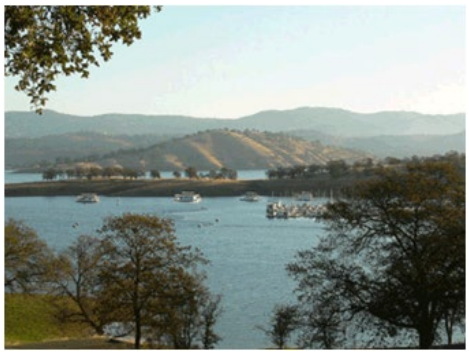
DRAFT CEQA SUPPLEMENTAL ANALYSIS
(Initial Study/Mitigated Negative Declaration)

DON PEDRO HYDROELECTRIC PROJECT

LA GRANGE HYDROELECTRIC PROJECT

FERC LICENSING



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MID
Modesto Irrigation District

Prepared for:
Turlock Irrigation District – Turlock, California
Modesto Irrigation District – Modesto, California

Prepared by:
HDR Engineering, Inc.

June 2025

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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE DON PEDRO HYDROELECTRIC PROJECT AND THE LA GRANGE HYDROELECTRIC PROJECT FERC LICENSING

Turlock Irrigation District (TID) and Modesto Irrigation District (MID), collectively referred to as "the Districts," have prepared a California Environmental Quality Act (CEQA) Supplemental Analysis in an Initial Study/Mitigated Negative Declaration (IS/MND) format, to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of the Districts accepting from the Federal Energy Regulatory Commission (FERC) a new license for the Don Pedro Hydroelectric Project (Don Pedro Project), FERC Project No. 2299 and an original license for the La Grange Hydroelectric Project (La Grange Project), FERC Project No. 14581, jointly referred to as the Projects. The Districts own and operate the Don Pedro Project, and TID separately operates and maintains hydropower facilities at the La Grange Project. The Districts propose to renew the existing FERC license for hydropower facilities associated with the Don Pedro Project and to obtain an original FERC license for hydropower facilities related to the La Grange Project. The Proposed Project consists of the acceptance and implementation of the new FERC licenses and continued operation and maintenance of the Projects pursuant to the terms and conditions contained in the new licenses.

The Draft CEQA Supplemental Analysis relies on the Final Environmental Impact Statement (FEIS) prepared by FERC in July 2020. The Draft CEQA Supplemental Analysis IS/MND found that implementation of the Proposed Project may result in potentially significant environmental impacts to: biological resources; geology and soils; and tribal cultural resources. However, with the implementation of mitigation measures, any potentially significant environmental impacts of the Proposed Project would be reduced to less than significant levels as described in the Draft CEQA Supplemental Analysis IS/MND.

The Draft CEQA Supplemental Analysis IS/MND is being circulated for public review and comment for a 30-day period starting on June 27, 2025 through July 27, 2025. Comments on the Draft CEQA Supplemental Analysis IS/MND must be received in writing via email or U.S. mail to the contact listed below by 5:00pm on July 27, 2025. For emailed comments, please include the project title in the subject line and include the commenter's name and U.S. Postal Service mailing address.

Michael Cooke
Turlock Irrigation District
333 East Canal Drive, Turlock, CA 95381
micooke@tid.org

During the 30-day public review period, the Draft CEQA Supplemental Analysis IS/MND will be available for review on the CEQAnet web portal at: https://ceqanet.lci.ca.gov/; on the Don Pedro Relicensing webpage at https://donpedro-relicensing.com/; and the La Grange Licensing webpage at https://lagrange-licensing.com/.

Sincerely,

Michael Cooke
Director of Water Resources and Regulatory Affairs
Turlock Irrigation District

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Abbreviations and Acronyms

AB	Assembly Bill
ACEC	Area of Critical Environment Concern
ACHP	Advisory Council on Historic Preservation
AFLA	Amendment to the Don Pedro Project Final License Application
ARPA	Archaeological Resources Protection Act
Basin Plan	Water Quality Control Plan for the Sacramento and San Joaquin Basins
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CALFIRE	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CCSF	County of San Francisco
CDFW	California Department of Fish and Wildlife
CDP(s)	census-designated place(s)
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	cubic ft per second
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CO	carbon monoxide
COLD	Cold Freshwater Habitat
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CTS	California tiger salamander
CWA	Clean Water Act
dB	decibels
dBA	sound pressure level
Dike A	small embankment dikes
DO	dissolved oxygen
Don Pedro Project	Don Pedro Hydroelectric Project
DPR	State Department of Parks and Recreation
DPRA	Don Pedro Recreation Agency
DPS	Distinct Population Segment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FERC/Commission	Federal Energy Regulatory Commission
FLA	Project Final License Application
FPA	Federal Power Act
ft	feet/foot
Hetch Hetchy System	Hetch Hetchy Water and Power System

HPMP(s)	Historic Properties Management Plan(s)
kW	kilowatts
La Grange Project	La Grange Hydroelectric Project
LGDD	La Grange Diversion Dam
LOS	Level of Service
LUST	leaking underground storage tank
M&I	municipal and industrial uses
MCAB	Mountain Counties Air Basin
MCL	maximum contaminant level
mg/l	milligrams per liter
MID	Modesto Irrigation District
MPN	most probable number
MRZ(s)	Mineral Resource Zone(s)
MUN	municipal and domestic supply
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NAHC	(California) Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
No.	Project Number
NO2	nitrogen dioxide
NTUs	Nephelometric Turbidity Units
O&M	operations and maintenance
O3	ozone
Pb	lead
PM	particulate matter
PM10	particulate matter of 10 micrometers or smaller
PM2.5	particulate matter of 2.5 micrometers and smaller
RM	River Mile
RRMP	Recreation Resource Management Plan
SHPO	State Historic Preservation Office
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SPWN	Spawning
SPCC	Spill Prevention, Control, and Countermeasure
SO2	sulfur dioxide
SRMA(s)	special recreation management area(s)
SRMP	Sierra Resource Management Plan
SWRCB	State Water Resources Control Board
TCAPCD	Tuolumne County Air Pollution Control District
TCP	Traditional Cultural Property
TCR(s)	Tribal cultural resource(s)
TID	Turlock Irrigation District

TMDL	Total Maximum Daily Load
U.S. EPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST(s)	underground storage tank(s)
VELB	valley elderberry longhorn beetle
VdB	decibel notation
VMT	Vehicle Miles Traveled
WARM	Warm Freshwater Habitat
WQC	Water Quality Certification
µg/L	micrograms per liter

1.0 Introduction

Turlock Irrigation District (TID) and Modesto Irrigation District (MID), collectively referred to as "the Districts," have prepared this Draft California Environmental Quality Act (CEQA) Supplemental Analysis to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of the Districts accepting from the Federal Energy Regulatory Commission (FERC or Commission) a new license for the Don Pedro Hydroelectric Project (Don Pedro Project), FERC Project Number (No.) 2299 and an original license for the La Grange Hydroelectric Project (La Grange Project), FERC Project No. 14581, jointly referred to as the Projects. The acceptance of both licenses is referred to in this Draft CEQA Supplemental Analysis as the Proposed Project.

The Proposed Project is located in Tuolumne and Stanislaus counties on the main stem of the Tuolumne River. The Proposed Project is described in detail throughout Section 2.0, Project Description, of this document. This document has been prepared in accordance with the requirements of the (CEQA) of 1970 (Pub. Resources Code, § 21000 et seq.) and the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.). This Draft CEQA Supplemental Analysis relies on expert opinion, technical studies, and other evidence to substantiate its findings. It follows the format of a CEQA Initial Study with anticipated Mitigated Negative Declaration.

1.1 Purpose of this Document

The Districts own and operate the Don Pedro Project. TID separately operates and maintains hydropower facilities at the La Grange Project. The Districts propose to renew the existing FERC license for hydropower facilities associated with the Don Pedro Project and to obtain an original FERC license for hydropower facilities related to the La Grange Project. Acceptance and implementation of the new FERC licenses and continued operation and maintenance of the Projects pursuant to the terms and conditions contained in the new licenses are collectively referred to in this document as the Proposed Project.

Accepting the hydroelectric Projects' new FERC licenses is a discretionary action undertaken by the Districts and has the potential to have physical effects on the environment. As such, the Districts' approval of the Proposed Project is subject to environmental review under CEQA, Cal. Pub. Res. Code §§ 21000–21178. TID has been identified as the lead agency under CEQA and, therefore, is responsible for certifying the CEQA documentation and approving the Proposed Project. MID is a Responsible Agency under CEQA and will need to approve and certify the Proposed Project and accept the CEQA documentation as sufficient per its guidelines. Furthermore, the California Department of Fish and Wildlife (CDFW) and the State Water Resources Control Board (SWRCB) are anticipated to act as Responsible and/or Trustee Agencies, as they may have discretionary permits/approvals that are required to support the Proposed Project. Specifically, CDFW may be requested to provide a permit to authorize the incidental "take" of State-protected species if necessary for Project implementation. Also, the SWRCB requires CEQA compliance to issue Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) for the Proposed Project. CEQA specifies that when a Project requires both CEQA compliance and an Environmental Impact Statement (EIS) prepared under the National Environmental Policy Act (NEPA), the CEQA lead agency shall, whenever possible, use the EIS as the Project Environmental Impact Report (EIR) (Public Resources Code Section 21083.7). Because NEPA does not require a separate discussion of some issues required by CEQA, such as tribal cultural resources (TCRs), those points of analysis, if missing from the EIS, must be added or supplemented before the EIS can be used to satisfy CEQA (see CEQA Guidelines Section 15221(b) for additional information). Therefore, this Draft CEQA Supplemental Analysis is being prepared to add and supplement points of analysis not covered by the EIS for the Proposed Project, thereby making the EIS compliant with CEQA.

1.2 Project Background

The Districts filed an application with FERC for a new license to continue to operate and maintain the Don Pedro Project. The Project impounds the Don Pedro Reservoir, created by the Don Pedro Dam. In addition to an authorized capacity of 168 MW – 203MW maximum output of hydroelectric power generation, Don Pedro Reservoir primarily serves as the water supply for the irrigation of more than 200,000 acres of Central Valley farmland and municipal and industrial (M&I) uses. The reservoir also provides flood control benefits along the Tuolumne and San Joaquin rivers. The original FERC license for the Don Pedro Project hydropower facilities was issued in 1966 for a term of 50 years.

Separately, the Districts filed with FERC an application for an original license to continue to operate and maintain the 4.7-megawatt (MW) La Grange hydropower facilities. These facilities are located at the La Grange Project in eastern Stanislaus County, approximately 2.5 miles downstream from Don Pedro Dam. Along with hydropower generation, the La Grange Project diverts irrigation water to TID customers. Although the La Grange hydropower facilities have existed since 1923, no FERC licenses have been issued.

The Districts requested licenses with 50-year terms for hydroelectric Projects. It is assumed that the FERC will issue separate licenses for the hydroelectric Projects and that the conditions in the licenses would be the same as those in the FERC Staff Alternative with Mandatory Conditions for the respective Projects, as described in the FERC's Final Environmental Impact Statement (FEIS) issued in July 2020. Once FERC issues the licenses, the Districts may operate and maintain one or both Projects consistent with the terms and conditions in the licenses, contest the licenses for one or both Projects by seeking a rehearing before FERC, or reject one or both licenses. Both Districts will determine if they accept the FERC licenses when proposed, and if so, will be required to implement the conditions described in the licenses.

As noted in Section 1.1, the Districts, as local government agencies, are subject to the requirements of CEQA. The California Supreme Court ruled that a California government licensee generally must comply with CEQA in connection with FERC licensing of a Project in the state (County of Butte v. Department of Water Resources, 13 Cal.5th 612, decided Aug. 1, 2022). The court explained that the CEQA document is an informational source for the California agency's decision-making regarding relicensing. The CEQA document informs the decision about whether to accept the particular license and its terms and conditions and whether to request that FERC incorporate other terms into the license or seek reconsideration by FERC. The CEQA document may also identify potential mitigation measures outside FERC's jurisdiction.

The FEIS evaluated four alternatives: 1) Districts' (Applicants') Proposal; 2) Districts' Proposal with certain FERC Staff modifications (FERC Staff Alternative); 3) FERC Staff Alternative with Mandatory Conditions; and 4) No Action, meaning that the Districts would continue to operate the Projects with no changes. In the 2020 FEIS, FERC staff selected the FERC Staff Alternative with Mandatory Conditions as the preferred alternative, the Proposed Project. Because a thorough alternatives analysis was completed for the FERC FEIS, no additional alternatives are considered necessary to evaluate within the CEQA process.

FERC Staff also recognized that the FERC license for each hydroelectric Project must include: 1) any mandatory conditions submitted by the Bureau of Land Management (BLM) pursuant to Federal Power Act (FPA) Section 4(e) that meet the FPA requirements and 2) any conditions included in a final, valid, and timely WQC that the SWRCB would issue under CWA Section 401. BLM filed with FERC Section 4(e) final Mandatory Conditions included in the Proposed Project. At the time this Draft CEQA

Supplemental Analysis is prepared, the SWRCB has not issued a valid WQC for either Project,[1] and one purpose of the Draft CEQA Supplemental Analysis is to provide the SWRCB with the information it needs to issue WQCs. It is premature and pre-decisional to identify in this Draft CEQA Supplemental Analysis conditions that may be in a SWRCB WQC for either Project. Therefore, these unknown conditions are not assessed in this Draft CEQA Supplemental Analysis, though the Districts recognize that they would be required to implement conditions once a WQC is issued. If such WQC conditions or issued licenses result in a new potentially significant impact that is not addressed in this Draft CEQA Supplemental Analysis, or a significant change in an impact conclusion in this Draft CEQA Supplemental Analysis, the Districts will consider the scope and scale of the changes to determine if revisions to this Draft CEQA Supplemental Analysis are appropriate or if there is a potential need for supplemental impact assessment under CEQA.

1.3 Organization of this Document

This Draft CEQA Supplemental Analysis contains the following components:

- Chapter 1: Introduction – Purpose of this CEQA document and Background Information
- Chapter 2: Project Description – Project locations, Existing facilities, operations, and measures, and Proposed facilities, operations, and measures
- Chapter 3: Environmental Analysis - CEQA Appendix G Checklist
- Chapter 4: List of Preparers
- Chapter 5: References

1.4 Public Review Process

Public involvement is an essential aspect of the CEQA environmental review process. CEQA requires disclosing information about the Proposed Project to the public and agency decision-makers and seeks to foster public participation and informed decision-making.

On September 17, 2024, the Districts distributed a Notice of Intent [NOI] to Rely on FERC's FEIS, in Combination with a Supplemental Analysis, to Satisfy CEQA for the Don Pedro and La Grange Hydroelectric Projects Relicensing to the interested parties mailing list identified by FERC. Distribution of the NOI started a 30-day public comment period. The NOI identified locations where the document was available for public review, including online at CEQAnet, and invited interested parties to submit written comments. The 30-day public review and comment period concluded on October 17, 2024. The Districts will consider all comments received by the date identified for closure of the public comment period during the preparation of this Final CEQA Supplemental Analysis.

Four comment letters were received and considered during the NOI public review period. The comments were from CDFW, the United States Department of Commerce, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service (NMFS), the SWRCB, and a collaboration of Conservation Groups. The comments discussed similar topics and concerns, including biological

[1] On May 7, 2024, the SWRCB formally set aside its final WQC issued by the SWRCB on January 15, 2021. On December 13, 2024, TID and MID submitted to the SWRCB applications for WQC of the Don Pedro Project and for WQC of the La Grange Project.

resources mitigation measures, special status species, water temperature and flows, the SWRCB's WQC, and cumulative impacts of the Proposed Project.

This Draft CEQA Supplemental Analysis is being circulated for a 30-day public review period to the California Office of Planning and Research State Clearinghouse for distribution to appropriate resource agencies and posting on CEQAnet. The Draft CEQA Supplemental Analysis will also be posted with the Tuolumne and Stanislaus County Clerks.

2.0 Project Description

A detailed description of the existing Projects' facilities, features, and operations and a comparison of these with the FERC Staff Alternative with Mandatory Conditions, if included in the licenses, is provided below.

2.1 Proposed Project Locations

The Don Pedro Project is located at River Mile (RM) 54.8 on the Tuolumne River in Tuolumne County, approximately 35 miles east of the city of Modesto, California. The Don Pedro Project occupies approximately 4,802 acres of federal lands administered by BLM. The FERC Project Boundary along the Don Pedro Reservoir extends 26 miles upstream. **Figure 2.3-1** shows the general vicinity of the existing Don Pedro Project and La Grange Project, the major facilities, and the current FERC Project Boundary for the Don Pedro Project.

The La Grange Project is located on the Tuolumne River in eastern Stanislaus County near the border with Tuolumne County, and it occupies approximately 14 acres of federal land administered by BLM. The La Grange head pond extends about 1.5 miles upstream from the La Grange Project. **Figure 2.3-2** shows the general vicinity of the existing La Grange Project, including facilities and the proposed FERC Project Boundary.

2.2 Proposed Project Objectives

The specific objectives related to the Proposed Project are:

1. Obtain from FERC a new 50-year license for the Don Pedro Project and an original 50-year license for the La Grange Project.

2. Continue to supply water for the irrigation of more than 200,000 acres of Central Valley farmland, and M&I uses and provide flood control benefits along the Tuolumne and San Joaquin rivers.

3. Continue to provide clean, renewable energy with low greenhouse gas emissions.

2.3 Elements Not Included in the Project Description

The Proposed Project does not include:

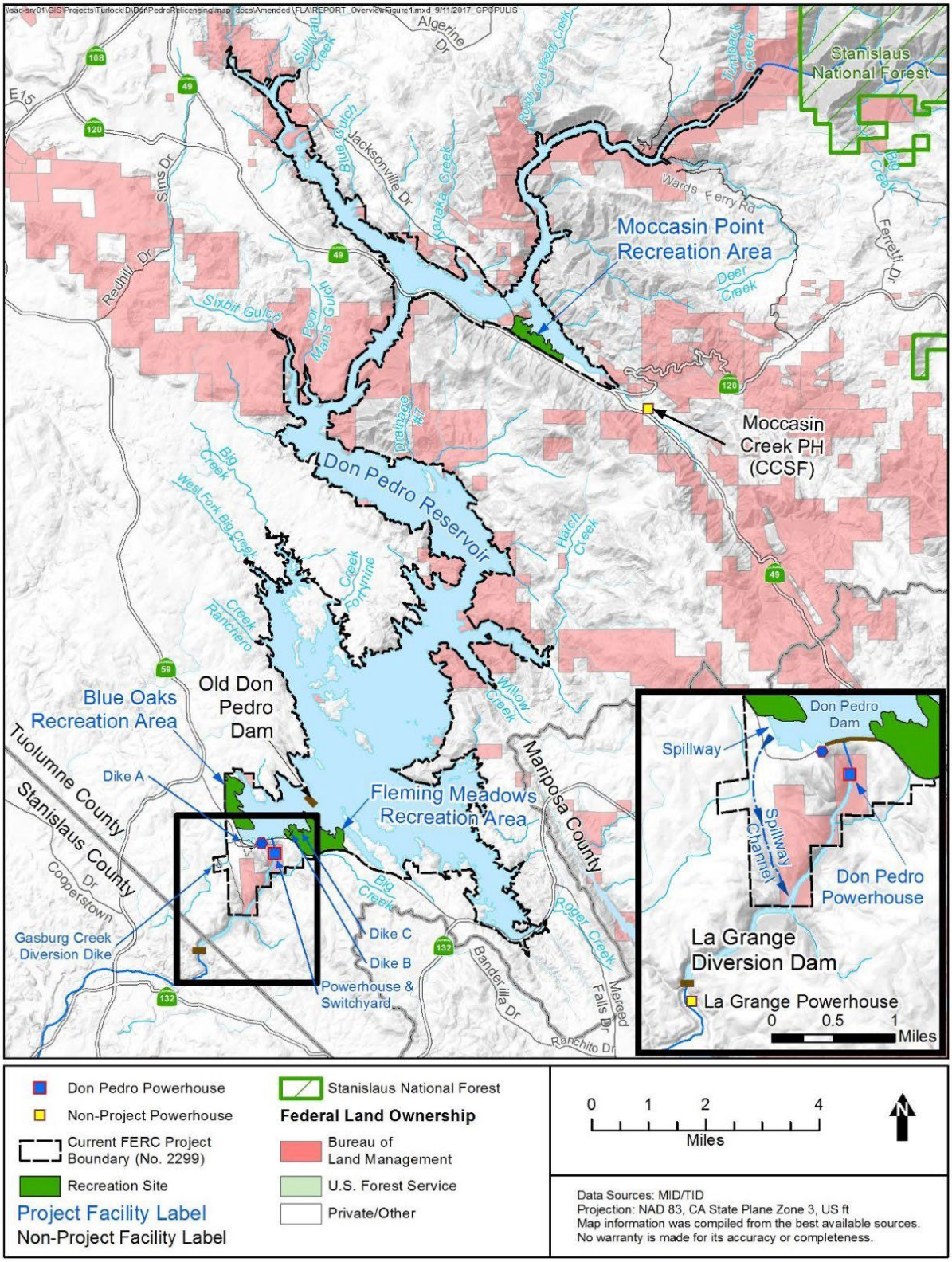
- Conditions proposed by the Districts in their Amendment to the Don Pedro Project Final License Application (AFLA) and La Grange Project Final License Application (FLA) (TID/MID 2017b) that were not adopted by FERC staff in the FERC Staff Alternative with Mandatory Conditions in the FEIS for each Project.

- FPA Section 10(j) or 10(a) conditions proposed by agencies not adopted by FERC in the FERC Staff Alternative with Mandatory Conditions in the FEIS for each Project.

- SWRCB's January 29, 2018, conditions were filed with FERC because the SWRCB specifically stated those conditions were draft and preliminary and, as described above, the SWRCB has not issued a final, valid WQC for either the Don Pedro Project or the La Grange Project.

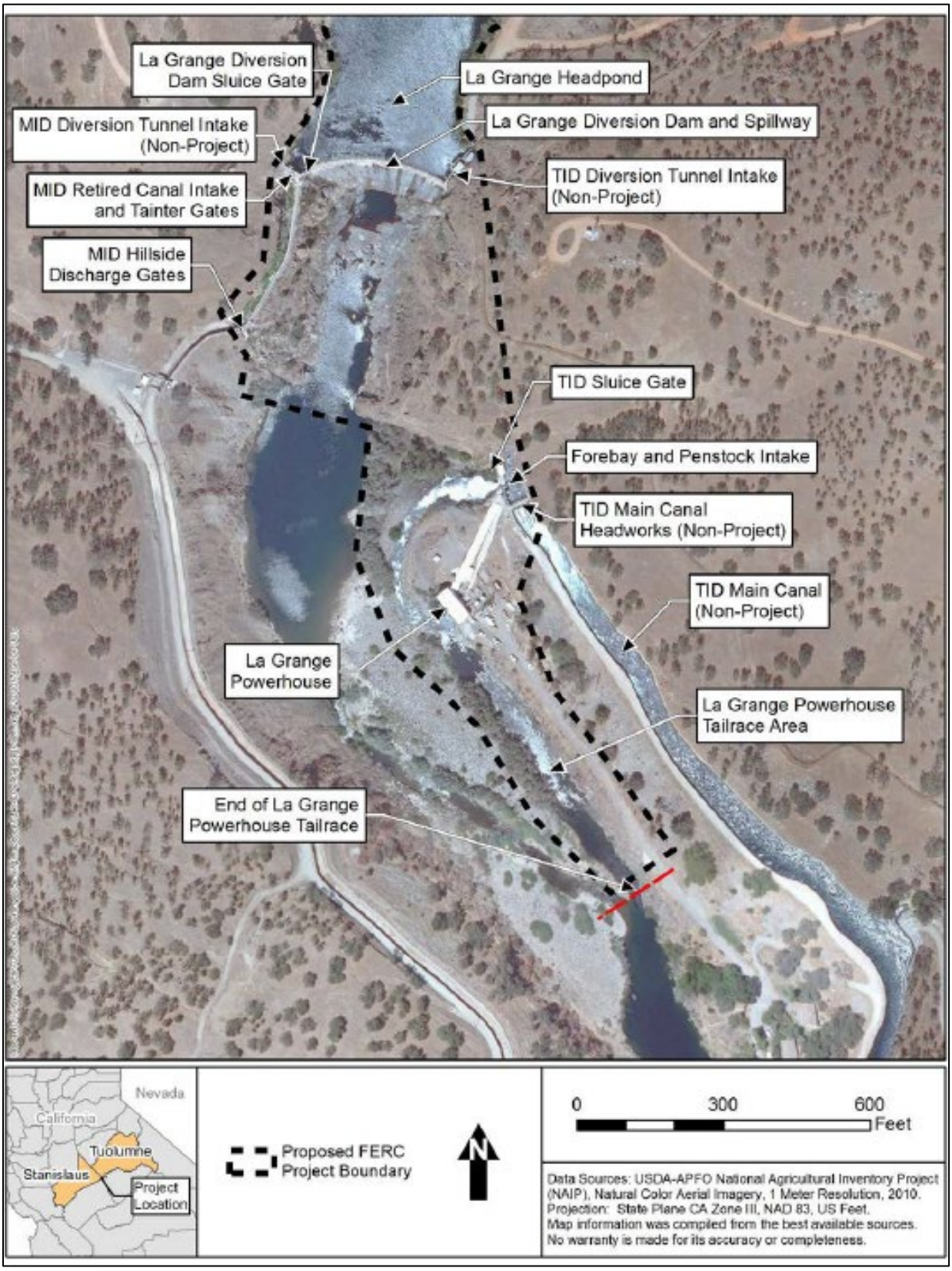
- Implementation of the FPA Section 10(j)/10(a) fish passage plan, as requested by NMFS in its August 5, 2020, letter of insufficiency because: (1) FERC did not adopt the condition in its FERC Staff Alternative with Mandatory Conditions; (2) the Districts do not find the condition to be a reasonably foreseeable future action; and (3) even if FERC had adopted the condition and it was reasonably foreseeable, NMFS did not provide sufficient detail to enable meaningful analysis. Regarding the fish passage, NMFS advised FERC that NMFS did not require a fishway and reserved its Section 18 fishway prescription authority.

Figure 2.3-1. Don Pedro and La Grange Projects Vicinity Map, Showing Locations of Major Facilities and Existing Project Boundary for the Don Pedro Project



Source: FERC 2020

Figure 2.3-2. La Grange Project Facilities



Source: FERC 2020

2.4 Don Pedro Project

2.4.1 Existing and Proposed Project Features

The original FERC license for the Don Pedro Project was issued in 1966 for 50 years. The Proposed Project includes the acceptance of a Don Pedro Project new license with terms and conditions consistent with those in the FERC Staff Alternative with Mandatory Conditions as described in the FEIS; continued operations and maintenance under the terms of the new license; and implementation of the license conditions, including modifications to some facilities, Project boundaries, and operations and maintenance.

2.4.1.1 Existing Facilities

The Don Pedro Project was placed into service in 1971. It is 31.54 percent owned by MID and 68.46 percent owned by TID. The Don Pedro Project is located downstream of the City and County of San Francisco (CCSF)-owned and operated Hetch Hetchy Water and Power System (Hetch Hetchy System), which includes a series of reservoirs, diversion conduits, tunnels, powerhouses, and related infrastructure located within the upper Tuolumne River watershed.

The Don Pedro Project includes the following existing facilities:

1. A 580-foot (ft)-high, 1,900-ft-long earth and rockfill dam;

2. A reservoir with a gross storage capacity of 2,030,000 acre-ft and a usable storage capacity of 1,721,000 acre-ft;

3. A 30-ft-high, 45-ft-wide, 135-ft-long, gated spillway including three 45-ft-wide by 30-ft-high radial gates;

4. A 995-ft-long, ungated ogee emergency spillway with a crest elevation of 830 ft (National Geodetic Vertical Datum of 1929);

5. A set of outlet works that are located at the left abutment of the dam and consist of three individual gate housings in the diversion tunnel, each containing two 4-ft-by-5-ft slide gates;

6. A 3,500-ft-long, concrete-lined diversion tunnel with a total hydraulic capacity of 7,500 cubic ft per second (cfs);

7. A 2,960-ft-long power tunnel located in the left abutment of the dam that transitions from an 18-ft-diameter, concrete-lined section to a 16-ft-diameter, steel-lined section;

8. A 21-ft-high, 12-ft-wide, emergency closure fixed-wheel gate;

9. A powerhouse located immediately downstream of the dam containing a 72-inch hollow jet valve and four Francis turbine-generator units with an authorized installed capacity of 206,325 kilowatts (kW);

10. A switchyard located on top of the powerhouse;

11. A 75-ft-high, earth and rockfill dike (Gasburg Creek Dike) with a slide-gate controlled, 18-inch-diameter conduit located near the downstream end of the spillway;

12. Three small embankment dikes (Dike A, located between the main dam and spillway, and Dikes B and C, located east of the main dam);

13. Recreation facilities on Don Pedro Reservoir, including Fleming Meadows, Blue Oaks, Moccasin Point; and

14. Appurtenant facilities and features, including access roads.

2.4.1.2 Proposed Facilities

The FERC Staff Alternative with Mandatory Conditions would not require any generation-related Project facilities to be added to the Project. As described in the FEIS, the Districts would continue operating and maintaining the existing recreation facilities associated with the Don Pedro Project with specific enhancements as described in the Recreation Resource Management Plan (RRMP) filed as Appendix E-7 of the Don Pedro Project AFLA. The existing FERC Project boundaries would be slightly modified.

2.4.2 Existing and Proposed Project Operations and Maintenance

2.4.2.1 Existing Operations and Maintenance

As noted, the Don Pedro Dam impounds the Don Pedro Reservoir. The dam releases water into the Tuolumne River, which then flows into the La Grange Project's La Grange head pond. Scheduled flow releases from Don Pedro Dam are generally provided through the four turbine-generator units (up to 5,500 cfs) in the Don Pedro Powerhouse. Flows are delivered to the powerhouse via the power tunnel. Units 1, 2, and 3 discharge to the Tuolumne River directly from the powerhouse. Unit 4 discharges through a horseshoe-shaped tunnel to the diversion tunnel downstream of the powerhouse.

2.4.2.2 Proposed Operations and Maintenance

The FERC Staff Alternative with Mandatory Conditions would substantially increase and add both flow and non-flow measures to enhance aquatic and recreational resources. Related to water supply purposes, the Districts would operate the Don Pedro Project generally consistent with existing operations. The Districts proposed including two in-river infiltration galleries (IG-1 and IG-2) in the Project. TID installed IG-1, with a capacity of approximately 100 cfs, in 2001 during the restoration of the special-run pool at RM 25.8. IG-1 is currently operational and is being used to meet the urban water demands of the Stanislaus Regional Water Authority. The Districts proposed to install a second infiltration gallery, IG-2, with a capacity of approximately 100 to 125 cfs, just downstream of IG-1. Water withdrawn at the IGs would be pumped to the TID water supply system via TID's Ceres Canal or other non-Project facilities, reducing the amount of water that needs to be diverted for consumptive use at the LGDD and allowing the Districts to provide additional summer flows to the 26-mi-long reach between the La Grange Powerhouse and the IGs. This area provides important habitat for salmonids without reducing water supplies. The FERC Staff Alternative with Mandatory Conditions stated that FERC's order issuing license would decide whether the IGs would be included in the license. However, with foresight, the FERC Staff Alternative with Mandatory Conditions provided for the IGs in Article 409 by including in the article: (1) a minimum flow requirement at the La Grange Project that would be in effect until the IGs are operational and (2) a minimum flow requirement at the La Grange Project and downstream of the IGs that would take effect once the IGs are operational.

2.4.3 Existing and Proposed Environmental Measures

2.4.3.1 Existing Environmental Measures

In 1995, the Districts entered into a settlement agreement (1995 Settlement Agreement) with CDFW, the U.S. Fish and Wildlife Service (USFWS), CCSF, and four non-governmental organizations that provided for increased minimum flow releases from the Don Pedro Project to the lower Tuolumne River to improve conditions for fall-run Chinook salmon. FERC issued an order on July 31, 1996, amending the Don Pedro Project license to incorporate the lower Tuolumne River minimum flow provisions contained in the 1995 Settlement Agreement. The summertime minimum flows range from 50 to 250 cfs, substantially increasing over the prior summertime minimum flow of 3 cfs. Fall through winter minimum flows vary from 150 to 300 cfs, depending on water year type.

The 1995 Settlement Agreement and license amendment also provide for the annual release of "pulse" flows to stimulate the upstream migration of adult salmon in the fall and spring to facilitate juvenile salmon's outmigration. The volume of these pulse flows also varies with water year type.

In accordance with the 1995 Settlement Agreement, the Districts also monitor the fall-run Chinook salmon population in the lower Tuolumne River and file annual reports summarizing the results of their monitoring activities. The agreement will remain in effect until the current Don Pedro Project license expires.

