kite, potential significant impacts that may result from Project activities include nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality. Due to its fully protected status, take of white-tailed kite cannot be authorized and would be a violation of Fish and Game Code.

Recommended Mitigation Measure 11: White-Tailed Kite Surveys
To avoid potential Project-related impacts, CDFW recommends that prior to commencing Project-related construction activities, a qualified avian biologist conduct surveys for nesting white-tailed kites within areas of Project activity and a ¼-mile buffer.

Recommended Mitigation Measure 12: White-Tailed Kite Avoidance:
CDFW recommends that a minimum no-disturbance buffer of ¼ mile be delineated around active nests of white-tailed kites until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. CDFW advises the Lead Agency

2-3

California Department of Fish and Wildlife, Continued

2-3 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 11 and 12 for white-tailed kite have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1c, replacing the text of Mitigation Measure MM-BR-1c in the Draft PEIR.

not to allow reductions in no-disturbance buffer size for white-tailed kites or any fully protected bird of prey species absent a compelling biological or ecological reason to do so. In the event that nesting white-tailed kites are detected during surveys, consultation with CDFW is warranted to discuss Project implementation and take avoidance.

2-3 cont.

COMMENT 4: Tricolored Blackbird (TRBL)

Issues and Impacts: TRBL are known to occur in the Project area (CDFW 2022a), and review of aerial imagery indicates that suitable habitat types within the Project area includes wetlands, ponds, and flood-irrigated agricultural land, which is an increasingly important nesting habitat type for TRBL (Meese et al. 2017).

TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014), and approximately 86% of the global population is found in the San Joaquin Valley (Kelsey 2008, Weintraub et al. 2016). For these reasons, disturbance to nesting colonies can cause entire nest colony site abandonment and loss of all unfledged nests (Meese et al. 2014). Without appropriate avoidance and minimization measures for TRBL, potential significant impacts include nesting habitat loss, nest and/or colony abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

Recommended Mitigation Measure 13: TRBL Surveys
CDFW recommends that Project construction activities be timed to avoid the avian nesting season of February 1 through September 15. If Project activity that could disrupt nesting must take place during that time, CDFW recommends that a qualified biologist conduct surveys for nesting TRBL no more than 10 days prior to the start of implementation to evaluate presence or absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

Recommended Mitigation Measure 14: TRBL Colony Avoidance:
If an active TRBL nesting colony is found during surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer, in accordance with CDFW's (2015) *Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015*, until the breeding season has ended or until a qualified biologist has determined that nesting has ceased and the young have fledged and are no longer reliant upon the colony or parental care.

Recommended Mitigation Measure 15: TRBL Take Authorization
In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is warranted to discuss whether the Project can avoid take and, if take avoidance is not feasible, to acquire an ITP pursuant to Fish and Game Code section 2081, subdivision (b), prior to any Project activities.

2-4

California Department of Fish and Wildlife, Continued

2-4 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 13 through 15 for tricolored blackbird have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1d, replacing the text of Mitigation Measure MM-BR-1d in the Draft PEIR.

COMMENT 5: Riparian Brush Rabbit and Riparian Woodrat

Issues and Impacts: Historically, riparian brush rabbit is known to have occurred in riparian forests along the San Joaquin River and Stanislaus rivers in Stanislaus and San Joaquin counties, and probably also streamside communities along the other tributaries of the San Joaquin River on the valley floor. Today, the largest remaining fragment of habitat and only extant population are found along the Stanislaus River in Caswell Memorial State Park, Dos Rios Ranch, and San Joaquin National Wildlife Refuge. Riparian brush rabbits inhabit dense, brushy areas of Valley riparian forests, marked by extensive thickets of wild rose (*Rosa* spp.), blackberries (*Rubus* spp.), and willows (*Salix* spp.). Thriving mats of low-growing vines and shrubs serve as ideal living sites where they build tunnels under and through the vegetation. Suitable existing habitat for riparian brush rabbits is characterized by an abundance of woody ground litter and fewer willows, signifying areas of higher ground not subject to regular or heavy flooding.

Lack of suitable habitat above the level of regular floods where the animals could find food and cover for protection from weather and predators poses the greatest threat to the species (ESRP 2022a). Other factors include wildfire threats due to long-term fire suppression in the Caswell State Park, diseases common to rabbits in California, and competition with the more fecund and vagile desert cottontail.

The riparian woodrat is the only subspecies of dusky-footed woodrat found on the floor of the Central Valley and is restricted today to small remnant patches of riparian forest along the Stanislaus River, with highest densities often encountered in willow thickets with an oak overstory. Loss and fragmentation of habitat are the principal reasons for the decline of the riparian woodrat, due largely to construction of large dams and canals that diverted water and altered hydrology, as well as from cultivation of the river bottoms. Thick undergrowth that is particularly important to woodrats, is sensitive to trampling and browsing and grazing by livestock (ESRP 2022b). A review of aerial imagery shows the presence of riparian woodland habitat along the San Joaquin River and Stanislaus River adjacent to the Project area. Known occurrences for both species have been documented adjacent to the Project boundary (CDFW 2022a).

Recommended Mitigation Measure 16: Riparian Brush Rabbit and Riparian Woodrat Habitat Assessment
Prior to Project construction activities occurring in riparian habitat in proximity to the San Joaquin River or Stanislaus River, CDFW recommends that a qualified biologist conduct protocol level surveys in accordance with the USFWS (2022) *Draft Habitat Assessment Guidelines & Survey Protocol for the Riparian Brush Rabbit and the Riparian Woodrat* at the appropriate time of year to determine the existence and extent of these species. If through surveys it is determined that riparian brush rabbit or riparian woodrat are occupying or have the potential to occupy the Project site,

2-5

California Department of Fish and Wildlife, Continued

2-5 Refer to CDFW Master Response 1. CDFW's Recommended Mitigation Measures 16 and 17 for riparian brush rabbit and riparian woodrat have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1l.

consultation with CDFW is warranted to determine appropriate avoidance and minimization measures including implementation of no-disturbance buffers.

Recommended Mitigation Measure 17: Riparian Brush Rabbit and Riparian Woodrat Take Authorization
If riparian brush rabbit occupies the Project area, and if take cannot be avoided, take authorization may be warranted prior to initiating Project activities by acquiring an ITP pursuant to Fish and Game Code section 2081, subdivision (b), before Project ground or vegetation disturbing activities occur. Alternatively, in the absence of protocol surveys, the applicant can assume presence and obtain an ITP.

2-5 cont.

COMMENT 6: California Tiger Salamander (CTS)

Issues and Impacts: CTS are known to occur in the Project area and its vicinity (CDFW 2022a), and review of aerial imagery indicates the presence of several wetland features. In addition, the Project area or its immediate surroundings may support small mammal burrows, a requisite upland habitat feature for CTS. Without appropriate avoidance and minimization measures for CTS, potential significant impacts associated with any construction or ground disturbing activity include burrow collapse; inadvertent entrapment; reduced reproductive success; reduction in health and vigor of eggs, larvae and/or young; and direct mortality of individuals. In addition, depending on the design of any activity, the Project has the potential to result in creation of barriers to dispersal.

Recommended Mitigation Measure 18: CTS Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment well in advance of Project construction, to determine if any Project area or its vicinity contains suitable habitat (upland or breeding) for CTS.

Recommended Mitigation Measure 19: Focused CTS Surveys
If the Project area does contain suitable habitat for CTS, CDFW recommends that a qualified biologist evaluate potential Project-related impacts to CTS prior to ground-disturbing activities using the USFWS (2003) *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander*. CDFW recommends that the survey include a 100-foot buffer around the areas in wetland and upland habitats that could support CTS.

Recommended Mitigation Measure 20: CTS Avoidance
CDFW advises that avoidance for CTS include a minimum 50-foot no disturbance buffer delineated around all small mammal burrows and a minimum 250-foot no-disturbance buffer around potential breeding pools within and adjacent to the Project

2-6

California Department of Fish and Wildlife, Continued

2-6 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 18 through 21 for California tiger salamander have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1f, replacing the text of Mitigation Measure MM-BR-1f in the Draft PEIR.

area. CDFW also recommends avoiding any impacts that could alter the hydrology or result in sedimentation of breeding pools.

Recommended Mitigation Measure 21: CTS Take Authorization
If CTS occupy the Project area and if take cannot be avoided, take authorization would be warranted prior to initiating Project activities, by acquiring an ITP pursuant to Fish and Game Code section 2081, subdivision (b), before Project ground or vegetation disturbing activities occur. Alternatively, in the absence of protocol surveys, the applicant can assume presence of CTS within the Project area and obtain an ITP.

2-6 cont.

COMMENT 7: Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Conservancy Fairy Shrimp

Issues and Impacts: Occurrences of these species have been noted within the Project boundary (CDFW 2022a). These small, freshwater crustaceans complete their entire lifecycle within a variety of vernal pool habitats and temporary waters between November and early May. Vernal pool fairy shrimp have been documented within grassland, agricultural, silvicultural, and aquacultural settings throughout California (USFWS 2007). Review of aerial imagery indicates the presence of several depressional features in the Project area that have the potential to support Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Conservancy Fairy Shrimp.

Recommended Mitigation Measure 22: Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Conservancy Fairy Shrimp Habitat Assessment
In advance of any Project construction or modified hydrology occurring in non-cultivated areas, CDFW recommends that a qualified biologist conduct protocol level surveys in accordance with the USFWS (2017) *Survey Guidelines for the Listed Large Branchiopods* at the appropriate time of year to determine the existence and extent of fairy shrimp and tadpole shrimp. If through surveys it is determined that these species are occupying or have the potential to occupy the Project site, consultation with CDFW is warranted to determine appropriate avoidance and minimization measures including adequate implementation of no-disturbance buffers.

2-7

COMMENT 8: Special-Status Plants

Issues and Impacts: Section 3.4.3.3 states that some Project impacts to special-status plant species would be unavoidable and potentially significant. State- and federal listed, and other special-status plant species meeting the definition of rare or endangered under CEQA section 15380, are known to occur throughout the Project boundary and surrounding area, including the species listed above (CDFW 2022a).

Many of the plant species listed above are threatened by grazing and agricultural, urban, and energy development, and many historical occurrences of these species

2-8

California Department of Fish and Wildlife, Continued

2-7 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measure 22 for vernal pool invertebrates has been incorporated into the PEIR as Mitigation Measure MM-BR-1g, replacing the text of Mitigation Measure MM-BR-1i in the Draft PEIR.

2-8 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 23 through 25 for special-status plants have been incorporated into the PEIR as Mitigation Measure MM-BR-1j, replacing the text of Mitigation Measure MM-BR-1n for Sanford's arrowhead and Mitigation Measure MM-BR-1o for Other Special-Status Plant Species in the Draft PEIR.

are presumed extirpated (CNPS 2021). Though new populations have recently been discovered, impacts to existing populations have the potential to significantly impact populations of plant species. Without appropriate avoidance and minimization measures for special-status plants, potential significant impacts associated with subsequent Project-specific activities include loss of habitat, loss or reduction of productivity, and direct mortality.

Recommended Mitigation Measure 23: Special-Status Plant Surveys
CDFW recommends that individual Project sites where construction activities will occur be surveyed for special-status plants by a qualified botanist following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2018). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. Note that due to variations in annual rainfall that CDFW recommends plant surveys be conducted over one season (Spring through Fall) and repeated over two separate seasons to maximize detection of special-status plants.

Recommended Mitigation Measure 24: Special-Status Plant Avoidance
CDFW recommends that special-status plant species be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW may be warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

Recommended Mitigation Measure 25: Listed Plant Species Take Authorization
If a State-listed plant species is identified during botanical surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization is warranted. Take authorization would occur through issuance of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b).

2-8 cont.

COMMENT 9: Burrowing Owl (BUOW)

Issues and Impacts: BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used for nesting and cover. BUOW may also occur in some agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable and there are useable burrows and foraging habitat in the area (Gervais et al. 2008). BUOW occurrences have been documented in the Project vicinity, and habitat both within and bordering the Project site supports suitable habitat for BUOW (CDFW 2022a).

BUOW rely on burrow habitat year-round for their survival and reproduction. The Project and vicinity contain remnant undeveloped land but is otherwise intensively

2-9

California Department of Fish and Wildlife, Continued

2-9 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 26 through 29 for burrowing owl have been incorporated into the PEIR as Mitigation Measure MM-BR-1b, replacing the text of Mitigation Measure MM-BR-1b in the Draft PEIR.

California Department of Fish and Wildlife, Continued

managed for agriculture. Potentially significant impacts to nesting and non-nesting BUOW can also occur as a result of ground-impacting activity, such as grading and flooding within active and fallow agricultural areas, and as a result of noise, vibration, and other disturbance caused by equipment and crews. Potential impacts associated with Project activities and land conversion include habitat loss, burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Recommended Mitigation Measure 26: BUOW Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of implementation of Project construction activities, to determine if the Project area or its vicinity contains suitable habitat for BUOW.

Recommended Mitigation Measure 27: BUOW Surveys
Where suitable habitat is present on or in the vicinity of the Project area, CDFW recommends assessing presence or absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium (1993) *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFG (2012) *Staff Report on Burrowing Owl Mitigation*. Specifically, these documents suggest three or more surveillance surveys conducted during daylight, with each visit occurring at least three weeks apart during the peak breeding season of April 15 to July 15, when BUOW are most detectable. CDFW advises that surveys include a minimum 500-foot survey radius around the Project area.

Recommended Mitigation Measure 28: BUOW Avoidance
CDFW recommends that no-disturbance buffers, as outlined by CDFG (2012), be implemented prior to and during any ground-disturbing activities, and specifically that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Recommended Mitigation Measure 29: BUOW Eviction and Mitigation
If BUOW are found within these recommended buffers and avoidance is not possible, CDFG (2012) states that evicting birds from burrows is considered a

2-9 cont.

potentially significant impact under CEQA. If it is necessary for Project implementation, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW then recommends mitigation in the form of replacement of occupied burrows with artificial burrows at a minimum ratio of one burrow collapsed to one artificial burrow constructed (1:1) to mitigate for evicting BUOW and the loss of burrows. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance at a rate that is sufficient to detect BUOW if they return.

2-9 cont.

COMMENT 10: Special-Status Bat Species

Issues and Impacts: Townsend's big-eared bat have been documented to occur in the vicinity of the Project area (CDFW 2022a). The draft PEIR acknowledges that habitat features are present that have the potential to support western mastiff bat, Yuma myotis, hoary bat, and western red bat.

Western mastiff bat, Yuma myotis, and Townsend's big-eared bat are known to roost in buildings, caves, tunnels, cliffs, crevices, and trees. (CDFW 2022b, Lewis 1994, and Gruver 2006). Hoary bat and western red bat are highly associated with riparian habitat (Peirson et al. 2006 and CDFW 2022c). Project activities have the potential to affect habitat upon which special-status bat species depend for successful breeding and have the potential to impact individuals and local populations. Without appropriate avoidance and minimization measures, potential significant impacts resulting from ground- and vegetation-disturbing activities associated with Project activities include habitat loss, inadvertent entrapment, roost abandonment, reduced reproductive success, reduction in health and vigor of young, and direct mortality.

Recommended Mitigation Measure 30: Bat Roost Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment well in advance of Project implementation to determine if the Project area or its immediate vicinity contains suitable roosting habitat for special-status bat species.

Recommended Mitigation Measure 31: Bat Roost Surveys
If suitable habitat is present, CDFW recommends assessing presence of special-status bat roosts by conducting surveys during the appropriate seasonal period of bat activity. CDFW recommends methods such as through evening emergence surveys or bat detectors to determine whether bats are present.

Recommended Mitigation Measure 32: Bat Roost Disturbance Minimization and Avoidance
If bats are present, CDFW recommends that a 100-foot no-disturbance buffer be placed around the roost and that a qualified biologist who is experienced with bats monitor the roost for signs of disturbance to bats from Project activity. If a bat roost

2-10

California Department of Fish and Wildlife, Continued

2-10 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 30 through 32 for special-status bat species have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1i, replacing mitigation measures Mitigation Measure MM-BR-1k and Mitigation Measure MM-BR-1l in the Draft PEIR.

is identified and work is planned to occur during the breeding season, CDFW recommends that no disturbance to maternity roosts occurs and that CDFW be consulted to determine measures to prevent breeding disruption or failure.

2-10 cont.

COMMENT 11: Western Pond Turtle (WPT)

Issues and Impacts: WPT are documented in the Project area (CDFW 2022a), and a review of aerial imagery shows requisite habitat features that WPT utilize for nesting, overwintering, dispersal, and basking occur in the Project area. These features include aquatic and terrestrial habitats such as rivers, lakes, reservoirs, ponded areas, irrigation canals, riparian and upland habitat. WPT are known to nest in the spring or early summer within 100 meters of a water body, although nest sites as far away as 500 meters have also been reported (Thomson et al. 2016). Noise, vegetation removal, movement of workers, construction, and ground disturbance as a result of Project activities have the potential to significantly impact WPT populations. Without appropriate avoidance and minimization measures for WPT, potentially significant impacts associated with Project activities could include nest reduction, inadvertent entrapment, reduced reproductive success, reduction in health or vigor of eggs and/or young, and direct mortality.

Recommended Mitigation Measure 33: WPT Surveys
CDFW recommends that a qualified biologist conduct focused surveys for WPT within 10 days prior to Project construction activities. In addition, CDFW recommends that focused surveys for nests occur during the egg-laying season of March through August.

Recommended Mitigation Measure 34: WPT Avoidance and Minimization
CDFW recommends that any WPT nests that are discovered remain undisturbed with a no-disturbance buffer maintained around the nest until the eggs have hatched and neonates are no longer in the nest or Project areas. If WPT individuals are discovered at the site during surveys or Project activities, CDFW recommends that they be allowed to move out of the area of their own volition without disturbance.

2-11

COMMENT 12: Crotch Bumble Bee (CBB), Morrison Bumble Bee (MBB), and Obscure Bumble Bee (OBB)

Issues and Impacts: The draft PEIR acknowledges that CBB, MBB, and OBB have been documented within the Project area (CDFW 2022a). Suitable habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. These bumble bee species primarily nest in late February through late October underground in abandoned small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, underneath brush piles, in old bird nests, and in dead trees or hollow logs, and in structures (Williams et al. 2014, Hatfield et al. 2015). Overwintering sites utilized by

2-12

California Department of Fish and Wildlife, Continued

2-11 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 33 and 34 for western pond turtle have been incorporated into the PEIR as Mitigation Measure MM-BR-1e, replacing the text of Mitigation Measure MM-BR-1e in the Draft PEIR.

2-12 Refer to CDFW Master Response 1. CDFW's Recommended Mitigation Measures 35 and 36 for bumble bees have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1m.

mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014).

CBB, OBB, and MBB have each experienced range-wide declines in abundance and range restrictions, including historic areas of California's Central Valley (Hatfield et al. 2014a, Hatfield et al. 2014b, Central Valley Xerces Society et al. 2018). Without appropriate avoidance and minimization measures, potentially significant impacts associated with ground- and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality.

Recommended Mitigation Measure 35: CBB, MBB, and OBB Surveys and Avoidance
CDFW recommends that all small mammal burrows and thatched/bunch grasses be surveyed for the species and their nests during the optimal flight period of April 1 through July 31 during the peak blooming period of preferred plant species prior to Project implementation. Avoidance of detected queens or workers is encouraged to allow CBB, MBB, and OBB to leave the Project site of their own volition. Avoidance and protection of detected nests prior to or during Project implementation is encouraged with delineation and observance of a 50-foot no-disturbance buffer.

Recommended Mitigation Measure 36: CBB Take Authorization
Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take. If take cannot be avoided, take authorization would be warranted through issuance of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b).

2-12 cont.

COMMENT 13: Other State Species of Special Concern

Issues and Impacts: American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot are known to inhabit grassland and upland shrub areas with friable soils (Williams 1986, Thomson et al. 2016). These species have been documented to occur in the vicinity of the Project, which supports requisite habitat elements for these species (CDFW 2022a). Habitat loss threatens all of the species mentioned above (Williams 1986, Thomson et al. 2016). Habitat within and adjacent to the Project represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. Without appropriate avoidance and minimization measures for these species, potentially significant impacts associated with ground disturbance include

2-13

California Department of Fish and Wildlife, Continued

2-13 Refer to CDFW Master Response 2. CDFW's Recommended Mitigation Measures 37 through 39 for State Species of Concern have been incorporated into the PEIR as Mitigation Measure MM-BR-1n, replacing Mitigation Measure MM-BR-1m for American badger, Mitigation Measure MM-BR-1g for Northern California legless lizard, Mitigation Measure MM-BR-1h for Blainville's horned lizard, and Mitigation Measure MM-BR-1f for western spadefoot.

habitat loss, nest/den/burrow abandonment, which may result in reduced health or vigor of eggs and/or young, and direct mortality.

Recommended Mitigation Measure 37: Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project construction activities to determine if Project areas or their immediate vicinity contain suitable habitat for the species mentioned above.

Recommended Mitigation Measure 38: Surveys
If suitable habitat is present, CDFW recommends that a qualified biologist conduct focused surveys for applicable species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance.

Recommended Mitigation Measure 39: Avoidance
Avoidance whenever possible is encouraged via delineation and observance of a 50-foot no-disturbance buffer around dens of mammals like the American badger as well as the entrances of burrows that can provide refuge for small mammals, reptiles, and amphibians.

2-13 cont.

COMMENT 14: Fisheries Impacts:

Section 3.4 states that several Project components are adjacent to, but not in, the Stanislaus and Tuolumne Rivers. Figure 2a, and other figures in the Draft PEIR show locations of some of the Project structures located in or adjacent to the rivers. CDFW recommends that the draft PEIR or documents tiering off of the PEIR further clarify whether the Project will result in diversion and conveyance of surface flow from streams and any related impacts to fisheries in the San Joaquin, Tuolumne, and/or Stanislaus Rivers and their tributaries.

Recommended Mitigation Measure 40: Fish Screening
As stated above, the Tuolumne, Stanislaus, and San Joaquin Rivers support several special status fish species including the Central Valley steelhead and the fall-run Central Valley Chinook salmon. CDFW is concerned that diversion of surface flow from these river systems may have the potential to harm, injure, or kill salmonids or other fish from entrainment into or impingement on screens. Smolt-sized fish are most vulnerable to these operational impacts. For diversions and canal returns potentially accessible to native/anadromous fish on the Tuolumne, San Joaquin, and Stanislaus Rivers, CDFW recommends that the draft PEIR and any documents tiering off of the PEIR include mitigation measures requiring the diversion structure to be fitted with fish screens meeting criteria outlined in the National Marine Fisheries Service (NMFS 1997) *Fish Screening Criteria for Anadromous Salmonids*, to prevent removal, entrainment, or impingement of fish and other wildlife as water is drafted. This screening recommendation does not apply to main canals in the La Grange Reservoir.

2-14

California Department of Fish and Wildlife, Continued

2-14 The Proposed Program will not result in diversion and conveyance of surface flow from streams and, therefore, will not result in any related impacts to fisheries in the San Joaquin, Tuolumne, and /or San Joaquin Rivers and their tributaries. As stated in Section 3.4 of the Draft PEIR, none of the projects included in the Proposed Program would affect the Stanislaus or Tuolumne Rivers; and therefore, these water bodies are not described in detail or evaluated further in the PEIR. Because of the programmatic level of evaluation in the PEIR, project locations on figures are approximate and could be subject to change. All projects will be evaluated using the EEC (Appendix A of the Draft PEIR) process prior to project implementation. CDFW's Recommended Mitigation Measure 40 is not applicable because the Proposed Program does not include diversion structures.

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS?

COMMENT 15: Wetland, Vernal Pool, and Riparian Habitats

Issues and Impacts: The Project area contains numerous waterways and wetland features, including vernal pools and swales within an agricultural landscape mosaic that also maintains undeveloped habitats. Project activities such as water recharge and any associated ground disturbances have the potential to involve temporary and permanent impacts to these habitat features. Project activities have the potential to result in temporary and permanent impacts to these features through groundwater pumping, habitat conversion, grading, fill, conveyance and infrastructure construction, and related development. Riparian and associated floodplain and wetland areas are valuable for their ecosystem processes such as protecting water quality by filtering pollutants and transforming nutrients; stabilizing stream banks to prevent erosion and sedimentation/siltation; and dissipating flow energy during flood conditions, thereby spreading the volume of surface water, reducing peak flows downstream, and increasing the duration of low flows by slowly releasing stored water into the channel through subsurface flow. Vernal pools provide unique wetland habitat for many special status and endemic plant and aquatic wildlife species. The Fish and Game Commission policy regarding wetland resources discourages development or conversion of wetlands that results in any net loss of wetland acreage or habitat value. Habitat conversion, construction, grading, and fill activities within these features also has the potential to impact downstream waters as a result of Project site impacts leading to erosion, scour, and changes in stream morphology.

Recommended Mitigation Measure 41: Stream and Wetland Mapping
CDFW recommends that formal stream mapping and wetland delineation be conducted by a qualified biologist or hydrologist, as warranted, to determine the baseline location, extent, and condition of streams (including any floodplain) and wetlands within and adjacent to the Project area. Please note that while there is overlap, State and federal definitions of wetlands differ, and complete stream mapping commonly differs from delineations used by the United States (U.S.) Army Corps of Engineers specifically to identify the extent of Waters of the U.S. Therefore, it is advised that the wetland delineation identify both State and federal wetlands in the Project area as well as the extent of all streams including floodplains, if present. CDFW advises that site map(s) depicting the extent of any activities that may affect wetlands, lakes, or streams be included with any Project site evaluations, to clearly identify areas where stream/riparian and wetland habitats could be impacted from Project activities.

2-15

California Department of Fish and Wildlife, Continued

2-15 Recommended Mitigation Measure 41: Stream and Wetland Mapping and Recommended Mitigation Measure 42: Stream and Wetland Habitat Mitigation have been incorporated into the Final PEIR as Mitigation Measure MM-BR-2, replacing the text of Mitigation Measure MM-BR-2 in the Draft PEIR in Table 3.4-4, Summary of Mitigation Measures for MID Project Impacts on Biological Resources. CDFW's recommended mitigation measures are similar in nature to the measures included in the Draft PEIR and would not result in any new impacts not previously identified. Any associated revisions to the Draft PEIR are included as errata in the Final PEIR as detailed in Section 3.1 of this Final PEIR. The mitigation measures added to Table 3.4-4 will be incorporated into the Mitigation Monitoring and Reporting Program for the Proposed Program.

Recommended Mitigation Measure 42: Stream and Wetland Habitat Mitigation CDFW recommends that the potential direct and indirect impacts to stream/riparian and wetland/vernal pool habitat be analyzed according to each Project activity. Based on those potential impacts, CDFW recommends that the draft PEIR and any subsequent documents tiering off of the PEIR include measures to avoid, minimize, and/or mitigate those impacts. CDFW recommends that impacts to riparian habitat, including biotic and abiotic features, take into account the effects to stream function and hydrology from riparian habitat loss or damage, as well as potential effects from the loss of riparian habitat to special-status species already identified herein. CDFW recommends that losses to vernal pools, swales, and other wetland or riparian habitats be offset with corresponding habitat restoration incorporating native vegetation to replace the value to fish and wildlife provided by the habitats lost from Project implementation. If on-site restoration to replace habitats is not feasible, CDFW recommends offsite mitigation by restoring or enhancing in-kind riparian or wetland habitat and providing for the long-term management and protection of the mitigation area, to ensure its persistence.

2-15 cont.