2.4.3.2 Proposed Environmental Measures

The FERC Staff Alternative with Mandatory Conditions includes staff-recommended measures along with the following mandatory conditions:

1. Annually perform employee awareness training to familiarize the Districts' operations and maintenance staff with special-status species, non-native invasive plants, and sensitive areas known to occur within or adjacent to the FERC Project Boundary (BLM Don Pedro revised 4(e) condition 2);

2. Annually consult with BLM to review lists of special-status plant and wildlife species (BLM Don Pedro revised 4(e) condition 9);

3. Develop a Ward's Ferry/Tuolumne River take-out management plan (BLM Don Pedro revised 4(e) condition 13);

4. Implement pesticide use restrictions on BLM land (BLM Don Pedro revised 4(e) condition 32); and

5. If the Districts propose ground-disturbing activities on or directly affecting BLM lands that were not explicitly addressed in the Commission's NEPA processes, consult with BLM to assess the potential for Project-related effects and whether additional information is required to proceed with the planned activity (BLM Don Pedro revised 4(e) condition 35).

In any license issued for the Project, these mandatory conditions would replace the following environmental measures that are included in the FERC Staff Alternative:

1. Implement the staff-recommended minimum flows, floodplain rearing pulse flows, spring outmigration pulse flows, fall pulse flows, gravel mobilization flows, and boating flows for the duration of any license;

2. Develop a water temperature monitoring plan; and

3. Improve and maintain shoreline access trails on each side of Ward's Ferry Bridge.

Table 2.4-1 shows the 69 specific conditions that would likely be included in a Don Pedro Project new license based on the FERC Staff Alternative with Mandatory Conditions in the FEIS. The list of conditions was compiled primarily from a review of the following portions of the FEIS (FERC 2020):

- Appendix B, License Conditions Recommended by Staff for the Don Pedro Project.
- Appendix D, U.S. BLM Revised Conditions for the Don Pedro Project (August 23, 2018).
- Table 4.3-1, Cost of environmental mitigation and enhancement measures considered in assessing the environmental effects of continuing to operate the Don Pedro Project (Source: FERC staff).

Table 2.4-1. Don Pedro Project Environmental Conditions

Designation	Name
FERC STAFF ALTERNATIVE (From Appendix B in FEIS)	
Art. 401	Commission Approval, Reporting, and Filing of Amendments
Art. 402	Reservation of Authority to Prescribe Fishways
Art. 403	Minimum Pool at Don Pedro Reservoir
Art. 404	Erosion and Sediment Control Plan
Art. 405	Spill Prevention Control and Countermeasure Management Plan
Art. 406	Drought Management Plan
Art. 407	Water Temperature Monitoring Plan
Art. 408	Operation Compliance Monitoring Plan
Art. 409	Minimum Flows below La Grange Project
Art. 410	Spring Pulse Flow Release Plan
Art. 411	Fall Pulse Flow Release Plan
Art. 412	Gravel Mobilization Flow
Art. 413	Spill Management Plan
Art. 414	Lower Tuolumne River Habitat Improvement Program
Art. 415	Coarse Sediment Management Plan
Art. 416	Gravel Cleaning Plan
Art. 417	Aquatic Invasive Species Management Plan
Art. 418	Terrestrial Resources Management Plan
Art. 419	Bald Eagle and Special-status Bird Management Plan

Designation	Name
Art. 420	Recreation Resource Management Plan (RRMP)
Art. 421	Woody Debris Management Plan
Art. 422	Transportation System Management Plan
Art. 423	Visual Resources Management Plan
Art. 424	Fire Prevention and Response Management Plan
Art. 425	Programmatic Agreement and Historic Properties Management Plan (HPMP)
Art. 426	Land Use and Occupancy
BLM FPA SECTION 4(e) MANDATORY CONDITIONS (from Appendix D in FEIS)	
Condition No. 1	Consultation
Condition No. 2	Annual Employee Training
Condition No. 3	Erosion Control and Restoration Plan
Condition No. 4	Large Woody Debris Material Management
Condition No. 5	Reservation of Authority to Modify 4(e) Conditions in the Event of Anadromous Fish Re-introduction
Condition No. 6	Aquatic Invasive Species Management Plan
Condition No. 7	Terrestrial Resources Management Plan (TRMP)
Condition No. 8	Bald Eagle Management Plan
Condition No. 9	Annual Review of Special Species Lists and Assessment of New Species on Federal Land
Condition No. 10	License Contacts
Condition No. 11	Annual Recreation Coordination Meeting
Condition No. 12	(BLM Conditions did not include a Condition No. 12)
Condition No. 13	Wards Ferry/Tuolumne River Take-Out Management Plan
Condition No. 14	Recreation Resources Management Plan
Condition No. 15	Historic Properties Management Plan (HPMP)
Condition No. 16	Transportation System Management Plan
Condition No. 17	Fire Prevention and Response Management Plan
Condition No. 18	Visual Resources Management Plan
Condition No. 19	Approval of Changes
Condition No. 20	Maintenance of Improvements on or Affecting BLM Lands
Condition No. 21	Existing Claims

Designation	Name
Condition No. 22	Compliance with Regulations
Condition No. 23	Surrender of License or Transfer of Ownership
Condition No. 24	Protection of United States Property
Condition No. 25	Indemnification
Condition No. 26	Damage to Land, Property, and Interests of the United States
Condition No. 27	Risks and Hazards on BLM Lands
Condition No. 28	Protection of BLM Special Status Species
Condition No. 29	Access
Condition No. 30	Crossings
Condition No. 31	Survey, Land Corners
Condition No. 32	Pesticide-Use Restrictions on BLM Lands
Condition No. 33	Modifications of 4(e) Conditions after Biological Opinion or Water Quality Certification (WQC)
Condition No. 34	Signs
Condition No. 35	Ground Disturbing Activities
Condition No. 36	Use of BLM Roads for Project Access
Condition No. 37	Access by the United States
Condition No. 38	Road Use
Condition No. 39	BLM Approval of Final Design
Condition No. 40	Unattended Construction Equipment
Condition No. 41	Maintenance of Improvements
Condition No. 42	Construction Inspections
Condition No. 43	Hazardous Substances Plan
Condition No. 44	Use of Explosives

Note: In addition to the conditions in the table, the Districts anticipate FERC will include in the Don Pedro Project new license the 37 standard conditions in FERC's Form L-5, Terms and Conditions of License for Constructed Major Project Affecting Navigable Water and Lands in the United States.

2.5 La Grange Project

2.5.1 Existing and Proposed Project Features

The Proposed Project includes in part acceptance of a La Grange Project original license with terms and conditions consistent with those in the FERC Staff Alternative with Mandatory Conditions as described in the FEIS.

2.5.1.1 Existing Facilities

The La Grange Project, completed in 1893, includes a masonry-gravity diversion dam on the Tuolumne River near La Grange, California, which raises the stage of the Tuolumne River to allow for the diversion of water by gravity from the Tuolumne River to the TID and MID water supply canal systems. TID's hydroelectric power plant at the dam was installed in 1923. While the La Grange Project is co-owned by TID and MID, the existing power plant is solely owned and operated by TID.

The La Grange Project includes the following existing facilities:

1. A 310-ft-long, 131-ft-high masonry arch diversion dam (La Grange Diversion Dam);

2. A head pond with a total storage capacity of 400 acre-ft and a usable storage capacity of about 100 acre-ft;

3. MID canal headworks in the first 400 ft of the MID canal and the "hillside" discharge gates (two 42-inch-diameter and one 60-by-60-inch), both part of MID's retired irrigation canal facilities, which was replaced by a diversion tunnel but currently used to provide flows to the plunge pool downstream of the dam;

4. TID irrigation intake and tunnel, which provides flow to the penstock intake structure and the headworks of the TID upper main canal;

5. A penstock intake structure containing a trashrack and three 7.5-ft-wide by 14-ft-tall concrete intake bays with manually operated gates and two automated 5-ft-high by 4-ft-wide sluice gates that can be used to discharge flow to the river via a sluice channel;

6. Two penstocks leading to a powerhouse with two Francis turbine-generator units with a maximum combined generating capacity of 4.7 MW and a maximum combined hydraulic capacity of approximately 580 cfs;

7. A 700-ft-long excavated tailrace; and

8. A substation.

2.5.1.2 Proposed Facilities

The FERC Staff Alternative with Mandatory Conditions would not require any generation-related Project facilities to be added to the Proposed Project.

2.5.2 Existing and Proposed Project Operations and Maintenance

2.5.2.1 Existing Operations and Maintenance

The La Grange Powerhouse operates in a run-of-river mode based on flows released from the Don Pedro Project. Water released from the Don Pedro Reservoir flows into the La Grange Project Headpond. Water is released from the headpond through the Project's La Grange Spillway or La Grange Powerhouse, which are described above, or through one or more of three non-Project releases. The first non-Project release facility is MID's non-generation-related diversion tunnel intake located on the diversion dam's

west (looking downstream, river right) end. The tunnel provides water to MID's irrigation and M&I water systems. The intake is located in the face of a cliff on the west (river right) bank about 100 ft upstream of La Grange Project. The invert of the MID tunnel is at an elevation of 277.4 ft. Flow is conveyed through the 15-ft, 6-inch-diameter tunnel for 895 ft to a control structure. Flow is then conveyed through a 5,300-ft-long tunnel to an outlet structure that controls flow to the MID-non-Project Main Canal. The design maximum flow rate for this tunnel is approximately 2,000 cfs.

The second and third non-Project release facilities are TID's non-generation-related diversion tunnel intakes located on the east (left) bank upstream of the diversion dam, consisting of two separate structures. The south intake structure contains two 8-ft-wide by 11-ft 10-inch-high control gates driven by electric motor hoists. The north intake structure includes a single 8-ft by 12-ft control gate. Flows from the TID tunnel discharge nearly 600 ft downstream from the intake into a concrete channel that contains the La Grange Power Intake structure described in Section 2.2.1 of the APDBA and below and TID's non-generation-related Upper Main Canal Headworks. At the tunnel outlet portal, the channel invert is approximately 18 ft wide and gradually expands to 39 ft wide at the face of the Upper Main Canal Headworks. The channel runs 118 ft along the centerline of flow and is constructed with a gradual bend to the south as it enters the TID Upper Main Canal. The invert of the channel is at an elevation of approximately 278 ft. TID maintains an open position of an 18-inch-diameter pipe that continuously delivers flow to the sluice gate channel downstream of the sluice gates. This water flows into the tailrace just upstream of La Grange Powerhouse. The flow quantity is not measured but is estimated to be approximately 5 to 10 cfs. The Districts normally release about 5 to 10 cfs approximately 400 ft downstream of the La Grange Project via hillside gates at the end of the retired MID intake canal.

2.5.2.2 Proposed Operations and Maintenance

Other than the minimum flow release of 5 to 10 cfs to the plunge pool downstream of the La Grange Project, the Districts do not propose to make substantive changes to the operation of the La Grange Project.

2.5.3 Existing and Proposed Environmental Measures

2.5.3.1 Existing Environmental Measures

The La Grange Project does not have existing environmental measures because the La Grange Project does not currently operate under a FERC license.

2.5.3.2 Proposed Environmental Measures

The FERC Staff Alternative with Mandatory Conditions includes the following staff-recommended measures along with the mandatory conditions that are not included in the Staff Alternative:

1. Provide for annual environmental training of employees and contractors, rather than bi-annual as proposed (BLM La Grange preliminary 4(e) condition 2);

2. Annually consult and review the current list of threatened, endangered, and special-status species that might occur on public land administered by BLM in the Project Area (BLM La Grange preliminary 4(e) condition 6);

3. Implement pesticide use restrictions on BLM land (BLM La Grange preliminary 4(e) condition 23); and

4. If the Districts propose ground-disturbing activities on or directly affecting BLM lands that were not explicitly addressed in the Commission's NEPA processes, consult with BLM to assess the

potential for Project-related effects and whether additional information is required to proceed with the planned activity (BLM La Grange preliminary 4(e) condition 26).

In any new license issued for the Project, these mandatory conditions would replace the following environmental measures that are included in the Staff Alternative:

1. Develop a plan in consultation with the SWRCB, CDFW, USFWS, and NMFS to determine and mitigate the extent of Project-caused low Dissolved Oxygen in the La Grange Powerhouse tailrace.

Table 2.5-1 shows the 50 specific conditions that would likely be included in a La Grange Project original license based on the FERC Staff Alternative with Mandatory Conditions in the FEIS. The list was compiled primarily from a review of the following portions of the FEIS (FERC 2020):

- Appendix C, License Conditions Recommended by Staff for the La Grange Project.
- Appendix E, U.S. BLM Revised Conditions for the La Grange Project.
- Table 4.3-2, Cost of environmental mitigation and enhancement measures considered in assessing the environmental effects of continuing to operate the La Grange Hydroelectric Project (Source: FERC staff).

Table 2.5-1. La Grange Hydroelectric Project Environmental Conditions

Designation	Name
FERC STAFF ALTERNATIVE (From Appendix C in FEIS)	
Art. 401	Commission Approval, Reporting, and Filing of Amendments
Art. 402	Reservation of Authority to Prescribe Fishways
Art. 403	Erosion and Sediment Control Plan
Art. 404	Spill Prevention Control and Countermeasure Management Plan
Art. 405	Minimum Flows below La Grange Diversion Dam
Art. 406	Ramping Rates
Art. 407	Operation Compliance Monitoring Plan
Art. 408	Water Quality Monitoring Plan
Art. 409	Fish Exclusion Design Plan
Art. 410	Aquatic Invasive Species Management Plan
Art. 411	Terrestrial Resources Management Plan
Art. 412	Bald Eagle and Special-status Bird Management Plan
Art. 413	Fire Prevention and Response Management Plan
Art. 414	Programmatic Agreement and Historic Properties Management Plan (HPMP)
Art. 415	Land Use and Occupancy

Designation	Name
BLM FPA SECTION 4(e) MANDATORY CONDITIONS (From Appendix E in FEIS)	
Condition No. 1	Consultation
Condition No. 2	Annual Employee Training
Condition No. 3	Erosion Control and Restoration Plan
Condition No. 4	Reservation of Authority to Modify 4(e) Conditions in the Event of Anadromous Fish Re-introduction
Condition No. 5	Terrestrial Resources Management Plan
Condition No. 6	Annual Review of Special-Status Species Lists and Assessment of New Species on Federal Land
Condition No. 7	Historic Properties Management Plan (HPMP)
Condition No. 8	Public Access and Hiking Trail
Condition No. 9	Bald Eagle Management Plan
Condition No. 10	Approval of Changes
Condition No. 11	Maintenance of Improvements on or Affecting BLM Lands
Condition No. 12	Existing Claims
Condition No. 13	Compliance with Regulations
Condition No. 14	Surrender of License or Transfer of Ownership
Condition No. 15	Protection of United States Property
Condition No. 16	Indemnification
Condition No. 17	Damage to Land, Property, and Interests of the United States
Condition No. 18	Risks and Hazards on BLM Lands
Condition No. 19	Protection of BLM Special Status Species
Condition No. 20	Access
Condition No. 21	Crossings
Condition No. 22	Surveys, Land Corners
Condition No. 23	Pesticide-Use Restrictions on BLM Lands
Condition No. 24	Modifications of 4(e) Conditions after Biological Opinion or Water Quality Certification (WQC)
Condition No. 25	Signs
Condition No. 26	Ground Disturbing Activities

Designation	Name
Condition No. 27	Use of BLM Roads for Project Access
Condition No. 28	Access by the United States
Condition No. 29	Road Use
Condition No. 30	BLM Approval of Final Design
Condition No. 31	Unattended Construction Equipment
Condition No. 32	Maintenance of Improvements
Condition No. 33	Construction Inspections
Condition No. 34	Hazardous Substances Plan
Condition No. 35	Use of Explosives

Note: In addition to the conditions in the table, the Districts anticipate FERC will include in the La Grange Project original license the 37 standard conditions in FERC's Form L-5, Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters and Lands of the United States. These administrative and legal conditions would not reasonably affect Endangered Species Act (ESA)-listed anadromous fishes.

2.6 Potential Permits and Approvals

Table 2.6-1 lists the permits and approvals that may be required for implementation of the Proposed Project.

Table 2.6-1. Potential Permits and Approvals

Agency	Permit/Approval
Federal	
U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act (ESA) Section 7 Consultation
State Historic Preservation Office (SHPO)	Section 106 of the National Historic Preservation Act (NHPA)
National Marine Fisheries Service (NMFS)	FPA Section 10(j)/10(a) ESA Section 7 Consultation
State	
California Native American Heritage Commission (NAHC)	Tribal Consultation per Assembly Bill (AB) 52
State Water Resources Control Board (SWRCB)	CWA Section 401 Water Quality Certification (WQC)
California Department of Fish and Wildlife (CDFW)	Incidental Take Permit
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement

3.0 Environmental Checklist

1. Project Title:

Relicensing the Don Pedro Hydroelectric Project and issuing an original license for the La Grange Hydroelectric Project.

2. Lead Agency Name and Address:

Turlock Irrigation District

333 East Canal Drive

Turlock, CA 95381

3. Contact Person and Phone Number:

Michael Cooke

(209) 883-8364

4. Project Location:

The Don Pedro Project is located at RM 54.8 on the Tuolumne River in Tuolumne County, approximately 35 miles east of the city of Modesto, California. The La Grange Project is located on the Tuolumne River on the border of Tuolumne and Stanislaus counties, California. The FERC Project Boundary along the Don Pedro Reservoir extends 26 miles upstream. The La Grange head pond extends about 1.5 miles upstream from the La Grange Diversion Dam.

5. Project Sponsor's Name and Address:

Turlock Irrigation District

333 East Canal Drive

Turlock, CA 95381

6. General Plan Designation:

Public/ Various

7. Zoning:

Open Space/ Various

8. Description of Project:

TID, with MID, desire to obtain from FERC a new 50-year license for the Don Pedro Project and an original 50-year license for the La Grange Project, each of which will protect the water supply, flood control, recreation, environmental, and hydropower benefits of the Projects.

9. Surrounding Land Uses and Setting: Briefly describe the project's surroundings:

Lands near the projects are within Tuolumne and Stanislaus counties, California. Primary land uses in the vicinity are single-family residential, non-irrigated farmland, and irrigated farmland. Land use downstream of the projects consists mainly of irrigated agricultural land and related uses as well as urban, suburban, and rural residential uses. Privately owned lands in the vicinity of the projects are subject to the counties' general plans and zoning ordinances and public lands are managed under agency management plans, as discussed below. The downstream extent of the Don Pedro Project Boundary coincides with the upstream extent of the proposed La Grange Project Boundary.

10. Other Public Agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

California Department of Fish and Wildlife (CDFW), California SWRCB

11. Have California Native American tribes traditionally and culturally affiliated with the Project Area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Yes, tribal consultation has been conducted, with no responses received.

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☐	Cultural Resources	☐	Energy
☒	Geology/Soils	☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials
☒	Hydrology / Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☒	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☒	Mandatory Findings of Significance

3.2 Determination

On the basis of this initial evaluation:

☐ I find that the proposed project would not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project may have a significant effect on the environment, and an EIR is required.

☐ I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date:

3.3 Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format are selected.

9. The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and

    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

3.4 Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
AES-1: Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
AES-3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.4.1 Environmental Setting

As discussed in FEIS Section 3.3.6, Land Use and Aesthetics, the Proposed Project is located in the Sierra Nevada foothills region, an area characterized by rolling hills, rural landscapes, native grasslands, and blue oak woodland. Proposed Project features include Don Pedro Reservoir, Don Pedro Dam and spillway, Don Pedro Powerhouse, La Grange Diversion Dam and Headpond, La Grange Powerhouse, and a number of recreational facilities at Don Pedro Reservoir. The Districts own all facilities and lands within the existing Don Pedro FERC Project Boundary, except for 4,802 acres of federal land that BLM administers. BLM's visual resource objective for these lands is to protect and enhance the scenic and visual integrity of the characteristic landscape by maintaining the existing visual quality of the (1) Don Pedro Reservoir/Highway 49 viewshed (Visual Resource Management Class III) and (2) Red Hills Area of Critical Environmental Concern (ACEC) (Visual Resource Management Class II).

Further, from FEIS Section 3.3.6, the downstream extent of the Don Pedro FERC Project Boundary coincides with the upstream extent of the Proposed FERC Project Boundary of the La Grange Project.

The 2-mile-long La Grange Headpond is located in a narrow canyon between Don Pedro Powerhouse and La Grange Diversion Dam, and the upper two-thirds is riverine in nature and widens in the lower third. The entire La Grange Headpond shoreline is undeveloped. Proposed Project infrastructure and the Headpond are visual elements of the La Grange Project, but prominent views of the Proposed Project by the public are not possible because of restricted road access and steep terrain that limits distant views.

According to the FLA for the Don Pedro Project, views of the Don Pedro FERC Project Boundary are scenic due to the natural beauty of the Tuolumne River and Sierra foothills. Because residential and commercial development are not allowed within the Proposed Project Area, vegetation along the reservoir is generally well established and lands within the Proposed Project Area blend into the surrounding landscape. However, Don Pedro Project facilities are structural elements that visually contrast with the surrounding rural or natural landscape (TID/MID 2017).

FEIS Section 3.3.6, *Land Use and Aesthetics – Affected Environment*, states that the Don Pedro FERC Project Boundary also includes land within the management corridor of the Tuolumne River, a designated National Wild and Scenic River. In 1988, the Forest Service approved the Tuolumne Wild and Scenic River Management Plan, which established a 0.25-mile management corridor on each side of the designated river segment from its source to Don Pedro Reservoir for a distance of 83 miles. The parcel description of the corridor overlaps the Don Pedro Project lands at the upstream end of Don Pedro Reservoir. Don Pedro Project land that overlaps the management corridor is within T.1N, R.16E, S1/2NW1/4 and N1/2SW1/4 of section 31.

The following plans contain guidelines or policies related to scenic vistas and visual quality for the Proposed Project Area:

- Stanislaus County General Plan
- Tuolumne County General Plan
- BLM Sierra Resource Management Plan (SRMP) (BLM 2008)
- California Department of Transportation (Caltrans) State Scenic Highway System Map (Caltrans 2025)
- U.S. National Park Service (NPS) Wild & Scenic Rivers (NPS 2025)

3.4.2 Impact Analysis

Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?

There are no designated scenic vistas within the Proposed Project Area. However, there are several scenic resources that provide scenic quality to the area. The Lake Don Pedro Vista Point is located near State Route 120. The Proposed Project operations would not affect the vista point. As noted previously, the Tuolumne River is a Wild and Scenic River that slightly overlaps with the Don Pedro FERC Project Boundary (NPS 2025). Under the Proposed Project's Visual Resources Management Plan, and cooperation with the Tuolumne Wild and Scenic River Management Plan, the scenic quality of the river would be unaffected.

According to the FLA, the Proposed Project does not include changes in the current footprint of the existing powerhouse and switchyard or other facilities. Therefore, effects on aesthetic resources during the term of the new FERC license would be the same as existing conditions (TID/MID 2017).

The proposed modifications and continued O&M of the Proposed Project would not create a substantial adverse effect on a scenic vista. Therefore, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated state scenic highways in the Proposed Project Area, however several highways in the vicinity are eligible for official state scenic highway designation. Tuolumne County's General Plan considers State Highway Route 120 a local scenic route. State Route 120 is also an eligible state scenic highway within the Proposed Don Pedro FERC Project Boundary (California Department of Transportation 2025). Proposed modifications to O&M associated with the Proposed Project are not located within or adjacent to the eligible route. Therefore, the Proposed Project would not substantially damage scenic resources, such as trees, rock outcroppings, or historic viewsheds of State Route 120. State Route 49 runs along the vicinity of the Proposed Project until it connects to State Route 120 in the Proposed Project Area; however, as discussed previously, the Proposed Project would not impact the eligible state scenic highway.

According to the Districts' Visual Quality Study, views from Highway 49/120 include the Don Pedro Reservoir, and BLM, District, and private lands were recorded. The foreground is dominated by the reservoir, shoreline lands constitute the middle ground, and the background consists of steep foothill slopes. Hetch Hetchy pipeline (non-project) can be seen to the east. This view of the reservoir is the one most often seen by people, i.e., typically those traveling to Yosemite National Park (TID/MID 2017).

The Proposed Project would not substantially damage scenic resources, such as trees, rock outcroppings, or historic buildings within eligible viewsheds of State Routes 49 and 120. As a result, **no impact** would occur, and no mitigation is required.

Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

In FEIS Section 3.3.6, *Land Use and Aesthetics – Environmental Effects*, FERC concludes that the Districts' visual quality report adequately characterizes the visual elements associated with the Don Pedro Project. Existing project facilities situated on BLM-administered land occur on BLM land classified by the BLM Visual Resource Management System (VRMS) as Class III. The objective of Class III is to partially retain existing characteristics of the landscape and to guide management activities not to dominate the view of the casual observer. The degree of contrast allowed for Class III areas is moderate, wherein visual elements, presumably those not occurring naturally, attract attention and begin to dominate the existing landscape. When compared to the BLM VRMS Class III objective and the degree of allowable contrast within the Class III area, the few project facilities at Blue Oak Recreation Area and Moccasin Point Recreation Area, situated within BLM land, are not inconsistent with these visual resource management parameters. In addition, there is no evidence that this small number of project facilities are in unacceptable condition or do not conform to the BLM VRMS Class III objectives.

As described previously and in the FLA, there will continue to be visual contrasts with the Proposed Project and the surrounding undeveloped landscape because these are an unavoidable consequence associated with water storage projects and their related facilities, including those developed for

recreation. However, because BLM's Visual Resource Objective maps were developed with the Don Pedro Project facilities in place, the continued presence of these facilities, though at times presenting a visual contrast with surrounding natural areas, is consistent with the BLM's objective of retaining the existing character of the landscape (TID/MID 2017).

As discussed in FEIS Section 3.3.6, *Land Use and Aesthetics – Environmental Effects*, proposed new construction, such as the whitewater boating take-out facility upstream of Ward's Ferry Bridge and the extension of riprap on the upstream face of Don Pedro Dam could affect the existing visual appearance at the project, including on BLM-administered land. However, the proposed extension of riprap, to limit the potential for erosion if the reservoir is drawn down lower than the current minimum elevation of 600-ft, would occur on the Districts' land. Additionally, the riprap extension would increase riprap on the upstream face of Don Pedro Dam from the current elevation of 585-ft down to elevation 535-ft. Furthermore, the Districts' proposed lower minimum pool elevation for the Don Pedro Reservoir of 550-ft would occur infrequently per Article 403; therefore, the likelihood that the extension of riprap would have a significant impact on visual quality of the project is minimal, and any potential impacts would occur infrequently.

According to the FLA, under current and historic operations, the Don Pedro Reservoir levels fluctuate across a broad band, which many viewers have grown accustomed to. Fluctuations and reservoir levels proposed for the new license and their effects on BLM aesthetic resources will be similar to current operations (TID/MID 2017).

Proposed modifications to operation and routine maintenance of the Proposed Project would include some minor ground-disturbing activities, which may result in the removal of vegetation, but would generally be consistent with existing operations and would not have a substantial adverse effect on a scenic vista. The Proposed Project is located within the SRMP; therefore, any vegetation removal planned on lands within the SRMP would be coordinated with the BLM through the Districts' Terrestrial Resources Management Plan (TRMP) and would not result in a substantial adverse effect on a scenic vista.

FERC specifies in FEIS Section 3.3.6, *Land Use and Aesthetics – Environmental Effects*, that BLM 4(e) Condition No. 18 consists of the Districts developing and implementing a Visual Resources Management Plan on BLM lands in the Proposed Project Area within one year of license issuance. Implementation of the plan would ensure the visual quality of the environment is not degraded by the Proposed Project.

The proposed modifications and O&M of existing facilities within the Proposed Project would not constitute a change to the visual setting. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of public views in their respective areas or their surroundings. As a result, **no impact** would occur, and no mitigation is required.

Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Any new sources of light associated with the Proposed Project would be in kind with existing facilities or recreational areas and would not cause substantial light or glare. Thus, the Proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Therefore, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

3.5 Agriculture and Forestry Resources

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. ***Would the project:***				
AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
AG-4: Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.5.1 Environmental Setting

As discussed in FEIS Section 3.3.6, Land Use and Aesthetics, the Proposed Project is located in the Sierra Nevada foothills region, an area characterized by rolling hills, rural landscapes, native grasslands, and blue oak woodland. Project features include Don Pedro Reservoir, Don Pedro Dam and spillway, Don Pedro Powerhouse, La Grange Diversion Dam and Headpond, La Grange Powerhouse, and multiple recreational facilities at Don Pedro Reservoir. The Districts own all facilities and lands within the existing Don Pedro FERC Project Boundary, except for 4,802 acres of federal land that BLM administers. Land within the Proposed La Grange FERC Project Boundary consists of MID-owned land, public land managed by BLM, and a single landowner, Coleman Ranch.

Lands near the Proposed Project are within Tuolumne and Stanislaus Counties. Primary land uses in the vicinity are single-family residential, non-irrigated farmland, and irrigated farmland. Land uses downstream of the Proposed Project consist mainly of irrigated agricultural land and related uses, as well as urban, suburban, and rural residential uses.

3.5.2 Impact Analysis

Impact AG-1: Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

No lands designated as Prime Farmland, unique Farmland, or Farmland of Statewide Importance are found within the Proposed Project (California Department of Conservation 2020, 2022a). Therefore, the proposed activities/actions included in the Proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. As a result, **no impact** would occur, and no mitigation is required.

Impact AG-2: Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Various Williamson Act parcels surround the Proposed Project. However, the Proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Operations of the Proposed Project would generally be consistent with existing conditions. Therefore, no agricultural land or Williamson Act parcels within the Proposed Project Area and vicinity would be affected by the Proposed Project. As a result, **no impact** would occur, and no mitigation is required.

Impact AG-3: Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The Proposed Project Area does not include lands zoned for forest, timberland, or timberland production. Additionally, the Proposed Project is confined to existing facilities and features in the FERC Project Boundary, none of which are zoned for timberland. Therefore, the Proposed Project would not conflict with the existing zoning or cause rezoning of forest land, timberland, or timberland zoned timberland production. As a result, **no impact** would occur, and no mitigation is required.

Impact AG-4: Would the project result in the loss of forest land or conversion of forest land to non-forest use?

As discussed previously, no lands zoned for forest, timberland, or timberland production exist within the Proposed Project Area. Therefore, the Proposed Project would not convert forest land to non-forest use. As a result, **no impact** would occur, and no mitigation is required.

Impact AG-5: Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

See responses to Impact AG-1, AG-2, AG-3, and AG-4 above. Activities associated with the Proposed Project would be limited to minor construction activities, routine maintenance and operations of existing facilities. Implementation of the proposed modifications and management plans would not result in the conversion of farmland to non-agricultural use or forest land to non-forest use. No other changes in the existing environment as a result of the Proposed Project would lead to the conversion of farmland or forest land. Therefore, **no impact** would occur, and no mitigation is required.

3.6 Air Quality

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management District or air pollution control District may be relied upon to make the following determinations. ***Would the project:***				
AQ-1: Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
AQ-3: Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
AQ-4: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

3.6.1 Environmental Setting

Impacts to Air Quality were not analyzed in the FEIS. Therefore, this section evaluates whether the Proposed Project could have significant impacts on air quality. The Proposed Project is located in Tuolumne and Stanislaus Counties, in the Mountain Counties Air Basin (MCAB) and San Joaquin Valley Air Basin (SJVAB). In Tuolumne and Stanislaus counties, local air quality is regulated by the Tuolumne County Air Pollution Control District (TCAPCD) and San Joaquin Valley Air Pollution Control District (SJVAPCD), respectively.

The Federal Clean Air Act is the primary federal law that governs air quality, and the California Clean Air Act is its companion state law. These laws and regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) set standards for the concentration of pollutants in the air. At the federal level, the Clean Air Act requires the U.S. EPA to set National Ambient Air Quality Standards (NAAQS). NAAQS and California Ambient Air Quality Standards (CAAQS) have been established for six transportation-related criteria air pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM) which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM10) and particles of 2.5 micrometers and smaller (PM2.5), and sulfur dioxide (SO2). In addition, national and state standards exist for lead (Pb), but lead is not considered a transportation-related pollutant. In California,

sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride are also regulated (CARB 2024a; CARB 2024b)

The Clean Air Act requires areas not in attainment of the NAAQS to develop an emission reduction strategy that will bring the area into attainment in a timely manner. Tuolumne County within the MCAB is currently designated as non-attainment for the state 1-hour ozone standard and the state/federal 8-hour ozone standard and is listed as unclassified or attainment with respect to all other ambient air quality standards. SJVAB has been classified federally as extreme non-attainment for ozone maintenance – serious for PM10, and non-attainment – moderate for PM 2.5. SJVAB has been classified by the state as non-attainment for ozone, attainment for PM10, and non-attainment for PM 2.5 (CARB 2025).

The TCAPCD's air quality rules and regulations are incorporated into the California SIP, which outlines the state's strategy for achieving and maintaining federal air quality standards (USEPA 2023). The SJVAPCD has prepared air quality plans for pollutants in nonattainment. The most recent versions are the 2007 PM10 Maintenance Plan, the 2024 PM2.5 (fine particulate matter) Plan, and the 2022 Ozone Plan. Each plan involves strategies and measures to reduce emissions to attain state and federal ambient air quality standards and implement the state air quality program through coordination with local planning agencies. A majority of the strategies and measures in these plans apply to generation of new stationary sources, personal vehicle and residences, and other standards that are not relevant to the Proposed Project.

The applicable standards from the local air quality plans are in Regulation VIII (Fugitive PM10 Prohibitions). The Regulation VIII rules were adopted in November 2001 and subsequently amended in 2004 to incorporate more stringent requirements. These rules reduce fugitive dust from construction sites, earthmoving activities, parking and staging areas, open areas, agricultural operations, carryout and trackout, paved and unpaved roads, and material storage sites. Key requirements include implementing dust suppression measures, such as regular watering of disturbed areas, limiting vehicle speeds on unpaved surfaces, and promptly cleaning up track-out materials on paved roads.

The SJVAPCD has also generated a list of clean air measures to reduce air quality impacts from development projects (SJVAPCD 2022), including using electric on- and off-road vehicles and cleanest available construction equipment. These measures are not requirements; however, they are suggestions to incorporate into a project.

Additionally, the SJVAPCD rule 4102, known as the Public Nuisance rule, prohibits the discharge of any air contaminants or other materials that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. This rule is designed to prevent air pollution from becoming a public nuisance (SJVAPCD 1992).

Air pollutant emissions from individual projects are evaluated against the significance thresholds for construction and operation. Table 3.6-1 presents the thresholds of significance for construction and operation for SJVAPCD and TCAPCD.

Table 3.6-1: Significance Thresholds

Pollutant/Precursor	SJVAPCD Standard Emissions, tons per year (construction and operations)	TCAPCD Standard Emissions, tons per year (construction and operations)
CO	100	100
NOx	10	100
ROG	10	100
SOx	27	N/A

PM10	15	100
PM2.5	15	N/A

Source:
SJVAPCD 2015. https://www.valleyair.org/media/m2ecyxiw/1-cms-format-ceqa-air-quality-thresholds-of-significance-criteria-pollutants.pdf
TCAPCD n.d. https://www.tuolumnecounty.ca.gov/DocumentCenter/View/1072/TCAPCD_Significance_Thresholds__2_?bidId=

3.6.2 Impact Analysis

Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

As discussed in the Environmental Setting section above, the SJVAPCD has an air quality plan for Ozone, PM10, and PM2.5. If a project is consistent with the goals and assumptions in the air quality plans, then it will not conflict with the region's ability to attain the federal and state air quality standards. The Proposed Project would not create a permanent stationary source of air contaminants, include a land use that would generate a substantial number of trips from mobile sources, or involve the use of high-ROG architectural coatings or solvents during operations and maintenance activities. As the Proposed Project would not generate a new stationary source and is not a large-scale development project, the applicable rules from the local air quality plans are Regulation VIII (Fugitive PM10 Prohibitions), which are rules to reduce fugitive dust from construction sites. The Proposed Project would be in compliance with this regulation by implementing dust suppression measures, such as regular watering of disturbed areas, limiting vehicle speeds on unpaved surfaces, and promptly cleaning up track-out materials on paved roads. The Proposed Project would only include only minor construction activities and would not include any major ground-disturbing activities that would exceed air quality significance thresholds. Due to the limited construction involved, the Proposed Project would not generate emissions that would violate local, state, or federal standards for criteria air pollutants.

Operational emissions would include a continuation of existing operational, maintenance, and inspection emissions as well as an increase in vehicle emissions from more visitors due to the recreational improvements. The Proposed Project would not significantly increase the service capacity of recreational areas or other facilities, and a negligible increase in vehicle trips during operations would be anticipated. Therefore, the Proposed Project would not conflict with or obstruct implementation of applicable air quality plans. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact AQ-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

As described in Chapter 2, *Project Description*, of this document, the scope of the Proposed Project entails minor construction activities. For the Don Pedro Project, the FERC Staff Alternative with Mandatory Conditions would not require any generation-related project facilities to be added to the Proposed Project. As described in the FEIS, the Districts would continue operating and maintaining the existing recreation facilities associated with the Don Pedro Project with certain enhancements. The Districts propose to include two in-river infiltration galleries (IG-1 and IG-2) to the project, one of which (IG-1) is already constructed and operational, and the other (IG-2) would only be constructed if required through the FERC license. For the La Grange Project, the FERC Staff Alternative with Mandatory Conditions would also not require any generation-related project facilities to be added to the Proposed Project.

As discussed above, the MCAB is currently designated as non-attainment for ozone, and the SJVAB is designated as non-attainment for ozone and PM2.5. Construction for the Proposed Project includes improvements at the existing facilities, including the Shoreline Trail, and would be limited in scope with minor ground-disturbing activities. Construction-related sources of emission include construction equipment, vehicle usage, and fugitive dust. The Proposed Project would implement dust suppression measures, such as regular watering of disturbed areas, limit vehicle speeds on unpaved surfaces, and promptly clean up track-out materials on paved roads, which would comply with Regulation VIII, discussed above. Because the Proposed Project construction activities, and accordingly, construction-related emissions, would be minor, they have been evaluated qualitatively rather than quantitatively. Given the relatively minor scale of construction for this Project, any emissions of criteria air pollutants are anticipated to be well below the thresholds of significance (Table 3.6-1) of both the SJVAPCD and TCAPCD. Therefore, construction activities related to the Proposed Project would not have a significant impact on air quality.

For both the Don Pedro Project and the La Grange Project, operations and maintenance of the facilities would not change significantly under the Proposed Project. Existing operations and maintenance activities that could contribute to generation of criteria air pollutants include routine vehicle traffic for inspection and repairs, as well as to carry out the resource management plans and recreational visitors. The scale and frequency of these vehicle trips would not significantly contribute to criteria air pollutants in Stanislaus and Tuolumne Counties, so operations and maintenance activities related to the Proposed Project would not have a significant impact on generation of criteria air pollutants. The Proposed Project emissions would be well below the thresholds of significance (Table 3.6-1) of both the SJVAPCD and TCAPCD. Therefore, the Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are defined as populations that are particularly vulnerable to the effects of air pollution, including children, the elderly, individuals with pre-existing health conditions, and facilities such as schools, hospitals, and residential care homes. Under CEQA, the potential for a project to expose sensitive receptors to substantial pollutant concentrations must be evaluated to determine whether significant air quality impacts would occur.

There are no sensitive receptors within a ¼ mile buffer of the existing Proposed Project Area. Furthermore, since all routine maintenance activities would be short-term (days) compared with long-term exposure criteria (years), no significant exposures to engine exhaust or fugitive dust would occur. Therefore, the Proposed Project would not result in exposure of sensitive receptors to substantial pollutant concentrations. As a result, **no impact** would occur, and no mitigation is required.

Impact AQ-4: Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

As discussed above, the MCAB is in attainment for PM2.5 and PM10, and the SJVAB is in attainment for PM2.5. Construction-related sources of emission include construction equipment, vehicle usage, and fugitive dust. The Proposed Project would implement dust suppression measures, such as regular watering of disturbed areas, limit vehicle speeds on unpaved surfaces, and promptly clean up track-out materials on paved roads, which would comply with Regulation VIII, discussed above. Given the relatively minor scale of construction activities for the Proposed Project, any emissions of criteria air pollutants would be well below the thresholds of significance (Table 3.6-1) of both the SJVAPCD and TCAPCD.

Therefore, construction activities related to the Proposed Project would not have a significant impact on air quality.

The Proposed Project does not include any land uses (for example, livestock operations, refineries, wastewater treatment plants, landfills) that would generate any substantial amounts of long-term, odorous emissions. Short-term routine maintenance activities would generate odors during maintenance vehicle or equipment operation. Although some odors may be generated during construction activities (e.g., diesel exhaust, asphalt paving), these emissions would be temporary, localized, and would dissipate rapidly. The SJVAPCD public nuisance rule prohibits discharging quantities of material "which cause injury, detriment, nuisance or annoyance to any considerable number of persons" (SJVAPCD 1992). Because the Proposed Project Area does not contain sensitive receptors or a substantial residential or public population, any odor emissions generated would not affect a substantial number of people. Therefore, the Proposed Project would not expose a substantial number of people to other emissions or objectionable odors. As a result, the Proposed Project would have a **less than significant**, and no mitigation is required.

3.7 Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
BIO-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 the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
BIO-3: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☒	☐
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

3.7.1 Environmental Setting

Fisheries

The Proposed FERC Project Boundary encompasses the Don Pedro Project and La Grange Project, which includes both lentic (i.e., still) and lotic (i.e., flowing) aquatic habitat including both reservoirs (Don Pedro Reservoir and La Grange Headpond), the mainstem Tuolumne River upstream of Don Pedro Reservoir to approximately 0.76 river miles upstream of the confluence with Turnback Creek, the mainstem Tuolumne River downstream from Don Pedro Dam to La Grange Headpond, Big Creek, Twin Gulch, and approximately 0.12 river miles of the lower Tuolumne River as it flows out of the La Grange Dam (RM 52.2).

Habitat within the Proposed Project Area includes impoundments with no fish passage at La Grange Diversion Dam and at Don Pedro Dam. Therefore, La Grange Diversion Dam is the upstream extent to anadromy. Aquatic habitat upstream of Don Pedro Reservoir is characterized as high gradient and much of the river is laterally constrained by the presence of bedrock whereas the lower Tuolumne River downstream of La Grange Diversion Dam is characterized by gravel bed (FERC 2020). Riverine habitat between Don Pedro Dam and Twin Gulch is characterized as boulder dominated habitat lacking complexity (HDR 2013). Downstream of the Twin Gulch confluence, water velocity slow and aquatic habitat is lentic with low habitat complexity (HDR 2013). The lower Tuolumne River downstream of La Grange Diversion Dam is characterized as moderately sloped with gravel substrate (HDR 2013).

Federal and State-listed Fish Species

A IPaC (USFWS 2025) query conducted on February 10, 2025, indicated that no federally threatened or endangered fish species nor their Designated Critical Habitat under the jurisdiction of the USFWS occur within the Proposed Project Area (see Appendix A). However, a query of the NOAA online resources (i.e., Species and Habitat App, NMFS ESA Critical Habitat Maper) indicated that Essential Fish Habitat for Chinook salmon and Critical Habitat for California Central Valley steelhead occurs within the Proposed Project Area. All anadromous fish species that have the potential to occur within the Proposed Project Area are managed under the National Marine Fisheries Service (NMFS).

Individual California Central Valley steelhead have been observed in the lower Tuolumne River; however, a population has not been documented (Zimmerman et al. 2009, and Pearse and Garza 2015) and the number of steelhead utilizing the lower Tuolumne River is considered low (FERC 2020). In 2017, CDFW (2017) stated there is no empirical evidence of a self-sustaining “run” or population of steelhead in the Tuolumne River, which is consistent with reported low abundance of adult *O. mykiss*, near absence of steelhead from otolith analyses (Zimmerman et al. 2009), and the conclusion of Pearse and Garza (2015) that few anadromous salmonids exist in the lower Tuolumne River. FERC (2020) also stated that between

2009 and 2018, only seven O. mykiss greater than 16 inches in length, which CDFW assumed de facto are steelhead, were detected in the lower Tuolumne River at the seasonal fish counting weir operated by MID and TID at RM 24.5. From 2019 through 2023, four additional *O. mykiss* greater than 16 inches in length were observed. Over the 15-year period between 2009 and 2023, this equates to an average of less than one 16-inch or larger *O. mykiss* observed at the weir per year. TRTAC (2025) provides annual reports submitted to FERC which include results of weir monitoring and other efforts to monitor *O. mykiss* in the lower Tuolumne River (TRTAC 2025).

The CV spring-run Chinook salmon, a federally endangered and state threatened species may opportunistically enter the Tuolumne River. The San Joaquin River Restoration Program (SJRRP) nonessential experimental population spring-run Chinook have been documented within the lower Tuolumne River (Clemento and Garza 2023; Gutierrez et al. 2024)[2]. However, these spring-run Chinook salmon are considered part of the ESA Section 10(j) non-essential experimental population and do not carry the same regulatory protection as federally protected species. Coded wire tags recaptured during carcass surveys indicated that 18 individuals in 2021 and 4 individuals in 2022 recovered in the lower Tuolumne River were of SJRRP – Salmon Conservation and Research Facility origin (Gutierrez et al. 2024). In the FEIS (FERC 2020), spring-run Chinook salmon and EFH were discounted from further analysis due to their status. The majority of Chinook salmon present within the Tuolumne River are considered fall run/late fall-run Chinook salmon, which utilize the lower Tuolumne River for spawning and rearing (Gutierrez et al. 2024).

The Southern Distinct Population Segment (DPS) of North American green sturgeon (*Acipenser medirostris*), a federally threatened species, is not expected to occur within the Proposed Project Area and the closest record of occurrence is within the Stanislaus River (Martarano 2018). There are no reliable, documented reports of green sturgeon Southern DPS in the Tuolumne River or that historically occurred in the Tuolumne River. Designated critical habitat for green Sturgeon Southern DPS does not occur in the river.

Additionally, there are no reliable, documented reports of the SR winter-run Chinook salmon ESU in the Tuolumne River or that it historically occurred in the Tuolumne River. Designated critical habitat for the ESU does not occur in the river.

Special Status Fish Species

No special-status fish species occur within the Proposed Project Area; however, hardhead (*Mylopharadon conocephalus*), Red Hills roach (*Lavinia symmetricus* ssp.), and Sacramento-San Joaquin roach (*L. symmetricus*) are known to occur in the watershed including both upstream and downstream of Don Pedro Reservoir (FERC 2020). CNDDB data query confirmed that hardhead was captured as recently as 2015 downstream of La Grange Diversion Dam; however, this record is approximately 10 years old (CNDDB 2025).

Reservoir Fisheries

Don Pedro Reservoir is managed as a put-and-take fishery for coldwater fish species and black bass (*Micropterus* spp.) fishery (FERC 2020). Various fish species have been historically stocked including Kokanee (*O. nerka*), Chinook salmon, brook trout (*Salvelinus fontinalis*), rainbow trout, Eagle Lake trout (*O. mykiss aquilarum*), and black bass (HDR 2013 as cited in FERC 2020). Additional species include threadfin shad (*Dorosoma petenense*), common carp (*Cyprinus carpio*), golden shiner (*Notemigonus chrysoleucas*), Sacramento sucker (*Catostomus occidentalis*), white catfish (*Ameiurus catus*), channel

[2] Several hundred Chinook salmon were found in the La Grange Diversion plunge pool in May 2025. The Districts have been coordinating with CDFW and NMFS regarding these fish.

catfish (*Ictalurus punctatus*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*M. dolomieu*), spotted bass (*M. punctatus*), green sunfish (*Lepomis cyanellus*), bluegill sunfish (*Lepomis macrochirus*), and crappie (*Pomoxis* spp.).

Riverine Fisheries

The lower Tuolumne River downstream of La Grange Diversion Dam provides habitat for various fish species, both native and non-native. Migratory species including fall-run Chinook salmon, Pacific Lamprey (*Entosphenus tridentatus*), Sacramento splittail (*Pogonichthys macrolepidotus*), *O. mykiss*, and striped bass (*Morone saxatilis*) also utilize the lower Tuolumne River for spawning and/or rearing habitat (FERC 2020). Fall-run Chinook salmon spawn in the upper reaches of the lower Tuolumne River as far upstream as RM 52 (FERC 2020), which is located approximately 0.2 river miles downstream of the La Grange Diversion Dam.

Terrestrial Resources

The Don Pedro Project is situated in the foothills of the west slope of California's Sierra Nevada. The Proposed Project Area encompasses over 5,538 acres of terrestrial habitats, which fall within two CalVeg mapping zones, Central Valley and South Sierra. The majority is within the Central Valley zone and is dominated by three vegetation alliances: Blue Oak, Chamise, and Annual Grasses and Forbs. There are also large areas of Gray Pine, and smaller inclusions of Lower Montane Mixed Chaparral and Interior Live Oak (CDFW 2025); see Appendix A, *Biological Resources Information.*

The Willow Creek Arm, Hatch Creek Arm, and the Don Pedro Bar of the Don Pedro Reservoir support dense stands of the Chamise alliance, a chaparral shrub alliance dominated by a single species. The Tuolumne Arm and Wood's Creek Arm support a mixture of alliances, including Lower Montane Mixed Chaparral, Chamise, Interior Live Oak, Gray Pine, Annual Grasses and Forbs and a few small areas of Riparian Mixed Hardwoods. Wetland and riparian habitats are uncommon; the bulk of Don Pedro Reservoir shoreline is steep-sided, with upland plant communities adjacent to the reservoir margin. Areas below the normal maximum surface elevation that are periodically exposed are sparsely vegetated or bare.

Although the majority of the Proposed Project Area is dominated by the Blue Oak and Annual Grasses and Forbs alliances (i.e., open habitats dominated by non-native grasses), lands near Don Pedro Reservoir consists of two distinct morphological sections. The narrow, upstream portion of the reservoir occupies the steep-sided, rocky and winding Tuolumne River canyon. The downstream portion of the reservoir fills the gentler-sloped canyon where the Tuolumne River emerges into the low Sierra foothills and then into the wider Tuolumne River valley. The foothills area in this portion of the watershed is dominated by gently rolling grasslands and agricultural areas.

Don Pedro Reservoir itself is characterized by perennial, deep, slow-moving, open water and steep poorly vegetated banks. Wetland and riparian habitats are limited to shallow areas and areas of emergent vegetation are primarily associated with tributary mouths. Fishing is a common recreation activity; CDFW manages the Don Pedro Reservoir fishery as a put-and-grow resource with substantial stocking.

The California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationship model predicts wildlife presence and use based on habitat type, age class, size class, canopy closure or cover, and occurrence of specific habitat elements (e.g., natural or manmade features such as cliffs, springs, or transmission lines). For the habitat types and elements identified within the Proposed Project Area, a total of 339 terrestrial vertebrate wildlife species are predicted to have the potential to occur (deBecker and Sweet 2005; CDFG 2008).

The Proposed Project Area overlaps with small portions of the BLM's Red Hills ACEC. The Red Hills ACEC is characterized by serpentine-based soils which support a unique assemblage of plant species, an abundant insect population, multiple mammals, and 88 species of documented birds (BLM 2025). Project O&M does not occur in the Red Hills ACEC, although the Districts have proposed some monitoring and protective measures in the area.

Noxious Weeds

Noxious weeds are common throughout the Proposed Project Area and vicinity, occurring in most habitat types. Within the Proposed Project Area 12 noxious weeds are known to occur; the most widespread and common weed is Italian thistle (*Carduus pychnocephalus*), which occurs in all habitat types, including the gabbro soils of the Red Hills ACEC. Bermudagrass (*Cynodon dactylon*) is also common, occurring in a discontinuous band around Don Pedro Reservoir just below the normal maximum surface elevation and other areas. Other frequently located weeds included medusahead grass (*Elymus caput-medusae*), Klamathweed (*Hypericum perforatum*) and yellow starthistle (*Centaurea solstitialis*). Fewer occurrences of barbed goatgrass (*Aegilops triuncialis*), tree-of-heaven (*Ailanthus altissima*), smooth distaff thistle (*Carthamus criticus*), Russian thistle (*Salsola tragus*), and puncturevine (*Tribulus terrestris*) are present, with just one occurrence each of Tamarisk (*Tamarix* sp.) and Giant reed (*Arundo donax*) identified within the Proposed Project Area. While many of these weeds are widespread or even ubiquitous in the vicinity surrounding the Proposed Project, some noxious weeds or treatments of noxious weeds may have an effect on federal or state-listed plants, special-status plants, or special habitats.

Wetland and Riparian Habitats

Wetland and riparian habitats are uncommon within the Proposed Project Area. Most of Don Pedro Reservoir is steep-sided, with upland plant communities directly adjacent to the reservoir margin. Areas below the normal maximum surface elevation that are periodically exposed are sparsely vegetated or bare. National Wetland Inventory mapping identifies a total of 82.4 acres of wetland and riparian habitats within the Proposed Project Area (USFWS 1987); see Appendix A, *Biological Resources Information*. Field surveys indicate that, in general, these wetland and riparian areas are present as narrow margins to steep ephemeral streams which drain to the Don Pedro Reservoir. The majority of the wetland habitat was observed outside the Proposed Project Area and consisted primarily of patches of riparian vegetation along intermittent or ephemeral drainages to Don Pedro Reservoir. In each of these drainages, wetland conditions began at or above the reservoir normal maximum surface elevation and continued upstream (often beyond the Proposed Project Area) where conditions allowed. Wetland habitat below reservoir normal maximum surface elevation was not observed except for open water represented by the Don Pedro Reservoir itself. In general, most wetlands were dominated by bedrock or cobble and boulder substrates, which do not support hydric soils, but do allow the development of hydrophytic vegetation. In addition, other indicators of ground saturation during some part of the growing season, such as watermarks, were often evident. Stressors to riparian vegetation primarily included noxious weed and cattle grazing; grazed areas support greater diversity of noxious and other non-native plant occurrences than non-grazed locations.

The 2012 examination of select habitats hydrologically connected with the Don Pedro Reservoir and supporting wetland or riparian vegetation were assessed using the California Rapid Assessment Methodology. Scores ranged from 97 at Moccasin Creek with fully developed riparian vegetation in unconfined channel on a perennial stream, to 59 at Drainage #7, occurring within confined bedrock banks and with limited potential to support vegetation.

Wetlands at the La Grange Project are primarily confined to narrow bands or small isolated wetlands adjacent to the Tuolumne River. The Districts evaluated wetlands within the La Grange Project by reviewing the USFWS's National Wetlands Inventory maps to identify potential wetlands within a 1-mile

buffer around the Proposed Project Area. Excluding the La Grange Headpond, there were only 0.09 acres of palustrine wetlands within the La Grange Project Boundary.

Riparian areas on the Tuolumne River below Don Pedro Dam and La Grange Diversion Dam occur within a confined channel and a restricted floodplain. Native riparian vegetation occupies approximately 2,700 acres as a nearly continuous but variable-width corridor along the lower Tuolumne River, with limited natural recruitment of cottonwood, and increases in riparian areas largely from restoration projects.

Federal and State-listed Plants and Special-status Plants[3]

No plant species listed as federally endangered are known to occur, and no critical habitat for plants is present within the Proposed Project Area.

Two federal and state listed plants and eight special-status plants are known to occur within the Proposed Project Area, the majority of which are located on federal lands administered by the BLM, and many of these are within the BLM's Red Hill's ACEC. Two plants which are listed as federally threatened, California vervain (*Verbena californica*) and Layne's ragwort (*Packera layneae*) are also state listed as threatened and rare, respectively. These and five special-status plants, including Red Hills onion (*Allium tuolumnense*), Congdon's lomatium (*Lomatium congdonii*), shaggy-haired lupine (*Lupinus spectabilis*), tripod buckwheat (*Eriogonum tripodum*), and Red Hills ragwort (*Packaera clevelandii*) are adapted to specific soils and occur in the Red Hills ACEC. Other special-status species are more prevalent, with the most abundant being Mariposa clarkia (*Clarkia biloba ssp. australis*), Red Hills soaproot (*Chlorogalum grandiflorum*), and Mariposa cryptantha (*Cryptantha mariposae*). All special-status plant species are listed as BLM sensitive and California Rare Plant Ranking 1B, with the exception of tripod buckwheat which does not have state listing status.

Federal and State-listed Plants and Special-status Wildlife

No wildlife species listed as federally endangered are known to occur, and no critical habitat for wildlife is present within the Proposed Project Area.

Two species listed as federally threatened, valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) and Northwestern pond turtle (*Actinemys* [*Emys*] [formerly *Clemmys*] *marmorata*), are known to occur in the Proposed Project Area. Surveys in 2012 identified both VELB and Northwestern pond turtles within the Proposed Project Area. VELB exit holes in 14 elderberry host plants, with an additional 59 elderberry shrubs which may host future occurrences of VELB. Northwestern pond turtles were observed at several basking locations and incidentally during other study efforts.

One species, the San Joaquin kit fox (*Vulpes macrotis mutica*), is federally and state listed as endangered, and two species, California red-legged frog (CRLF) (*Rana draytonii*) and California tiger salamander (CTS) (*Ambystoma californiense*) (Central Valley DPS), are listed as federally threatened. Neither is known to occur in the Proposed Project Area but have been included in mitigation measures because habitat is present.

One species, bald eagle (*Haliaeetus leucocephalus*), is listed as state threatened (also listed as special-status) is known occur in the Proposed Project Area. Bald eagles are known to nest at up to ten different

[3] No new occurrences of plants or wildlife were identified within the FERC Project Boundary in updated Information for Planning and Consultation (USFWS 2025), California Natural Diversity Database (CDFW 2025b), or California Native Plant Society Rare Plant Inventory (CNPS 2025) queries; queries are included in Appendix A, *Biological Resources Information*.

locations along the shorelines of the Don Pedro Reservoir, several of which are known to have produced nestlings, at least one of which produced fledglings in 2013.

One species, golden eagle (*Aquila chrysaetos*), is state listed as fully protected and is known to occur in the vicinity of the Proposed Project, although no nests have been identified within the Proposed Project Area.

Special-status wildlife known to occur within the Proposed Project Area include osprey (*Pandion haliaetus*) and special-status bats. Nine species of special-status bats listed by the BLM (Sensitive) or CDFW (Species of Special Concern) have been documented to occur or potentially occur in the vicinity of the Proposed Project with both night roosts and day roosts known to occur at Project facilities.

Special-Status Invertebrates

Crotch's bumble bee (*Bombus crotchii*) and Monarch butterfly (*Danaus plexipus*) are the two special-status invertebrates with the potential to occur in the Proposed Project Area. Crotch's bumble bee became a candidate for listing under the California Endangered Species Act on June 18, 2019. Therefore, it is unlawful to injure, harass, or take any Crotch's bumble bee individuals without an Incidental Take Permit issued by the California Department of Fish and Wildlife. The U.S. Fish and Wildlife Service published a proposal to list the Monarch butterfly as a threatened species under the ESA on December 12, 2024. As of the writing of this document, the 90-day public comment period is still open at the end of which the Service will make a final decision on the species' status.

Crotch's bumble bee may be found throughout the Proposed Project Area; however, open shrub, meadow, and wetland habitats with an abundance of flowering plants provide optimal habitat for this species. Colonies typically nest in underground cavities such as small mammal burrows but can also use above-ground features including hollow logs, brush piles, and thatched grass. The nesting season typically begins in mid-March and ends by October (Forest Service 2017). Potentially significant impacts on Crotch's bumble bee, if it is present, include loss of foraging plants, loss of nest habitat, changes in foraging behavior, nest abandonment, reduced nest success, or direct mortality.

Monarch butterfly and its host plant may be found within the Proposed Project Area. Monarchs rely on milkweed plants (*Asclepias* spp.) for their primary foraging plant and obligate larval host plant. Eggs are laid on milkweed across a variety of habitats, such as fields, roadside areas, open areas, wet areas, or urban gardens. Adults will feed on nectar from many flowers during breeding and migration. Site characteristics for successful reproduction are poorly understood in the western population, though it is assumed that suitable sites include high humidity, dappled sunlight, a nearby water source, and protection from high winds, storms, and fluctuating temperatures (Xerces Society 2018). Potentially significant impacts to Monarch butterfly, if it is present, include loss of foraging and larval host plants and direct mortality of eggs on destroyed host plants.

3.7.2 Impact Analysis

Impact BIO-1: 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Fisheries

A search of the California Natural Diversity Database (CNDDB) for the Proposed Project Area was conducted, and no fishes are listed by the California Endangered Species Act (CESA) (CNDDB 2025). However, on June 19, 2024, the California Fish and Game Commission voted to approve White Sturgeon as a candidate species for listing under CESA (CDFW 2025). Individual white sturgeon have been documented in the lower Tuolumne River, but no known occurrences are within the Proposed Project Area (Diviney and Dahl 2024). As described previously, CNDDB (2025) also lists Red Hills roach, Sacramento-San Joaquin roach, and hardhead as special status species.

An IPaC (USFWS 2025) query conducted on February 10, 2025, indicated that no federally threatened or endangered fish species nor their Designated Critical Habitat under the jurisdiction of the USFWS occur within the Proposed Project Area.

The FEIS (FERC 2020) analyzed the potential impacts of the FERC Staff Alternative with Mandatory Conditions (i.e., Proposed Project) on fisheries resources downstream of the Don Pedro Dam in the lower Tuolumne River. In the FEIS (FERC 2020), model simulations were run to determine impacts based on flow measures described in the Proposed Project. Specifically, the Proposed Project would implement the operation of two in-river infiltration galleries (RM 25.9, which is outside the FERC Project Boundary) to divert water, staff-recommended minimum flows, floodplain rearing pulse flows, spring outmigration pulses flows, fall pulse flows, gravel mobilization flows, and boating flows. Specific conditions were included in the Proposed Project to benefit fisheries resources (FERC 2020).

In the FEIS (FERC 2020), ground disturbances during any construction or maintenance activities were identified as potential impacts to water quality and fisheries. Implementation of Best Management Practices (BMPs) under the soil erosion and sediment control plan would reduce the likelihood for negative water quality impacts on receiving waters (FERC 2020) and ultimately the fisheries resources in the lower Tuolumne River. Potential impacts from hazardous materials are also considered but mitigated through the Spill Prevention Control and Countermeasure Management Plan (FERC 2020). Temporary turbidity increases may result from various flow releases (e.g., Coarse Sediment Management Program, Gravel Mobilization Flows) under the Proposed Project; however, the timing of releases will be during periods of naturally occurring high flow events such as seasonal precipitation and therefore are not expected to cause adverse impacts to fish (FERC 2020). Impacts from flow management could also result in stranding and mortality; therefore, ramping rates were designated in the FEIS (FERC 2020) to mitigate stranding. Degraded water quality including reduced dissolved oxygen concentration occurs periodically, but water quality impacts are addressed during water quality monitoring (FERC 2020). Water temperatures in the lower Tuolumne River within the Proposed Project Area are controlled by water temperature in the reservoir that is released through the penstocks at the Don Pedro Dam. Therefore, water temperature impacts in the Proposed Project Area are not expected. Water temperatures are relatively stable but do increase longitudinally downstream typically in April through September (FERC 2020); however, the downstream Project Boundary is within 0.12 miles of the La Grange Dam and substantial temperature warming is not expected in this area. As previously documented for the Don Pedro Hydroelectric Project, downstream of the Proposed Project Area, the Proposed Project as compared to the existing conditions are not expected to have an adverse effect on water temperature in the lower Tuolumne River (TID/MID 2017a – AFLA, Exhibit E). In contrast, the Proposed Project through implementation of the proposed licenses' measures and articles is expected to have beneficial effects on aquatic resources (e.g., CCV steelhead) (2017b, APDBA) and FERC (2020). Nonetheless, water temperature modeling and monitoring in the lower Tuolumne River has occurred in the past (TID/MID 2017c) and is ongoing as part of the Proposed Project.

The Proposed Project would not 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 USFWS. The FEIS (FERC 2020) identified several measures to mitigate for potential effects of Proposed Project activities through avoidance, protective actions, and monitoring and reporting. In addition, several measures would have a beneficial impact on habitat conditions for ESA and CESA-listed fish within the Proposed Project Area and lower Tuolumne River. With the implementation of the following Proposed Project measures, the Proposed Project would have a **less than significant impact** either directly or through habitat modifications, on fisheries species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS, and no mitigation is required.

Proposed Project Fisheries Measures included in FEIS:

Erosion and Sediment Control Plan (Don Pedro Draft License Article 404 and La Grange Draft License Article 403)

- Before the commencement of any ground-disturbing activity within the FERC Project Boundary, the licensees must file, for FERC approval, a soil erosion and sediment control plan. The plan must include, at a minimum, the following:
    - A description of BMPs to reduce the quantity of soil and sediment entering the river during construction;
    - Provisions for inspecting erosion control measures while they are in place;
    - Emergency protocols for erosion and sedimentation control (e.g., steps that would be taken if control measures fail during a storm event);
    - Techniques that would be used to stabilize sites once construction is completed; and
    - A description of when and what type of water quality monitoring of surface waters would occur during ground-disturbing activities and thereafter until soil conditions have stabilized.