Editorial Comments and/or Suggestions

Water Rights: The Project proposes the construction of three 200 acre-foot regulating reservoirs, and other Project structures located in proximity to the Stanislaus, Tuolumne, and San Joaquin Rivers. As stated previously, the capture of unallocated stream flows to artificially recharge groundwater aquifers is subject to appropriation and approval by the SWRCB pursuant to Water Code section 1200 et seq. The draft PEIR states in Section 3.10.3.3 that the Project operation would not require new or expanded water rights, and no additional water would be required beyond quantities currently managed by Modesto ID, but no additional details regarding existing water rights are provided. CDFW recommends that the draft PEIR include a detailed description of the water rights and water entitlements that would pertain to the Project and address any applications or change petitions that may be filed. CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Given the potential for impacts to sensitive species and their habitats, it is advised that required consultation with CDFW occur well in advance of the SWRCB water right application process.

2-16

Lake and Streambed Alteration: Project activities that have the potential to substantially change the bed, bank, and channel of streams and associated wetlands or divert surface flow may be subject to CDFW's regulatory authority pursuant to Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation): (c) deposit debris, waste or other materials that could

2-17

California Department of Fish and Wildlife, Continued

2-16 The Proposed Program does not include groundwater recharge projects. As stated in the Draft PEIR Section 2.1.2.1, Regulating Reservoirs, the proposed regulating reservoirs would balance the demands of upstream and downstream irrigation delivery orders by diverting surplus flows from existing canals and laterals to the proposed reservoirs. The captured water would then be available for use to cover flow shortages. This balancing, or "buffering," of flows would allow for improved water delivery service at irrigation turnouts and improve overall water use efficiency by reducing unnecessary operational canal spills. The proposed regulating reservoirs would not impound any natural surface water flows or other inflows. As a result, the Proposed Program does not include capture of unallocated streamflows to artificially recharge groundwater aquifers. Operation of the Proposed Program does not require new or expanded water rights, and no additional water would be required beyond those currently managed by MID.

2-17 Section 1.8, Potentially Required Permits and Approvals, in the Draft PEIR identifies a Lake and Streambed Alteration (LSA) Agreement from CDFW as a potential requirement for the Proposed Program. In addition, Fish and Game Code, sections 1601 through 1603, and the potential need for an LSA Agreement are described in the Draft PEIR in Section 3.4, Biological Resources; Section 3.8, Hydrology and Water Quality; and Section 5, Consultation and Coordination. The Proposed Program will comply with applicable laws and regulations.

pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration (LSA) Agreement; therefore, if the CEQA document approved for the Project does not adequately describe the Project and its impacts, a subsequent CEQA analysis may be necessary for LSA Agreement issuance. Additional information on notification requirements is available through the Central Region LSA Program at (559) 243-4593 or R4LSA@wildlife.ca.gov, and the CDFW website: https://wildlife.ca.gov/Conservation/LSA.

2-17 cont.

Nesting birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

CDFW encourages that Project construction activities occur during the bird non-nesting season; however, if Project construction must occur during the breeding season (i.e., February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Code sections as referenced above.

To evaluate Project-related impacts to nesting birds, CDFW recommends that a qualified biologist conduct preconstruction surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be impacted by the Project are detected. CDFW also recommends that surveys cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends that a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends that the work causing that change cease and that CDFW be consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or

2-18

California Department of Fish and Wildlife, Continued

2-18 Refer to CDFW Master Response 2. CDFW's recommendations for nesting birds have been incorporated into the Final PEIR as Mitigation Measure MM-BR-1a.

ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified biologist advise and support any variance from these buffers.

2-18 cont.

Endangered Species Act Consultation: CDFW recommends consultation with the USFWS well in advance of Project implementation, due to potential impacts to Federal listed species. Take under the federal Endangered Species Act is more stringently defined than under CESA and may also include significant habitat modification or degradation that could result in death or injury to a listed species, by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Similarly, for potential effects to steelhead and its critical habitat, CDFW recommends consultation with NMFS.

2-19

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database that may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB field survey form can be obtained at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

2-20

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

2-21

CONCLUSION

CDFW appreciates the opportunity to comment on the draft PEIR and is looking forward to working proactively with Modesto ID on any desired early consultation for future projects which will rely on and/or tier off of the PEIR. If you have questions regarding this letter or would like to consult with CDFW regarding future PEIR projects, please

California Department of Fish and Wildlife, Continued

2-19 Section 1.8, Potentially Required Permits and Approvals, in the Draft PEIR identifies federal Endangered Species Act Section 7 consultation with U.S. Fish and Wildlife Service and/or National Marine Fisheries Service as approvals potentially required to implement the Proposed Program. In addition, the Endangered Species Act of 1973, United States Code, Title 16, Sections 1531 through 1543, is described in Section 3.4, Biological Resources, and Section 5, Consultation and Coordination. The Proposed Program will comply with applicable laws and regulations.

2-20 Comment noted. California Natural Diversity Database (CNDDB) Field Survey Forms for special-status species and natural communities detected during project surveys will be submitted to CNDDB.

2-21 Comment noted. Filing fees will be paid at the time the Notice of Determination is filed, immediately after certification of the PEIR and approval by the MID Board of Directors.

California Department of Fish and Wildlife, Continued

contact Annette Tenneboe, Senior Environmental Scientist (Specialist), at (559) 580-3202 or by email at Annette.Tenneboe@wildlife.ca.gov.

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California Department of Fish and Wildlife, Continued

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California Department of Fish and Wildlife, Continued

Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: Modesto Irrigation District Comprehensive Water Resources Management Plan

STATE CLEARINGHOUSE No.: 2018092056

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Before Project Activity	
Recommended Mitigation Measure 1: LBV Habitat Assessment	
Recommended Mitigation Measure 2: Focused LBV Surveys	
Recommended Mitigation Measure 3: LVB Nest Avoidance Buffers	
Recommended Mitigation Measure 4: LBV Habitat Mitigation	
Recommended Mitigation Measure 5: LVB Take Authorization	
Recommended Mitigation Measure 6: Focused SWHA Surveys	
Recommended Mitigation Measure 7: SWHA Avoidance	
Recommended Mitigation Measure 8: SWHA Take Authorization	
Recommended Mitigation Measure 9: Loss of SWHA Foraging Habitat	
Recommended Mitigation Measure 10: SWHA Tree Removal	
Recommended Mitigation Measure 11: White-Tailed Kite Surveys	
Recommended Mitigation Measure 12: White-Tailed Kite Avoidance	
Recommended Mitigation Measure 13: TRBL Surveys	
Recommended Mitigation Measure 14: TRBL Colony Avoidance	
Recommended Mitigation Measure 15: TRBL Take Authorization	
Recommended Mitigation Measure 16: Riparian Brush Rabbit and Riparian Woodrat Habitat Assessment	

California Department of Fish and Wildlife, Continued

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 17: Riparian Brush Rabbit and Riparian Woodrat Take Authorization	
Recommended Mitigation Measure 18: CTS Habitat Assessment	
Recommended Mitigation Measure 19: Focused CTS Surveys	
Recommended Mitigation Measure 20: CTS Avoidance	
Recommended Mitigation Measure 21: CTS Take Authorization	
Recommended Mitigation Measure 22: Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Conservancy Fairy Shrimp Habitat Assessment	
Recommended Mitigation Measure 23: Special-Status Plant Surveys	
Recommended Mitigation Measure 24: Special-Status Plant Avoidance	
Recommended Mitigation Measure 25: Listed Plant Species Take Authorization	
Recommended Mitigation Measure 26: BUOW Habitat Assessment	
Recommended Mitigation Measure 27: BUOW Surveys	
Recommended Mitigation Measure 28: BUOW Avoidance	
Recommended Mitigation Measure 29: BUOW Eviction and Mitigation	
Recommended Mitigation Measure 30: Bat Roost Habitat Assessment	
Recommended Mitigation Measure 31: Bat Surveys	
Recommended Mitigation Measure 32: Bat Roost Disturbance Minimization and Avoidance	
Recommended Mitigation Measure 33: WPT Surveys	
Recommended Mitigation Measure 34: WPT Avoidance and Minimization	
Recommended Mitigation Measure 35: CBB, MBB, and OBB Surveys and Avoidance	
Recommended Mitigation Measure 36: CBB Take Authorization	

California Department of Fish and Wildlife, Continued

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 37: Habitat Assessment – – American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot.	
Recommended Mitigation Measure 38: Surveys – American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot.	
Recommended Mitigation Measure 39: Avoidance – American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot.	
Recommended Mitigation Measure 40: Fish Screening	
Recommended Mitigation Measure 41: Stream and Wetland Mapping	
Recommended Mitigation Measure 42: Stream and Wetland Habitat Mitigation	
During Project Activity	
Recommended Mitigation Measure 3: LVB Nest Avoidance Buffers	
Recommended Mitigation Measure 4: LBV Habitat Mitigation	
Recommended Mitigation Measure 7: SWHA Avoidance	
Recommended Mitigation Measure 12: White-Tailed Kite Avoidance	
Recommended Mitigation Measure 14: TRBL Colony Avoidance	
Recommended Mitigation Measure 20: CTS Avoidance	
Recommended Mitigation Measure 24: Special-Status Plant Avoidance	
Recommended Mitigation Measure 28: BUOW Avoidance	
Recommended Mitigation Measure 32: Bat Roost disturbance Minimization and Avoidance	
Recommended Mitigation Measure 34: WPT Avoidance and Minimization	

California Department of Fish and Wildlife, Continued

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 35: CBB, MBB, and OBB Surveys and Avoidance	
Recommended Mitigation Measure 39: Avoidance – American badger, California legless lizard, Blainville's horned lizard, Merced kangaroo rat, and western spadefoot.	

SECTION 3

Revisions to the Draft PEIR

This section of the Final PEIR includes specific text changes to the Draft PEIR. Note that new text required to respond to comments is shown in italicized print, and deletions are indicated by strikethrough text.

3.1 Specific Changes to the Draft PEIR (Based on Legal Review)

Specific changes to the Draft PEIR since publication are detailed below. Some changes were made based on review and input from the District's legal review team. These changes to the Draft PEIR are limited to Section 4 and are detailed below.

Section 4.1, Cumulative Impacts, as shown below:

- Section 4.1.2, Aesthetics and Visual Resources, on page 4-3 is revised to read as follows:

  The projects described in Table 4-1 and the anticipated conversion of agricultural to developed lands associated with population growth in Stanislaus County would contribute to localized changes in the visual character of the Program Area, primarily in the vicinity of existing development. *However, the Proposed Program would not have a substantial effect on a scenic vista, substantially damage scenic resources, nor create a new source of substantial light or glare.* The Proposed Program would include system improvements and other actions to improve agricultural water supply in the Program Area, which would be consistent with the existing rural and agricultural land uses and associated visual character of the region. Therefore, the Proposed Program would not create a cumulatively considerable impact on aesthetics.

- Section 4.1.3, Land Use and Agricultural Resources, on page 4-3 is revised to read as follows:

  Farmlands adjacent to individual system improvement projects under the Proposed Program may be temporarily taken out of production to accommodate construction activities such as vehicle access and material and equipment staging. The Proposed Program would result in the permanent loss of some agricultural land, *including Important Farmland,* ~~particularly~~ as a result of proposed reservoir improvements. Each of the proposed regulating reservoir projects is anticipated to have a permanent footprint of 40 to 60 acres. Conversion of land in agricultural production would be limited to approximately 150 acres for all three projects combined. Reservoir locations would be chosen to avoid or minimize conversion of lands under Williamson Act contracts, when feasible. Although the Proposed Program would result in the permanent conversion of a small amount of agricultural lands, the Program would improve long-term water supply delivery to agricultural land uses, thereby supporting rural agricultural communities and discouraging conversion of agricultural lands to other uses. *In areas zoned as City, Residential, Commercial, Business Park, and Industrial, MID would coordinate proposed improvements with the relevant local entity to ensure zoning requirements are properly addressed, such that implementation of the Proposed Program would not conflict with local land use policies.* Therefore, the Proposed Program would not create a cumulatively considerable impact on agriculture or land use.

- Section 4.1.4, Air Quality, on page 4-3 is revised to read as follows:

  Construction activities associated with the Proposed Program would cause temporary air pollutant emissions; however, worst-case pollutant emissions would be lower than the SJVAPCD CEQA thresholds and would not expose sensitive receptors to substantial pollutant concentrations or odors. As discussed in Section 3.3.3.2, Impacts Associated with the Proposed Program, Impact AQ-2, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project would comply with the requirements in a previously approved plan or mitigation program, including an air quality attainment or maintenance plan that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area in which the project is located. The Proposed Program would comply with San Joaquin Valley Air Pollution Control District's mitigation program as established in the Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD, 2015a) and would not conflict with the established emission reduction goals and measures, and the attainment strategies. The Proposed Program would not result in a cumulatively considerable net increase of any criteria pollutant for which the Program region is nonattainment under an applicable federal or State ambient air quality standard. Therefore, the Proposed Program would not create a cumulatively considerable impact on air quality.

- Section 4.1.9, Hydrology and Water Quality, on page 4-5 is revised to read as follows:

  The Proposed Program would not result in a substantial decrease in groundwater supplies or interference with groundwater recharge. The Proposed Program would result in a substantial amount of earth movement, particularly for the construction of the proposed regulating reservoirs. However, the Proposed Program would include the implementation of a stormwater pollution prevention plan and best management practices to avoid significant water quality impacts during construction and operation. These measures would minimize the potential for erosion and sedimentation, *thus avoiding significant water quality impacts or violation of any water quality standards or waste discharge requirements*. Additionally, the Proposed Program would not result in changes to drainage *that exceed the capacity of existing or planned stormwater drainage systems* such that flooding or flooding-related water quality impacts would occur. Rather, the addition of three regulating reservoirs could potentially provide increased ability to manage stormwater, allowing sediment to settle and potentially improving water quality during storm events. *The Proposed Program would not conflict with, nor obstruct implementation of, the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins; and no impacts on groundwater resources would occur*. As such, the Proposed Program would not cause a cumulatively considerable impact on hydrology or water quality.