Spill Prevention Control and Countermeasure Management Plan (Don Pedro Draft License Article 405 and La Grange Draft License Article 404)

- Within six months of license issuance, the licensees must file, for FERC approval, a revised Spill Prevention Control and Countermeasure Management Plan. The licensees must revise the Spill Prevention Control and Countermeasure Management Plan, filed October 11, 2017 as appendix E3 of the amended final license application, to include the following additional measures:
    - A description of how hazardous substances would be transported, stored, handled, and disposed of in a safe manner;
    - A description of equipment and procedures to be used to ensure containment and cleanup of any spilled hazardous substance;
    - A provision to notify the Water Board, CDFW, USFWS, NMFS, and BLM within 24 hours of discovering a hazardous substances spill; and
    - A provision to file a report with FERC within 10 days of a hazardous substance spill that identifies: (a) the location of the spill; (b) the type and quantity of hazardous material

spilled; (c) any corrective actions that have been undertaken to clean up the spill; and (d) any measures taken to ensure that similar spills do not occur in the future.

Coarse Sediment Management Program (Don Pedro Draft License Article 415)

- Within one year of license issuance, the licensees must file, for FERC approval, a coarse sediment management plan to enhance spawning habitat for Chinook salmon and *O. mykiss* by placing 75,000 tons of gravel at sites between RM 52 and RM 39 and 25,000 tons of gravel at sites between RM 39 and RM 24.5, for a total not to exceed 100,000 tons for the duration of the license. The plan must include, but not necessarily be limited to, the following provisions:

    - Filing of an implementation plan to place at least 75,000 tons of gravel at the first group of gravel augmentation sites within one year, after review and input from the CDFW, NMFS, and USFWS;

    - Annual surveys of fall-run Chinook and *O. mykiss* spawning use of new gravel patches for five years following completion of gravel augmentation;

    - Filing of a summary report with FERC in year 12 after license issuance presenting monitoring, mapping, and evaluation of projects conducted in the first 10 years, and an evaluation of the need for additional gravel augmentation at the initial sites or new augmentation sites; and

    - Filing of a second implementation plan for any new gravel augmentation sites identified in the 12-year report.

Proposed Experimental Gravel Cleaning Program

- The Districts propose and FERC's FEIS staff recommend to conduct a five-year program of experimental gravel cleaning using a gravel ripper and pressure washer operated from a backhoe, or equivalent methodology, including monitoring interstitial fines before and after gravel cleaning, to improve the quality of salmonid spawning gravel in the lower Tuolumne River. Gravel cleaning would be conducted at or below the confluence of intermittent streams downstream from La Grange Diversion Dam, including Gasburg Creek (RM 50.3) and Peaslee Creek (RM 45.5).

Gravel Mobilization Flows (Don Pedro Draft License Article 412)

- In years when the March through June spill is projected to exceed 100,000 acre-feet at the U.S. Department of the Interior, Geological Survey, gage no. 11289650 below La Grange Diversion Dam (La Grange gage), the licensees must provide a flow of 6,500 cubic feet per second (cfs), as measured at the La Grange gage, for at least two days within the March through June spill period, with downramping not to exceed 400 cfs/hour until a flow of 3,000 cfs is reached, and then 300 cfs/hour at flows less than 3,000 cfs.

- To evaluate whether corresponding changes occur in channel morphology or improvements to the quality of spawning gravel via a reduction in interstitial fines, the licensees shall conduct substrate surveys at designated sites located upstream of river mile 43 prior to, and following, each gravel mobilization flow provided under this article for the first 10 years of the new license, and file an annual report summarizing the results of the surveys by August 31 of each year in which the flow was provided. The licensees must also file a summary report with FERC that assesses the results of the gravel mobilization flow implementation and monitoring after a period

of 10 years, including any recommended changes to the gravel mobilization flows or additional monitoring that is needed.

Lower Tuolumne River Habitat Improvement Plan (Don Pedro Draft License Article 414)

- Within one year of license issuance, the licensees must file, for FERC approval, a revised Lower Tuolumne River Habitat Improvement Program (LTRHIP) to guide the implementation of habitat and floodplain restoration projects. The revised LTRHIP must include, but not necessarily be limited to, the following:

    - An implementation plan for the initial group of four habitat enhancement projects to be conducted during the first 5 years of the license, as described in the licensees' August 15, 2019 filing, to include a cost estimate and implementation schedule;

    - A provision to incorporate a minimum of 6,535 cubic feet of large woody material into the design of the first group of habitat enhancement projects, anchored in a manner designed to provide the maximum sustained habitat benefit, potentially using engineered log jams or similar approaches;

    - A provision for monitoring each enhancement site to determine if the project was satisfactorily implemented as designed, which project goals were met, and how project features persist and function through time and over a variety of flow conditions; and

    - A provision to file, for FERC approval, an implementation plan in year 6 that describes the next set of three to five enhancement projects to be implemented under the LTRHIP.

Aquatic Invasive Species Management Plan (Don Pedro Draft License Article 417 and La Grange Draft License Article 410)

- The proposed Aquatic Invasive Species Management Plan includes measures to prevent the introduction and spread of aquatic invasive species. The plan will be revised to include the following:

    - Educating recreational users on ways to reduce the spread of invasive species by providing signage and information pamphlets at designated public boat access sites and on websites that provide the public with information on project facilities;

    - Continuing of the boater self-inspection permit program;

    - Identifying project operation and maintenance activities that could result in the introduction, spread, or proliferation of aquatic invasive species, and measures that could be used to limit the spread or introduction of invasive species; and

    - Recording and communicating incidental observations of aquatic invasive species to BLM, USFWS, and CDFW.

- Within six months of license issuance, the licensees must file, for FERC approval, a plan to manage aquatic invasive species to minimize the potential introduction and spread of aquatic invasive species in the La Grange Project Boundary. The plan must include, but not necessarily be limited to, the following:

- A provision to provide information (i.e., signage and information pamphlets at designated public boat access sites and on public websites) to educate recreational users on ways to reduce the spread of invasive species;

- A provision to include the following best management practices for minimizing the spread of invasive species during project operation and maintenance: (a) identifying invasive species that may be introduced by a given activity, (b) implementing preventive measures, (c) identifying critical control points (locations and times) for preventing the spread of aquatic invasive species, and (d) identifying actions to be taken if an aquatic invasive species introduction occurs;

- A provision to consult with the BLM, USFWS, NMFS, the SWRCB, and CDFW if aquatic invasive species are discovered within the FERC Project Boundary; and

- A provision to record and communicate incidental observation of aquatic invasive species to the BLM, USFWS, NMFS, the SWRCB, and CDFW within 24 hours, and to FERC within 10 days.

Water Quality Monitoring Plan (La Grange Draft License Article 408)

- Within six months of license issuance, the licensees must file, for FERC approval, a water quality monitoring plan to manage dissolved oxygen (DO) concentrations in the La Grange Powerhouse tailrace. The plan must include, at a minimum, the following:

    - Monitoring of DO and water temperature at 15-minute intervals in the upper end of the La Grange Headpond, La Grange forebay, immediately downstream of the La Grange Powerhouse, and at the downstream end of the powerhouse tailrace channel for three years, beginning in year 1 of license issuance;

    - Supplementing these data with weekly observations of aquatic vegetation and algae in the La Grange Powerhouse forebay and near the penstock intake;

    - Identifying the proposed monitoring season based on the timing of recently observed DO concentrations less than the water quality objective;

    - Annual reporting on the monitoring program for distribution to the consulted agencies and the FERC; and

    - Submitting, for FERC approval, a summary report after three years of monitoring that identifies the cause(s) for any DO concentrations that do not meet the Basin Plan objective, proposed mitigation to address low DO concentrations, and plans for effectiveness monitoring for any measure(s) to be implemented to address low DO concentrations.

Minimum Flows below La Grange Diversion Dam (Don Pedro Draft License Article 409 and La Grange Draft License Article 405)

- To support aquatic resources and water-based recreation opportunities, the licensees must maintain the minimum flows shown in FEIS Appendix B Table 1, below, according to the most recent preliminary/final water year classification as determined by the California Department of Water Resources using the 60-20-20 San Joaquin River Index. 13 Preliminary water year determinations must be made by the Districts on February 1, March 1, and April 1 of each year

using a 90 percent probability of exceedance of the 60-20-20 San Joaquin River Index, to govern project operations from February 1 through May 15. The Districts must make a final water year determination by May 7, based on the 60-20-20 San Joaquin River Index determined by California Department of Water Resources on or about May 1 of each year using a 75 percent probability of exceedance, to govern project operations from May 16 through the remainder of the year.

Water Temperature Monitoring Plan (Don Pedro Draft License Article 409)

- Within six months of license issuance, the licensees must file, for FERC approval, a water temperature monitoring plan. The plan must include, at a minimum, the following:
    - A provision to for real-time monitoring at the U.S. Department of the Interior, Geological Survey, gage No. 11289650 below La Grange and at the temporary fish counting weir at river mile 24.5;
    - A provision for periodic monitoring in Don Pedro Reservoir near the dam whenever the reservoir elevation is lower than 700 feet National Geodetic Vertical Datum of 1929;
    - A provision to make water temperature data from below the La Grange gage and temporary fish counting weir available in real time and Don Pedro Reservoir temperature available within three days of downloading according to the schedule defined in the plan;
    - A provision to file annual summary reports for all temperature monitoring conducted in each year; and
    - A provision to file a summary report after five years that includes any recommendations for adjusting future monitoring and any measures recommended to enhance water temperature conditions to benefit Chinook salmon and *O. mykiss* in the lower Tuolumne River.

Terrestrial Resources

The FEIS analyzed the potential impact of the Proposed Project on terrestrial resources and identified that some project and recreational activities could affect plants and wildlife. Construction and maintenance of project recreation areas could affect plants and wildlife or their habitat. Human activity could affect special-status bat roosting habitat near project facilities and affect nesting or winter roosting bald eagles on Don Pedro Reservoir. Changes in vegetation management, human disturbance (e.g., recreation), reservoir water level fluctuations, and facility maintenance could alter the composition of vegetation communities, including ESA or CESA-listed or special status plants. Vegetation management of recreation areas that involve project-related ground disturbance or pesticide use near wetlands or aquatic habitats could result in adverse effects on sensitive amphibians. Water level fluctuations of the Don Pedro Reservoir could affect western pond turtle habitat downstream within the La Grange Project area by affecting water temperatures. The Districts' periodic use of smoke and carbon monoxide to control rodents around developed recreation areas could affect burrowing wildlife, including burrowing owl, a state candidate for listing. Damage to elderberry plants resulting from project construction and maintenance activities could affect VELB, which use elderberry shrubs for reproduction.

The Proposed Project would not 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 USFWS. The FEIS identified several measures in addition to the Districts' proposed Terrestrial Resource Management Plan (TRMP) to mitigate for potential

effects of Proposed Project activities through avoidance, protective actions, and monitoring and reporting. With implementation of the following Proposed Project measures, the Proposed Project would have a **less than significant impact** either directly or through habitat modifications, on terrestrial species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS, and no mitigation is required.

Proposed Project Terrestrial Resources Measures included in FEIS:

Terrestrial Resource Best Management Practices

- Provide annual environmental training for employees and contractors.
- Host an annual consultation meeting with the resource agencies and interested stakeholders to discuss management of special-status species.
- Annually consult and review the current list of threatened, endangered, and special-status species that might occur on public land administered by BLM within the FERC Project Boundary.
- Develop a revised TRMP for the Don Pedro Project that includes FERC staff-recommended measures incorporated by group, below (FEIS terrestrial resource measures 10, 11, 13, 15, 18, 19, 22, 24, 25, 27, 29, and 30).
- Implement the TRMP filed as appendix E-6 of the Don Pedro AFLA.
- Perform pre-construction surveys for special-status or threatened and endangered species following USFWS and/or CDFW protocols prior to any project-related ground disturbance in areas with suitable habitat, and implement 50-foot buffers around special-status or threatened and endangered plants, marked with flagging or fencing, prior to the implementation of vegetation management, trail construction, or other ground-disturbing activities.
- Modify the Don Pedro TRMP to include: (1) pre-construction surveys for special-status or threatened and endangered species following USFWS and/or CDFW protocols prior to any project-related ground disturbance in areas with suitable habitat for special-status species (rather than the proposed 0.5-acre minimum threshold); (2) installation of interpretive signs about the unique plants of the Red Hills.

Noxious Weeds

- The proposed TRMP includes noxious weed prevention and management measures for all BLM-administered lands and lands under the Districts' ownership within the FERC Project Boundary. These measures include:
    - BMPs to minimize the introduction and spread of noxious weeds.
    - Noxious weed surveys beginning in the second year following license issuance and every fifth year thereafter.
    - Guidelines and prioritization to prevent introduction of new A- and B-listed noxious weeds, and control or contain existing populations of A-, B- and C-listed noxious weeds, and management of existing occurrences of B-listed noxious weeds.

- Beginning in the second year following license issuance, and every fifth year thereafter, the Districts will conduct a noxious weed survey of BLM-administered lands within the Red Hills ACEC as well as lands within the FERC Project Boundary that are subject to operations and maintenance activities, including Don Pedro Project facilities and the Moccasin Point, Blue Oaks, and Fleming Meadows recreation areas.

- Conduct noxious weed surveys in areas that support occurrences of special-status or threatened and endangered plants and using manual control of noxious weeds, where feasible (instead of herbicides), in areas with sensitive resources.

- Implement control measures for the giant reed population documented along the Don Pedro Powerhouse access road.

ESA- and CESA-listed and Special-status Plant Species and Habitats

- The proposed TRMP includes special-status plant monitoring and protection measures for all BLM-administered lands and lands under the Districts' ownership within the FERC Project Boundary. These measures include:

    - Monitoring known occurrences of special-status plants starting the second year following license issuance and every fifth year thereafter; and,

    - Develop usage plans in consultation with the BLM for areas surrounding known occurrences of special-status plants with the potential for being directly affected by activities within the FERC Project Boundary.

    - Perform surveys every five years for special-status plants in several specified areas subject to project operations and maintenance activities or recreational use.

    - Perform surveys for special-status plants following CDFW protocols within the Red Hills ACEC every five years and every 10 years elsewhere within the FERC Project Boundary at Project facilities, recreation areas, roads and trails that are predominately used for project-related purposes, and where project-related disturbance is reasonably expected to occur.

    - Modify the Don Pedro TRMP to include: (1) pre-construction surveys for special-status plants prior to any ground disturbance; (2) install interpretive signs about the unique plants of the Red Hills ACEC; (3) develop procedures for project staff to recognize and report occurrences of special-status plants; and (4) consult with BLM to develop specific usage plans for areas around known occurrences of special-status plants that could be affected by recreational use.

ESA- and CESA-listed and Special-status Wildlife Species and Habitats

- The proposed TRMP will include the following modifications to minimize potential impacts to special-status or threatened and endangered wildlife:

    - Revise the applicant-prepared BA for terrestrial species to (1) include procedures to minimize adverse effects on federally listed species; (2) ensure project-related activities meet restrictions included in site management plans for special-status species; and (3) develop implementation and effectiveness monitoring of measures taken or employed to reduce effects on listed species.

- Modify the Don Pedro TRMP to include protective measures for the San Joaquin kit fox, including (1) discouraging raptor use of transmission line as perches and (2) habitat surveys.

- Modify the Don Pedro TRMP to provide for protection of burrowing animals, including the federally listed CTS and an Joaquin kit fox by specifying locations where ground squirrel activity is problematic and where the Districts' rodent control activities would potentially occur, limiting use of burrow fumigants or rodenticides, conducting surveys for burrowing owl, San Joaquin kit fox, and CTS prior to fumigant use, and documenting incidental sightings of these species.

- Modify the Don Pedro TRMP to include protective measures for the San Joaquin kit fox, including (1) discouraging raptor se of transmission line as perches and (2) habitat surveys.

- Modify the Don Pedro TRMP to provide protection of CRLF and CTS by establishing decontamination protocols to prevent the spread of chytrid fungus.

- Modify the Don Pedro TRMP to provide protection of San Joaquin kit fox, California red-legged frog CTS and western burrowing owl, and special-status bats by including (1) control of bullfrog and crayfish populations; (2) surveys for chytrid fungus; (3) protocols for slash removal and storage; (4) provisions to minimize impacts from roads, including potential wildlife-friendly road crossings; and (5) species and habitat monitoring every three years (FEIS terrestrial measure 28).

Special-status Bats

- The proposed TRMP includes protections for special-status bats and other species of bats at Project facilities and structures (i.e., Project features, developed recreation areas, and structures that may be used by bats for roosting).

    - Humane exclusion devices will be installed, if during the new license term, bats or signs of roosting are discovered at Project facilities where there is a staff presence routinely (i.e., at least daily or weekly)

    - To prevent visitor activities from disrupting pallid bat at the small cinderblock structure near the A2 restroom in the Blue Oak campground during the evening, physical measures will be taken to exclude humans from the building while still accommodating pallid bat use (e.g., partially boarding the doorway).

    - Modify the Don Pedro TRMP, including: (1) protocols for collecting field signs of white-nose syndrome during bat surveys; and (2) public education actions to avoid and minimize impacts at recreation facilities.

    - Conduct annual surveys of project facilities to evaluate the need for bat exclusion devices and install exclusion devices as needed.

    - Conduct a single survey within 2 years of license issuance of all project facilities to evaluate the need for bat exclusion devices and install exclusion devices as needed.

    - Modify the Don Pedro TRMP to provide for: (1) resurveying project facilities with potential for bat occurrence every five years to look for evidence of bat use; (2) protection

guidelines and BMPs to avoid and minimize impacts, including the installation and annual inspection of bat exclusion devices at project facilities with evidence of bat roosting; and (3) reporting any sick or dead bat to CDFW and USFWS as soon as possible, and following accepted decontamination protocols when entering areas with potential bat occurrence (as found in appendix C of White-nose Syndrome Conservation and Recovery Working Group, 2015).

VELB

- The Districts will follow USFWS Conservation Guidelines for management of VELB and VELB host plants within the FERC Project Boundary. These guidelines direct practitioners to avoid and protect VELB host plants whenever possible. Accordingly, the Districts will not engage in ground disturbing activities within 100 ft of a VELB host plant (as mapped during relicensing studies) without prior authorization from the USFWS.

- The proposed TRMP will include the following modifications to minimize potential impacts to VELB host plants:

    - Implement the proposed protections for VELB in the Don Pedro TRMP, filed as appendix E-6 of the Don Pedro amended final license application to provide protections for VELB in accordance with the USFWS (2017) conservation guidelines for the species.

    - Modify the Don Pedro TRMP to provide protections for VELB by following the protocols from USFWS (2017) framework for assessing impacts to the species from project activities, which requires surveys for VELB and avoidance and minimization measures within 165 feet from project activities.

Avian

- The proposed TRMP includes protections for bald eagles:

    - Bald eagle nest survey monitoring would begin the first full calendar year following license issuance and once every two years for the first five years following license issuance (i.e., in Year 2 and Year 4). After the fifth year, survey frequency will be reduced to once every five years.

    - Establishment of buffers per USFWS 2007, National Bald Eagle Management Guidelines;

    - Protection of nests from removal without consultation and approval of CDFW, BLM, and USFWS, and tree removal shall be in compliance with Fish and Game Code § 3503 and BGEPA; and

    - Limit use of rodenticides and only use them in accordance with federal and State law, and prior to application will consult with the CDFW, BLM, and USFWS on the type and location of use.

- The proposed bald eagle and special-status bird management plan will include the following:

    - Annual bald eagle nesting, wintering, and night roost surveys within suitable habitat on all lands within 0.25 mile of the shoreline of Don Pedro Reservoir, conducted in accordance with the Bald Eagle Breeding Survey Instructions (CDFW, 2010) and the Protocol for

Evaluating Bald Eagle Habitat and Populations in California (Jackman and Jenkins, 2004) to identify areas where limited vegetation management operating periods are needed;

- A 0.25-mile protective buffer on project lands around nests and communal night roosts, unless consultation with BLM, USFWS and CDFW allows for a reduced protective buffer if nesting eagles demonstrate a greater tolerance;
- Coordination with BLM, USFWS, and CDFW to establish a protective buffer on project lands around any new bald eagle nest or communal night roost;
- Installation of signs on project lands to inform recreationists of the temporary closure(s) during the breeding season to prevent disturbance to nesting bald eagles;
- Collection of incidental observations of all raptor species at the project to determine if protective buffers on project lands are needed; and
- Consultation with USFWS and CDFW to identify suitable protective buffers on project lands around any active nests of other special-status birds and birds protected under the MBTA and CFGC.

Pest Control

- Modify the Don Pedro TRMP to include protective buffers for use of pesticides and avoiding pesticide use within suitable habitat for the San Joaquin kit fox, western burrowing owl, CRLF and CTS; and within 500 feet of any documented bat maternity colony.
- Modify the Don Pedro TRMP to include BMPs to avoid adverse effects from any pesticide use on BLM lands within 500 feet of suitable aquatic habitat for special-status or threatened and endangered amphibians and reptiles.
- Modify the Don Pedro TRMP to include BMPs to minimize potential for pesticides to affect non-target species and avoidance and minimization measures where project-related ground disturbance would occur within 300 feet of wetlands and riparian areas.
- Avoid pesticide use within 500 feet of suitable aquatic and upland habitat for CTS
- Modify the Don Pedro TRMP to limiting use of burrow fumigants or rodenticides, conducting surveys prior to fumigant use (duplicate of FEIS terrestrial measure, above).

Special-status Invertebrates

To minimize potential impacts on special-status invertebrates, including direct take of individuals and degradation of habitat, implementation of mitigation measures MM-BIO-1, MM-BIO-2, MM-BIO-3, and MM-BIO-4 are needed to supplement the aforementioned conditions and plans. These specific mitigation measures are required to reduce the Proposed Project's potential impacts on special-status invertebrates. Therefore, the Proposed Project would result in a **less than significant impact with mitigation incorporated** on special-status invertebrates identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Mitigation Measures:

MM-BIO-1 Crotch's Bumble Bee Nest Avoidance. A qualified biologist shall conduct a site review prior to activities that could result in significant ground disturbance and, if they determine suitable nesting and foraging habitat for Crotch's bumble bee is present in or within 50 feet, or an agreed minimum distance determined through consultation with CDFW, of the disturbance area, then nesting and foraging habitat shall be avoided. Suitable habitat shall be avoided by a minimum of 50 feet, if feasible, or work shall be done between November and February to avoid the nesting season.

MM-BIO-2 Crotch's Bumble Bee Habitat Replacement. Mitigation for permanent impacts on Crotch's bumble bee nesting and foraging habitat shall be provided at a minimum 1:1 ratio. Mitigation is to be determined in consultation with CDFW. Mitigation as required in applicable regulatory permits obtained by the Districts from CDFW or during the annual consultation meeting may be applied to satisfy this measure.

MM-BIO-3 Milkweed Mapping. A qualified biologist will identify and map locations and species of milkweed plants in areas that would be permanently or temporarily impacted by the Proposed Project.

MM-BIO-4 Milkweed Avoidance. Temporary construction activities will be modified to avoid milkweed and monarch butterfly habitat. Where avoidance is not possible, impacts will be considered permanent. Fencing and/or signage will be used to identify the presence of milkweed and monarch butterfly habitat for the duration of construction. All temporary work and staging areas will be located at least 30 feet from milkweed plants.

Special Status Aquatic Species

To minimize potential impacts on special-status aquatic species that may occur in the Proposed Project Area, including direct take of individuals and degradation of habitat, implementation of MM-BIO-5, is needed to supplement the aforementioned conditions and plans. This specific mitigation measure is required to reduce the Proposed Project's potential impacts on special-status aquatic species (fish and amphibians) that may occur if dewatering is required for implementation of Proposed Project activities. Therefore, the Proposed Project would result in a **less than significant impact with mitigation incorporated** on special-status aquatic species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

MM-BIO-5 Stranded/Entrained Aquatic Species Rescue and Salvage. If dewatering is required, the Districts will retain a qualified biologist(s) for the duration of any Proposed Project activities that involve dewatering of any waterbodies or waterways containing aquatic species. The qualified biologist(s) shall make a good faith effort to remove fish, frogs, turtles, and other aquatic vertebrate species in the area of dewatering. This measure does not apply to diversion of water and drawdown of reservoirs for purposes of Project operations, as they are described in FERC's Final EIS. Aquatic species rescue and salvage shall include the following, or as defined in applicable resource agency permits obtained by the Districts and approved plans: All species shall be captured using fine mesh or soft material nets and transported to release locations in a bucket, ice chest, or other carrying mechanism, with aeration devices for species that require oxygenated water. Holding time shall be no longer than 45 minutes after capture. Handling of aquatic species shall be minimized to the greatest extent possible. Gloves shall always be worn during rescue and salvage efforts to minimize effects of handling to the greatest extent possible. Prior to entering the stream or initiating any rescue and salvage activities, all gear and equipment shall be decontaminated in a designated location where runoff can be contained. All species, except for invasive aquatic species (for example, bullfrog) shall be relocated to nearby surface waters in low enough numbers to not increase predation, and in appropriate sites to minimize the potential for reentry to the work area. Exclusionary

devices (e.g., nets, screens) shall be used on any equipment or materials that have the potential to entrain aquatic species.

Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Fisheries

The FEIS (FERC 2020) includes analysis of the Proposed Project on aquatic habitat. Under this action, gravel augmentation (i.e., placement) and other habitat restoration actions conducted under the Lower Tuolumne River Habitat Improvement Program could potentially impact fish habitat. As such, instream work has the potential to impact fish habitat pertaining to Critical Habitat for steelhead, especially if heavy machinery is utilized in this process. However, gravel augmentation and habitat restoration are expected to be beneficial for fish and fish habitat by creating spawning and rearing areas for adults and early life stages. Therefore, any impacts from instream work are likely to be localized and temporary. In addition, the implementation of BMPs and Plans (e.g., Soil Erosion and Sediment Control Plan, Spill Prevention and Countermeasure Management Plan as described above) will minimize and avoid impacts to water quality. The Proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS. The FEIS identified several measures in addition to the Districts' proposed measures to mitigate for potential effects of Proposed Project flow releases. With implementation of the following Proposed Project measures, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Proposed Project Fisheries Measures included in FEIS:

- Erosion and Sediment Control Plan
    - See Impact BIO-1 for details on the contents of this plan.
- Spill Prevention Control and Countermeasure Management Plan
    - See Impact BIO-1 for details on the contents of this plan.
- Lower Tuolumne River Habitat Improvement Plan
    - See Impact BIO-1 for details on the contents of this plan.

Terrestrial Resources

The FEIS includes analysis of the Proposed Project on vegetation which could include sensitive habitats. Construction and maintenance of the Proposed Project recreation sites, campgrounds, roads, and trails could affect sensitive vegetation communities through mortality, injury, or displacement as a result of habitat removal, modification, or fragmentation.

Changes in the Proposed Project vegetation management, human disturbance (e.g., recreation), reservoir water level fluctuations, and facility maintenance could alter the composition of vegetation communities by increasing the establishment and spread of noxious weeds. Changes in flow magnitude could affect downstream riparian vegetation. Riparian species release seeds in conjunction with flows that

distribute the seeds to areas with nursery conditions, including barren substrate and the appropriate moisture regime.

In comparison to existing conditions and operations, the Proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS. The FEIS identified several measures to mitigate for potential effects of Proposed Project flow releases. With implementation of the following Proposed Project measures, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Proposed Project Terrestrial Resources Measures included in FEIS:

- Make reasonable efforts to shape the descending limb of the snowmelt runoff hydrograph to mimic natural conditions in spill years.

- Shape the descending limb of the snowmelt runoff hydrograph to ensure that flows are not reduced by more than 7 to 10 percent (depending on flow volume) of the previous day's 24-hour average flow.

- Follow a spring recession rate during the month of June each year following the flow rates specified in tables 3.3.2-36 and 3.3.2-37 of the FEIS.

- Provide a riparian recession flow in above normal, below normal, and dry water years to allow a multi-day ramp-down at specified rates to base flow from the flow value on the final day of any water year "Recession Initiation Flow Value") on which minimum flows are determined by a percent of unimpaired flow.

- Mitigation measures to protect habitats and vegetation communities from non-flow related Project activities overlap with protections addressed in response to Impact BIO-1, above, and include best management practices for construction, vegetation management, noxious weeds, special-status plants.

Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are no state or federally protected wetlands in the Proposed Project which would be affected through direct removal, filling, hydrological interruption or other means. Most mapped wetlands occur outside of the Proposed Project Area, and no construction is proposed in wetlands. Therefore, the Proposed Project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. As a result, **no impact** would occur, and no mitigation is required.

Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

Fisheries

No impacts to fish migration are expected to occur within the Proposed Project Area. La Grange Diversion Dam does not provide for upstream fish passage. Installation of a fish weir at the La Grange

sluice gate channel serves to prevent fish from entering the channel during powerhouse outages (FERC 2020) but also is not expected to impact migration due to the lack of fish passage at the dam. Water temperatures in the Proposed Project Area are generally stable and adequate for *O. mykiss* life stages within the Proposed Project Area as indicated by temperature modeling of temperature exceedance (FERC 2020). Temperatures for fall-run Chinook salmon are also generally adequate in the upper reaches of the lower Tuolumne within the Proposed Project Area as indicated by temperature exceedance (FERC 2020). Potential temperature barriers occur outside and downstream of the Proposed Project Area as indicated by large exceedances in reaches of the lower Tuolumne River near the confluence with the San Joaquin River (FERC 2020). However, there are no new facilities proposed that would be a physical barrier to upstream or downstream movement and because flows would increase as compared to the existing condition as part of the Proposed Project, passage past any natural impediments to fish would be improved. Therefore, the Proposed Project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident of migratory wildlife corridors or impede the use of wildlife nursery sites within the Tuolumne River. As a result, **no impact** would occur, and no mitigation is required.

Terrestrial Resources

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and can link otherwise fragmented habitats. Riparian corridors associated with the various rivers, and their tributaries, often facilitate local and regional wildlife movement, but riparian vegetation in the Proposed Project Area is limited and unlikely to provide substantial cover through various other habitats. Dams can block the migration of fish and changes in flows can affect migration of some species.

In comparison to existing conditions and operations, the Proposed Project would not directly interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident of migratory wildlife corridors or impede the use of wildlife nursery sites. The FEIS identified several measures to mitigate for potential effects of Proposed Project flow releases and O&M. With implementation of the following Proposed Project measures, the Proposed Project would have a **less than significant impact** and no mitigation is required.

Proposed Project Terrestrial Resources Measures included in FEIS:

Mitigation measures to protect wildlife corridors from changes in flow as well as non-flow related Project activities overlap with protections addressed in response to Impact BIO-1 and BIO-2, above, and include Terrestrial Resources Best Management Practices for construction, vegetation management, noxious weeds, special-status plants, and measures to more closely mimic the natural hydrograph.

Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Proposed Project is consistent with the Stanislaus County General Plan (Stanislaus County 2016) and the Tuolumne County General Plan (Tuolumne County 2018). Each plan specifies policies to protect water resources, wetland and riparian areas, fish and wildlife habitat, wildlife movement corridors, vegetation communities, open space for the preservation of natural resources, threatened and endangered species, and aquatic habitats. In addition, all local plans include specific measures to preserve and protect oak trees and oak woodlands. The Proposed Project activities are consistent with the policies included in these local plans, and no conflicts are anticipated. Therefore, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Tuolumne River, the San Joaquin River, and the San Joaquin River tributaries are covered or referred to in multiple plans including the *Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead, San Joaquin River Restoration Program, Delta Water Quality Control Planning, San Joaquin River TMDL Plans, Bay-Delta Conservation Plan, Biological and Conference Opinion on the Long-Term Operation of the Central Valley Project and State Water Project, Delta Conveyance, California EcoRestore, CDFW's Ecosystem Restoration Program, California DWR provides information and updates for the Delta Conveyance Project, the Central Valley Salmon and Steelhead Restoration and Enhancement Plan, Final Restoration Plan for Anadromous Fish Restoration Program, Tuolumne Wild and Scenic River Management Plan, and 1995 Settlement Agreement* as identified in the FEIS (FERC 2020). These programs and plans aim to create beneficial fish habitats through habitat restoration, better manage water, improve water quality, and ultimately recover imperiled species.

The Proposed Project Area overlaps with a small portion of the BLM's Red Hills ACEC. The Red Hills ACEC is characterized by serpentine-based soils which support a unique assemblage of plant species, an abundant insect population, multiple mammals, and 88 species of documented birds. Proposed Project O&M does not occur in the Red Hills ACEC, although the Districts have proposed some monitoring and protective measures for Red Hills ACEC plants and habitats in the Proposed Project Area.

There are no approved habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans within the Proposed Project Area. Therefore, the Proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. With implementation of the following Proposed Project measures for the BLM Red Hills ACEC, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Proposed Project Terrestrial Resources Measures included in FEIS:

Measures to protect the unique plants and habitats within the ACEC are listed to address Impact BIO-1 above. These include measures for Terrestrial Resources Best Management Practices, treatment of noxious weeds, and protections for ESA- and CESA-listed and Special-status Plants.

3.8 Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
CR-1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
CR-3: Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

3.8.1 Environmental Setting

Cultural resources is a term applied to the historical period and precontact archaeological sites; historical buildings, objects, structures, records, manuscripts, or places; and places of traditional cultural or religious importance, regardless of their eligibility for listing on national, state, or local registers. Under CEQA Sections 21084.1 and 21083.2, potential adverse impacts on cultural resources that are listed on or eligible for listing on the California Register of Historical Resources (CRHR) or that are considered unique or significant regardless of their CRHR status as determined by the lead CEQA agency, must be taken into account. CRHR listed or eligible resources, termed historical resources, include but are not limited to any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (Pub. Resources Code, § 5020.1[j]).

Properties that are listed in or eligible for listing in the CRHR include both precontact and historic period resources, are of local significance, including some California State Historical Landmarks and California Points of Historical Interest, or are resources that have been listed in or formally determined to be eligible for listing in the National Register of Historic Places (NRHP) (See also Pub. Resources Code, § 5024.1).

The FERC Project Boundary consists of the Don Pedro Project and La Grange Project. For the Don Pedro Project, the FERC relicensing cultural resources study efforts focused on a boundary that was defined as all lands within the FERC boundary that are (1) within 100 ft. beyond the normal maximum water surface elevation (830 ft.), (2) within designated Don Pedro Project facilities and formal recreation use areas, (3) within informal recreation use areas identified by the Don Pedro Recreation Agency (DPRA), (4) within the Red Hills ACEC, and (5) along the reservoir edges, including reservoir reaches that contain intermittent and perennial streams. For the La Grange Project, the FERC licensing cultural resources study efforts focused on a boundary that was defined as lands immediately downstream of the

LGDD and the La Grange Headpond upstream of the LGDD. For the downstream portion, the boundary included the La Grange powerhouse, penstocks, bypass spillway, tailrace, and a La Grange Project access road. The boundary included a 100-ft buffer zone for the upstream portion beyond the normal maximum water surface elevation of 296.5-ft of the La Grange Headpond, extending upriver from the LGDD to the Don Pedro Powerhouse.

To help inform the identification of cultural resources within the Proposed Project Area, the Districts conducted archaeological and historical built environment resources investigations and investigations of properties with traditional cultural significance between 2015 and 2019 as part of the FERC licensing and relicensing. The investigations were documented in five cultural resources inventory and NRHP evaluation study reports (TID/MID 2015a, TID/MID 2015b, TID/MID 2015c, TID/MID 2017a, TID/MID 2019a). The methodologies utilized for these studies included background and archival research, field surveys, engagement with Native American Tribes and communities, and NRHP evaluations.

The Don Pedro Project relicensing studies documented 474 cultural resources. The cultural resources identified during these studies included 37 historical built environment resources, of which one was eligible for inclusion in the NRHP, 33 were ineligible, and three were left unevaluated regarding their eligibility for inclusion in the NRHP. Additionally, one Traditional Cultural Property (TCP), which was determined eligible for inclusion in the NRHP, was identified within the Don Pedro Project Boundary. The remaining 436 resources comprise 85 precontact archaeological sites, 140 historic-era archaeological sites, 39 multicomponent (containing historic-era and precontact components), and 172 isolated archaeological finds. Of these 436 archaeological resources, 29 have been determined eligible for the NRHP, 331 have been determined ineligible, and 76 remain unevaluated.

The La Grange Project licensing studies documented 21 cultural resources within the overall footprint of the La Grange Project Boundary. The cultural resources identified during these studies included 14 historical built environment resources, of which two were eligible for inclusion in the NRHP and 12 were ineligible. The remaining seven resources comprise one precontact archaeological site, four historic-era archaeological sites, and two isolated archaeological finds. All seven archaeological resources were ineligible for inclusion in the NRHP. Additionally, no TCPs were identified within the La Grange Project Boundary.

Table 3.8-1. Cultural Resources within the Proposed Project Area and their NRHP Eligibility

Cultural Resource Type	Eligible	Ineligible	Unevaluated	Total Number of Resources
Don Pedro Project Resources				
Archaeological[1]				
Historic-Era Sites	6	111	23	**140**
Precontact Sites	12	37	36	**85**
Multicomponent Sites	11	11	17	**39**
Isolated Finds	0	172	0	**172**
Tribal Resources[2]				
TCPs	1	0	0	**1**
Built Environment[3]				

Cultural Resource Type	Eligible	Ineligible	Unevaluated	Total Number of Resources
Historic-Era	1	33	3	**37**
Subtotal	**31**	**364**	**79**	**474**
La Grange Project Resources				
Archaeological				
Historic-Era Sites	0	4	0	**4**
Precontact Sites	0	1	0	**1**
Multicomponent Sites	0	0	0	**0**
Isolated Finds	0	2	0	**2**
Tribal Resources				
TCPs	0	0	0	**0**
Built Environment[3]				
Historic-Era	2	12	0	**14**
Subtotal	**2**	**19**	**0**	**21**
Total	***32[4]***	***383***	***79***	***494***

[1] This count includes three historic Districts and one precontact District, the primary components are archaeological. All three historic Districts remain unevaluated for the NRHP, while the precontact District has been determined eligible.

[2] The TCP identified is represented by a District.

[3] This count includes two historic Districts comprised of built environment resources. Both Districts are ineligible for the NRHP because they are not 50. Also, one of the ineligible built environment resources included in this count, the DPRA Headquarters building, burned down in May 2016 following its documentation during relicensing efforts and no longer exists.

[4] One of these resources, the La Grange Ditch (P-50-2207/P-55-8888), was recorded for both the Don Pedro and La Grange Project. Thus, the total number of eligible resources is 32. The total number of resources for the Proposed Project is then 494.

The State Historic Preservation Officer (SHPO) concurred with the findings of the cultural resources inventory and NRHP evaluation reports in letters dated December 12, 2014, February 23, 2015, September 18, 2017, September 19, 2018, and October 11, 2018. As the SHPO does not typically concur with CRHR eligibility recommendations, the cultural resources identified during the FERC studies and submitted to the SHPO were explicitly evaluated for listing in the NRHP. Importantly, resources listed in or determined to be eligible for the NRHP are automatically listed in or eligible for the CRHR. Although it is possible to identify resources that are eligible for listing in the CRHR but not in the NRHP, the significance criteria for both NRHP and CRHR eligibility are similar enough that determinations of eligibility for the NRHP would also apply to the CRHR. For this document, the NRHP eligibility determinations will also be assumed to be the CRHR eligibility determinations.

Cultural history is often of great interest to the public. However, locational and other information about historical resources can result in irreparable vandalism or other damages to these resources. As a result, various state and federal regulations have been passed that allow for restrictions on confidential site

location information and other information that could result in damage to these resources, including CEQA, Section 9 of the Archaeological Resources Protection Act of 1979 (ARPA; for federal lands), and Section 304 of the NHPA of 1966 (54 U.S.C. §307103), to name a few. Thus, the final technical reports of findings for the completed cultural resources studies are confidential, were filed with FERC as privileged, and are provided only on a need-to-know basis. Public summaries that describe the methods and results of these studies but omit any privileged information are included in the FLA (TID/MID 2014, TID/MID 2017b).

3.8.2 Impact Analysis

Impact CR-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

A substantial adverse change in the significance of a historical resource is defined in section 15064.5(b)(1) of the CEQA Guidelines as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired."

Of the 494 cultural resources (from both the Don Pedro Project and La Grange Project) identified by the relicensing studies within the Proposed Project Area, 32 resources are listed in or eligible for listing in the NRHP and are, therefore, eligible for listing in the CRHR, and 383 resources were determined to be ineligible for inclusion in the NRHP. Another 79 resources have not been evaluated regarding their eligibility for inclusion in the NRHP. Moreover, architectural and engineered facilities and historic-era archaeological sites (for example, a trash dump dating to the 1970s) that were not 45 to 50 years of age at the time of the studies have reached the 50-year age criterion for consideration of effects and potential listing on the CRHR and NRHP or will reach the 50-year age criterion after the new FERC license are issued. These resources will require formal recordation using the State Department of Parks and Recreation (DPR) 523 forms and an assessment of each site's integrity to determine whether these resources are affected by, or will potentially be affected, by operations and maintenance associated with the Proposed Project.

Historic Properties Management Plans (HPMP)

Activities associated with the Proposed Project have the potential to affect known and unknown cultural resources (for example, unrecorded resources that could be discovered during the term of the proposed new licenses) in the Proposed Project Area that are eligible or potentially eligible for inclusion in the NRHP and/or CRHR. As part of the licensing and relicensing efforts, the Districts developed Historic Properties Management Plans (HPMPs) for both the Don Pedro Project and La Grange Project (TID/MID 2018, TID/MID 2019b) to guide the management of precontact and historic-period properties that are listed in, eligible for listing in, or that are unevaluated for listing in the NRHP, during the term of the proposed new licenses. The HPMPs provide the procedures required to comply with federal and state laws and regulations and to consult with Tribes, agencies, and SHPOs to continue managing historic properties under the proposed new licenses. These measures include avoidance, protection, monitoring, and mitigation measures. Properties that have not been evaluated for listing in the NRHP are to be managed as if they are eligible in the same manner as listed or eligible properties that have been formally evaluated. The HPMPs were developed with Native American tribes, BLM, and SHPO.

In accordance with the terms of the HPMPs, unevaluated resources will be managed as if they are NRHP eligible through avoidance, as feasible. Avoidance means that no activities associated with the Proposed Project may occur at or to these resources that are not evaluated for the NRHP and/or the CRHR. This applies to activities within the boundaries of known or potential historical resources, including any defined buffer zones. Avoidance further means that the boundaries for potentially disturbing or destructive

activities may need to be modified, redesigned, or eliminated to avoid historical resources properly. If necessary, buffer zones may be established around resources to ensure added protection from ground-disturbing activities. Avoidance may include rerouting trails or roads to avoid resources, gating access roads to particularly sensitive areas to keep visitors away, or restricting public access and disturbances associated with the Proposed Project to protect resources. Avoiding historical buildings or structures may include replacing or modifying characteristics that potentially make them eligible for the NRHP or CRHR. Implementing these avoidance measures ensures the known or potential historical resources will not be impacted by activities or public use and access associated with the Proposed Project and that the Proposed Project will not cause a substantial adverse change in the significance of a historical resource or require mitigation measures.

Following the HPMP measures, prior NRHP evaluations will be reviewed to ensure that the evaluations are still appropriate and that the Proposed Project's potential impacts on potential historical resources are avoided or mitigated to less than significant levels. Operations and maintenance within the Proposed Project Area are expected to continue as they have been conducted historically. Unevaluated resources that have reached 50 years of age since the previous studies were conducted will be evaluated when Proposed Project activities could potentially disturb or modify these resources. Effects of continued operations and maintenance to newly and previously evaluated resources that are eligible for listing in the NRHP and/or the CRHR will be assessed under the HPMPs when Project activities are identified that could affect such resources and/or when a new resource is identified, to determine the appropriate treatment for managing the resource under the new licenses.

When impacts to unevaluated resources are unavoidable, they will be evaluated for the NRHP and/or the CRHR through a testing or evaluation program (e.g., subsurface testing, archival research, etc.). Included in the HPMPs is a program for resource evaluations. This program specifies evaluation protocols for archaeological resources, built environment resources, and Native American TCPs.

Any resources determined eligible for the NRHP or CRHR that cannot be avoided by activities associated with the Proposed Project will follow procedures established in the HPMPs to reduce potentially significant impacts. The HPMPs also detail the resource-specific measures to be conducted that are unique to each resource that may undergo evaluation or mitigation, as well as provide the steps necessary to implement mitigation based on the NRHP and CRHR criteria under which a resource is found eligible. The processes may include data recovery excavations for historic-era archaeological sites, archival research of historical buildings and structures, signage, and other measures deemed appropriate based on the type of resources being addressed and as determined through consultation with consulting parties (i.e., BLM, Native American Tribes, and SHPO). The HPMP methods and protocols have been compiled in accordance with the principles, standards, and guidance contained in Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (USDOI 1983), the Advisory Council on Historic Preservation's (ACHP's) Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites (ACHP 1999), guidance offered by SHPO, and as appropriate, recommendations from the BLM, and Native American Tribes. Implementing these protocols would ensure that planned, unavoidable impacts from the Proposed Project to historical resources are reduced to a less significant level before impact-causing activities are conducted. As such, those impacts would not result in a substantial adverse change to the significance of a historical resource or require mitigation measures, as the HPMPs are already a component of the Proposed Project.

Proposed Project operation or maintenance, erosion, and recreation could expose and damage previously unidentified cultural resources that could be historical. In addition, previously identified resources could have new components or characteristics revealed throughout the new licenses that were previously unknown. The HPMPs provide measures to address such inadvertent discoveries (i.e., the unexpected exposure of previously unknown and unrecorded resources) during the terms of the new licenses. These measures require that all work in the immediate area of the discovery ceases

immediately and that all materials remain in place until a qualified archaeologist can examine the discovery to determine whether the find is an isolated artifact, an archaeological site, other resource types, or a finding of no concern (i.e., not 45-50 years of age). Isolated historic-era artifacts and archaeological sites unexpectedly discovered are to be documented on DPR 523 forms and avoided by further ground disturbance. The SHPO, BLM, and consulting Tribes will be notified of the inadvertent discovery within 48 hours of the discovery, in accordance with 36 CFR 800.13(b)(3). The notification will describe any assessment of NRHP eligibility (formal or informal), the recommended actions to be undertaken to resolve potential adverse effects, and to seek consultation on the recommendations or other ways to avoid, minimize, or mitigate potential impacts to the discoveries. Per 36 CFR 800.13(b)(3), the Tribes and SHPO will have 48 hours to respond to the notification. If avoidance is not feasible, the measures to address unavoidable impacts will be implemented as provided in the HPMPs and discussed above.

Minor ground disturbances within the Proposed Project Area related to modifications, vegetation management, road maintenance, construction, and use, recreation, or emergency repairs to flow releases and that may be required for routine maintenance activities have the potential to cause substantial adverse changes to currently unidentified, buried historic-era archaeological sites and known archaeological sites near these activity areas. Archaeological and/or tribal monitoring will be implemented in accordance with the measures provided in the HPMPs. Regular monitoring will provide feedback concerning the condition of historical resources, confirming that the resources have been avoided as planned or signaling when additional management measures may be called for. A qualified, professional archaeologist will monitor all potential historical resources located within the Proposed Project Area for which eligibility has not yet been determined. The frequency of monitoring shall be based on considerations of accessibility, resource type, and proximity to features and recreational use areas associated with the Proposed Project. It is the product of consultation with Tribes and agencies, as appropriate. If a previously recorded resource is ineligible, it will no longer be monitored or managed through the HPMPs. However, if a previously unrecorded resource is identified, it will be assumed eligible and, in consultation with Tribes and agencies, avoided, and a monitoring schedule will be assigned.

In addition to regular resource-specific monitoring, archaeological and/or tribal monitoring may be appropriate in cases of ground disturbance within 30-ft of NRHP- or CRHR-eligible or unevaluated resources.

An annual monitoring report summarizing the results of all monitoring activities during the preceding calendar year will be prepared and distributed to consulting parties. The report shall include written descriptions of any disturbances observed at each site monitored. An annual cultural resources consultation meeting with consulting Tribes, land-managing agencies, and SHPO will also be held each year to discuss the monitoring report. Based on the results of monitoring presented in the report, the meeting will include a discussion of any proposals to increase or decrease monitoring frequency in response to recent site conditions. Any agreed-upon changes in site monitoring frequency will be appended to the beginning of the HPMPs monitoring plan and submitted to Tribes and agencies (as appropriate) as an errata sheet.

The HPMPs further provide annual cultural resources education and sensitivity training for the Districts' staff and contractors, including all heavy equipment operators and other ground crew members working on the Proposed Project. Training personnel in the procedures required to avoid unplanned impacts on cultural resources will help to prevent inadvertent disturbances and allow for the evaluation and potential mitigation of impacts before historical resources are disturbed. Through implementation of the HPMPs, the Proposed Project would not cause a substantial adverse change in the significance of a historical resource. As a result, the Proposed Project would have a **less than significant impact** on historical resources, and no mitigation is required.

Impact CR-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

As provided for in section 15064.5(c)(1) of the CEQA Guidelines, a lead agency shall first determine whether an archaeological resource is a historical resource, as defined in section 15604.5(a) of the CEQA Guidelines, when it is found that a Project would affect that resource. According to section 15064.5(c)(3) of the CEQA Guidelines, "if an archaeological site does not meet the criteria defined in subdivision (a) but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2." If archaeological resources are determined to be either historical resources or unique archaeological resources, then the effects of the Project on those resources must be analyzed.

The cultural resources studies completed for the licensing and relicensing identified 443 archaeological resources within the Proposed Project Area, for which the NRHP/CRHR eligibility of 76 of these resources has not been determined. Twenty-nine of these resources have been determined eligible for inclusion in the NRHP and, therefore, the CRHR. The remaining 338 archaeological resources have been determined ineligible for the NRHP. In accordance with the terms of the HPMPs, unevaluated archaeological resources will be managed as if they are NRHP eligible through avoidance, if feasible. Avoidance means that no ground-disturbing activities associated with the Proposed Project may affect these unevaluated archaeological resources, nor shall any ground-disturbing activities occur within the boundaries of known or potential historical resources, including any defined buffer zones. Avoidance further means that the boundaries for ground-disturbing activities may need to be modified, redesigned, or eliminated to avoid archaeological resources properly. Buffer zones may be established around archaeological resources to ensure added protection. Moreover, avoidance may include rerouting trails or roads to avoid archaeological resources, gating access roads to particularly sensitive areas to keep visitors away, or restricting public access and disturbances to protect archaeological resources. Implementing these avoidance measures ensures the archaeological resources will not be impacted by ground-disturbing activities or public use and access and that the Proposed Project will, therefore, not cause a substantial adverse change in the significance of an archaeological resource that is determined to be unique or is a historical resource or potential historical resource, or require mitigation measures.

Additionally, there is the potential for currently unidentified archaeological resources to be discovered on the Proposed Project during the term of the proposed new licenses. Operation or maintenance of the Proposed Project, erosion, and recreation could expose and damage previously unidentified cultural resources. In addition, known archaeological resources may reveal previously unknown characteristics if new portions of these resources are exposed. The HPMPs provide the measures to address inadvertent discoveries (i.e., the unexpected exposure of previously unknown and unrecorded archaeological resources) during the terms of the new licenses. These measures require that all work in the immediate area of the discovery cease immediately and that all artifacts remain in place until a qualified archaeologist can examine the discovery to determine whether the find is an isolated artifact or an archaeological site. Isolated artifacts and archaeological sites unexpectedly discovered are to be documented on the DPR 523 forms and avoided by further ground disturbance. The SHPO, BLM, and consulting Tribes will be notified of the inadvertent discovery within 48 hours of the discovery, in accordance with 36 CFR 800.13(b)(3). The notification will describe any assessment of NRHP eligibility (formal or informal), the recommended actions to be undertaken to resolve potential adverse effects, and to seek consultation on the recommendations or other ways to avoid, minimize, or mitigate potential impacts to the discoveries. Per 36 CFR 800.13(b)(3), the Tribes and SHPO will have 48 hours to respond to the notification. If avoidance is not feasible, the measures to address unavoidable impacts will be implemented as provided for in the HPMPs.

Avoidance and protection are not always possible. When planned impacts on archaeological resources are unavoidable, unevaluated resources will be evaluated for the NRHP through a testing or evaluation program (e.g., subsurface testing, archival research, etc.). Any resources determined eligible for the NRHP or CRHR that cannot be avoided by activities associated with the Proposed Project will be mitigated to address significant impacts. The approaches and methods detailed in the HPMPs will be used for both NRHP evaluation and mitigation at archaeological resources, including test excavation for NRHP evaluations, data recovery excavations, archival research, signage, and other measures deemed appropriate to the type of resource being evaluated and the type of impacts being mitigated. The HPMPs detail resource-specific measures unique to each resource that may undergo evaluation or mitigation and provide the steps necessary to implement mitigation based on the NRHP and CRHR criteria under which a resource is found eligible. The HPMP methods and protocols have been compiled in accordance with the principles, standards, and guidance contained in Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (USDOI 1983), the ACHP's Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites (ACHP 1999), guidance offered by SHPO, and as appropriate, recommendations from the BLM, and Native Americans Tribes. Implementing these methods and protocols would ensure that planned, unavoidable impacts on archaeological resources from the Proposed Project will be addressed before impacting the resources. The Proposed Project, therefore, will not cause a substantial adverse change in the significance of an archaeological resource or require mitigation measures beyond what is already required by the HPMPs, which is a component of the Proposed Project.

Minor ground disturbances within the Proposed Project Area related to modifications, vegetation management, road maintenance, construction, and use, recreation, or emergency repairs to flow releases and that may be required for routine maintenance activities have the potential to cause substantial adverse changes to currently unidentified, buried archaeological resources and known archaeological resources near these activity areas. Archaeological and/or tribal monitoring will be implemented in accordance with the measures provided in the HPMPs. Regular monitoring will provide feedback concerning the condition of historical resources, confirming that resources have been avoided as planned or signaling when additional management measures may be called for. A qualified, professional archaeologist will monitor all potential historical resources located within the Proposed Project Area for which eligibility has not yet been determined. The frequency of monitoring shall be based on considerations of accessibility, resource type, and proximity to features and recreational use areas associated with the Proposed Project. It is the product of consultation with Tribes and agencies, as appropriate. If a previously recorded archaeological resource is determined ineligible, it will no longer be monitored or managed through the HPMPs. However, if a previously unrecorded resource is identified, it will be assumed eligible and avoided, and in consultation with Tribes and agencies, a monitoring schedule will be assigned.

In addition to regular resource-specific monitoring, archaeological and/or tribal monitoring may be appropriate in cases of ground disturbance within 30-ft of NRHP- or CRHR-eligible or unevaluated resources. Tribes shall be invited to participate any time an archaeologist monitors disturbing ground activities near precontact resources.

An annual report summarizing the results of all monitoring activities during the preceding calendar year will be prepared and distributed to consulting parties each year. The report shall include written descriptions of any disturbances observed at each monitored resource. An annual cultural resources consultation meeting with Tribes, land-managing agencies, and SHPO will also be held each year to discuss the monitoring report. Based on the results of monitoring presented in the report, the meeting will include a discussion of any proposals to increase or decrease monitoring frequency in response to recent resource conditions. Any agreed-upon changes in resource monitoring frequency will be appended to the beginning of the HPMPs monitoring plan and submitted to Tribes and agencies (as appropriate) as an errata sheet.

The HPMPs further provide annual cultural resources education and sensitivity training for the Districts' staff and contractors, including all heavy equipment operators and other ground crew members working on the Proposed Project. Training personnel in the procedures required to avoid unplanned impacts on archaeological resources would help to prevent inadvertent disturbances and allow for the evaluation and potential mitigation of impacts before any disturbances or destruction. Through implementation of the HPMPs, the Proposed Project would not cause a substantial adverse change in the significance of an archaeological resource. As a result, the Proposed Project would have a **less than significant impact** on archaeological resources, and no mitigation is required.

Impact CR-3: Would the project disturb any human remains, including those interred outside dedicated cemeteries?

Section 15064.5(d) of the CEQA Guidelines requires that the Proposed Project addresses the potential for human remains, particularly Native American human remains, to be present within the Proposed Project Area. Consistent with state law, including section 7050.5 of the Health and Safety Code and section 5097.98 of the Public Resources Code, section 15064.5(d) and (e) of the CEQA Guidelines require the identification of known or likely burials or other locations of human remains and adherence to applicable state laws and regulations for the appropriate disposition of human remains, including in the event of accidental discovery. Given the culturally sensitive nature of the lands within the Proposed Project, which includes the presence of previously identified human remains within the Proposed Project Area and the presence of precontact occupation sites, it is possible that additional human remains could be discovered during the term of the proposed new licenses. The measures provided in the HPMPs to address the discovery and protection of human remains, in accordance with applicable state and federal laws, would be employed if human remains are encountered. Through implementation of the HPMPs, the Proposed Project would not disturb any human remains, including those interred outside dedicated cemeteries. As a result, the Proposed Project would have a **less than significant impact** on human remains, and no mitigation is required.

3.9 Energy

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
ENERGY-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
ENERGY-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.9.1 Environmental Setting

The Proposed Project consists of hydroelectric facilities that, in part, produce a source of hydroelectric power. According to FEIS Section 4.1, *Power and Developmental Benefits of the Project*, as currently operated, the Don Pedro Project has an authorized installed capacity of 168 MW – 203MW maximum output and generates an average of 612,967 MWh annually; the La Grange Project has a capacity of 4.7 MW and generates an average of 18,077 MWh annually. Under the Proposed Project as part of FERC's Staff Alternative with Mandatory Conditions in FEIS Section 4.2, *Comparison of Alternatives*, the Don Pedro Project would have an installed and dependable capacity of 220 MW and generate 652,994 MWh annually; the La Grange Project would have an installed and dependable capacity of 4.7 MW (same as existing capacity) and generate 24,576 MWh annually.

The State of California's Clean Energy and Pollution Reduction Act of 2015 establishes California's GHG emissions reduction target of 40 percent below 1990 levels by 2030 and 80 percent by 2050. California's 100 Percent Clean Energy Act of 2018 establishes a goal that 100 percent of retail sales of electricity to California end-use customers will be supplied by renewable energy resources and zero-carbon resources by December 31, 2045.

As discussed in FEIS Section 1.2.1, *Purpose of Action*, issuing a new license for the Don Pedro Project and an original license for the La Grange Project would allow the Districts to generate electricity within the FERC Project Boundary for the terms of the licenses, making electrical power from renewable resources available to their customers.

3.9.2 Impact Analysis

Impact ENERGY-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Routine maintenance involving short-term energy resource consumption would be generally limited to facility maintenance, vegetation management, and road maintenance. The Proposed Project would not be wasteful because the equipment would be used short-term and only when necessary. Further, the Proposed Project would adhere to existing tiered emissions standards for off-road and construction equipment established by the U.S. Environmental Protection Agency and the California Air Resources Board.

During construction, energy consumption in transportation fuel (gasoline and diesel) would result from operating construction equipment, hauling trucks, and worker commute vehicles. This work would generally be consistent with existing operations and maintenance and represent continuous use of such energy consumption.

According to FEIS Section 2.2, *Applicants' Proposal*, proposed facilities, and operations associated with the Don Pedro Project include the installation of a second in-river infiltration gallery, IG-2, with a design capacity of 100 to 125 cfs and the upgrade of three of the four turbine-generators, increasing the hydraulic capacity of Units 1, 2, and 3. The existing authorized capacity of the Don Pedro Project is 168,015 kW, and the proposal would increase the authorized capacity to 220,000 kW. The upgrades would increase the total maximum hydraulic capacity of the Don Pedro Project from 5,530 cfs to 6,100 cfs and increase the average annual generation by about 20,000 MWh. Other than the minimum flow release of 5 to 10 cfs to the plunge pool downstream of the LGDD, the Districts do not propose to make substantive changes to the operation of the La Grange Project. These proposed modifications would not contribute to wasteful, inefficient, or unnecessary consumption of energy resources.

The Proposed Project would have a beneficial impact on energy resources through its production of hydroelectric power. The Proposed Project would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Proposed Project construction or operation. Therefore, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact ENERGY-2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Proposed Project would not significantly increase energy use or conflict with a state or local plan for renewable energy or energy efficiency. Clean, hydropower generation is a valuable benefit of the Proposed Project. The upgraded turbine-generators for Units 1, 2, and 3 as part of the Don Pedro Project are expected to produce energy benefits of approximately 20,000 MWh per year, or approximately 3 percent, resulting from improved efficiency and greater capacity (TID/MID 2017).

The Proposed Project would support renewable energy plans and contribute towards implementing California's 100 Percent Clean Energy Act of 2018 in supplying renewable energy. As such, the Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Proposed Project would have **no impact**, and no mitigation is required.

3.10 Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☐	☒
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv. Landslides?	☐	☐	☐	☒
GEO-2: Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?	☐	☐	☒	☐

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.10.1 Environmental Setting

The Proposed Project Area is located near the western margin of the Sierra Nevada Mountains. This major mountain chain is 400 miles long and runs south-southeast to north-northwest in eastern California. The Proposed Project is located in the Western Sierra Nevada Metamorphic Belt within the Sierra Nevada Block, a 400-mile-long, 40- to 80-mile-wide, tilted fault block trending north-northwest. The block includes the broad region of foothills along the western slope of the Sierra Nevada Mountains. The Western Sierra Nevada Metamorphic Belt is divided into three bedrock subunits—the Western, Central, and Eastern belts. The Proposed Project Area overlies the Central Belt. The Central Belt is characterized by ultramafic igneous rocks and metamorphosed volcanic and sedimentary sequences of the Paleozoic and Mesozoic eras. Surficial deposits overlie the bedrock units; they consist primarily of colluvial soils and local alluvium in the drainage areas (FERC 2020).

Soils near the Proposed Project are shallow and excessively well-drained. The dominant soil associations are the Whiterock-rock outcrop-Auburn association (71 percent), the Rock outcrop-Henneke-Delpiedra association (18 percent), and the Sierra-rock outcrop-Auberry-Ahwahnee association (8 percent). The Whiterock-rock outcrop-Auburn association is one of the more extensive associations in the foothills of the Sierra Nevada Mountains; it typically develops in tilted slate, amphibolite schist, and partially metamorphosed sandstone formations (FERC 2020).

The western margin of the Sierra Nevada Mountains contains the Foothills Fault System, a dominant structural feature that developed during the Jurassic and Cretaceous periods. The Foothills Fault System is a braided complex of north-northwest-striking fault segments with mineralized zones. Several faults and shear zones are present within the Foothills Fault System. These faults are located in the vicinity of the Proposed Project Area and include, from southwest to northeast, the Bear Mountains Fault, the Bowie Flat Fault, and the Melones Fault. Several unnamed Bear Mountains Fault Zone faults cross the Tuolumne River within the La Grange Project. The minor Bowie Flat Fault crosses the Don Pedro Reservoir. The California Division of Safety of Dams classify all of these faults as conditionally active, meaning they have not been active within the last 11,400 years. The largest earthquake along the Foothills Fault System segment was August 1, 1975, Oroville earthquake (Richter magnitude of 5.7), 136 miles northwest of the La Grange Diversion Dam. No major earthquakes have occurred within 60 miles of the Proposed Project Area in recorded history (FERC 2020).

3.10.2 Impact Analysis

Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Public Resources Code Section 2621 *et seq.)* intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors and prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. Based on information provided by the California Geological Survey (CGS), there are no Alquist-Priolo Earthquake Fault Zones in the Proposed Project Area (CGS 2025a). Therefore, the Proposed Project would have **no impact**, and no mitigation is required.

ii. Strong seismic ground shaking?

The Earthquake Shaking Potential for California map, prepared by the CGS indicates that the Proposed Project Area is within an area distant from known active faults and is expected to experience lower levels of shaking less frequently (CGS 2016). As noted, no major earthquakes have occurred within 60 miles of the Proposed Project Area in recorded history. The proposed improvements at the existing recreational facilities are unlikely to create a risk of loss, injury, or death when subject to seismic ground shaking since these facilities would not involve structures that would be occupied. All construction work would be subject to the seismic safety provisions of the California Building Code adopted by the counties. The Proposed Project operations would be similar to existing operations and would not pose new risks associated with seismic ground shaking. Therefore, the Proposed Project would have **no impact** related to strong-seismic ground shaking, and no mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Liquefaction is when saturated, unconsolidated soil or sand is converted into a quicksand-like suspension during an earthquake. Since liquefaction most likely would occur during or following an earthquake and severe earthquake risk is deemed low in the Proposed Project Area, the risk and danger of liquefaction occurring is also considered minimal.

Land subsidence is the gradual settling or sinking of an area with little horizontal motion. It occurs because of changes taking place underground. Both natural and human phenomena can induce subsidence. Natural phenomena include subsidence resulting from shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, or gas from underground reservoirs, collapse of underground mines, drainage of wetlands, and soil compaction. While sinkholes have occurred in Tuolumne County, none have occurred in the Proposed Project Area (Tuolumne County 2018b). In Stanislaus County, the area of concern for subsidence is the Central Valley area, outside the Proposed Project Area (Stanislaus County 2016). The Proposed Project does not propose any groundwater extraction, oil, or gas, so it would not contribute directly to subsidence.