3.2 Specific Changes to the Draft PEIR (Based on CDFW's Comments)

Additional changes to the Draft PEIR were based on comments received from CDFW and are detailed below.

Section ES, Executive Summary

- Table ES-1 – In response to comments received from CDFW, the Section 3.4 Biological Resources portion of Table ES-1 has been replaced in its entirety with the following, which includes each of CDFW's recommended mitigation measures.

PEIR Section and Impact	Level of Significance	Mitigation Measures
3.4 Biological Resources		
Impact BR-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW, USFWS, or NMFS. This includes potential reduction in the number, restricted range, increased mortality, or lowered reproductive success that jeopardizes the long-term persistence of local populations of an endangered or threatened native anadromous or resident fish species.	LTS with mitigation	**MM-BR-1a: Nesting birds** The following measures are recommended to avoid adverse effects on nesting birds (not including Swainson's hawk or other special-status raptor species) that nest within or immediately adjacent to the project site: • Project construction activities may occur during the bird non-nesting season; however, if project construction must occur during the breeding season (February through mid-September), MID will be responsible for ensuring that implementation of the project does not result in violation of the Migratory Bird Treaty Act or Fish and Game Code sections 3503 (regarding unlawful take, possession, or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird). • To evaluate project-related impacts to nesting birds, a qualified biologist will conduct preconstruction surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be affected by the project are detected. These surveys will cover a sufficient area around the work site to identify nests and determine their status. A "sufficient area" means any area potentially affected by the project. In addition to direct impacts (such as, nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, a qualified biologist will conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, a qualified biologist will continuously monitor nests to detect behavioral changes resulting from the project. If behavioral changes occur, the work causing that change will cease, and MID will consult with CDFW for additional avoidance and minimization measures. • If continuous monitoring of identified nests by a qualified biologist is not feasible, a minimum no-disturbance buffer of 250 feet will be established around active nests of non-listed bird species, and a 500-foot no-disturbance buffer will be established around active nests of non-listed raptors. These buffers will remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there are compelling biological or ecological reasons to do so, such as when the construction area would be concealed from a nest site by topography. A qualified biologist will advise and support any variance from these buffers.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	The following measures are recommended to avoid adverse effects on nesting colonies of great blue heron (*Ardea herodias*) and great egret (*Ardea alba*): • Active nesting colonies of great blue heron or great egret will be avoided with a 400-foot buffer between the colony and active construction that uses heavy equipment or that involves tree removal. • Minor modification activities may occur if they are short in duration (3 days or less), do not use heavy machinery, do not remove more than 900 square feet of vegetation, and avoid all activities within a 250-foot buffer between an active colony and construction activities. • If construction is initiated during the non-nesting season (September 1 through January 31), construction activities may occur within 100 feet of the nearest portion of the nest colony site. However, no woody vegetation (particularly large trees) within 200 feet of the nest colony site may be removed. **MM-BR-1b: Burrowing owl** Adverse effects on burrowing owls will be mitigated as follows: • A qualified biologist will conduct a habitat assessment in advance of implementation of project construction activities, to determine if the project area or its vicinity contains suitable habitat for burrowing owl. • Where suitable habitat is present on or in the vicinity of the project area, presence or absence of burrowing owl will be assessed by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium (1993) *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFG (2012) *Staff Report on Burrowing Owl Mitigation*. Specifically, these documents suggest three or more surveillance surveys conducted during daylight, with each visit occurring at least 3 weeks apart during the peak breeding season of April 15 to July 15, when burrowing owls are most detectable. These surveys will include a minimum 500-foot survey radius around the project area. • No-disturbance buffers, as outlined by CDFG (2012), will be implemented prior to and during any ground-disturbing activities; and impacts to occupied burrows will be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either (1) the birds have not begun egg laying and incubation or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

PEIR Section and Impact	Level of Significance	Mitigation Measures

LTS with mitigation

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting Sites	April 1 to Aug 15	200 meters	500 meters	500 meters
Nesting Sites	Aug 16 to Oct 15	200 meters	200 meters	500 meters
Nesting Sites	Oct 16 to Mar 31	50 meters	100 meters	500 meters

- If burrowing owls are found within these recommended buffers and avoidance is not possible, CDFG (2012) states that evicting birds from burrows is considered a potentially significant impact under CEQA. If it is necessary for project implementation, burrow exclusion would be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. Mitigation would be implemented in the form of replacement of occupied burrows with artificial burrows at a minimum ratio of one burrow collapsed to one artificial burrow constructed (1:1) to mitigate for evicting burrowing owls and the loss of burrows. Burrowing owls may attempt to colonize or re-colonize an area that will be affected; thus, ongoing surveillance would be conducted at a rate that is sufficient to detect burrowing owls if they return.

MM-BR-1c. Swainson's hawk and white-tailed kite

Adverse effects on nesting Swainson's hawks will be mitigated as follows:

- A qualified wildlife biologist will conduct surveys for nesting Swainson's hawk following the entire survey methodology developed by the Swainson's Hawk Technical Advisory Committee (2000) prior to any project construction activities.
- If project-specific construction activities will take place during the Swainson's hawk nesting season (March 1 through September 15) and active Swainson's hawk nests are present, a minimum 0.5-mile no-disturbance buffer will be delineated and maintained around each nest, regardless of when or how it was detected, until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental care for survival.
- In the event an active Swainson's hawk nest is detected and a 0.5-mile no-disturbance buffer is not feasible, consultation with CDFW will occur to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b), will be necessary to comply with the California Endangered Species Act. Alternatively, the applicant can assume presence of Swainson's hawk and obtain an ITP.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	• Compensation for the loss of Swainson's hawk foraging habitat as described in the CDFW Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (CDFG, 1994) will be provided to reduce impacts to foraging habitat to less than significant. The Staff Report Regarding Mitigation for Impacts to Swainson's Hawks recommends that mitigation for habitat loss occur for any project proposed within 10 miles from known nest sites. • If the project requires the removal of known Swainson's hawk nest trees, even outside of the nesting season, they will be replaced with appropriate native tree species planting at a ratio of 3:1 at or near the project area or in another area that will be protected in perpetuity, to offset the local and temporal impacts of nesting habitat loss. Adverse effects on nesting white-tailed kite will be mitigated as follows: • To avoid potential project-related impacts, prior to commencing project-related construction activities, a qualified avian biologist will conduct surveys for nesting white-tailed kites within areas of project activity and a 0.25-mile buffer. • A minimum no-disturbance buffer of 0.25 mile will be delineated around active nests of white-tailed kites until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental care for survival. MID will not allow reductions in the no-disturbance buffer size for white-tailed kites or any fully protected bird of prey species absent a compelling biological or ecological reason to do so. In the event that nesting white-tailed kites are detected during surveys, MID will consult with CDFW to discuss project implementation and take avoidance. **MM-BR-1d. Tricolored blackbird** Adverse effects on nesting tricolored blackbird colonies will be mitigated as follows: • Project construction activities will be timed to avoid the avian nesting season of February 1 through September 15. However, if project activity that could disrupt nesting must take place during that time, a qualified biologist will conduct surveys for nesting tricolored blackbird no more than 10 days prior to the start of implementation to evaluate presence or absence of tricolored blackbird nesting colonies in proximity to project activities and to evaluate potential project-related impacts. • If an active tricolored blackbird nesting colony is found during surveys, a minimum 300-foot no-disturbance buffer will be established, in accordance with CDFW's (2015) *Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015*, until the breeding season has ended or until a qualified biologist has determined that nesting has ceased and the young have fledged and are no longer reliant on the colony or parental care.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	• In the event that an active tricolored blackbird nesting colony is detected during surveys, MID will consult with CDFW to discuss whether the project can avoid take and, if take avoidance is not feasible, to acquire an ITP pursuant to Fish and Game Code section 2081, subdivision (b), prior to any project activities. **MM-BR-1e. Western pond turtle** Adverse effects on western pond turtle will be mitigated as follows: • A qualified biologist will conduct focused surveys for western pond turtle within 10 days prior to project construction activities. In addition, focused surveys for nests will occur during the egg-laying season of March through August. • Any western pond turtle nests that are discovered will remain undisturbed with a no-disturbance buffer maintained around the nest until the eggs have hatched and neonates are no longer in the nest or project areas. If western pond turtle individuals are discovered at the site during surveys or project activities, they will be allowed to move out of the area of their own volition without disturbance. **MM-BR-1f: California tiger salamander** Adverse effects on California tiger salamander (CTS) will be mitigated as follows: • A qualified biologist will conduct a habitat assessment well in advance of project construction, to determine if any project area or its vicinity contains suitable habitat (upland or breeding) for CTS. • If the project area contains suitable habitat for CTS, a qualified biologist will evaluate potential project-related impacts to CTS prior to ground-disturbing activities using the USFWS (2003) *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander*. The survey will include a 100-foot buffer around the areas in wetland and upland habitats that could support CTS. • Avoidance for CTS will include a minimum 50-foot no-disturbance buffer delineated around all small mammal burrows and a minimum 250-foot no-disturbance buffer around potential breeding pools within and adjacent to the project area. Any impacts that could alter the hydrology or result in sedimentation of breeding pools will be avoided. • If CTS occupy the project area and if take cannot be avoided, take authorization would be obtained prior to initiating project activities by acquiring an ITP pursuant to Fish and Game Code section 2081, subdivision (b), before project ground- or vegetation-disturbing activities occur. Alternatively, in the absence of protocol surveys, the applicant can assume presence of CTS within the project area and obtain an ITP.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	**MM-BR-1g. Vernal pool invertebrates** • In advance of any project construction or modified hydrology occurring in non-cultivated areas, a qualified biologist will conduct protocol-level surveys in accordance with the USFWS (2017a) *Survey Guidelines for the Listed Large Branchiopods* at the appropriate time of year to determine the existence and extent of fairy shrimp and tadpole shrimp. If through surveys it is determined that these species are occupying or have the potential to occupy the project site, MID will consult with CDFW to determine appropriate avoidance and minimization measures, including adequate implementation of no-disturbance buffers. • Adverse effects on federally listed and other special-status vernal pool invertebrates will be mitigated through formal consultation with USFWS, with the likely consulting federal agency being USACE. In the event of no federal nexus, the District will coordinate directly with USFWS through Section 10 of the FESA. **MM-BR-1h. Valley elderberry longhorn beetle** Adverse effects on valley elderberry longhorn beetle will be mitigated consistent with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (*Desmocerus californicus dimorphus*) (USFWS, 2017). The framework provides specific detail and guidance for the implementation of mitigation. Mitigation measures in the framework include the following: • Avoidance and minimization measures • Transplanting of elderberries • Monitoring • Compensatory mitigation measures **MM-BR-1i. Special-status bat species** Adverse effects on special-status bat species will be mitigated as follows: • A qualified biologist will conduct a habitat assessment well in advance of project implementation to determine if the project area or its immediate vicinity contains suitable roosting habitat for special-status bat species. • If suitable habitat is present, presence of special-status bat roosts will be assessed by conducting surveys during the appropriate seasonal period of bat activity using methods such as evening emergence surveys or bat detectors to determine whether bats are present. • If bats are present, a 100-foot no-disturbance buffer will be established around the roost and a qualified biologist who is experienced with bats will monitor the roost for signs of disturbance to bats from project activity. If a bat roost is identified and work is planned to occur during the breeding season, a no-disturbance buffer to maternity roosts will be established, and CDFW will be consulted to determine measures to prevent breeding disruption or failure.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	**MM-BR-1j. Special-status plant species** Adverse effects on special-status plants will be mitigated as follows: • Individual project sites where construction activities will occur will be surveyed for special-status plants by a qualified botanist following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. Because of the variations in annual rainfall, CDFW recommends plant surveys be conducted over one season (spring through fall) and repeated over two separate seasons to maximize detection of special-status plants. • Special-status plant species will be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then MID will consult with CDFW to determine appropriate minimization and mitigation measures for impacts to special-status plant species. • If a state-listed plant species is identified during botanical surveys, MID will consult with CDFW to determine if the project can avoid take. If take cannot be avoided, take authorization is required. Take authorization would occur through issuance of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b). **MM-BR-1k. Least Bell's vireo** Adverse effects on least Bell's vireo will be mitigated as follows: • A qualified biologist will conduct a habitat assessment in advance of any project construction activities, to determine where the project site or its immediate vicinity contains suitable habitat for least Bell's vireo. • A qualified wildlife biologist will conduct surveys following the survey methodology developed by USFWS (2001) prior to initiation of project construction within the project area and implement a 500-foot buffer around the project area. In addition, if project construction will take place during the species' nesting season (April 1 through August 31), additional preconstruction surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to the start of project activities such as construction or habitat removal. • If a least Bell's vireo nest is found during protocol or preconstruction surveys, a minimum 500-foot no-disturbance buffer will be maintained until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest site or parental care.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	• Impacts to known nest trees will be avoided at all times of year. Regardless of nesting status, if potential or known least Bell's vireo nesting habitat is removed, it will be replaced with appropriate native tree species, planted at a ratio of 3:1 (replaced to removed), in an area that will be protected in perpetuity, to offset the loss of nesting habitat. • If a 500-foot no-disturbance nest buffer is not feasible, MID will consult with CDFW. Acquisition of an ITP for least Bell's vireo may be necessary prior to project implementation, to avoid unauthorized take, pursuant to Fish and Game Code section 2081, subdivision (b). Alternatively, the applicant can assume presence of least Bell's vireo within the project area and obtain an ITP. • **MM-BR-1l. Riparian brush rabbit and riparian woodrat** Adverse effects on riparian brush rabbit and riparian woodrat will be mitigated as follows: • Prior to project construction activities occurring in riparian habitat in proximity to the San Joaquin River or Stanislaus River, a qualified biologist will conduct protocol-level surveys in accordance with the USFWS (2022) *Draft Habitat Assessment Guidelines & Survey Protocol for the Riparian Brush Rabbit and the Riparian Woodrat* at the appropriate time of year to determine the existence and extent of these species. If through surveys it is determined that riparian brush rabbit or riparian woodrat are occupying or have the potential to occupy the project site, MID will consult with CDFW to determine appropriate avoidance and minimization measures, including implementation of no-disturbance buffers. • If riparian brush rabbit occupies the project area, and if take cannot be avoided, take authorization will be obtained prior to initiating project activities by acquiring an ITP pursuant to Fish and Game Code section 2081, subdivision (b), before project ground- or vegetation-disturbing activities occur. Alternatively, in the absence of protocol surveys, the applicant can assume presence and obtain an ITP. **MM-BR-1m. Crotch bumble bee, Morrison bumble bee, and obscure bumble bee** Adverse effects on bumble bees will be mitigated as follows: • Small mammal burrows and thatched/bunch grasses within individual project sites where construction activities will occur will be surveyed for these species and their nests during the optimal flight period of April 1 through July 31 during the peak blooming period of preferred plant species prior to project implementation. Avoidance of detected queens or workers will be encouraged, to allow crotch bumble bee, Morrison bumble bee, and obscure bumble bee to leave the project site of their own volition. Avoidance and protection of detected nests prior to or during project implementation will be accomplished through delineation and observance of a 50-foot no-disturbance buffer.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	• Upon any detection of crotch bumble bee prior to or during project implementation, MID will consult with CDFW to discuss how to avoid take. If take cannot be avoided, take authorization would be obtained through issuance of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b). **MM-BR-1n. Other state-listed species of special concern** Adverse effects on other state-listed species of special concern will be mitigated as follows: • A qualified biologist will conduct a habitat assessment in advance of project construction activities to determine if project areas or their immediate vicinity contain suitable habitat for American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot. • If suitable habitat is present, a qualified biologist will conduct focused surveys for applicable species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance. • Whenever possible, impacts will be avoided via delineation and observance of a 50-foot no-disturbance buffer around dens of mammals like the American badger as well as the entrances of burrows that can provide refuge for small mammals, reptiles, and amphibians.
Impact BR-2: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal), riparian habitat, essential fish habitat (EFH), or other sensitive natural community identified in local or regional plans, policies, and regulations, or by CDFW and USFWS through direct removal, filling, hydrological interruption, or other means.	LTS with mitigation	**MM-BR-2. Wetland, Vernal Pool, and Riparian Habitats** Adverse effects on wetlands, vernal pools, and riparian habitat will be mitigated as follows: • Formal stream mapping and wetland delineation will be conducted by a qualified biologist or hydrologist, as warranted, to determine the baseline location, extent, and condition of streams (including any floodplain) and wetlands within and adjacent to the project area. Although there is overlap, state and federal definitions of wetlands differ, and complete stream mapping commonly differs from delineations used by USACE, specifically to identify the extent of waters of the United States. The wetland delineation will identify both state and federal wetlands in the project area as well as the extent of all streams, including floodplains, if present. Site map(s) depicting the extent of any activities that may affect wetlands, lakes, or streams will be included with any project site evaluations, to clearly identify areas where stream/riparian and wetland habitats could be affected from project activities.