The Proposed Project is unlikely to experience liquefaction, subsidence, or other ground failure. In addition, as noted, all construction work would be subject to the seismic safety provisions of the California

Building Code. Therefore, the Proposed Project would have **no impact** related to seismic-related ground failure, and no mitigation is required.

iv. Landslides?

The Proposed Project is located in the foothill region west of the Sierra Nevada. Based on information from the CGS, the Proposed Project Area is not prone to landslides (CGS 2025b). Proposed minor, short-term construction activities as part of the Proposed Project would not induce landslides that would present a risk of loss, injury, or death. Therefore, the Proposed Project would have **no impact** related to landslides, and no mitigation is required.

Impact GEO-2: Would the project result in substantial soil erosion or the loss of topsoil?

Erosion hazards within the Proposed Project Area are low. Most of the slopes adjacent to the Don Pedro Reservoir and the downstream areas of the Tuolumne River above La Grange Diversion Dam are characterized by intact rock, rubble, or boulders that are not prone to erosion. The land surrounding the La Grange Headpond is mostly undeveloped. The La Grange Headpond is contained within a canyon reach of the Tuolumne River with heavily armored or rock-outcrop shorelines. The highest erosion hazards near the Proposed Project are associated with the large drainages upstream of the Don Pedro Reservoir (e.g., Hatch Creek and Big Creek) (FERC 2020).

The Districts propose rehabilitating existing recreational facilities, constructing new recreational facilities, and constructing minor, additional Proposed Project features. Construction of any type would likely result in ground-disturbing activities that could cause short-term, localized erosion and associated water quality effects in Don Pedro Reservoir, La Grange Headpond, and the Tuolumne River downstream of the Proposed Project facilities. Any ground-disturbing activity, including non-routine maintenance, has the potential to result in erosion and sedimentation. BLM's Don Pedro revised 4(e) condition 3 and La Grange preliminary 4(e) condition 3 would minimize potential erosion impacts, but these conditions are limited to ground-disturbing activities on BLM-managed land. Temporary construction activities on other lands could increase erosion hazards, however, the Proposed Project includes an Erosion and Sediment Control Plan (FERC 2020, Appendix B, page B-3).

During Project operation, soil erosion may occur during stormwater runoff from exposed surfaces such as dirt roads, trails, and other unpaved areas. Project operation may also result in some shoreline erosion along the Don Pedro Reservoir. However, the effects of operations on shoreline erosion would be limited because much of the shoreline consists of rock outcrops and shallow soil. Erosion from waves on the reservoir is limited because the irregularly shaped reservoir keeps the fetch relatively short, limiting wave heights (FERC 2020).

During daily operations and maintenance, erosion related to using the Don Pedro and La Grange Project spillways and dam outlet facilities is minimal and not likely to result in adverse effects on the lower Tuolumne River. Although regular Proposed Project operation and maintenance (i.e., non-flood conditions) would not substantially contribute to erosion downstream of the Don Pedro Reservoir, large flood events can result in substantial sediment movement into the La Grange Headpond and the lower Tuolumne River. The 1997 flood eroded 500,000 cubic yards of sediment from the Twin Gulch channel, resulting in the deposition of sediment at the confluence of the Twin Gulch channel with the Tuolumne River above the La Grange Headpond, within the La Grange Headpond and in the lower Tuolumne River. However, based on current conditions, flood events smaller than the 1997 flood event are not expected to result in significant erosion in the Twin Gulch channel and sediment movement into the La Grange Headpond and lower Tuolumne River (FERC 2020).

In summary, proposed operations are not expected to increase erosion and sedimentation hazards on the affected waterways, and the proposed increased flows likewise would not affect these hazards. While temporary construction activities could increase erosion hazards, the Proposed Project includes an Erosion and Sediment Control Plan (FERC 2020, Appendix B, page B-3), which would minimize this hazard. Therefore, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact GEO-3: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As discussed under Impacts GEO-1 and GEO-2 above, the Proposed Project Area does not include any portion of a liquefaction zone, and chances of lateral spreading and subsidence within the Proposed Project Area are minimal. While landslides may occur within the Proposed Project Area, any risk of them would not be exacerbated by implementation of the Proposed Project. Therefore, the Proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Proposed Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. As a result, the Proposed Project would have **no impact**, and no mitigation is required.

Impact GEO-4: Would the project be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?

The FEIS did not analyze the potential impacts of expansive soils. Expansive soils, or shrink-swell soils, contain expansive clays that can absorb significant amounts of water into their crystalline structure. The presence of clay makes the soil prone to large changes in volume in response to changes in water content. The quantity and type of expansive clay minerals affect the potential for the soil to expand or contract. The area southwest of Don Pedro Reservoir contains Argonaut soils with clay subsoil (USDA SCS 1964a). As such, Argonaut soils are potentially expansive soils. The La Grange Project Area has Exchequer soils with a lower clay content (USDA SCS 1964b).

For developments subject to the California Building Code, Section 1808.6 requires design features for foundations of buildings and structures in areas subject to expansive soils. Proposed Project improvements will be subject to this section. Although no new structures are included as part of the Proposed Project, any new construction would adhere to the California Building Code. Therefore, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact GEO-5: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The FEIS did not evaluate the capacity of soils to support the use of septic tanks or alternative wastewater disposal systems. All three Recreation Areas – Fleming Meadows, Blue Oaks, and Moccasin Point – have restroom facilities with showers, and all are located in Tuolumne County. Disposal of wastewater and “graywater” in Tuolumne County requires approval of disposal systems by the Tuolumne County Environmental Health Division. The Proposed Project does not propose new facilities requiring wastewater disposal systems or changes to the wastewater and graywater produced at these existing recreation areas. The existing facilities would likely be improved, but mainly for accessibility. No expansion of existing restrooms is proposed, so no new or expanded wastewater systems would be installed. As such, the Proposed Project would have **no impact** on soils incapable of adequately

supporting the use of septic tanks or alternative wastewater disposal systems, and no mitigation is required.

Impact GEO-6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The FEIS did not address paleontological resources. CEQA includes in its definition of historical resources "…any object [or] site …that has yielded or may be likely to yield information important in prehistory…" (14 California Code of Regulations Section 15064.5[a][3]), which is typically interpreted as including fossils and other paleontological resources. More specifically, the destruction of a "…unique paleontological resource or site or unique geologic feature…" constitutes a significant impact under CEQA pursuant to CEQA Guidelines in Appendix G.

Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered to have a high paleontological potential, while Holocene-age deposits (less than 10,000 years old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms. Metamorphic and igneous rocks have low paleontological potential, either because they formed beneath the earth's surface or because they have been altered under high heat and pressures, chaotically mixed, or severely fractured. Generally, the processes that form igneous and metamorphic rocks are too destructive to preserve identifiable fossil remains (Tuolumne County 2018b).

As noted, the Proposed Project Area overlies the Central Belt, which is characterized by ultramafic igneous rocks and metamorphosed volcanic and sedimentary sequences of the Paleozoic and Mesozoic eras. Given their characteristics, rocks in the Central Belt are considered to have a low paleontological potential. However, the Proposed Project Area also has surficial deposits consisting primarily of colluvial soils and local alluvium, which could have paleontological resources.

Records of paleontological finds maintained by the University of California Museum of Paleontology state that there are 72 localities at which fossil remains have been found in Tuolumne County. These occur primarily in the Mehrten geologic formations. In addition, Paleozoic marine rocks occur in the county's western portion and may contain fossils of marine invertebrates (Tuolumne County 2018b). No rocks belonging to the Mehrten formation are indicated on the geology map for the Proposed Project Area, nor have any Paleozoic marine rocks (CGS 2022). The University of California Museum of Paleontology also states that there are 237 localities at which fossil remains have been found in Stanislaus County. One of these records indicates a find at La Grange (UCMP 2025).

Although much of the Proposed Project has been previously disturbed, unique paleontological or geologic features could be discovered during subsurface work, which would be considered a potentially significant impact. Also, given the record of a find at La Grange, it is possible that construction activities within the La Grange portion of the Proposed Project Area could encounter paleontological resources. Therefore, **MM-GEO-1** (described below) would be implemented to minimize impacts resulting from the potential for discovery of buried paleontological resources during Proposed Project construction activities.

Long-term operations activities associated with the Proposed Project may involve ground disturbing activities on previously disturbed or undisturbed land and may involve subsurface ground disturbance. Therefore, operations of the Proposed Project could have the potential to encounter unique paleontological or geologic resources, although the possibility is low. With implementation of MM-GEO-1, the Proposed Project would have a **less than significant impact with mitigation incorporated** on unique paleontological resources or sites or unique geologic features.

Mitigation Measure:

MM-GEO-1 Discovery of Paleontological Resources. If paleontological resources are encountered during construction activities, work shall stop within a radius of 50-ft of the find, and a qualified paleontologist shall be contacted to assess the find and to make recommendations on its disposition. Recommendations may include but are not limited to preservation in place or excavation and ultimate curation by an established, accredited museum repository. Work shall not resume at the site of the encounter until the disposition of the finding is completed and verified by the paleontologist.

3.11 Greenhouse Gas Emissions

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.11.1 Environmental Setting

Greenhouse gases (GHG) and emissions were not analyzed in the FEIS. GHG emissions effects are not localized to areas where they are produced. Climate change is a global phenomenon resulting from the combined effects of GHG emissions produced worldwide. While the true study area affected by GHG emissions is global, for purposes of this section, the study area is considered as the State of California.

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. Scientific research attributes these climatological changes to GHG emissions. GHG emissions are emitted by natural processes and human activities. Human-produced GHG emissions are created primarily by the burning of fossil fuels for energy. The human-produced GHG emissions most responsible for global warming and their relative contribution to it are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and chlorofluorocarbons (CFCs).

Each type of GHG has a different capacity to trap heat in the atmosphere and each type remains in the atmosphere for a particular length of time. The ability of a GHG to trap heat is measured by an index called the global warming potential expressed as carbon dioxide equivalent (CO2e). CO2 is considered the baseline GHG in this index and has a global warming potential of one. CH4 has a global warming potential of 28 times that of CO2, and N2O has a global warming potential of 265 times that of CO2. The families of CFCs, hydrofluorocarbons, and perfluorocarbons have a substantially greater global warming potential than other GHGs, generally ranging from approximately 1,300 to over 10,000 times that of CO2. While CO2 represents the vast majority of the total volume of GHGs released into the atmosphere, the release of even small quantities of other types of GHGs can be significant for their contribution to climate change.

The GHG emissions standards within the Proposed Project Area are regulated by statewide policies and regulations as well as local policies and regulations. In Tuolumne and Stanislaus counties, local air quality and GHG emissions are regulated by the Tuolumne County Air Pollution Control District (TCAPCD) and San Joaquin Valley Air Pollution Control District (SJVAPCD), respectively.

Neither TCAPCD nor SJVAPCD have established specific numeric thresholds for GHG emissions. Instead, for SJVAPCD, the significance of a project's GHG emissions is evaluated based on whether the project would conflict with or obstruct the implementation of applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. For small-scale projects, if the estimated emissions are minimal and the project complies with existing regulations and plans, the impact is generally considered less than significant (SJVAPCD 2020). Thresholds used by other air quality districts may provide a useful frame of reference for significant emissions. For example, the Sacramento Metropolitan Air Quality Management District uses a threshold of 1,100 MT CO2e per year for land development projects (SMAQMD 2020).

Applicable federal regulations that address GHG emissions include the following:

United States Environmental Protection Agency

On April 2, 2007, in Massachusetts v. Environmental Protection Agency, 549 U.S. 497, the U.S. Supreme Court found that GHGs are air pollutants covered by the FCAA. The Supreme Court held that USEPA must determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. To regulate GHGs from passenger vehicles, the USEPA issued an endangerment finding on December 7, 2009. The finding identifies emissions of six key GHGs — CO2, CH4, N2O, HFCs, PFCs, and SF6 — that threaten the public health and welfare of current and future generations (USEPA 2024a).

Mandatory Reporting of Greenhouse Gases Rule

On September 22, 2009, the USEPA issued a final rule for the mandatory reporting of GHG data and other relevant information from large sources in the United States (Code of Federal Regulations Title 40, Part 98). This comprehensive, nationwide emissions data is intended to provide a better understanding of the sources of GHGs and guide development of policies and programs to reduce emissions. The mandatory reporting rule applies to direct GHG emitting sources; suppliers of fossil fuel, industrial gas, and other products that would result in GHG emissions if released, combusted, or oxidized; and facilities that inject carbon dioxide underground for geologic sequestration or other reasons. In general, facilities that emit 25,000 metric tons (MT) of carbon dioxide equivalent (CO2e) or more per year of GHGs are required to submit annual reports to the USEPA.

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate, AB, and Executive Orders (EOs) including, but not limited to, the following:

AB 32 - California Global Warming Solutions Act

California has enacted aggressive GHG reduction targets, starting with AB 32, the California Global Warming Solutions Act of 2006. AB 32 is California’s signature climate change legislation. It set the goal of reducing statewide GHG emissions to 1990 levels by 2020 and required the California Air Resources Board (CARB) to develop a scoping plan that describes the approach California will take to achieve that goal and update it every 5 years. In 2015, Governor Jerry Brown enhanced the overall adaptation planning effort with Executive Order B-30-15, establishing an interim GHG reduction goal of 40 percent below 1990 levels by 2030 and required state agencies to factor climate change into all planning and investment decisions.

Senate Bill (SB) 375- Sustainable Communities and Climate Protection Act Gases

SB 375 furthered state climate action goals by mandating coordinated transportation and land use planning through the preparation of Sustainability Communities Strategies (SCS). SB 375 requires the CARB to develop regional GHG emissions reduction targets for passenger vehicles. The CARB establishes 2020 and 2035 targets for each region covered by one of the State's 18 metropolitan planning organizations.

SB 97

SB 97, enacted in 2007, mandates the consideration of GHG emissions in environmental reviews under CEQA and requires the Governor's Office of Planning and Research (OPR) to develop, and the California Natural Resources Agency to adopt, amendments to the CEQA Guidelines specifically addressing GHG emissions. These amendments became effective on March 18, 2010 (CA LUCI 2025).

SB 32

SB 32 was signed into law on September 8, 2016. SB 32 expands upon AB 32 to reduce GHG emissions. SB 32 sets into law the mandated GHG emissions target of 40 percent below 1990 levels by 2030 written into EO B-30-15.

CARB's 2017 Climate Change Scoping Plan

The CARB 2017 Scoping Plan (2017 Scoping Plan) serves as a strategic framework for California's climate and air quality goals, outlining a comprehensive approach to reduce greenhouse gas emissions and improve air quality. It outlines California's strategy to achieve its climate goals of reaching the targets set in Senate Bill 32 of reducing emissions by 40 percent from 1990 levels by 2030 and reducing emissions by 80 percent below 1990 levels by 2050. The 2017 scoping plan emphasizes a comprehensive approach to reducing greenhouse gas emissions across key sectors, including transportation, energy, and waste management. The plan identifies specific measures and policies aimed at fostering innovation, enhancing energy efficiency, and promoting renewable energy sources.

CARB 2022 Climate Change Scoping Plan

The CARB 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) builds on California's commitment to achieving carbon neutrality by 2045, outlining an updated strategy to further reduce greenhouse gas emissions. It sets a framework to achieve targets for carbon neutrality and reduce GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279.

SJVAPCD

The SJVAPCD created a Climate Change Action Plan (CCAP), finalized in 2009. This CCAP addresses GHG emissions impacts under CEQA, including guidelines for determining significance and suggesting best performance standards (BPS). The SJVAPCD has not established specific numeric thresholds for GHG emissions. Instead, the significance of a project's GHG emissions is evaluated based on whether the project would conflict with or obstruct the implementation of applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The CCAP guidelines for GHG analysis rely on the use of performance-based standards to evaluate potential impacts. Under this approach, significance is determined by incorporating established project design elements and BPS, rather than by quantifying project-specific emissions. Because emissions reductions are pre-quantified through BPS implementation, individual project emission estimates are not required. BPS for a development project focus on reducing vehicle miles traveled and energy consumption. For small-scale projects, if the

estimated emissions are minimal and the project complies with existing regulations and plans, the impact is generally considered less than significant. (SJVAPCD 2009).

TCAPCD

Tuolumne County does not have specific, published numeric thresholds of significance for greenhouse gas (GHG) emissions under CEQA. Instead, they follow the State CEQA Guidelines and utilize existing federal and state thresholds.

3.11.2 Impact Analysis

Impact GHG-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As described in Chapter 2, *Project Description*, of this document, the scope of the Proposed Project entails minor construction activities and would not create a stationary source. For the Don Pedro Project, the FERC Staff Alternative with Mandatory Conditions would not require any generation-related project facilities to be added to the project. As described in the FEIS, the Districts would continue operating and maintaining the existing recreation facilities associated with the Don Pedro Project with certain enhancements. The Districts proposed to include two in-river infiltration galleries (IG-1 and IG-2) to the project, one of which (IG-1) is already constructed and operational, and the other (IG-2) would only be constructed if required through the FERC license. For the La Grange Project, the FERC Staff Alternative with Mandatory Conditions would also not require any generation-related project facilities to be added to the Proposed Project. Construction for the Proposed Project includes improvements at the existing facilities, including the Shoreline Trail, and would be limited in scope. Construction-related sources of emission include construction equipment and vehicle usage. Because construction activities, and accordingly, construction-related emissions, would be minor for the Proposed Project, they have been evaluated qualitatively rather than quantitatively. Given the relatively minor scale of construction activities for the Proposed Project, GHG emissions would be accordingly minor and would not exceed local, state, or federal thresholds. Additionally, the Proposed Project results in generation of hydropower. This would provide clean power, with fewer emissions generated than from fossil fuels, leading to a beneficial impact to GHG.

For both the Don Pedro Project and La Grange Project, operations and maintenance of the facilities would not change significantly under the Proposed Project. Existing operations and maintenance activities that could contribute to generation of GHG emissions include routine vehicle traffic for inspection and repairs, as well as to carry out the resource management plans and recreational visitors. The scale and frequency of these vehicle trips would not significantly contribute to GHG emissions in the counties, so operations and maintenance related to the Proposed Project would not have a significant impact on generation of criteria air pollutants. Therefore, the Proposed Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact GHG-2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Proposed Project would generate short-term GHG emissions during construction activities. These short-term construction GHG emissions are not expected to exceed local or state significance thresholds, as described under Impact GHG-1.

As discussed above, TCAPCD does not set specific, numeric thresholds of significance for GHG evaluation and does not have a climate action plan. The SJVAPCD CCAP guidelines evaluate GHG

impacts using performance-based standards and BPS, rather than requiring project-specific emissions quantification. BPS focus on reducing vehicle miles traveled and energy use. For small-scale projects that implement BPS and comply with applicable regulations and plans, GHG impacts are generally considered less than significant. By incorporating BPS, including limiting vehicle idling and using energy-efficient equipment, design and construction would aim to reduce energy consumption and would establish compliance with these guidelines. Given the small scale and short-term nature of trail paving work, overall GHG emissions would be minimal compared to larger construction or industrial projects. Additionally, the Proposed Project results in generation of hydropower. This would provide clean power, with fewer emissions generated than from fossil fuels, leading to a beneficial impact to GHG.

The 2022 CARB Scoping Plan lays out a suggested path at the state and local levels for California to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions. At the state level, the plan encourages regulations and incentive programs. At the local level, the plan suggests local climate action planning. As demonstrated in this section, the Proposed Project follows state regulations and complies with the measures and goals in the local climate action plan by incorporating BPS. As such, the Proposed Project is compliant with the 2022 CARB Scoping Plan.

Construction GHG emissions would be temporary and intermittent and would cease upon completion of work. In addition to being cumulatively minimal, because the construction activities of the Proposed Project would occur over an extended time period, the impact related to GHG emissions would be further reduced when considered on a year-to-year basis. Operational GHG emissions would not be increased significantly over existing conditions due to the Proposed Project. Therefore, the Proposed Project would not conflict with any state or regional GHG emission reduction goals. As a result, Proposed Project would have a **less than significant impact**, and no mitigation is required.

3.12 Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☐	☒	☐
HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

3.12.1 Environmental Setting

Hazardous Materials Database Listings

The SWRCB GeoTracker (SWRCB 2025) and DTSC EnviroStor (DTSC 2025) databases were used to determine the presence of hazardous materials sites in the Proposed Project Area. No active hazardous materials cleanup sites were identified the Proposed Project Area. Several Leaking Underground Storage Tank (LUST) Cleanup Sites were identified in the vicinity of the Proposed Project Area, however, all of the sites are listed as closed cases.

Wildfire

According to the CAL FIRE Fire Hazard Severity Zones Map Viewer, the Proposed Project Area is located in State Responsibility Areas primarily consisting of Very High Fire Hazard Severity Zones and interspersed Federal Responsibility Areas on Proposed Project lands managed by the BLM (CALFIRE 2023a, CALFIRE 2023b).

Airports and Airport Land Use Plans

No airports are located in the vicinity of the Proposed Project.

Schools

There are no schools located within the Proposed Project Area. There are currently three schools within 0.5 miles of the Proposed Don Pedro Project FERC Boundary: Lake Don Pedro Elementary School, First Five Building Blocks Preschool, and Don Pedro High School.

Emergency Response and Evacuation

The Tuolumne County Emergency Operations Plan was last updated in 2024, while the Stanislaus County Emergency Operations Plan was last updated in 2021. Due to the size and complexity of the Don Pedro facility, the Districts maintain a specific Don Pedro Emergency Action Plan which is updated yearly. These emergency plans contain response protocols for a wide variety of emergencies of varying size and scale.

3.12.2 Impact Analysis

Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Activities within the Proposed Project Area would use fuel to maintain and operate vehicles and herbicide to manage noxious weeds in the TRMP (TID/MID 2017). However, the routine transport, use, or disposal of these materials would not be a change from current conditions. Waste is not anticipated to be hazardous; however, if hazardous materials are encountered, they would be transported and disposed of at approved facilities in accordance with applicable laws and regulations, including the federal Resource Conservation and Recovery Act (42 U.S.C. §§ 6901-6992) and California's Hazardous Waste Program administered by the Department of Toxic Substances Control.

According to FEIS Section 3.3.2, *Aquatic Resources – Environmental Effects*, construction of any new Proposed Project facilities, modification of existing facilities, and routine and non-routine maintenance could affect water quality if pollutants (e.g., fuels, lubricants, herbicides, and other hazardous materials) are discharged into waterways. Therefore, the Districts would implement a Spill Prevention Control and Countermeasure (SPCC) Management Plan (Don Pedro Draft License Article 405 and La Grange Draft License Article 404) (TID/MID 2017) to guide the handling of hazardous substances and protect water quality and aquatic biota during Proposed Project construction and operation. The Districts' SPCC Management Plan (TID/MID 2017) identifies relevant federal, state, and local regulations and consists of two components: (1) DPRA SPCC Plan, and (2) DPRA HAZMAT Plan. The Districts' proposed measures would focus on managing risks associated with the DPRA warehouse and fuel island located at 10181 Bonds Flat Road by defining locations for storage of hazardous materials used for the Project, specifying primary and secondary containment of hazardous materials, identifying mitigation measures to prevent any hazardous material spill from spreading, ensuring that the Districts' staff receive training for managing hazardous materials and cleaning up any hazardous material spills.

Through implementation of the Proposed Project SPCC Management Plan and conditions, the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

As discussed, in Impact HAZ-1, the Proposed Project includes activities that would use materials that may be hazardous to the environment during routine maintenance activities and operations of the facilities. However, minimal storage of these materials would occur.

The Don Pedro Project contains two above-ground oil storage tanks for gasoline and diesel #2, surpassing the 55 U.S. gallon requirement for oil storage containers, necessitating a management plan. Therefore, the Districts have implemented a SPCC Management Plan, which features their Tier 1 Qualified Facility SPCC Plan and a Hazmat Plan (TID/MID 2017). Due to license conditions, the Districts would file an SPCC Plan for the La Grange Project within six months of license issuance. The Districts would also file a Hazardous Material Plan for the Proposed Project within one year of license issuance.

No other actions associated with the operation of the hydropower facilities would generate a foreseeable event that would release hazardous materials into the environment, considering the aforementioned hazardous materials laws and safety regulations in place. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No schools are located within one-quarter mile of the Proposed Project Area. Therefore, there would be **no impact** from hazardous materials to schools within one-quarter mile of the Proposed Project, and no mitigation is required.

Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No cleanup sites listed in the ENVIROSTOR database are in the Proposed Project Area (Department of Toxic Substances Control 2025). No solid waste disposal facilities listed by the California RWQCBs with waste constituents above hazardous waste levels outside the waste management unit are located in or near the Proposed Project Area. Wastewater Treatment facilities, mining sites, and landfills listed by the California RWQCBs as having cleanup or abatement orders are not in the Proposed Project Area. There are no underground storage tanks (USTs) or active leaking underground storage tank (LUST) clean-up sites in the Proposed Project Area (SWRCB 2025). Therefore, the Proposed Project would have **no impact** on hazards to the public from hazardous sites, and no mitigation is required.

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No public or public-use airports are within two miles of the Proposed Project Area. Therefore, the Proposed Project would not result in a safety hazard or excessive noise for people residing or working in the area. As a result, **no impact** would occur and no mitigation is required.

Impact HAZ-6: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Both Stanislaus and Tuolumne counties have Emergency Operations Plans in place. As part of existing resource measures for operations and environmental quality, the Districts have an existing Don Pedro Emergency Action Plan updated yearly. The plan identifies potential emergency conditions at Don Pedro Dam and specifies actions to minimize property damage and loss of life under such conditions. The Districts' Fire Prevention and Response Management Plan (TID/MID 2017) also includes vehicular access routes throughout the Proposed Project Area for emergency response.

Maintenance within the Proposed Project Area could delay temporary access to short-term work areas, but access for emergency purposes would not be obstructed or impeded. The Proposed Project would improve long-term emergency access by maintaining Proposed Project Area roads. Construction plans and specifications would be developed and defined where traffic management is needed during implementation. Therefore, the Proposed Project would not interfere with an adopted emergency response plan or emergency evacuation plan. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact HAZ-7: Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The Proposed Project Area is located in State Responsibility Areas primarily consisting of Very High Fire Hazard Severity Zones and interspersed Federal Responsibility Areas on Proposed Project lands managed by the BLM (CALFIRE 2023a, CALFIRE 2023b).

Both Stanislaus and Tuolumne counties have Emergency Operations Plans that address wildfire response. The Districts also have a Don Pedro Emergency Action Plan and Fire Prevention and Response Management Plan (TID/MID 2017). As discussed in FEIS Section 3.3.6, *Land Use and Aesthetics – Environmental Effects*, the Districts propose to implement their Fire Prevention and Response Management Plan (TID/MID 2017), which identifies fire prevention procedures, reporting, and safe fire practices for Districts' personnel and contractors responsible for operating and maintaining the Don Pedro Project.

Workers and recreational users within the Proposed Project Area would be in areas with potentially high fire danger; however, this is not a change from the existing conditions. Additionally, fire risks already present in the Proposed Project Area would be reduced by implementing measures from the Fire Prevention and Response Management Plan (TID/MID 2017). Therefore, the Proposed Project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

3.13 Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
HYDRO-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
HYDRO-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
HYDRO-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☐	☒
HYDRO-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDRO-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.13.1 Environmental Setting

Surface Water

Both Don Pedro Reservoir and the La Grange Headpond are on the Tuolumne River. The Tuolumne River, a perennial stream, originates in Tuolumne Meadows in Yosemite National Park and flows westward for about 71 miles before it enters Don Pedro Reservoir. Water released from the Don Pedro Reservoir enters the La Grange Headpond created by the La Grange Diversion Dam. Water not diverted by the Districts at the La Grange Project passes through the La Grange Headpond to the lower Tuolumne River, which continues its westward flow for approximately 52 miles until it discharges into the San Joaquin River. The average annual flow of the Tuolumne River, as measured by a USGS gage below La Grange Diversion Dam, is 1,041 cfs, with higher flows during the winter and spring months and lower flows during the summer and fall months (FERC 2020).

The Don Pedro Project attenuates high flows in the Tuolumne River from winter storms and spring runoff and stores the water in Don Pedro Reservoir. At the normal maximum water surface elevation of 830 feet, Don Pedro Reservoir has a surface area of 12,960 acres, a gross storage capacity of 2,030,000 acre-feet, and a usable storage capacity of 1,721,000 acre-feet. The current minimum operating water surface elevation of Don Pedro Reservoir is 600 feet. The Don Pedro Project typically reaches its usable storage capacity at the end of the spring runoff season in June and is gradually drawn down through the irrigation season, which typically extends through September. The drainage area upstream of Don Pedro Dam is about 1,533 square miles (FERC 2020).

Under non-spill conditions, La Grange Headpond has a surface area of 35 acres, a gross storage capacity of 400 acre-feet, and a usable storage capacity of about 100 acre-feet. The surface elevation of the La Grange Headpond varies between about 294 feet and 296 feet about 90 percent of the time. The drainage area upstream of the La Grange Diversion Dam is about 1,535 square miles (FERC 2020).

The mainstem Tuolumne River is joined by several tributaries before entering Don Pedro Reservoir. including Cherry Creek, the South Fork of the Tuolumne River, the Clavey River, and the North Fork of the Tuolumne River. Within the Don Pedro Project vicinity, a number of tributaries flow into Don Pedro Reservoir. Because of their relatively low elevation, most of these streams are ephemeral and rain-driven. As such, they contribute comparatively little water when compared to the mainstem Tuolumne River. Two small, intermittent drainageways - Big Creek and Twin Gulch - enter the La Grange Headpond between Don Pedro Dam and La Grange Diversion Dam (FERC 2020).

Groundwater

Several large groundwater basins are in the San Joaquin Valley. The Modesto and Turlock Groundwater Basins are located downstream of the La Grange Diversion Dam. In Tuolumne County, where most of the

Proposed Project Area is located, there are no groundwater basins such as those in the San Joaquin Valley. The subsurface material in Tuolumne County consists primarily of impervious granitic and greenstone bedrock, which generally produces a low or unpredictable groundwater yield. The presence of groundwater and potential well capacities are dependent not only on geographic location and geology, but also on the number and size of subsurface fractures encountered where a well is drilled, the degree of connectivity between those fractures and other fractures, and the seasonal and annual recharge of the bedrock fracture network (Tuolumne County 2018b).

Water Quality

Surface water quality is overseen in California by the SWRCB through the RWQCBs, in accordance with the requirements of the CWA. CWA Section 303(d) requires states to develop a list of impaired and threatened waters in their jurisdictions. States then must develop a Total Maximum Daily Load (TMDL) for every pollutant/waterbody combination on the list. An essential component of a TMDL is the calculation of the maximum amount of a pollutant that can occur in the waterbody and still meet water quality standards. The most recent Section 303(d) list prepared by California, in 2024, indicates that Don Pedro Reservoir is categorized as an impaired water due to the presence of mercury, the source of which is resource extraction activities. A TMDL plan for mercury is scheduled to be prepared and adopted by 2027 (SWRCB 2024).

The lower Tuolumne River, below the La Grange Diversion Dam, is categorized as an impaired water due to the presence of several pollutants: mercury, Group A pesticides, water temperature, and toxicity. Mercury is from the same source as that for Don Pedro Reservoir. Group A pesticides are contributed by agricultural activities in the downstream area. The sources of water temperature and toxicity pollution are unknown (FERC 2020).

Data specific to the Proposed Project Area indicate that (FERC 2020):

- Dissolved oxygen (DO) is less than the 7.0-mg/L Basin Plan objective in the hypolimnion of Don Pedro Reservoir; and for brief periods just below Don Pedro Dam and Powerhouse. However, the average daily concentrations below Don Pedro Dam and Powerhouse remain above 7.0 mg/L.

- DO of less than the 8.0-mg/L Basin Plan objective for the Waterford-La Grange reach occurs in September and October of some years in the La Grange Powerhouse tailrace channel, while DO in the mainstem channel remains at 9.0 mg/L or higher. In response to comments on the draft license application, the Districts state these low DO concentrations appear to be a localized phenomenon associated with high levels of aquatic vegetation in the La Grange Powerhouse forebay and near the penstock intake.

- Dissolved copper in Don Pedro Reservoir's hypolimnion exceeds the corresponding California Toxics Rule's allowable level, although all other sites and metals meet the California Toxics Rule limit.

- Bioaccumulation of mercury in Don Pedro Reservoir and lower Tuolumne River fishes exceeds limits considered safe for human consumption.

The Proposed Project includes a Water Quality Monitoring Plan. As stated in Article 408 of the FERC Staff Alternative, the condition would require the Districts, after consultation with USFWS, NMFS, State Water Board, and CDFW, to file with FERC within 6 months of license issuance a plan to manage DO concentrations in the La Grange Powerhouse tailrace. The plan would include:

- Monitoring DO and water temperature at 15-minute intervals in the upper end of the LGDD Headpond, in the La Grange Diversion Dam Headpond, immediately downstream of the La Grange Powerhouse, and at the downstream end of the powerhouse tailrace channel for 3 years beginning in year 1 of license issuance.

- Supplementing data with weekly observations of aquatic vegetation and algae in the La Grange Powerhouse forebay and near the penstock intake.

- Identifying the proposed monitoring season based on the timing of recently observed DO concentrations less than the Basin Plan water quality objective.

- Reporting annually on the monitoring program.

- Filing a summary report after three years of monitoring that identifies the cause(s) for any DO concentrations that do not meet the Basin Plan objective, proposed mitigation to address low DO concentrations, and plans for effectiveness monitoring for any measure(s) to be implemented to address low DO concentrations.

Groundwater quality in Tuolumne County, where most of the Proposed Project Area is located, has generally been found to be good. Groundwater mostly contains naturally occurring constituents such as iron and manganese. Sources of groundwater contamination are improperly placed and maintained septic systems and leaking underground storage tanks (Tuolumne County 2018b).

Flood Hazards

Flooding occurs only occasionally in Tuolumne County, particularly during the winter and spring following heavy periods of rainfall when excessive runoff causes streams and tributaries from the Stanislaus River and Tuolumne River to overrun their banks. Flood zones identified in the Tuolumne County Recirculated General Plan EIR are confined mainly to the Don Pedro Reservoir shoreline and to the banks of the Tuolumne River downstream to La Grange (Tuolumne County 2018b).

The Districts have historically operated the Don Pedro Project for flood control, among other objectives. In accordance with Corps regulations, the Districts reserve 340,000 acre-feet of usable capacity in Don Pedro Reservoir for flood storage from October through April for conditional flood space thereafter, depending on the anticipated snowmelt runoff during April, May, and June (FERC 2020).

The Tuolumne County Recirculated General Plan EIR also identified inundation areas related to potential dam failures should they occur. The Don Pedro Reservoir area would be affected mainly by failures of the O'Shaughnessy and Cherry Valley Dams. However, the inundation areas would be limited to mainly the reservoir shoreline. A failure of Don Pedro Dam could affect the area adjacent to the banks of the lower Tuolumne River and the community of La Grange (Tuolumne County 2018b).

Water Plans

The Water Quality Control Plan for the Sacramento and San Joaquin Basins (Basin Plan) designates existing and potential beneficial uses and water quality objectives for the Tuolumne River (CVRWQCB 2019). **Table 3.13-1** identifies existing beneficial uses of the Tuolumne River, among them irrigation, hydropower, warm and cold freshwater habitat, and contact recreation. The Basin Plan includes water quality objectives to support designated beneficial uses in the Tuolumne River Basin, which address temperature, bacteria, chemical constituents, color, DO, floating material, oil and grease, pesticides, pH, sediment, settleable and suspended materials, taste and odor, toxicity, and turbidity. Table 3.13-2 lists

and describes these water quality objectives. Other water quality objectives address mercury in fish; these are described in Table 3.3.2-5 of the FEIS.

Table 3.13-1. Beneficial uses of Don Pedro Reservoir and the LTR surface water bodies in the Central Valley Regional Water Quality Control Board and listed in the Basin Plan

Designated Beneficial Use Description from Basin Plan, Section II		Designated Beneficial Use Abbreviation	Unit from Basin Plan, Table 2-1	
			Don Pedro Reservoir	Don Pedro Dam to San Joaquin River
			Hydo Unit No. 536.32	Hydro Unit No. 535.
Municipal and Domestic Supply (MUN)	Uses of water for community, military or individual water supply systems including, but not limited to, drinking water supply.	MUNICIPAL AND DOMESTIC SUPPLY	Potential	Potential
Agricultural Supply (AGR)	Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing.	IRRIGATION	--	Existing
		STOCK WATERING	--	Existing
Industrial Service Supply (IND)	Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.	POWER	Existing	--
Water Contact Recreation (REC-1)	Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.	CONTACT	Existing	Existing
		CANOEING AND RAFTING[1]	--	Existing
Non-Contact Water Recreation (REC-2)	Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beach-combing, camping, boating, tide-pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.	OTHER NON-CONTACT	Existing	Existing

Designated Beneficial Use Description from Basin Plan, Section II		Designated Beneficial Use Abbreviation	Unit from Basin Plan, Table 2-1	
			Don Pedro Reservoir	Don Pedro Dam to San Joaquin River
			Hydo Unit No. 536.32	Hydro Unit No. 535.
Warm Freshwater Habitat (WARM)	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.	WARM[2]	Existing	Existing
Cold Freshwater Habitat (COLD)	Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.	COLD[2]	Existing	Existing
Migration of Aquatic Organisms (MGR)	Uses of water that supports habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.	COLD[3]	--	Existing
Spawning (SPWN)	Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.	WARM[4]	--	Existing
		COLD[3]	--	Existing
Wildlife Habitat (WILD)	Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation or enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.	WILDLIFE HABITAT	Existing	Existing

Source: CVRWQCB 2019

[1] Shown for streams and rivers only with the implication that certain flows are required for this beneficial use.

[2] Resident does not include anadromous. Any Segments with both COLD and WARM beneficial use designations will be considered COLD water bodies for the application of water quality objectives.

[3] Salmon and steelhead.

[4] Striped bass, sturgeon, and shad.

Table 3.13-2. Water quality objectives to support beneficial uses of Don Pedro Reservoir and the LTR surface water bodies in the Central Valley Regional Water Quality Control Board and listed in the Basin Plan

Parameter	Water Quality Objectives for Inland Surface Water
Bacteria	In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200 [MPN]/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400 [MPN]/100 ml.
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

Parameter	Water Quality Objectives for Inland Surface Water
Chemical Constituents	Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. The chemical constituent objectives in Tables 3-1[2] and 3-2[2] apply to the water bodies specified. Metal objectives in the table are dissolved concentrations. At a minimum, water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) and WATER QUALITY OBJECTIVES 3-4 February 2019 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Tables 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. At a minimum, water designated for use as domestic or municipal supply (MUN) shall not contain lead in excess of 0.015 mg/l. The Regional Water Board acknowledges that specific treatment requirements are imposed by state and Federal drinking water regulations on the consumption of surface waters under specific circumstances. To protect all beneficial uses the Regional Water Board may apply limits more stringent than MCLs.
Cryptosporidium and Giardia	Waters shall not contain *Cryptosporidium* and Giardia in concentrations that adversely affect the public water system component of the MUN beneficial use. This narrative water quality objective for Cryptosporidium and Giardia shall be applied within the Sacramento-San Joaquin Delta and its tributaries below the first major dams (shown in Figure A44-1) and should be implemented as specified in Chapter 4 of the Basin Plan. Compliance with this objective will be assessed at existing and new public water system intakes.
Color	Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.
Dissolved Oxygen	For surface water bodies outside the legal boundaries of the Delta, the monthly median of the mean daily DO concentration shall not fall below 85% of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75% of saturation. The dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time Waters designated WARM .....5.0 mg/L Waters designated COLD.....7.0 mg/L Waters designated SPWN.....7.0 mg/L The more stringent objectives in Table 3-3 apply to specific water bodies in the Sacramento and San Joaquin River Basins: 8.0 mg/l……15 October to 15 June…..…Tuolumne River from Waterford to La Grange* * When natural conditions lower dissolved oxygen below this level, the concentrations shall be maintained at or above 95% of saturation.
Floating Material	Waters shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses.
Oil and Grease	Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or that otherwise adversely affect beneficial uses.
pH	The pH shall not be depressed below 6.5 nor raised above 8.5.

Parameter	Water Quality Objectives for Inland Surface Water
Pesticides	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer. Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12.). Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of thiobencarb in excess of 1.0 µg/l. Pesticide concentrations shall not exceed the levels identified in Table 3-4.[2] Where more than one objective may be applicable, the most stringent objective applies. For the purposes of this objective, the term pesticide shall include: (1) any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, which may infest or be detrimental to vegetation, man, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever, or (2) any spray adjuvant, or (3) any breakdown products of these materials that threaten beneficial uses. Note that discharges of "inert" ingredients included in pesticide formulations must comply with all applicable water quality objectives.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Settleable Material	Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
Suspended Material	Waters shall not contain suspended material in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
Taste & Odor	Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies [MUN] or to fish flesh or other edible products of aquatic origin, or that cause nuisance or adversely affect beneficial uses.
Temperature	The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. Temperature objectives for COLD interstate waters, WARM interstate waters, and Enclosed Bays and Estuaries are as specified in the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California including any revisions. There are also temperature objectives for the Delta in the State Water Board's 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. In determining compliance with the water quality objectives for temperature, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. At no time or place shall the temperature of any COLD water be increased by more than 5°F (2.8°C) above natural receiving water temperature.

Parameter	Water Quality Objectives for Inland Surface Water
Toxicity	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. The Regional Water Board will also consider all material and relevant information submitted by the discharger and other interested parties and numerical criteria and guidelines for toxic substances developed by the State Water Board, the California Office of Environmental Health Hazard Assessment, the State Water Board Division of Drinking Water Programs, the U.S. Food and Drug Administration, the National Academy of Sciences, the U.S. Environmental Protection Agency, and other appropriate organizations to evaluate compliance with this objective. The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors shall not be less than that for the same water body in areas unaffected by the waste discharge, or, when necessary, for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater, latest edition. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay. In addition, effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate; additional numerical receiving water quality objectives for specific toxicants will be established as sufficient data become available; and source control of toxic substances will be encouraged.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits: • Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU. • Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20%. • Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs. • Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10%. In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Exceptions to the above limits will be considered when a dredging operation can cause an increase in turbidity. In those cases, an allowable zone of dilution within which turbidity in excess of the limits may be tolerated will be defined for the operation and prescribed in a discharge permit

Source: CVRWQCB 2019.
mg/L = milligrams per liter
µg/L = micrograms per liter
MCL = maximum contaminant level
MPN = most probable number
NTU nephelomtric turbidity units
[1] The Basin Plan includes water quality objectives for mercury, methylmercury, and salinity that are not included in the table because they do not apply to the LTR.
[2] Due to its length, this table is not repeated here. Refer to Basin Plan for the full text of the table.

The Bay-Delta Plan is complementary to the other water quality control plans adopted by the state and regional boards and state policies for water quality control adopted by the SWRCB. The plan provides reasonable protection for the Bay-Delta watershed's beneficial uses that require control of salinity (caused by saltwater intrusion, municipal discharges, and agricultural drainage), instream flows and Delta outflows, and water project operations (limits on diversions and associated operations and management). The Bay-Delta Plan supersedes the regional water quality control plans to the extent of any conflict between these plans. The other plans and policies establish water quality objectives and requirements for parameters, such as toxic chemicals, bacterial contamination, and other parameters which have the potential to impair beneficial uses or cause nuisance.

In 2018, the SWRCB adopted the Lower San Joaquin River flow amendment to the Bay-Delta Plan. The amendment includes a new narrative objective, a new numeric objective that applies to each of the Lower San Joaquin River salmon bearing tributaries, including the Tuolumne River, and a modified minimum

flow objective on the Lower San Joaquin River at Vernalis. The revised flow objective is intended to increase flows that are required to remain instream during the critical salmon rearing and migratory period from February through June, and increase flow variability and access to floodplain, food, and suitable temperatures that promote survival of native juvenile migratory fish. The revised flow objective at Vernalis establishes that required tributary flows must remain in the mainstem Lower San Joaquin River and provide a minimum level of protection during critically dry years to support and maintain survival of juvenile fish migrating through the Delta. The tributary and Lower San Joaquin River flow requirements also include adaptive implementation provisions to better achieve a suite of ecological functions and adjust to future conditions (SWRCB 2018). At this time, the SWRCB has not implemented the San Joaquin River component of the updated Bay-Delta Plan. Therefore, specific requirements for the Tuolumne River in the Proposed Project Area are not currently established and therefore, cannot be assessed.

3.13.2 Impact Analysis

Impact HYDRO-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

FEIS Section 3.3.2, Aquatic Resources, analyzed the potential impact of the Proposed Project on water quality. Although the Lower Tuolumne River is outside the Proposed Project Area, the Proposed Project and associated activities could have an impact on this portion of the Tuolumne River, so the FEIS analyzed impacts on the river along with those on Don Pedro Reservoir. Changing the operations for either the Don Pedro or the La Grange project has the potential to alter water quality from existing conditions. Even if water quality conditions are not changed, continuation of negative water quality effects has the potential to adversely affect beneficial uses.

Preliminarily, the SWRCB indicated that it will likely require the Districts, in consultation with the relevant resource agencies, to develop a plan to monitor water quality, and it is reasonable to assume that the SWRCB will still require this plan for the Proposed Project in the final 401 WQC. The SWRCB specifies that the plan address: (1) monitoring locations, (2) monitoring periods, (3) monitoring parameters, and (4) reporting. The SWRCB specifies that monitoring locations include an adequate number and spatial distribution of monitoring sites in the projects' reservoirs and throughout project-affected river reaches to provide data that measures potential water-quality impacts from operation of the projects. Water quality monitoring would occur at intervals during the license term to document trends in time and changes in water quality related to operational changes that may impact water quality or designated beneficial uses of water. The SWRCB specifies that the plan consider in-situ, DO, recreation-related water quality, and bioaccumulation monitoring components. The SWRCB also specifies that, if at any point, monitoring suggests water quality conditions are in exceedance of Basin Plan water quality objectives, the Districts would immediately notify the SWRCB and the Central Valley RWQCB.

The FEIS concluded that, because proposed project operation would not substantially change the flow of water through the project reservoirs, water quality in the reservoirs or in project releases would similarly not change. Low DO near the bottom of Don Pedro Reservoir would likely continue and may contribute to the release of mercury from sediments and subsequently lead to bioaccumulation in aquatic organisms, some of which may be consumed by humans. However, this effect is a typical result of reservoir stratification, and overall effects of the Proposed Project operation are expected to result in similar water quality conditions as existing conditions. Under the Districts' proposed operations, the Basin Plan DO objectives would be met immediately below the Don Pedro Powerhouse and in the Lower Tuolumne River, except for the La Grange Powerhouse tailrace channel. Low DO concentrations are expected to continue to occur in the La Grange Powerhouse tailrace in September, October, and November. DO

concentrations throughout most of the Lower Tuolumne River are expected to continue to typically meet the Basin Plan DO objectives.

FEIS Section 3.3.2 of the FEIS states that project operation can require the use and storage of hazardous materials and pesticides to maintain project facilities. Such materials could pass into ground and surface water at the project via inadvertent spills. Implementing the proposed SPCC Management Plan, with FERC staff-recommended modifications to include descriptions of spill containment measures and cleanup protocols, would ensure proper storage facilities and cleanup supplies are available and that spill prevention and cleanup protocols are in place, which would help mitigate the risk of a spill that could adversely affect both surface and groundwater quality (see also Section 3.12, *Hazards and Hazardous Materials*). In addition, BLM revised 4(e) condition 32 places restrictions on pesticide use on BLM land, which would limit the amount of overall pesticide use, thereby reducing potential water quality impacts.

During routine maintenance of the Proposed Project, waste would be disposed of consistent with all applicable state and federal permits and approvals. In addition, if ground disturbance is greater than one acre, a Stormwater Pollution Prevention Plan (SWPPP) would be implemented to prevent sediment from eroding on site and causing sedimentation in nearby watercourses. Operations of the Proposed Project would not substantially affect surface or groundwater quality.

As described previously, surface water quality conditions are generally consistent with the Basin Plan throughout the Proposed Project Area. Where inconsistencies exist, they are not a direct result of the Proposed Project. For example, increased mercury and pesticide levels can be attributed to historic resource extraction and agricultural efforts, respectively, in the surrounding area. In addition, while DO concentrations that are below the Basin Plan Objective occur in some areas, they would generally be consistent with the Basin Plan throughout the Proposed Project Area under proposed operations.

Therefore, the Proposed Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during maintenance or operations. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact HYDRO-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Groundwater supply and quality in the Proposed Project Area are not extensively discussed in the FEIS. The Modesto and Turlock Groundwater Basins are located downstream of the La Grange Diversion Dam. Groundwater quality in Tuolumne County, where most of the Proposed Project Area is located, has generally been found to be of good quality. The Proposed Project is not anticipated to use a substantial amount of groundwater, if any. Surface water use in the Proposed Project Area is limited mainly to the recreation facilities. The Proposed Project includes improving existing recreation facilities and constructing a new boat launch. The result of these improvements may lead to a minimal expansion of impervious surfaces, which would reduce the amount of surface area available for potential groundwater recharge. However, this would only minimally affect the existing recharge that may occur in the area.

The infiltration galleries would allow for additional withdrawal of river water that would supplement TID's water supplies. Although not explicitly analyzed in the FLA or the FEIS, it is anticipated that the additional river water withdrawn through the infiltration galleries would reduce or offset the need to use some groundwater to satisfy TID water service demands. This would result in a positive effect on groundwater supplies in the Modesto and Turlock Groundwater Basins.

In summary, the Proposed Project would not use a substantial amount of groundwater, nor is it expected to substantially reduce areas of potential recharge. Therefore, the Proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact HYDRO-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site?

As discussed in Section 3.10, *Geology and Soils*, the Proposed Project could result in erosion and sedimentation caused by ground disturbance during construction activities, mainly associated with recreation facility improvements. BLM's Don Pedro revised 4(e) condition 3 and La Grange preliminary 4(e) condition 3 would minimize potential erosion impacts, but these conditions are limited to ground-disturbing activities on BLM-managed land. Don Pedro Draft License Article 404 and La Grange Draft License Article 403 require development and implementation of an Erosion and Sediment Control Plan for the Proposed Project that would apply to construction activities on all lands within the Proposed Project Area, which would avoid and minimize potential erosion impacts. In addition, if ground disturbance is greater than one acre, a SWPPP would be implemented to prevent sediment from eroding on site and causing sedimentation in nearby watercourses.

Most of the recreation improvements would occur on the existing facilities, which already have impervious surfaces. It is expected that these improvements would add only minimal impervious surfaces, thereby not significantly altering existing drainage patterns at these facilities. Recreational improvements outside the existing facilities would include improving and maintaining shoreline access trails on each side of Ward's Ferry Bridge. The trail is not expected to add any impervious surfaces. The shoreline trail would not alter the landscape in a manner that would significantly alter existing drainage patterns such that substantial erosion or siltation would occur. Therefore, the Proposed Project would not alter drainage patterns such that substantial erosion or siltation would occur. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

As discussed above, construction activities associated with recreation facility improvements may have impacts on drainage patterns. In particular, more impervious surfaces could generate additional runoff after precipitation events such that increased flooding could occur. However, as noted under Impact HYDRO-3-i, the amount of impervious surface anticipated to be added through recreation facility improvements would be minimal, so the amount of potential additional runoff would likewise be minimal. It is unlikely that any additional runoff would lead to any flooding on or offsite. Furthermore, Don Pedro License Article 404 and La Grange License Article 403 require development and implementation of an Erosion and Sediment Control Plan for the Proposed Project, which would avoid and minimize potential erosion and off-site flooding impacts. Therefore, the Proposed Project would not alter drainage patterns such that flooding would occur. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As discussed above, the Proposed Project is not expected to generate significant additional runoff. Recreational improvements outside the existing facilities would include improving and maintaining

shoreline access trails on each side of Ward's Ferry Bridge. The shoreline access trail would not create or contribute runoff. Therefore, the Proposed Project would not alter drainage patterns such that adverse effects related to drainage systems or polluted runoff would occur. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

iv. Impede or redirect flood flows?

As noted above, flood zones are confined mainly to the Don Pedro Reservoir shoreline and the lower Tuolumne River banks. The FEIS concluded that flow changes that are part of the Proposed Project would not affect compliance with flood control requirements and management in the LTR. Therefore, no alterations to Tuolumne River flows would occur that would impede or redirect flood flows.

The proposed recreation improvements would be outside existing identified flood zones. Improvements that may be constructed within an existing flood zone, such as the shoreline trail, would not introduce any structures that would significantly impede or redirect flood flows. Therefore, the Proposed Project would have **no impact** related to flood flows, and no mitigation is required.

Impact HYDRO-4: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As discussed above, flood zones are limited in the Proposed Project Area, and no structures are proposed to be built within an identified flood zone. The Proposed Project Area would not be subject to a tsunami, as tsunamis occur along a coastline and the Proposed Project Area is substantially inland. As the Don Pedro Reservoir and the La Grange Headpond are operated in a manner to control flooding, and will continue to be operated that way, the Proposed Project is not likely to cause inundation of additional lands and consequently cause a release of pollutants. A seiche typically occurs when an earthquake or landslide directly affects a body of water. As discussed in Section 3.10, Geology and Soils, the Proposed Project Area is not subject to significant seismic or landslide hazards, so seiches that could affect lands adjacent to waterbodies are unlikely. Therefore, the Proposed Project would not risk release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone. As a result, **no impact** would occur, and no mitigation is required.

Impact HYDRO-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The continued operation of the Proposed Project was found to be consistent with all comprehensive water quality control plans reviewed by the Districts and FERC as part of the FEIS. As stated above, the Bay-Delta Plan is still in development so an assessment of whether the Proposed Project would conflict or obstruct implementation of the Bay-Delta Plan cannot be completed at this time since it is speculative. Implementation of the Bay-Delta Plan requires a CEQA evaluation to be completed by the SWRCB, which to date has not been initiated. Once the Bay-Delta Plan is available and specifies requirements for the LTR, the Districts will review the requirements to determine if operations under the new licenses are consistent and meet the requirements.

The Proposed Project will require a Section 401 WQC from the SWRCB, which will include requirements that will be part of the licenses. Through implementation of the Proposed Project's 401 WQC it is anticipated that any potential conflicts with the pending Bay-Delta Plan would be resolved.

The FEIS found that existing conditions within the Proposed Project Area did not meet DO objectives of the Basin Plan. However, as discussed under Impact HYDRO-1, FERC staff recommended the development of a plan to determine and effectively mitigate the La Grange Project's contribution to this area of deficiency with the Basin Plan DO objectives in the La Grange Powerhouse tailrace.

Implementation of this plan would lead to no conflict with the Basin Plan DO objectives. No other conflicts with the Basin Plan were identified in the FEIS.

The Sustainable Groundwater Management Act, enacted by the State of California in 2014, seeks to regulate the use of groundwater in California in a manner that is sustainable. Groundwater basins that meet specified conditions are required to prepare Groundwater Sustainability Plans that set forth how the basin will achieve sustainable groundwater use. The Proposed Project Area is not within a groundwater basin that is subject to the requirements of the Sustainable Groundwater Management Act. Therefore, the Proposed Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

3.14 Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
LP-1: Physically divide an established community?	☐	☐	☐	☒
LP-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

3.14.1 Environmental Setting

In FEIS Section 3.3.6, *Land Use and Aesthetics*, lands near the Proposed Project are within Tuolumne and Stanislaus Counties. Primary land uses in the vicinity are single-family residential, non-irrigated farmland, and irrigated farmland. Land use downstream of the Proposed Project consists mainly of irrigated agricultural land and related uses as well as urban, suburban, and rural residential uses. Privately owned lands in the vicinity of the Proposed Project are subject to the counties' general plans and zoning ordinances and public lands are managed under agency management plans, as discussed below. The downstream extent of the Proposed Don Pedro Project FERC boundary coincides with the upstream extent of the proposed FERC boundary of the La Grange Project. Land within the Proposed La Grange Project Boundary consists of MID-owned land and public land managed by BLM and a single owner, Coleman Ranch.

In addition, from FEIS Section 3.3.6, the Don Pedro Project Boundary also includes land within the management corridor of the Tuolumne River, a designated National Wild and Scenic River. In 1988, the Forest Service approved the Tuolumne Wild and Scenic River Management Plan, establishing a 0.25-mile management corridor on each side of the designated river segment from its source to Don Pedro Reservoir for 83 miles. The parcel description of the corridor overlaps the Don Pedro Project lands at the upstream end of the Don Pedro Reservoir. The Proposed Project land overlapping the management corridor is within T.1N, R.16E, S1/2NW1/4, and N1/2SW1/4 of section 31.

BLM Sierra Resource Management Area

Public land administered by BLM is managed under the SRMP (BLM, 2008a), the Visual Resource Inventory (BLM, 1986a), and the Visual Resource Contrast Rating (BLM, 1986b). The existing Project Boundary encompasses approximately 18,370 acres, of which 4,802 are federal lands within BLM's Sierra Resource Management Area, including land within the Red Hills ACEC, which was designated to protect the rare plant species found in this area.

Shoreline Management

Other than the three developed recreation areas, two of which have facilities partially situated on BLM land, the Districts do not allow residential and commercial development within the Don Pedro Project Boundary; however, Project facilities are structural elements that visually contrast with the surrounding rural or natural landscape. The entire La Grange Headpond is undeveloped.

Ninety percent of the 160-mile Don Pedro Reservoir shoreline is undeveloped, and the Districts' land use policies include rules and regulations that strictly limit the use of lands outside the developed recreational areas. These policies are designed to protect and preserve the natural character and integrity of the area by prohibiting shoreline development and disturbances such as dredging, docks, moorings, and piers and all vehicle use on lands, except at designated boat launches.

The shoreline of the Proposed La Grange Project is undeveloped, and no policies have been adopted by the District's Board of Directors regarding shoreline development along the La Grange Headpond.

Stanislaus County General Plan

The Stanislaus County General Plan's Land Use Element was adopted in 2016. The plan designates 16 land uses, one corresponding to the Proposed La Grange FERC Project Boundary: Agriculture (Stanislaus County 2016).

Tuolumne County General Plan

The Tuolumne County General Plan was updated in 2018 as the constitution for growth and development in the county's unincorporated areas. Of the 20 land use types designated in the plan, 2 are identified within the Proposed Don Pedro and Proposed La Grange FERC Project Boundaries: Public and Agricultural. The remaining 5 land uses are only located within the Don Pedro FERC Project Boundary: Estate Residential, Large Lot Residential, Rural Residential, Parks and Recreation, and Low-Density Residential (Tuolumne County 2019).

3.14.2 Impact Analysis

Impact LP-1: Would the project physically divide an established community?

Within the FERC Project Boundaries, none of the Proposed Project facilities, boundary modifications, routine maintenance, and ongoing operational activities would be located in or affect established communities.

As discussed in FEIS Section 2.2.2, *Proposed Project Boundary*, the Districts propose to revise the existing Don Pedro FERC Project Boundary to include some additional land associated with proposed structures and to remove other lands that are not needed for Project purposes. The Districts also propose a FERC Project Boundary for the Proposed La Grange Project that encompasses all Proposed Project features and lands necessary for the safe operation and maintenance of the Proposed Project and other purposes, such as recreation, shoreline control, and protection of environmental resources.

Operations and maintenance that are part of the Proposed Project would generally be consistent with existing operations. The Districts would operate the Proposed Project in the same manner as current conditions, with a few attributable changes to proposed environmental measures. Proposed modifications to future operations would not affect established communities.

Therefore, the Proposed Project would not physically divide any established communities. As a result, **no impact** would occur, and no mitigation is required.

Impact LP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Proposed Project would not result in changes to existing land uses. Within the Proposed Project Area, the proposed facilities, boundary modifications, and operations and maintenance modifications would be consistent with the goals and policies outlined in the Stanislaus and Tuolumne County General Plans and the BLM SRMP.

Therefore, the Proposed Project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As a result, **no impact** would occur, and no mitigation is required.

3.15 Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
MR-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
MR-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

3.15.1 Environmental Setting

According to FEIS Section 3.3.1, *Geology and Soils – Mineral Resources*, gold mining began in the mid-1800s and was the dominant mineral resource activity near the Proposed Project. Many abandoned and active mines are located throughout the Tuolumne River basin. In addition, gold, marble, and limestone products were extensively mined near the Proposed Project. The area also contains copper, soapstone, scheelite, platinum, silver, sulfur, decorative stone, slate, sand, and gravel deposits. The gravel mining reach of the lower Tuolumne River (RM 40.3 to 34.2) is currently the focus of development by commercial aggregate producers.

State legislature adopted the Surface Mining And Reclamation Act in 1975, which designated Mineral Resource Zones (MRZs) for areas possessing minerals that are of statewide or regional significance. MRZs are areas classified by the presence or absence of significant sand, gravel, or stone deposits suitable as aggregate sources. There are MRZs near the Proposed Project, given their location in the Mother Lode gold rush belt.

3.15.2 Impact Analysis

Impact MR-1: Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Mineral resources are abundant within Stanislaus and Tuolumne counties. However, due to limited new construction activities, ground disturbance, and a lack of change in land use, the Proposed Project would not limit access to any such mineral resource beyond current conditions. There are several MRZs near the Don Pedro Project in Tuolumne County (Tuolumne County 2019). Similar to existing operations and maintenance, activities associated with the Proposed Project would not occur within active mines or locally important mineral resource recovery sites. As such, the Proposed Project would not result in any loss of availability to a known mineral resource that would be of value to the region and the residents of the state. Therefore, the Proposed Project would have **no impact**, and no mitigation is required.

Impact MR-2: Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Tuolumne County's General Plan indicates that the county intends to designate MRZs on land use diagrams and conserve mineral resources for future use (Tuolumne County 2018). The Stanislaus County General Plan states that the county seeks to conserve natural resources, preserve open space, and manage extractive mineral resources to ensure an adequate supply without degradation of the environment (Stanislaus County 2016). As stated, no active mines or locally important mineral resource recovery sites are located within the Proposed Project Area. The Proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the Proposed Project would have **no impact**, and no mitigation is required.

3.16 Noise

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
NOISE-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
NOISE-2: Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
NOISE-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.16.1 Environmental Setting

Noise

Noise is commonly defined as an unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Noise is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale adjusts the sound power levels to be consistent with human hearing response. Noise level allowances for various types of land uses reflect the varying noise sensitivities associated with those uses. In general, noise-sensitive land uses ("sensitive receptors") are any residence, hospital, school, hotel, library, office, or similar facility where quiet is an important attribute of the environment (Tuolumne County 2018b).

The ambient noise environment in Tuolumne County is primarily affected by traffic on highways and County roadways, commercial and industrial uses, agricultural uses, railroad operations, and aircraft. The most prominent sources of noise are motor vehicles (e.g., automobiles, buses, trucks, and motorcycles). Motor vehicle noise significantly influences noise levels to nearby sensitive receptors, primarily to nearby residences (Tuolumne County 2018b). The primary noise generators within Stanislaus County are associated with transportation (i.e., airports, freeways, arterial roadways, railroads), with industrial and agricultural operations generating more localized noise (Stanislaus County 2016). There are two State Routes near the Proposed Project Area and La Grange Road (see Section 3.20, Transportation). No

significant commercial, industrial, or agricultural uses are in the area, and no railroad tracks or airports are nearby.

Tuolumne County's current Noise Element establishes noise standards for the range of uses in and around the County. These standards determine whether proposed new development in the County requires mitigation to avoid potential land use conflicts. According to the Noise Element, the maximum allowable noise exposure to transportation noise sources is 60 dB at outdoor activity areas for urban residential land uses, transient lodging, and hospitals and nursing homes. For interior spaces, the maximum allowable noise exposure to transportation sources is 45 dB for the land mentioned above, along with churches, office buildings, schools, and libraries, among other land uses. The maximum allowable noise exposure for stationary noise sources is 70 dB during the daytime for noise-sensitive land uses and 65 dB at nighttime (10:00 p.m. to 7:00 a.m.) (Tuolumne County 2018a).

In Stanislaus County, Chapter 10.46 of the Stanislaus County Code, referred to as the Noise Control Ordinance, states that it is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise that causes the exterior noise level, when measured at any property situated in either the incorporated or unincorporated area of the county, to exceed established exterior noise level standards. For noise-sensitive land uses other than residential, the maximum allowable sound level is 45 dBA at all times. The maximum allowable sound level for residential land uses is 50 dBA in the daytime and 45 dBA at nighttime. The ordinance also limits construction noise to 75 dBA at any receiving property line between 7:00 p.m. and 7:00 a.m.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Decibel notation (VdB) is commonly used to measure vibration. The VdB compresses the range of numbers required to describe vibration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a typical environmental problem. However, in contrast to noise, groundborne vibration is not a phenomenon that most people experience daily and is typically attributed to construction activities.

3.16.2 Impact Analysis

Impact NOISE-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

There would be no changes to the operation of the Proposed Project that would be expected to alter the noise levels associated with the existing hydropower facilities. Likewise, there would be no substantial change in ambient noise levels at recreation facilities during operations.

The Proposed Project would generate temporary noise from short-term construction activities associated with minor recreation improvements, routine maintenance activities and transport of maintenance equipment to recreation and hydropower facilities. For noise sources such as maintenance activity and vehicle traffic, the region of influence is typically less than 0.5 miles from the noise source. Noise coming from maintenance work, although temporary, can potentially affect sensitive receptors. Routine maintenance of the Proposed Project would require using equipment that would be audible at off-site locations. Received noise levels would fluctuate depending on the maintenance activity, equipment type,

and distance between noise source and receiver. Additionally, noise from equipment would vary depending on the number and type of equipment at a location at any given time.