PEIR Section and Impact	Level of Significance	Mitigation Measures
	LTS with mitigation	• The potential direct and indirect impacts to stream/riparian and wetland/vernal pool habitat will be analyzed according to each project activity. Based on those potential impacts, any subsequent documents tiering off of this PEIR will also include measures to avoid, minimize, and/or mitigate those impacts. Impacts to riparian habitat, including biotic and abiotic features, will take into account the effects to stream function and hydrology from riparian habitat loss or damage, as well as potential effects from the loss of riparian habitat to special-status species already identified herein. Losses to vernal pools, swales, and other wetland or riparian habitats will be offset with corresponding habitat restoration incorporating native vegetation to replace the value to fish and wildlife provided by the habitats lost from project implementation. If onsite restoration to replace habitats is not feasible, offsite mitigation will be provided by restoring or enhancing in-kind riparian or wetland habitat and providing for the long-term management and protection of the mitigation area, to ensure its persistence.
Impact BR-3: Substantially interfere with the movement of any native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites.	LTS	None required.
Impact BR-4: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.	LTS	None required.

Section 2.4, Project Commitments

- Section 2.4.3, Biological Resources – The bullet "Conduct Appropriate Surveys" is revised to read as follows:

  A qualified biologist will *conduct a habitat assessment in advance of any project construction activities, to determine where the project site or its immediate vicinity contains suitable habitat for special-status species* ~~determine whether suitable habitat is present and warrants any species-specific focused surveys~~ and, if necessary, conduct *species-specific* focused ~~protocol~~ surveys consistent with the protocols identified in Table 3.4-2, Recommended Special-Status Species Surveys for Projects Associated with the Proposed Program, in Section 3.4 or with the most current agency-approved protocol for a given species.

Section 3.4, Biological Resources

- Section 3.4.1.2, State – To clarify the correct naming convention for agreements under Section 1602 of the Fish and Game Code, the text under Fish and Game Code, Sections 1601 through 1603 has been revised as follows:

  Under Sections 1601 through 1603 of the Fish and Game Code, project proponents are required to notify CDFW before diverting, obstructing, or otherwise changing the natural flow, bed, channel, or bank of a river, stream, or lake. If CDFW determines that an existing fish or wildlife resource might be substantially adversely affected by project activities, it would issue a *Lake and* Streambed Alteration Agreement to project proponents that includes reasonable measures necessary to protect the resource. Project proponents must conduct project activities in accordance with the *Lake and* Streambed Alteration Agreement.

  Section 1602 of the Fish and Game Code states that any entity proposing to substantially divert or obstruct the natural flow of, or alter streambed materials, channel, or bank in any river, stream, or lake must provide the following:

  – A detailed description and map of the project location and name of and description of the river, stream, or lake affected by streamflow diversions

  – Copies of applicable local, state, or federal permits and/or other documents already issued as part of a *Lake and* Streambed Alteration Agreement

  The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports wildlife, fish, or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A *Lake and* Streambed Alteration Agreement typically includes measures designed to protect the affected fish and wildlife and associated riparian resources.

- Section 3.4.3.2, Impact Assessment Assumptions and Methodology – The bullet "Conduct Appropriate Surveys" is revised to read as follows:

  A qualified biologist will *conduct a habitat assessment in advance of any project construction activities, to determine where the project site or its immediate vicinity contains suitable habitat for special-status species* ~~determine whether suitable habitat is present and warrants any species-specific focused surveys~~ and, if necessary, conduct *species-specific* focused ~~protocol~~ surveys consistent with the protocols identified in Table 3.4-2, Recommended Special-Status Species Surveys for Projects Associated with the Proposed Program, in Section 3.4 or with the most current agency-approved protocol for a given species.

- Table 3.4-2 – In response to comments received from CDFW, Table 3.4-2 has been replaced in its entirety with the following Table 3.4-2, which has been updated to include the species-specific focused surveys recommended by CDFW:

Table 3.4-2. Recommended Special-Status Species Surveys for Projects Associated with the Proposed Program
Modesto Irrigation District Capital Improvements Program Programmatic Environmental Impact Report

Survey Type	Survey Notes
Focused survey for special-status plants	Individual project sites where construction activities will occur will be surveyed for special-status plants by a qualified botanist following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. Because of variations in annual rainfall, CDFW recommends plant surveys be conducted over one season (spring through fall) and repeated over two separate seasons to maximize detection of special-status plants.
Focused survey for special-status vernal pool invertebrates (vernal pool fairy shrimp, vernal pool tadpole shrimp, and conservancy fairy shrimp)	In advance of any project construction or modified hydrology occurring in non-cultivated areas, a qualified biologist will conduct protocol-level surveys in accordance with the USFWS (2017a) *Survey Guidelines for the Listed Large Branchiopods* at the appropriate time of year to determine the existence and extent of fairy shrimp and tadpole shrimp.
Focused survey for valley elderberry longhorn beetle	A survey will be conducted consistent with *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (USFWS, 2017).
Focused surveys for crotch bumble bee, Morrison bumble bee, and obscure bumble bee	Where suitable habitat is present on or in the vicinity of the project area, all small mammal burrows and thatched/bunch grasses will be surveyed for these species and their nests during the optimal flight period of April 1 through July 31 during the peak blooming period of preferred plant species prior to project implementation.
Focused survey for special-status vernal pool amphibians (CTS)	If the project area contains suitable habitat for CTS, a qualified biologist will evaluate potential project-related impacts to CTS prior to ground-disturbing activities using the USFWS (2003) *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander*. The survey will include a 100-foot buffer around the areas in wetland and upland habitats that could support CTS.
Focused survey for western pond turtle	A qualified biologist will conduct focused surveys for western pond turtle within 10 days prior to project construction activities. In addition, focused surveys for nests will be conducted during the egg-laying season of March through August.
Focused survey for nesting birds	If project construction must occur during the breeding season (February through mid-September), a qualified biologist will conduct preconstruction surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be affected by the project are detected. The surveys will cover a sufficient area around the work site to identify nests and determine their status. A "sufficient area" means any area potentially affected by the project. Prior to initiation of construction activities, a qualified biologist will conduct a survey to establish a behavioral baseline of all identified nests.
Focused survey for large wader colonial nest sites (great blue heron and great egret)	A survey will be conducted as a single visit before "leaf out" (that is, prior to March 1) to locate colonial nest sites, followed by a second visit to confirm that previously found sites are active (April 1 to June 1).

Table 3.4-2. Recommended Special-Status Species Surveys for Projects Associated with the Proposed Program
Modesto Irrigation District Capital Improvements Program Programmatic Environmental Impact Report

Survey Type	Survey Notes
Focused survey for nesting Swainson's hawk and white-tailed kite	A qualified wildlife biologist will conduct surveys for nesting Swainson's hawk following the entire survey methodology developed by the SWHA Technical Advisory Committee (2000) prior to any project construction activities. Prior to commencing project-related construction activities, a qualified avian biologist will conduct surveys for nesting white-tailed kites within areas of project activity and a 0.25-mile buffer.
Focused survey for burrowing owl	Where suitable habitat is present on or in the vicinity of the project area, presence or absence of burrowing owl will be assessed by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium (1993) *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFG (2012) *Staff Report on Burrowing Owl Mitigation*. Specifically, these documents suggest three or more surveillance surveys conducted during daylight, with each visit occurring at least 3 weeks apart during the peak breeding season of April 15 to July 15, when burrowing owl are most detectable. These surveys will include a minimum 500-foot survey radius around the project area.
Focused survey for nesting tricolored blackbird colonies	If project activity that could disrupt nesting must take place during the avian nesting season of February 1 through September 15, a qualified biologist will conduct surveys for nesting tricolored blackbird no more than 10 days prior to the start of implementation to evaluate presence or absence of tricolored blackbird nesting colonies in proximity to project activities and to evaluate potential project-related impacts.
Focused survey for least Bell's vireo	If suitable habitat is present, a qualified wildlife biologist will conduct surveys following the survey methodology developed by USFWS (2001) prior to initiation of project construction within the project area and a 500-foot buffer around the project area. In addition, if project construction will take place during the species' nesting season (April 1 through August 31), additional preconstruction surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to the start of project activities such as construction or habitat removal.
Focused survey for special-status bat species	If suitable habitat is present, presence of special-status bat roosts will be assessed by conducting surveys during the appropriate seasonal period of bat activity. Surveys will use methods such as evening emergence surveys or bat detectors to determine whether bats are present.
Focused surveys for riparian brush rabbit and riparian woodrat	Prior to project construction activities occurring in riparian habitat in proximity to the San Joaquin River or Stanislaus River, a qualified biologist will conduct protocol-level surveys in accordance with the USFWS (2022) *Draft Habitat Assessment Guidelines & Survey Protocol for the Riparian Brush Rabbit and the Riparian Woodrat* at the appropriate time of year to determine the existence and extent of these species.
Focused surveys for other state Species of Special Concern (American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot)	If suitable habitat is present, a qualified biologist will conduct focused surveys for applicable species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance.

- Section 3.4.3.3, Impacts Associated with the Proposed Program – The section on construction impacts of the Regulating Reservoirs on "Nesting Birds" is revised to include revised dates for the nesting season as follows:

  Many nesting birds are protected under FESA, CESA, and the MBTA. Based on the conditions observed during the reconnaissance-level surveys, nesting birds may occur on or near all of the proposed regulating reservoir projects. If project activities occur during the nesting season (February 1 through ~~August 31~~ *September 15*), nests with eggs or young could be lost (directly affected) during construction activities such as vegetation removal, topsoil stripping/stockpiling, and reservoir construction. Disturbance associated with construction activities could indirectly cause the abandonment of nests. The loss of a small number of nesting birds during construction would be a **less than significant** impact; however, the loss of a large number of birds would be a **potentially significant** impact. The loss of a special-status species nest would be a **potentially significant** impact.

- Section 3.4.3.3, Impacts Associated with the Proposed Program – The section on construction impacts of the All Other Project Types on "Nesting Birds" is revised to include revised dates for the nesting season as follows:

  Almost all project sites have some potential for nesting habitat for one or more species of birds that are regulated by FESA, CESA, and the MBTA. Active nests (cliff swallow, barn swallow, and black phoebe) were observed during the May 2018 and May 2019 reconnaissance-level surveys. As such, nesting birds are expected at or near all of the proposed projects that would be constructed between February 1 and ~~August~~ *September* 15. Disturbance associated with construction activities could indirectly cause the abandonment of nests. The loss of a small number of nesting birds through implementation would be a **less than significant** impact; however, the loss of a large number of birds would be a **potentially significant** impact. The loss of a special-status species nest would be a **potentially significant** impact.

- Section 3.4.4, Mitigation Measures – The text of this section has been revised as follows:

  Project commitments (Section 2.4 and Section 3.4.3.2) are included as part of the Proposed Program and are designed to avoid and minimize impacts on regulated habitats, special-status species, and other biological resources to the extent feasible. Additional mitigation measures identified in Table 3.4-4 would ~~need to~~ be implemented to reduce impacts to a less-than-significant level ~~as necessary~~ if potentially significant impacts on habitat or species *would* occur. The following mitigation measures, *including the habitat assessments and species-specific focused surveys included as project commitments in Section 2.4.3,* would be implemented to avoid or substantially lessen potentially significant impacts on biological resources. Table 3.4-4 summarizes the mitigation measures identified for each project category and individual project as applicable.

  As described in Section 3.4.2.1, the reconnaissance-level surveys conducted as part of the impact assessment conducted for this PEIR were intended to assist in impact evaluation. Additional appropriately timed, focused surveys for specific special-status species would ~~need to~~ be conducted for future projects implemented as part of the Proposed Program *if the initial habitat assessments indicate that the project site or its immediate vicinity contains suitable habitat for special-status species*. ~~Appendix E provides recommendations for surveys to determine whether species are likely to be adversely affected and provides mitigation measures for species that are considered to have some potential to occur within or adjacent to a proposed project location.~~

- Table 3.4-4 – In response to comments received from CDFW, Table 3.4-4 has been revised as follows to update the numbering of mitigation measures:

Table 3.4-4. Summary of Mitigation Measures for MID Project Impacts on Biological Resources
Modesto Irrigation District Comprehensive Water Resources Management Plan PEIR

Project	Loss of Significance before Mitigation	Mitigation Measure	Loss of Significance after Mitigation
Impact BR-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW, USFWS, or NMFS. This includes potential reduction in the number, restricted range, increased mortality, or lowered reproductive success that jeopardizes the long-term persistence of local populations of an endangered or threatened native anadromous or resident fish species.			
All projects – Special-Status Terrestrial Wildlife	Potentially Significant	MM-BR-1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h, 1i, ~~1j,~~ 1k, 1l, 1m, *1n*	Less than Significant
All projects – Special-Status Plants	Potentially Significant	MM-BR-*1j,* ~~1n, 1o~~	Less than Significant
All projects – Special-Status Native Anadromous or Resident Fish Species	Less than Significant	NA	Less than Significant
Impact BR-2: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal), riparian habitat, essential fish habitat, or other sensitive natural community identified in local or regional plans, policies, and regulations, or by CDFW and USFWS through direct removal, filling, hydrological interruption, or other means.			
All projects – Wetland and Riparian Habitats	Potentially Significant	MM-BR-2	Less than Significant
All projects – Essential Fish Habitat	Less than Significant	NA	Less than Significant
Impact BR-3: Substantially interfere with the movement of any native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites.			
All projects – Wildlife Nursery Sites or Corridors	Less than Significant	NA	Less than Significant
All projects – Native Resident/Migratory Fish Nursery Sites or Corridors	Less than Significant	NA	Less than Significant
Impact BR-4: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.			
All projects – Local Policies, Ordinances, or Plans	Less than significant	NA	Less than Significant
All projects – Conservation Easements	Less than significant	NA	Less than Significant

Notes:

Potential impacts on fish species would be less than significant and, therefore, do not require mitigation. However, project commitments would be applied as appropriate.

Information is based on findings presented in the biological resources technical memorandum (Appendix E).

NA = not applicable

- MM-BR-1a. Nesting Birds – In response to comments received from CDFW, Mitigation Measure MM-BR-1a has been revised as follows:

  MM-BR-1a. Nesting Birds

  The following measures are recommended to avoid adverse effects on nesting birds (not including Swainson's hawk or other special-status raptor species) that nest within or immediately adjacent to the project site:

  - *Project construction activities may occur during the bird non-nesting season; however, if project construction must occur during the breeding season (February through mid-September), MID will be responsible for ensuring that implementation of the project does not result in violation of the MBTA or Fish and Game Code sections 3503 (regarding unlawful take, possession, or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).*

  - *To evaluate project-related impacts to nesting birds, a qualified biologist will conduct preconstruction surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be affected by the project are detected. These surveys will cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by the project. In addition to direct impacts (such as, nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, a qualified biologist will conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, a qualified biologist will continuously monitor nests to detect behavioral changes resulting from the project. If behavioral changes occur, the work causing that change will cease, and MID will consult with CDFW for additional avoidance and minimization measures.*

  - *If continuous monitoring of identified nests by a qualified biologist is not feasible, a minimum no-disturbance buffer of 250 feet will be established around active nests of non-listed bird species, and a 500-foot no-disturbance buffer will be established around active nests of non-listed raptors. These buffers will remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there are compelling <u>biological or ecological</u> reasons to do so, such as when the construction area would be concealed from a nest site by topography. A qualified biologist will advise and support any variance from these buffers.*

  - ~~If construction occurs during the bird nesting season (generally February 1 through August 31), preconstruction nesting bird surveys (2 visits at least 1 week apart) will be conducted by a qualified biologist within the 14 days before construction to detect the presence of any nesting birds within or adjacent to the proposed project (within 400 feet for non-special-status raptors and within 100 feet for all other non-special-status birds). If construction occurs during the nonbreeding season for nesting birds (September 1 through January 31), preconstruction surveys are not required.~~

  - ~~If the preconstruction nesting bird surveys detect actively nesting birds, the results of the surveys will be submitted to CDFW within 3 days of completing the surveys. If any active non-special-status bird nests are found on site, the applicant will avoid initiating any construction activities within the standard buffers described above (that is, 400 and 100 feet, as appropriate). The applicant will then develop and implement a plan for the protection and monitoring of these nests, to be approved by CDFW, in a timely manner.~~

~~The results of any protective measures instituted as a part of the protection and monitoring plan will be provided to CDFW in electronic format within 1 week of implementation.~~

- MM-BR-1b. Burrowing Owl – In response to comments received from CDFW, Mitigation Measure MM-BR-1b has been revised as follows:

MM-BR-1b. Burrowing Owl

Adverse effects on burrowing owls will be mitigated as follows:

- *A qualified biologist will conduct a habitat assessment in advance of implementation of project construction activities, to determine if the project area or its vicinity contains suitable habitat for burrowing owl.*
- *Where suitable habitat is present on or in the vicinity of the project area, presence or absence of burrowing owl will be assessed by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium (1993) Burrowing Owl Survey Protocol and Mitigation Guidelines and the CDFG (2012) Staff Report on Burrowing Owl Mitigation. Specifically, these documents suggest three or more surveillance surveys conducted during daylight, with each visit occurring at least 3 weeks apart during the peak breeding season of April 15 to July 15, when burrowing owls are most detectable. These surveys will include a minimum 500-foot survey radius around the project area.*
- *No-disturbance buffers, as outlined by CDFG (2012), will be implemented prior to and during any ground-disturbing activities; and impacts to occupied burrows will be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either (1) the birds have not begun egg laying and incubation or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.*

Location	***Time of Year***	***Level of Disturbance***		
		Low	***Medium***	***High***
Nesting Sites	*April 1 to Aug 15*	*200 meters*	*500 meters*	*500 meters*
Nesting Sites	*Aug 16 to Oct 15*	*200 meters*	*200 meters*	*500 meters*
Nesting Sites	*Oct 16 to Mar 31*	*50 meters*	*100 meters*	*500 meters*

- *If burrowing owls are found within these recommended buffers and avoidance is not possible, CDFG (2012) states that evicting birds from burrows is considered a potentially significant impact under CEQA. If it is necessary for project implementation, burrow exclusion would be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. Mitigation would be implemented in the form of replacement of occupied burrows with artificial burrows at a minimum ratio of one burrow collapsed to one artificial burrow constructed (1:1) to mitigate for evicting burrowing owls and the loss of burrows. Burrowing owls may attempt to colonize or re-colonize an area that will be affected; thus, ongoing surveillance would be conducted at a rate that is sufficient to detect burrowing owls if they return.*
- ~~The results of preconstruction surveys for burrowing owl, including negative findings, will be submitted to CDFW within 3 days of survey conclusion. If burrowing owls are found during the nesting season (February 15 through August 31), no ground disturbance will occur within 250 feet of occupied burrows until a qualified biologist determines that fledging has occurred (that is, the juveniles are no longer dependent upon the nest burrows).~~

~~If burrowing owls are found during the non-nesting season (September 1 through February 14), no ground disturbance will occur within 160 feet of occupied burrows.~~

- ~~Alternatively, the applicant may retain a qualified biologist to conduct passive relocation of individuals from occupied burrows using 1-way doors for a minimum of 3 consecutive days (only during the non-nesting season). Once the occupied burrows have been cleared, the applicant may backfill the burrows. If passive relocation is used, the applicant will also provide alternate natural or artificial burrows that are more than 160 feet from the impact area and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated burrowing owls. One alternate natural or artificial burrow will be provided for each burrow that will be excavated within the project site. Artificial burrow creation, if used, will follow the guidelines in Trulio (1995) and the *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). The applicant will be responsible for reporting all observations of burrowing owl to the CNDDB within 10 days of the sighting.~~

- MM-BR-1c. Swainson's Hawk and White-Tailed Kite – In response to comments received from CDFW, Mitigation Measure MM-BR-1c has been revised as follows:

  MM-BR-1c. Swainson's Hawk and White-Tailed Kite

  Adverse effects on nesting Swainson's hawks ~~and white-tailed kites~~ will be mitigated as follows:

  - *A qualified wildlife biologist will conduct surveys for nesting Swainson's hawk following the entire survey methodology developed by the Swainson's Hawk Technical Advisory Committee (2000) prior to any project construction activities.*
  - *If project-specific construction activities will take place during the Swainson's hawk nesting season (March 1 through September 15) and active Swainson's hawk nests are present, a minimum 0.5-mile no-disturbance buffer will be delineated and maintained around each nest, regardless of when or how it was detected, until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental care for survival.*
  - *In the event an active Swainson's hawk nest is detected and a 0.5-mile no-disturbance buffer is not feasible, consultation with CDFW will occur to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b), will be necessary to comply with CESA. Alternatively, the applicant can assume presence of Swainson's hawk and obtain an ITP.*
  - *Compensation for the loss of Swainson's hawk foraging habitat as described in the CDFW Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (CDFG, 1994) will be provided to reduce impacts to foraging habitat to less than significant. The Staff Report Regarding Mitigation for Impacts to Swainson's Hawks recommends that mitigation for habitat loss occur for any project proposed within 10 miles from known nest sites.*
  - *If the project requires the removal of known Swainson's hawk nest trees, even outside of the nesting season, they will be replaced with appropriate native tree species planting at a ratio of 3:1 at or near the project area or in another area that will be protected in perpetuity, to offset the local and temporal impacts of nesting habitat loss.*

  Adverse effects on nesting white-tailed kite will be mitigated as follows:

  - *To avoid potential project-related impacts, prior to commencing project-related construction activities, a qualified avian biologist will conduct surveys for nesting white-tailed kites within areas of project activity and a 0.25-mile buffer.*

- *A minimum no-disturbance buffer of 0.25 mile be delineated around active nests of white-tailed kites until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental care for survival. MID will not allow reductions in the no-disturbance buffer size for white-tailed kites or any fully protected bird of prey species absent a compelling biological or ecological reason to do so. In the event that nesting white-tailed kites are detected during surveys, MID will consult with CDFW to discuss project implementation and take avoidance.*
- ~~If active Swainson's hawk or white-tailed kite nests are detected during preconstruction surveys, a no-disturbance buffer zone of 500 feet will be implemented during the nesting season (March 1 through September 15) or until August 15 if management authorization is provided by CDFW (SHTAC, 2000). Furthermore, a nest monitoring plan will be developed and implemented for all active nests. If monitoring demonstrates that nesting individuals are being adversely affected, the no-disturbance zone will be increased in 100-foot increments until all adverse effects are eliminated.~~
- ~~Compensation for loss of suitable Swainson's hawk foraging habitat (mostly with reservoir construction) will be conducted as follows: habitat acquisition (through fee title or conservation easement) at a 1:1 ratio for nest sites within 1 mile, 0.75:1 ratio for nest sites within 5 miles, and 0.5:1 ratio for nest sites within 10 miles. Note that habitat acquisition can be "stacked" with mitigation for loss of agricultural land as long as the acquired land is planted in a suitable crop for Swainson's hawk foraging in 3 out of every 5 years. Compensation for loss of suitable white-tailed kite foraging habitat will be conducted concurrently with compensation for loss of suitable Swainson's hawk habitat.~~

- MM-BR-1d. Tricolored Blackbird – In response to comments received from CDFW, Mitigation Measure MM-BR-1d has been revised as follows:

  MM-BR-1d. Tricolored Blackbird

  Adverse effects on nesting tricolored blackbird colonies will be mitigated as follows:

  - *Project construction activities will be timed to avoid the avian nesting season of February 1 through September 15. However, if project activity that could disrupt nesting must take place during that time, a qualified biologist will conduct surveys for nesting tricolored blackbird no more than 10 days prior to the start of implementation to evaluate presence or absence of tricolored blackbird nesting colonies in proximity to project activities and to evaluate potential project-related impacts.*
  - *If an active tricolored blackbird nesting colony is found during surveys, a minimum 300-foot no-disturbance buffer will be established, in accordance with CDFW's (2015) Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015, until the breeding season has ended or until a qualified biologist has determined that nesting has ceased and the young have fledged and are no longer reliant on the colony or parental care.*
  - *In the event that an active tricolored blackbird nesting colony is detected during surveys, MID will consult with CDFW to discuss whether the project can avoid take and, if take avoidance is not feasible, to acquire an ITP pursuant to Fish and Game Code section 2081, subdivision (b), prior to any project activities.*
  - ~~MID will prepare a habitat management plan and incidental take permit application for submittal to, and approval by, CDFW before any loss of suitable nesting habitat for tricolored blackbird on a project site. The habitat management plan will, at a minimum, include the following provisions:~~

- ~~To avoid and minimize impacts on nesting tricolored blackbird, MID will not initiate grubbing, grading, or other soil/vegetation disturbance within 250 feet of project boundaries during the nesting season (March 15 through July 30). All project soil/vegetation disturbance will occur between August 1 and March 14 to the extent feasible.~~
- ~~Alternatively, if MID initiates project soil/vegetation disturbance between March 15 and July 30, surveys will be conducted for prospecting or nesting tricolored blackbird colonies in all potentially suitable nesting habitats that are within and out to 250 feet from the project boundaries. The surveys will be conducted by a qualified biologist during the season immediately preceding initiation of the project. The surveys will be conducted according to the following schedule: a total of 2 visits during the early March 15 to July 30 time period with at least 1 month between survey visits.~~
- ~~If nesting colonies are found before initiation of project soil/vegetation disturbance in the year of the survey, a no-work exclusion zone will be established within 250 feet of each active nesting colony until a qualified biologist determines that the young-of-the-year are no longer reliant on the nest site.~~
- ~~Alternatively, MID may retain a qualified biologist to conduct daily monitoring of any active nesting colonies that are within 250 feet or less of project soil/vegetation disturbance to determine whether the individuals are exhibiting any behaviors that would suggest that nest failure could occur. If the qualified biologist determines that disturbance is sufficient to cause nest failure, all activities within 250 feet of the nesting colony will be terminated until the young-of-the-year are no longer reliant on the nest.~~
- ~~To compensate for the loss of known nesting habitat for tricolored blackbird on a project site, MID will plant Himalayan blackberry (Rubus armeniacus) or California blackberry at a minimum 2:1 compensation ratio. The compensation stands of blackberry will be sited on the nearest suitable land controlled by MID or on nearby alternative land on which MID has acquired a conservation easement acceptable to CDFW. Compensation sites will be chosen to avoid any loss of existing natural wetland communities. Annual monitoring of the compensation stands will be conducted to determine whether tricolored blackbirds are using the compensation habitat. If no evidence of use has been found after 5 years of monitoring, MID will be required to plant additional blackberry at a minimum 1:1 compensation ratio on other lands under MID control within Stanislaus County where no active episodic human disturbance would preclude tricolored blackbirds from settling and nesting in the compensation habitat.~~

- MM-BR-1e. Western Pond Turtle – In response to comments received from CDFW, Mitigation Measure MM-BR-1e has been revised as follows:

  MM-BR-1e. Western Pond Turtle

  Adverse effects on western pond turtle will be mitigated as follows:

  - *A qualified biologist will conduct focused surveys for western pond turtle within 10 days prior to project construction activities. In addition, focused surveys for nests will occur during the egg-laying season of March through August.*
  - *Any western pond turtle nests that are discovered will remain undisturbed with a no-disturbance buffer maintained around the nest until the eggs have hatched and neonates are no longer in the nest or project areas. If western pond turtle individuals are discovered at the site during surveys or project activities, they will be allowed to move out of the area of their own volition without disturbance.*

- ~~During dewatering of any canal suitable for western pond turtle, the applicant will retain a qualified biologist to monitor the dewatering and salvage any stranded western pond turtles that are observed. Salvage will be conducted by net, and all individuals will be relocated to a portion of the associated canal at least 500 feet downstream of the nearest boundary of the project site that has at least 300 linear feet of continuous aquatic habitat. Any non-native turtles (for example, red-eared slider [*Trachemys scripta elegans*]) that are salvaged will not be released to the wild. The applicant will consult with CDFW in regard to the disposition of these latter individuals.~~
- ~~When removing the top 12 inches of soil from any relatively undisturbed edge habitat on or near the project site (ungraded road shoulders and field edges that could provide potential egg-laying sites), the applicant will use a qualified biologist as a spotter whose responsibility is to watch for western pond turtle eggs or neonates that are overturned during earthmoving. If eggs or neonates are found, all earthmoving activities within 30 feet of the eggs or neonates will be temporarily halted until the eggs or neonates can be salvaged. The eggs or neonates will then be delivered to a nearby qualified wildlife rescue and rehabilitation facility that has been approved by CDFW. The eggs or neonates will be held by the wildlife rescue and rehabilitation facility until they are ready for release into downstream portions of the associated canals (at least 500 feet downstream from the nearest project boundary). Once the top 12 inches of soil have been removed, no further monitoring for western pond turtle eggs or neonates is required given that western pond turtle nests are shallow (less than 6 inches deep).~~

- MM-BR-1f. California Tiger Salamander and Western Spadefoot – In response to comments received from CDFW, Mitigation Measure MM-BR-1f has been revised as follows:

  MM-BR-1f. California Tiger Salamander ~~and Western Spadefoot~~

  Adverse effects on *California tiger salamander (*CTS*)* will be mitigated as follows:

  - *A qualified biologist will conduct a habitat assessment well in advance of project construction, to determine if any project area or its vicinity contains suitable habitat (upland or breeding) for CTS.*
  - *If the project area contains suitable habitat for CTS, a qualified biologist will evaluate potential project-related impacts to CTS prior to ground-disturbing activities using the USFWS (2003) Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander. The survey will include a 100-foot buffer around the areas in wetland and upland habitats that could support CTS.*
  - *Avoidance for CTS will include a minimum 50-foot no-disturbance buffer delineated around all small mammal burrows and a minimum 250-foot no-disturbance buffer around potential breeding pools within and adjacent to the project area. Any impacts that could alter the hydrology or result in sedimentation of breeding pools will be avoided.*
  - *If CTS occupy the project area and if take cannot be avoided, take authorization would be obtained prior to initiating project activities, by acquiring an ITP pursuant to Fish and Game Code section 2081, subdivision (b), before project ground- or vegetation-disturbing activities occur. Alternatively, in the absence of protocol surveys, the applicant can assume presence of CTS within the project area and obtain an ITP.*
  - ~~Concentrations of small mammal burrows and other suitable refugia that may support CTS will be avoided to the extent feasible. Prior to ground disturbance, linear routes will be mapped, marked in the field, and surveyed for burrows. Burrows within a vehicle access route that cannot be avoided and are susceptible to being crushed will be temporarily reinforced with polyvinyl chloride pipe or by other measures deemed effective by a qualified~~

~~biologist before allowing vehicle access (dry season only). Any reinforcing materials will be removed immediately after access is completed.~~

- ~~Prior to any work within a project site with suitable CTS habitat or within 1 mile of suitable CTS habitat (or within 2 miles of known CTS occurrences where there is contiguous suitable habitat between the project and occurrence), a one-way exclusion fence will be installed before winter (prior to October 15) of the planned year of construction. The exclusion fence around the project site will remain in place for the duration of the project. A qualified biologist will survey and delineate the fence route and be present during fence installation. Exit funnels or other appropriate exit structures for CTS will be provided no more than 60 feet apart along the entire fence alignment. The exclusion fence will be routinely inspected for repair for the duration of construction. Any damage, such as holes or gaps, will be repaired immediately.~~
- ~~CTS found within a project site will be captured by hand, contained in a 2-gallon plastic bucket with lid, and relocated immediately to the outside of the nearest portion of the exclusion fence (in a ground squirrel burrow if available, or under a 2-foot by 2-foot piece of plywood covered with styrofoam insulation).~~
- ~~Prior to any disturbance of potentially suitable aquatic CTS breeding habitat, a qualified biologist will conduct presence/absence surveys within the habitat in accordance with the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander October* (USFWS and CDFG, 2003).~~
- ~~Before the start of work each morning within the CTS exclusion fence, a qualified biologist will check for CTS under equipment and materials that are to be moved that day. The qualified biologist will also check all excavated steep-walled holes or trenches for CTS. CTS will be removed by the qualified biologists and relocated immediately to the outside of the nearest portion of the exclusion fence (in a ground squirrel burrow if available, or under a 2-foot by 2-foot piece of plywood covered with styrofoam insulation).~~
- ~~A 10-mile-per-hour speed limit will be enforced at all project sites, except on roads with a posted speed limit. On roads with posted speed limits, construction traffic will be limited to the minimum safe speed.~~
- ~~If dead or injured CTS are found, the qualified biologist will consult with USFWS and CDFW to determine which, if any, additional protection measures will be implemented. These measures may include, but are not limited to, lower traffic threshold, more intensive monitoring, or controlled arrival and departures of construction traffic.~~

~~Implementation of the above measures that address CTS also apply to western spadefoot and will also mitigate and compensate for potential adverse effects on this species within and adjacent to project sites.~~

- MM-BR-1g. Northern California Legless Lizard – In response to comments received from CDFW, Mitigation Measure MM-BR-1g has been removed and replaced with a new mitigation measure, MM-BR-1n Other State Species of Special Concern (described below).
- MM-BR-1h. Blainville's Horned Lizard – In response to comments received from CDFW, Mitigation Measure MM-BR-1h has been removed and replaced with a new mitigation measure, MM-BR-1n Other State Species of Special Concern (described below).

- MM-BR-1i. Vernal Pool Invertebrates – In response to comments received from CDFW, Mitigation Measure MM-BR-1i has been revised as follows:

MM-BR-1*g*~~*i*~~. Vernal pool invertebrates

- *In advance of any project construction or modified hydrology occurring in non-cultivated areas, a qualified biologist will conduct protocol level surveys in accordance with the USFWS (2017a) Survey Guidelines for the Listed Large Branchiopods at the appropriate time of year to determine the existence and extent of fairy shrimp and tadpole shrimp. If through surveys it is determined that these species are occupying or have the potential to occupy the project site, MID will consult with CDFW to determine appropriate avoidance and minimization measures, including adequate implementation of no-disturbance buffers.*
- *Adverse effects on federally listed and other special-status vernal pool invertebrates will be mitigated through formal consultation with USFWS, with the likely consulting federal agency being USACE. In the event of no federal nexus, the District will coordinate directly with USFWS through Section 10 of the FESA.*

~~Adverse effects on federally listed and other special-status vernal pool invertebrates will be mitigated through formal consultation with USFWS, with the likely consulting federal agency being the USACE. In the event of no federal nexus, the District will coordinate directly with USFWS through Section 10 of the FESA. USACE's guidelines for formal consultation and mitigation approach include the following (this approach will also be followed as appropriate as part of potential direct coordination with USFWS through the federal Section 10 process):~~

- ~~The precise location of the project site clearly delineated on either an original or high-quality copy of a USGS topographic map (exact scale, 7.5-minute, 1 inch = 24,000 inches). The map should include quad names; county name; project name; type of project by category (specify development or other); and townships, ranges, and sections in which the project is located.~~
- ~~Detailed maps of the proposed project site should include the following:~~
  - ~~Potential habitat of listed vernal pool plants and invertebrates (vernal pools, swales, and other areas in which water ponds in winter and spring)~~
  - ~~On-site and adjacent properties where vernal pool complexes cross the property boundary~~
  - ~~Other special-status species locations and habitats~~
  - ~~Locations of any proposed on-site reserves~~
  - ~~Locations of all proposed project features (buildings, roads, parking lots, bike trails, hiking paths, fences, irrigated and non-native landscaped areas, detention basins, recreation fields, parks, and any other open spaces)~~
  - ~~Locations of existing infrastructure within proposed reserves, such as power lines, easements, pipelines, or any other underground structures for which access and maintenance privileges exist~~
  - ~~Spatial buffers between the project features and avoided vernal pool resources~~
  - ~~Watershed boundaries of wetlands, both avoided and affected, to assist in evaluation of indirect effects~~
- ~~Areas (in acres) directly and indirectly affected by the proposed project, including the following:~~
  - ~~Total area of the project~~

- ~~Estimated area of listed vernal pool species habitat filled or destroyed, including effects of interrelated and interdependent actions~~
- ~~Estimated area of habitat of listed vernal pool invertebrates indirectly affected, and estimated size of buffer between the project features and adjacent avoided or preserved areas~~
- ~~Land use of properties adjacent to both affected areas and avoided or preserved areas~~
- ~~Map or discussion describing hydrological relationships of both affected and avoided wetlands with adjacent properties~~

- ~~Any conservation plan or conservation measures that the applicant proposes. To expedite consultation, such plans and measures should be developed during the informal consultation process with USFWS, before initiation of formal consultation, and should include the following:~~
  - ~~Specific provisions for endowments for future management, maintenance, and ownership of any vernal pool reserves included in the conservation proposal~~
  - ~~Specific locations and construction methods for any compensatory wetlands~~
  - ~~Monitoring protocols, success criteria, and remediation protocols for any compensatory wetlands~~
- ~~A survey is required for any listed vernal pool plants if the proposed project is within the range of such species. If presence of listed invertebrates is not assumed, and the proposed project occurs in an area where USFWS does not assume presence of listed invertebrates in the watershed, protocol surveys are necessary.~~
- ~~In coordination with the requirements of any formal consultation regarding federally listed vernal pool invertebrates, MID will implement measures consistent with the formal consultation and Draft *Vernal Pool Mitigation and Monitoring Guidelines for U.S. Army Corps of Engineers South Pacific Division* (USACE, 2016) for compensatory mitigation projects involving vernal pool habitats as required for processing of Department of the Army permits under Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act.~~

- MM-BR-1j. Valley Elderberry Longhorn Beetle – In response to comments received from CDFW, Mitigation Measure MM-BR-1j has been re-numbered as MM-BR-1h. There are no other changes to the mitigation measure.
- MM-BR-1k. Tree-Roosting Bats – In response to comments received from CDFW, Mitigation Measure MM-BR-1k has been re-numbered as MM-BR-1i and revised as follows:

  MM-BR-1k*i. Special-Status Bat Species* **~~Tree Roosting Bats~~**

  Adverse effects on s*pecial-status bat species* ~~tree-roosting bats (that is, western red bat [*Lasiurus blossevillii*] and hoary bat [*Lasiurus cinereus*])~~ will be mitigated as follows:

  - A *qualified biologist will conduct a habitat assessment well in advance of project implementation to determine if the project area or its immediate vicinity contains suitable roosting habitat for special-status bat species.*
  - *If suitable habitat is present, presence of special-status bat roosts will be assessed by conducting surveys during the appropriate seasonal period of bat activity using methods such as evening emergence surveys or bat detectors to determine whether bats are present.*
  - *If bats are present, a 100-foot no-disturbance buffer will be established around the roost and a qualified biologist who is experienced with bats will monitor the roost for signs of*

disturbance to bats from project activity. If a bat roost is identified and work is planned to occur during the breeding season, a no-disturbance buffer to maternity roosts will be established, and CDFW will be consulted to determine measures to prevent breeding disruption or failure.

- ~~A qualified biologist will conduct a survey for tree-roosting bats at all suitable roosting habitat within 120 feet of the project boundaries. The survey will consist of the following: (1) daytime visual searches for individuals roosting in the foliage of on-site or adjacent large trees; and (2) evening Anabat or similar bioacoustic equipment surveys to show presence of foraging individuals. The surveys will be conducted on 2 consecutive days/nights during the 7 days before construction during months when these species may be present in the project area (that is, March 1 to October 15).~~
- ~~If the survey determines that individuals are present in on-site or adjacent roosting habitat (that is, riparian woodland, orchards, or other nearby mature trees), no construction activities that result in fugitive noise, vibration, light, or dust will occur within 120 feet of the roost site while it is occupied.~~
- ~~Ongoing evening surveys will be continued until 2 consecutive nights without any nearby detections have occurred (other than during the pupping season) and will then be terminated. Construction must then start within the next 2 days.~~
- ~~No additional evening surveys will be required at occupied sites and their 120-foot setback that are found during the pupping season (May 15 to July 15). Construction activities at such sites will be avoided until after mid-July. Construction must then start within the next 2 days.~~
- ~~All project night-lighting will be shielded and directed away from suitable roosting habitat.~~

- MM-BR-1l. Non-Tree-Roosting Bats – In response to comments received from CDFW, Mitigation Measure MM-BR-1l has been removed. Mitigation for all bat species is now included in MM-BR-1i (described above).
- MM-BR-1m. American Badger – In response to comments received from CDFW, Mitigation Measure MM-BR-1m has been removed and replaced with a new mitigation measure, MM-BR-1n Other State Species of Special Concern (described below).
- MM-BR-1n. Sanford's Arrowhead – In response to comments received from CDFW, Mitigation Measure MM-BR-1n has been removed. Mitigation for all special-status plant species is now included in MM-BR-1j (described below).
- MM-BR-1o. Other Special-Status Plant Species – In response to comments received from CDFW, Mitigation Measure MM-BR-1o has been renumbered as MM-BR-1j and has been revised as follows to include all special-status plant species, including Sanford's arrowhead:

  MM-BR-1~~o~~*j*. ~~Other~~ Special-Status Plant Species

  Adverse effects on ~~other~~ special-status plants will be mitigated ~~consistent with the *Policy on Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants* (CNPS, 1998) and will be accomplished through conference and coordination with CNPS. CNPS endorses the following measures~~ *as follows*:

  - *Individual project sites where construction activities will occur will be surveyed for special-status plants by a qualified botanist following the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW, 2018). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations*

occurring during the appropriate floristic period. Because of variations in annual rainfall, CDFW recommends plant surveys be conducted over one season (spring through fall) and repeated over two separate seasons to maximize detection of special-status plants.

- *Special-status plant species will be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then MID will consult with CDFW to determine appropriate minimization and mitigation measures for impacts to special-status plant species.*
- *If a state-listed plant species is identified during botanical surveys, MID will consult with CDFW to determine if the project can avoid take. If take cannot be avoided, take authorization is required. Take authorization would occur through issuance of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b).*
- ~~Avoiding the impact altogether by not taking a certain action~~
- ~~Minimizing the impact by limiting the degree or magnitude of the action~~
- ~~Rectifying the impact by repairing, rehabilitating, or restoring the affected environment~~
- ~~Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the project~~
- ~~Compensating for the impact by replacing or providing substitute resources or environments elsewhere~~

~~Multiple measures may be necessary to effectively mitigate adverse effects on a given plant species but will always be at the discretion of MID as long as the measures can be reasonably expected to avoid, minimize, or compensate for the anticipated effects.~~

- Section 3.4.4, Mitigation Measures – In response to comments received from CDFW, the following mitigation measures have been added:

MM-BR-1k. Least Bell's Vireo

Adverse effects on least Bell's vireo will be mitigated as follows:

- *A qualified biologist will conduct a habitat assessment in advance of any project construction activities, to determine where the project site or its immediate vicinity contains suitable habitat for least Bell's vireo.*
- *A qualified wildlife biologist will conduct surveys following the survey methodology developed by USFWS (2001) prior to initiation of project construction within the project area and implement a 500-foot buffer around the project area. In addition, if project construction will take place during the species' nesting season (April 1 through August 31), additional preconstruction surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to the start of project activities such as construction or habitat removal.*
- *If a least Bell's vireo nest is found during protocol or preconstruction surveys, a minimum 500-foot no-disturbance buffer will be maintained until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest site or parental care.*
- *Impacts to known nest trees will be avoided at all times of year. Regardless of nesting status, if potential or known least Bell's vireo nesting habitat is removed, it will be replaced with appropriate native tree species, planted at a ratio of 3:1 (replaced to removed), in an area that will be protected in perpetuity, to offset the loss of nesting habitat.*

- *If a 500-foot no-disturbance nest buffer is not feasible, MID will consult with CDFW. Acquisition of an ITP for least Bell's vireo may be necessary prior to project implementation, to avoid unauthorized take, pursuant to Fish and Game Code section 2081, subdivision (b). Alternatively, the applicant can assume presence of least Bell's vireo within the project area and obtain an ITP.*

MM-BR-1l. Riparian Brush Rabbit and Riparian Woodrat

Adverse effects on riparian brush rabbit and riparian woodrat will be mitigated as follows:

- *Prior to project construction activities occurring in riparian habitat in proximity to the San Joaquin River or Stanislaus River, a qualified biologist will conduct protocol-level surveys in accordance with the USFWS (2022) Draft Habitat Assessment Guidelines & Survey Protocol for the Riparian Brush Rabbit and the Riparian Woodrat at the appropriate time of year to determine the existence and extent of these species. If through surveys it is determined that riparian brush rabbit or riparian woodrat are occupying or have the potential to occupy the project site, MID will consult with CDFW to determine appropriate avoidance and minimization measures, including implementation of no-disturbance buffers.*
- *If riparian brush rabbit occupies the project area, and if take cannot be avoided, take authorization will be obtained prior to initiating project activities by acquiring an ITP pursuant to Fish and Game Code section 2081, subdivision (b), before project ground- or vegetation-disturbing activities occur. Alternatively, in the absence of protocol surveys, the applicant can assume presence and obtain an ITP.*

MM-BR-1m. Crotch Bumble Bee, Morrison Bumble Bee, and Obscure Bumble Bee

Adverse effects on bumble bees will be mitigated as follows:

- *All small mammal burrows and thatched/bunch grasses within individual project sites where construction activities will occur will be surveyed for these species and their nests during the optimal flight period of April 1 through July 31 during the peak blooming period of preferred plant species prior to project implementation. Avoidance of detected queens or workers will be encouraged, to allow crotch bumble bee, Morrison bumble bee, and obscure bumble bee to leave the project site of their own volition. Avoidance and protection of detected nests prior to or during project implementation will be accomplished through delineation and observance of a 50-foot no-disturbance buffer.*
- *Upon any detection of crotch bumble bee prior to or during project implementation, MID will consult with CDFW to discuss how to avoid take. If take cannot be avoided, take authorization would be obtained through issuance of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b).*

MM-BR-1n. Other State-Listed Species of Special Concern

Adverse effects on other state-listed Species of Special Concern will be mitigated as follows:

- *A qualified biologist will conduct a habitat assessment in advance of project construction activities to determine if project areas or their immediate vicinity contain suitable habitat for American badger, Merced kangaroo rat, California legless lizard, Blainville's horned lizard, and western spadefoot.*
- *If suitable habitat is present, a qualified biologist will conduct focused surveys for applicable species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance.*

- *Whenever possible, impacts will be avoided via delineation and observance of a 50-foot no-disturbance buffer around dens of mammals like the American badger as well as the entrances of burrows that can provide refuge for small mammals, reptiles, and amphibians.*

- MM-BR-2. Wetland and Riparian Habitats – In response to comments received from CDFW, Mitigation Measure MM-BR-2 has been revised as follows:

  MM-BR-2. Wetland*, Vernal Pool,* and Riparian Habitats

  Adverse effects on wetlands, vernal pools, and riparian habitat will be mitigated as follows:

  - *Formal stream mapping and wetland delineation will be conducted by a qualified biologist or hydrologist, as warranted, to determine the baseline location, extent, and condition of streams (including any floodplain) and wetlands within and adjacent to the project area. Although there is overlap, state and federal definitions of wetlands differ, and complete stream mapping commonly differs from delineations used by USACE, specifically to identify the extent of waters of the United States. The wetland delineation will identify both state and federal wetlands in the project area as well as the extent of all streams including floodplains, if present. Site map(s) depicting the extent of any activities that may affect wetlands, lakes, or streams will be included with any project site evaluations, to clearly identify areas where stream/riparian and wetland habitats could be affected from project activities.*

  - *The potential direct and indirect impacts to stream/riparian and wetland/vernal pool habitat will be analyzed according to each project activity. Based on those potential impacts, any subsequent documents tiering off of this PEIR will also include measures to avoid, minimize, and/or mitigate those impacts. Impacts to riparian habitat, including biotic and abiotic features, will take into account the effects to stream function and hydrology from riparian habitat loss or damage, as well as potential effects from the loss of riparian habitat to special-status species already identified herein. Losses to vernal pools, swales, and other wetland or riparian habitats will be offset with corresponding habitat restoration incorporating native vegetation to replace the value to fish and wildlife provided by the habitats lost from project implementation. If onsite restoration to replace habitats is not feasible, offsite mitigation will be provided by restoring or enhancing in-kind riparian or wetland habitat and providing for the long-term management and protection of the mitigation area, to ensure its persistence.*

  ~~Wetlands identified as being potentially adversely affected by the construction of various project facilities under the Proposed Program would be field-delineated, and waters and wetland delineations would be verified by USACE. All jurisdictional determinations would be made as part of a formal delineation process, including information necessary to support a CWA 404(b)(1) analysis. Final determination of jurisdictional status and associated project impacts on such jurisdictional waters and wetlands would be determined by USACE, the Central Valley Regional Water Quality Control Board, and CDFW.~~

  ~~Mitigation for unavoidable impacts on wetlands would be determined following USACE's *12501-SPD Regulatory Program Standard Operating Procedure for Determination of Mitigation Ratios* (USACE, 2017) as well as USACE's Final *2015 Regional Compensatory Mitigation and Monitoring Guidelines* (USACE, 2015). Mitigation measures will include one or more of the following:~~

  - ~~Obtaining credits from a mitigation bank~~
  - ~~Making a payment to an in-lieu fee program that would conduct wetland restoration, creation, enhancement, or preservation activities~~

- ~~Wetland restoration, establishment, enhancement, and/or preservation activities within the same watershed as the project impacts (off-site mitigation) where on-site mitigation would not be possible~~

Section 3.6, Geology and Soils

- Section 3.6.3.2 – Impact Assessment Assumptions and Methodology. The reference to the Hydrology and Water Quality section was incorrect and has been revised as follows:

  Implementation of BMPs to prevent soil erosion, as prescribed in a SWPPP, would be required and implemented as part of the Proposed Program. The SWPPP is required by the Construction General Permit Order issued by the SWRCB (Section ~~3.9~~ *3.8*, Hydrology and Water Quality) and would include the following…

Section 5, Consultation and Coordination

- Section 5.2.3 – Lake or Streambed Alteration Agreement. To clarify the correct naming convention for agreements under Section 1602 of the Fish and Game Code, the text under Section 5.2.3 has been revised as follows:

5.2.3 Lake ~~or~~ *and* Streambed Alteration Agreement

CDFW regulates work that will substantially affect resources associated with rivers, streams, and lakes in California, pursuant to California Fish and Game Code Sections 1600 through 1607. Authorization, known as a Lake ~~or~~ *and* Streambed Alteration Agreement, is required from CDFW for projects prior to any action that substantially diverts, obstructs, or changes the natural flow of a river, stream, or lake, or uses material from a streambed. This agreement applies to any work undertaken within the 100-year floodplain of a body of water or its tributaries. MID will work with CDFW to ensure that all applicable legal requirements are fulfilled.

- Section 5.2.4 – State Permits and Authorizations. To clarify the correct naming convention for agreements under Section 1602 of the Fish and Game Code, the bullet under Section 5.2.4 has been revised as follows:

  - California Fish and Game Code Section 1600 *Lake and* Streambed Alteration Agreement – CDFW

Section 7, References, as shown below:

California Burrowing Owl Consortium. 1993. "Burrowing Owl Survey Protocol and Mitigation Guidelines." Pages 171-177 in J.L. Lincer and K. Steenhof (editors). The Burrowing Owl, Its Biology and Management. Raptor Research Report Number 9.

California Department of Fish and Wildlife (CDFW). 2015. Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015. March 19.

U.S. Fish and Wildlife Service (USFWS). 2001. Least Bell's Vireo Survey Guidelines. https://www.fws.gov/sites/default/files/documents/survey-protocol-for-least-bells-vireo.pdf.

U.S. Fish and Wildlife Service (USFWS). 2017a. Survey Guidelines for the Listed Large Branchiopods. U. S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. Revised November 2017.

U.S. Fish and Wildlife Service (USFWS). 2022. Draft Habitat Assessment Guidelines & Survey Protocol for the Riparian Brush Rabbit and the Riparian Woodrat. Accessed December 29, 2022. https://www.fws.gov/sites/default/files/documents/survey-protocols-for-the-riparian-brush-rabbit-and-riparian-woodrat.pdf.