Table 3.16-1 lists maximum noise levels recommended for noise impact assessments for typical equipment based on a distance of 50 feet between the equipment and a noise receptor. Equipment shown in Table 3.16-1 represents a broad overview of equipment and associated noise levels. Not all of the equipment listed in Table 3.16-1 would be used for construction or maintenance activities of the Proposed Project. For most construction or maintenance activities associated with the Proposed Project, equipment use would be limited to trucks and hand tools, but other equipment, such as graders and generators, may also be used at some locations and, therefore, are included in Table 3.16-1. All construction and maintenance activities would be conducted during day time hours and would not require night time noise-generation.

Table 3.16-1. Noise Levels of Typical Construction Equipment

Equipment Type	Range of Maximum Sound Levels for Analysis (dBA at 50 feet)	Maximum Sound Levels for Analysis (dBA at 50 feet)
Rock drill	83–99	96
Jackhammer	75–85	82
Pneumatic tool	78–88	85
Pump	74–84	80
Haul truck	83–94	88
Portable generator	71–87	80
Tractor	77–82	80
Front-end loader	77–90	86
Hydraulic backhoe	81–90	86
Hydraulic excavator	81–90	86
Grader	79–89	86
Air compressor	76–89	86
Trucks	81–87	86

Source: Bolt et al. (1987)
Notes: dBA = A-weighted decibel, ft = foot, lbs = pounds

There are no residences, or other noise-sensitive land uses within or adjacent to the existing FERC Boundary of the Don Pedro Project and the La Grange Project. The proposed changes to the FERC Project Boundary, which are minimal, would not encompass any noise-sensitive land uses, nor would any noise-sensitive uses be adjacent to the adjusted boundary. Construction of the minor recreation improvements, and maintenance and operations of the Proposed Project would take place in remote areas and would not take place within 50 feet of any sensitive receptors. Recreational areas would experience increases in noise during construction and routine maintenance activities, but it would be temporary and limited to daytime hours. The Don Pedro reservoir campgrounds are noise-sensitive but don't constitute permanent sensitive receptors, only temporary.

Therefore, the Proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Proposed Project in excess of standards established in the local general plans or noise ordinances, or applicable standards of other agencies. As such, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact NOISE-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Implementation of the Proposed Project would cause increases in vibration within the Proposed Project Area, mainly from temporary construction equipment use. However, vibration increases would primarily be at the surface level, and no significant vibration would occur beyond the construction site. Moreover, as noted, no permanent residences or noise-sensitive land uses are within one mile of the proposed construction sites other than the recreation areas. When construction and maintenance activities are being performed at the recreation areas, these areas would be closed temporarily, and visitors would be directed to other recreation areas. Therefore, the Proposed Project would not generate excessive groundborne vibration or groundborne noise levels. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact NOISE-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Pine Mountain Lake Airport is the nearest public-use airport to the Proposed Project Area, located approximately nine miles northeast of the Moccasin Point Recreation Area. While an Airport Land Use Compatibility Plan has been prepared for Pine Mountain Lake Airport, the airport planning area does not extend to the Proposed Project Area (Tuolumne County 2023). Therefore, noise from Pine Mountain Lake Airport operations would not affect the Proposed Project Area. No private airstrips were identified in the vicinity of the Proposed Project Area. Therefore, the Proposed Project would have **no impact** related to airport or airstrip noise, and no mitigation is required.

3.17 Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
PH-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
PH-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.17.1 Environmental Setting

The Proposed Project is located within Tuolumne and Stanislaus Counties, California. Primary land uses in the vicinity of the Proposed Project Area include single-family residential, non-irrigated farmland, and irrigated farmland. Land uses downstream of the Proposed Project consist mainly of irrigated agricultural land and related uses as well as urban, suburban, and rural residential uses. The downstream extent of the Don Pedro Project Boundary coincides with the upstream extent of the proposed boundary of the La Grange Project. The Districts own all facilities and lands within the existing Don Pedro FERC Project Boundary, except for 4,802 acres of federal land that BLM administers. Land within the Proposed FERC Project Boundary for the La Grange Project consists of MID-owned land and public land managed by BLM and a single owner, Coleman Ranch. BLM manages the 14 acres of public land within the Proposed FERC Project Boundary under the SRMP.

The areas surrounding the Proposed Project can be generally classified as rural and sparsely populated, with no considerable population centers. Sonora, CA, is the largest city in the Project vicinity, located approximately 6 miles northeast of the Don Pedro Reservoir, with a population of 4,965 (U.S. Census Bureau 2023a). There are several census-designated places (CDPs) within a 5-mile radius of the FERC Project Boundaries, including a population of 3,777 in Jamestown (U.S. Census Bureau 2023b), 1,157 in Lake Don Pedro (U.S. Census Bureau 2023c), 92 in La Grange (U.S. Census Bureau 2023d), and 61 in Chinese Camp (U.S. Census Bureau 2023e).

3.17.2 Impact Analysis

Impact PH-1: Would the project induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

There are no residential land uses or communities within the FERC Project Boundary of the Don Pedro Project or the La Grange Project. The Proposed Project would not encourage population growth in or

near the Proposed Project Area, as no new residential facilities are proposed or reasonably foreseeable due to the Proposed Project. As discussed in Section 3.14 of *Land Use and Planning*, the Proposed Project would not result in any changes to existing land uses. The Proposed Project would not convert any non-residential lands to residential lands. The Proposed Project would continue the O&M of the existing hydropower facility and would not result in other infrastructure that would induce population growth. Therefore, the Proposed Project would not cause substantial unplanned population growth in the area directly or indirectly. As a result, **no impact** would occur, and no mitigation is required.

Impact PH-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

As discussed above under Impact PH-1, there are no residential land uses or communities within the FERC Project Boundary of the Don Pedro Project or the La Grange Project. The Proposed Project facilities, FERC Project Boundary modifications, and changes to existing operations would not displace any people or housing as most of the Proposed Project would occur on uninhabited lands owned by the Districts and on lands owned and managed by the BLM. Therefore, the Proposed Project would have **no impact**, and no mitigation is required.

3.18 Public Services

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire Protection?	☐	☐	☒	☐
ii. Police Protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

3.18.1 Environmental Setting

BLM provides fire prevention, suppression, and mitigation efforts on the lands it manages under the SRMP (BLM 2008). CALFIRE is responsible for wildlife fire protection and suppression on lands near the Proposed Project under their Stanislaus and Tuolumne Counties jurisdictions. Several fire stations are located within five miles of the Proposed Project Area, including CALFIRE stations in Blanchard, Groveland, and Green Springs. There are also several Tuolumne County Fire Departments, the closest being less than one mile from the Proposed Project Area.

The Stanislaus and Tuolumne County Sheriff's Departments provide police protection for their respective counties. Through public land use fees, TID/MID provides law enforcement funding to Stanislaus and Tuolumne Counties. The California Highway Patrol also provides law enforcement on unincorporated public roads near the Proposed Project. BLM personnel are responsible for enforcing regulations to manage BLM lands and resources. The main Sheriff's station for the Tuolumne County Sheriff's Department is located in Sonora, CA, and the Stanislaus County Sheriff's Department's main station is in Modesto, CA.

There are no schools located within the Proposed Project Area. There are currently three schools within 0.5 miles of the Proposed Don Pedro Project FERC Boundary: Lake Don Pedro Elementary School, First Five Building Blocks Pre, and Don Pedro High School.

The Proposed Don Pedro Project comprises three recreational areas: Moccasin Point, Blue Oaks, and Fleming Meadows. No parks are located within the FERC Project Boundaries; however, two parks are within 1 mile: Hugh Martins Park and La Grange Regional Park.

3.18.2 Impact Analysis

Impact PS-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire Protection?

As discussed in FEIS Section 3.3.5, *Recreation – Affected Environment*, recreational use of the Don Pedro Reservoir and the three recreation areas is anticipated to increase by 35 percent over the next 30 years. Capacity is not expected to be exceeded in recreation areas, including campgrounds and picnic areas, except for some parking areas. The projected increase in the number of recreational visitors over the term of the Proposed Project has the potential to increase the need for fire protection services.

The Don Pedro Fire Prevention and Response Plan (TID/MID 2017) would be implemented by the DPRA in the Proposed Project Area. According to the plan, CALFIRE is responsible for wildland fire protection and suppressing lands within the Proposed Project Area. On BLM land within the Proposed Project Area, the Tuolumne County Fire Department assists in wildland fire suppression, structure fire prevention, and medical aid county-wide, including in the Proposed Project Area. The plan includes emergency access routes to ensure fire control crews' accessibility through state, county, and the Proposed Project's access roads. Transportation system management through issuing licenses for the Proposed Project could improve existing road conditions and emergency access for the 50-year license term.

Therefore, the Proposed Project would not necessitate substantial additional fire protection services that would require additional fire personnel or the construction of new or significantly altered fire protection facilities. Furthermore, fire response times would remain consistent with current response times. The Proposed Project would not cause significant environmental impacts in maintaining acceptable service ratios, response times, or other performance objectives for fire protection. With implementing the Fire Prevention and Response Plan, the Proposed Project would have a **less than significant impact** on fire protection, and no mitigation is required.

ii. Police Protection?

Impacts to police protection services under the Proposed Project would be similar to those described for fire protection services in Impact PS-1-i above. The Proposed Project includes several recreation areas within the Don Pedro Project Boundary, all using existing roads for access.

Furthermore, police response times would remain consistent with current response times. Primary Project roads and recreation roads would be maintained under the issuance of a new license. As stated above, transportation system management through issuing licenses for the Proposed Project could improve existing road conditions and emergency access for the 50-year license term.

The responsible party (BLM, Tuolumne County, etc.) would be expected to maintain their respective roadways that may be used to access the Proposed Project. Therefore, the Proposed Project would not necessitate substantial additional police services in the Proposed Project Area that would require additional police personnel or the construction of additional police facilities. Therefore, the Proposed Project would have a **less than significant impact** on police protection, and no mitigation is required.

iii. Schools?

There are no schools located within the Proposed Project Area. The Proposed Project would not generate an increase in population that would affect schools and demand on schools, and school facilities would remain unchanged. Recreational facilities under the Proposed Don Pedro Project would be intended for recreational purposes as designated and would not require school services as a residential community would. Therefore, the Proposed Project would have **no impact** on or associated with schools, and no mitigation is required.

iv. Parks?

Besides existing recreation areas within the Proposed Don Pedro Project, no parks exist within the boundaries of the Proposed Project. Rehabilitating recreation areas in the Proposed Don Pedro Project would benefit public open spaces through a new 50-year license. The Proposed Project would not generate an increase in population that would affect parks. Therefore, the Proposed Project would have **no impact** on or associated with parks, and no mitigation is required.

v. Other public facilities?

The Proposed Project would not generate an increase in population that would affect any other public facilities. Therefore, the Proposed Project would have **no impact** on or associated with other public facilities, and no mitigation is required.

3.19 Recreation

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
REC-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐

3.19.1 Environmental Setting

As discussed in FEIS Section 3.3.5, *Recreation*, the Proposed Project is located in the Sierra Nevada foothills region on the Tuolumne River in Tuolumne and Stanislaus Counties, California. The Proposed Project provides diverse and substantial recreation opportunities at Don Pedro Reservoir and along the Tuolumne River.

Don Pedro Project

Don Pedro Reservoir supports a variety of land-based and water-based recreational uses and opportunities, including house boating, power boating, fishing, swimming, water skiing, picnicking, hiking, and camping at either developed or remote sites. Don Pedro Reservoir supports year-round fishing for various fish species (e.g., trout, kokanee, salmon, bass, crappie, sunfish, catfish, etc.). Visitors can access fishing opportunities along the shoreline and reservoir via boating. Most recreational use at Don Pedro Reservoir is focused on the three developed recreation areas (Moccasin Point, Blue Oaks, and Fleming Meadows), which are managed by the DPRA. The three recreation areas include campgrounds (559 campsites), picnic areas (43 picnic sites), three boat launch facilities, two marinas, a houseboat dock, and a swimming lagoon.

The public has access to the entire shoreline from the high-water line down and has vehicle access in select areas outside the three developed recreation areas. The three developed recreational areas are situated on less than 10 percent of the reservoir shoreline; the remaining shoreline is undeveloped. Dispersed boat-in camping and day use is permitted, with some exceptions, along much of the undeveloped portions of the shoreline. Eight floating restrooms and three vault restrooms are located around the shoreline in areas with high visitor use, and an additional vault restroom is provided near Ward's Ferry Bridge.

Current operating protocols permit Don Pedro Reservoir to be drawn down to an elevation of 600-ft, and at this point, boating access to the reservoir upstream of old Don Pedro Dam (located at RM 56.4, 1.6 miles upstream of Don Pedro Dam) becomes limited. Typically, the reservoir operates between 690 and 830-ft, depending on hydrologic conditions and water management factors, which allows for boating access and other typical water- and land-based recreational use and opportunities at the reservoir. Don Pedro Reservoir has approximately 160 miles of shoreline at high water, including islands.

La Grange Project

No recreation facilities are located along the Tuolumne River's reach between the Don Pedro Dam and the La Grange Diversion Dam (LGDD), and access to the area is restricted. River-based recreation opportunities, including boating above the LGDD, are made difficult by high and rapid changes in instream flows due to the Don Pedro Project operations. Boating is further restricted by the infeasibility of the portage at the spillway due to the presence of the hydroelectric facilities (i.e., dam, spillway, and canals) and the vertical canyon walls, which create hazardous conditions (TID/MID 2017). Localized shoreline activities occur infrequently, but on-water activities are unsafe and very limited.

The following plans contain guidelines or policies related to recreation for the Proposed Project Area:

- Stanislaus County General Plan
- Tuolumne County General Plan
- BLM SRMP (BLM 2008)

Stanislaus County General Plan

The Stanislaus County General Plan’s Conservation/Open Space Element was adopted in 2016. The plan has two goals related to recreation: 1) encourage the protection and preservation of natural and scenic areas throughout the County and 2) provide for the open-space recreational needs of the residents of the County (Stanislaus County 2016).

Tuolumne County General Plan

The Tuolumne County General Plan was updated in 2018. The plan has three overarching goals related to recreation (Tuolumne County, 2019):

- OAV1. Promote development in Tuolumne County reflects the values and vision of the community and implements the latest legal, statutory, scientific, and technical changes and advances.
- OAV2. Achieve, enable, and preserve maximum flexibility within the constraints of state and federal law and an ever-evolving legal, cultural, and environmental landscape.
- OAV3. Recognize that the County has a unique role in collaborating with special Districts/stakeholders within the County to promote the delivery of efficient and cost-effective public services.

BLM Sierra Resource Management Area

Public land administered by BLM is managed under the SRMP. The SRMP contains two goals related to recreational resource management applicable to the lands within and adjacent to the Proposed Project Area (BLM 2008):

- Ensure outdoor recreational opportunities are available while protecting other resources and uses.
- Ensure adequate river flows for boating, fishing, swimming, etc.

In addition, the SRMP identifies five objectives to help meet these goals (BLM 2008).

- Develop recreation management strategies for large blocks of BLM land in wild and scenic river corridors.
- Develop recreation sites that meet public health and safety standards.
- Mitigate conflicts between competing uses.
- Maintain existing visitor center, campground, trail, and day-use facilities to accept BLM standards.
- Manage recreation for a remote experience on the wild segments of the North Fork American, Tuolumne, and Merced rivers pursuant to the Wild and Scenic Rivers Act.

The SRMP also designated four special recreation management areas (SRMA), but none of these SRMAs occur in the Proposed Project Area.

In FEIS Section 3.3.5, *Recreation – Environmental Effects*, FERC concludes that the Proposed Project provides suitable settings for various recreational activities that attract visitors, which, if unmanaged, could affect environmental resources (e.g., soil erosion and vegetation removal). The Districts propose one recreational measure that involves constructing and maintaining a pedestrian trail that extends between the shoreline of the La Grange Headpond near the Don Pedro spillway channel and the parking area of the former visitor center adjacent to the Don Pedro Dam.

The Districts propose to implement the RRMP, which states the Districts would be responsible for operating and maintaining the three existing recreational areas with campgrounds, day-use areas, and boat launches; areas with limited infrastructure (e.g., floating restrooms and boat-in campsites); and areas receiving recurrent dispersed recreation that have no infrastructure. The RRMP contains a monitoring program to report annual use every six years and to summarize visitor survey responses collected every 12 years to assess recreational facilities, visitor needs and preferences, and recommendations for facility modifications, closures, or new facilities. FERC also stated that the monitoring program would monitor recreational use through the license term, document whether Project visitor needs are being met, and identify recreational use-related effects. FERC concluded that the existing boating access at the developed boat ramps at Don Pedro Reservoir would be adequate to accommodate current and future use, as boating access is only an issue in sequential low-flow years and the water surface elevations drop below 600 ft, which would likely be infrequent.

3.19.2 Impact Analysis

Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Proposed Project includes an RRMP that consists of an operations and maintenance program that describes how the Districts would routinely maintain and operate the recreational facilities. Operational maintenance activities would keep recreation facilities functioning and in efficient operating conditions. As part of the RRMP's operations and maintenance program, the Districts would routinely monitor the developed recreation area facilities and undeveloped shoreline recreation sites to identify maintenance needs as they arise, and needs identified through monitoring may be addressed immediately or flagged for inclusion in upcoming scheduled routine maintenance activities. Operations and maintenance of the Proposed Project's recreation facilities would not substantially accelerate the physical deterioration of the Proposed Project's recreational facilities nor increase the number of recreationalists using the facilities.

The Proposed Project's developed boat ramp facilities at Don Pedro Lake (3 launches) depend on the reservoir water surface elevation to remain accessible or usable by the public. As a result, the operation of the Proposed Project has the potential to increase the use of other regional boat ramp facilities such that substantial physical deterioration of the facility could occur or be accelerated, primarily if operations resulted in none of the boat ramps being usable. As part of the Proposed Project, the Districts are proposing to lower the minimum pool from the current elevation of 600 ft. to 550 ft per Article 403. Lowering the reservoir level from the current elevation of 600 ft to an elevation of 550 ft would occur infrequently only during successive dry years and most likely between mid-November and mid-March outside the peak summer recreation season. If the reservoir level is lowered below the current 600 ft, access to existing boat ramps would be limited; however, the reservoir levels would be below 600 ft very infrequently (i.e., only in successive dry years) and during periods outside the peak recreation season. Thus, the anticipated effects on boat ramp availability on Don Pedro Reservoir are not significant and would not accelerate the physical deterioration of the existing or other regional boat ramp facilities. Therefore, the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. As a result, the Proposed Project would have a **less than significant impact** and no mitigation is required.

Impact REC-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

The Proposed Project would include operational maintenance and ongoing operations of existing developed recreation facilities and undeveloped shoreline use areas. These maintenance and operational activities at recreational facilities can potentially affect biological resources and geology and soil resources in the Proposed Project Area. Analysis of these impacts and required mitigation measures are discussed in Section 3.7, *Biological Resources*, and in Section 3.10, *Geology and Soils*.

There are three recreation areas (Moccasin Point, Blue Oaks, and Fleming Meadows) located at Don Pedro Reservoir that support a variety of land-based and water-based recreational uses and opportunities, which are situated on less than 10 percent of the reservoir shoreline. The remaining shoreline is undeveloped, where dispersed boat-in camping and day use are permitted with no or minimal recreation site infrastructure; however, eight floating restrooms and three vault restrooms are located around the shoreline in areas with high visitor use. At the popular whitewater boating takeout, Ward's Ferry Bridge, there is an additional vault restroom. The Proposed Project's RRMP includes operation and

maintenance activities and responsibilities, as summarized below, which the Districts would routinely employ to minimize or avoid adverse physical effects on the environment.

At the three developed recreation area complexes, the Districts would conduct operational maintenance activities per the RRMP to keep them functioning and operating efficiently. The Districts and their concessionaires would routinely monitor the three developed recreation areas to identify maintenance needs as they arise. Needs identified through monitoring may be addressed immediately (e.g., collecting litter, replacing light bulbs, cleaning bathroom areas) or flagged for inclusion in upcoming scheduled routine maintenance activities (e.g., emptying large trash containers, repairing plumbing).

In the undeveloped shoreline use areas, the Districts routinely patrol and monitor the undeveloped sites along the shoreline and manage the sites and the limited facility infrastructure as needed based on site conditions. The routine maintenance activities conducted by the Districts and their concessionaires keep the limited-facility infrastructure functioning and operating efficiently. Examples of regular or routine maintenance activities include but are not limited to, cleaning, vegetation maintenance, repair, replacement, servicing, and inspecting. Additionally, DPRA may relocate, remove, or add floating toilets at the identified and other locations as deemed necessary to maintain sanitary conditions and provide toilet services where recreationists need them. The RRMP includes measures to address potential resource damage due to significant visitor use impacts at these locations. These measures include but are not limited to site closure, new use restrictions, or installing or providing additional site infrastructure (e.g., tent pads, picnic tables, moorage, designated hunting blinds, and/or toilets for increased resource protection, etc.). If additional public shoreline dispersed areas are identified within the Proposed Project Area over time, they will be included in this program.

In addition to the District's operation and maintenance activities, the RRMP includes a Recreation Use Monitoring Program that is designed to measure recreation use levels, recreation use impacts, and visitor tolerances for implications (e.g., crowding, conflict, use impacts, facility conditions, etc.) and management actions that may be used to address identified conflicts, issues, or effects from recreational use.

The Recreation Facility Development Program in the RRMP is intended to address identified existing and future recreation facility needs by upgrading existing facilities and constructing new facilities, where appropriate, based on regular monitoring of recreation use and trends. The program also defines the current capital construction-related plans of the Districts, identifies proposed recreation development Projects and their estimated costs, and provides conceptual diagrams of the locations of anticipated improvements. The Districts would review the Recreation Facility Development Program periodically and revise it as appropriate to continue to address new recreation needs within the Proposed Project Area as they evolve throughout the term of the new license. Future major capital improvement Projects include when a new recreation facility would be constructed or a major new site feature (e.g., a new parking area, replacing a boat ramp, expanded camping loop, new connector trail). These new facilities or site features would be defined through future planning, including site feasibility, site survey, and detailed design. There is only one new facility to be constructed as part of the new license. In FEIS Section 2.3.1, FERC recommended the Districts construct and maintain shoreline access trails on each side of Ward's Ferry Bridge to provide suitable shoreline access for visitors, provide safe egress from the river for hand-carrying rafts, and reduce erosion and vegetation damage caused by user-created trails. While there are no current designs or alignments for these river access trails, the Proposed Project measures for biological resources, geology, and soils would avoid or minimize physical impacts on the environment from the trail construction. These measures include pre-construction surveys for sensitive resources as part of the Terrestrial Resources Management Plan (refer to Section 3.7 – Biological Resources) and implementation of a soil erosion and sediment control plan that would apply to construction activities on all lands within the Proposed Project Area (refer to Section 3.10 – Geology and Soils). Site and construction plans for future undefined work associated with the Proposed Project will require discretionary approvals and potential additional environmental analysis before construction activities.

Therefore, with implementation of the Proposed Project articles and conditions, along with implementation of the operation, maintenance, and monitoring measures and processes in the RRMP, the Proposed Project would have a **less than significant impact** on the environment from construction or expansion of recreational facilities, and no mitigation is required.

3.20 Transportation

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
TRANSPO-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
TRANSPO-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
TRANSPO-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
TRANSPO-4: Result in inadequate emergency access?	☐	☐	☐	☒

3.20.1 Environmental Setting

The Proposed Project Area is accessible by two State Routes. State Route 132, an east-west, two-lane road, passes through the community of La Grange and by the southeastern arm of Don Pedro Reservoir. State Route 49/120, a north-south, two-lane road, passes by the northern arm of the reservoir. La Grange Road, a two-lane county road, extends north of State Route 132 from the community of La Grange, west of Don Pedro Reservoir, before intersecting with State Route 120. Various paved and unpaved local roads serve areas on or near the Proposed Project Area. The Proposed Project Area includes various trails for pedestrian and bicycle use, most located near shoreline recreation areas. Several recreation areas also include access to vehicles to launch boats.

3.20.2 Impact Analysis

Impact TRANSPO-1: Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Proposed Project does not include the decommissioning, rerouting, or significant alteration of roads or paths in Tuolumne or Stanislaus County. Construction of the Proposed Project may lead to a temporary increase in the use of various rural roads within the Proposed Project Area due to the hauling of construction materials and workers commuting to and from the construction site. However, routine and

long-term operations of the Proposed Project will not result in an increase in the use of local roadways. Maintenance activities would be spaced out over time, and the number of workers and vehicles present at a given time would be similar to those of existing maintenance activities. Any impacts to roads that affect circulation patterns would be temporary.

Due to its rural location, the Proposed Project Area has little interaction with transit, bicycle, or pedestrian facilities. The Proposed Project Area includes recreation facilities, such as trails, for cyclists and pedestrians, which are addressed in the RRMP. Therefore, the Proposed Project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact TRANSPO-2: Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Section 15064.3 of the CEQA Guidelines states the following:

(b) Criteria for Analyzing Transportation Impacts.

(1) Land Use Projects. VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

Construction of the Proposed Project would generate a temporary increase in Vehicle Miles Travelled (VMT) due to minor construction activities within the Proposed Project Area. However, this increase would be relatively small and cease at each location at the end of each construction location.

Overall implementation of the Proposed Project would cause a minor, short-term increase in the amount of vehicle miles traveled attributable to routine maintenance activities. The increase in vehicle miles traveled as a result of operations of the Proposed Project would be small, considering the types of maintenance activities (e.g., small number of vehicles or construction operators, minimal number of structures needing materials transported to the site). At each Project site, routine maintenance is anticipated to result in anywhere from 5-10 trips per month, and long-term O&M would result in fewer trips per month. Given the type of “development project” and the minimal amount of VMT expected, the Proposed Project would not meet the screening threshold for VMT analysis for small projects according to the Governor’s Office of Planning and Research Technical Advisory Memo (OPR 2018). Therefore, the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), which sets the criteria for assessing transportation impacts. As such, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact TRANSPO-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Proposed Project does not include rerouting of roads or any new design features. Circulation design and uses within the area would remain consistent. The Proposed Project would not change the surrounding transportation system's geometric design features or require new incompatible uses. The temporary maintenance work associated with the Proposed Project would be accessed using existing rural roadways. In addition, the Proposed Project would not permanently change the existing vehicle use makeup (e.g., cars, trucks, etc.) within the Proposed Project Area. Therefore, the Proposed Project would not substantially increase public hazards due to a change in a geometric design feature or incompatible uses. As a result, **no impact** would occur, and no mitigation is required.

Impact TRANSPO-4: Would the project result in inadequate emergency access?

The Proposed Project would not increase the number of residents within the Proposed Project Area requiring additional emergency access. Routine and long-term operations and maintenance of the Proposed Project would not change access routes to or within the FERC Project Boundary or result in inadequate emergency access. Proposed construction activities would not result in any road closures. In contrast, through the routine maintenance of project roads, the Proposed Project would be expected to improve and maintain emergency access. Therefore, the Proposed Project would not result in inadequate emergency access. As a result, **no impact** would occur, and no mitigation is required.

3.21 Tribal Cultural Resources (TCRs)

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

3.21.1 Environmental Setting

The Don Pedro Project Area and the La Grange Project Area are ethnographically located within Central Sierra Miwok territories. The Central Sierra Miwok territory is located in the Sierra Nevada foothills and

mountains spanning the upper drainages of the Stanislaus and Tuolumne Rivers. The Central Sierra Miwok group is considered a member of the Eastern Miwok, one of the two major divisions of the Miwokan subgroup of the Utian language family (Levy 1978). While the La Grange Project Area is in the Central Sierra Miwok territory, it is on the western edge of this territory, close to the traditional territory of the Northern Valley Yokuts.

This section provides a brief ethnographic and ethnohistoric background for the Central Sierra Miwok and the regulatory context and consultation efforts related to TCRs for the Proposed Project.

The following descriptions of the Central Sierra Miwok are excerpted from the HPMPs prepared for the Don Pedro Project and La Grange Hydroelectric Project (TID/MID 2018, TID/MID 2019).

Central Sierra Miwok

The main political unit of the Miwok consisted of small tribal groups, independent and sovereign nations with a defined and bounded territory designating its zone of control over natural resources. Among the Sierra Miwok, small tribal groups included political lineage localities that made up the permanent settlements with an average population estimate of around 25 people, as well as several semi-permanent settlements and numerous seasonally occupied campsites that were used at various times throughout the seasonal round of gathering, hunting, and fishing activities (Levy 1978). Ethnographic literature points to a chief or an assembly house in the community at the capital or principal settlement (Levy 1978). The dominant form of house was a conical structure of bark slabs supported by posts or other framing.

The main foci of subsistence were gathering wild plant foods, especially acorn, and hunting mammals. The Sierra Miwok traveled to higher or lower elevation levels during various seasons to obtain subsistence resources unavailable near their permanent settlements. The inhabitants occupying the Transition Zone forest moved to higher elevations during summer in pursuit of deer. Those in the foothill areas would occasionally visit the plains of the central valley to hunt antelope and tule elk, which are unavailable in the mountains. Plant foods varied seasonally, as greens were gathered in the spring and were used to supplement the diet of acorns stored since the previous fall. Seeds were gathered from May to August. Pine nuts were collected after August when the land was burned. In late fall and early winter, acorns were gathered (Levy 1978). Meat consumption was greatest in winter when plant resources were limited to stored foods (Levy 1978).

Technological skills included basket making and production of ground stone items, such as mortars and pestles used in acorn processing. Lithic technology consisted of Projectile points, knives, scrapers, and expedient tools like hammer stones and choppers made from various materials, such as chert and obsidian (Levy 1978).

The Spanish first contacted the Eastern Miwok in the second part of the eighteenth century in the Sacramento-San Joaquin Valley explorers (Levy 1978). Since then, dramatic cultural changes developed, including the transformation of previously independent small tribal groups into unified militias resisting forced labor, forced missionization, and displacement that was intensified by epidemics and targeted violence against the Miwok by the Spanish, which killed many thousands of Miwok persons in the first half of the nineteenth century (Levy 1978).

During the 1840s, fur trappers, gold miners, and settlers arrived in large numbers, and hostile relations often arose between these newcomers and Sierra Miwok. For a brief time, Southern Sierra Miwok supplied labor for J.D. Savage's gold mining operations in the Big Oak Flat District. However, large mining operations were shut down as miners increased and Miwok participation decreased (Levy 1978). Records indicate that at least 200 Miwok were killed by the miners during the years 1847 to 1860 (Levy 1978).

A period of confiscation of Indian lands occurred with the annexation of California by the U.S. (Levy 1978). Although treaties were signed by several members of the small tribal groups, they were never ratified by the U.S. Senate (Levy 1978). A few groups of Sierra Miwok were removed to the Fresno area, but most of the Sierra Miwok population remained in rancherias scattered throughout the Sierra Nevada foothills (Levy 1978). Reliance on wage labor steadily increased, and dependence on gathering and hunting diminished throughout the end of the nineteenth century and early twentieth century. Federally recognized Sierra Miwok Tribes near the Don Pedro Project and La Grange Project Areas include the Chicken Ranch Rancheria of Jamestown, California, and the Tuolumne Band of Me-Wuk Indians of Tuolumne, California.

Regulatory Context

CEQA was amended in 2014 by Assembly Bill 52 (AB 52), which created a new category of CEQA-considered resources, TCRs, and established a detailed, stepwise process for a CEQA lead agency to consult[4] with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of a Proposed Project. As defined in Public Resources Code Section 21074, TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are included or eligible for inclusion in the CRHR or are included in a local register of historical resources. TCRs are also resources determined by the lead agency, "in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [Public Resources Code] Section 5024.1," considering the significance of the resource to a California Native American Tribe. As described in Public Resources Code Section 21074(b), a cultural landscape that meets these criteria is a TCR "to the extent that the landscape is geographically defined in terms of the size and scope of the landscape."

Identifying the Tribes that are traditionally and culturally affiliated with a Project's geographic area is necessary to complete AB 52 consultation pursuant to Public Resources Code Section 21080.3.1, which requires notification to these Tribes and consultation if individual Tribes request. The purpose of AB 52 consultation is to determine whether TCRs are present within a Project Area, to determine whether the Project will significantly impact any such resources identified in accordance with Public Resources Code Section 21084.2, and if so, to determine the most appropriate way to avoid or mitigate those impacts.

Before the release of a negative declaration, mitigated negative declaration, or EIR for a Project, the lead agency must determine that one of the following has occurred: (1) the AB 52 consultation process has concluded; (2) the Tribe requested AB 52 consultation but has failed to provide comments to the lead agency or otherwise failed to engage in the consultation process; or (3) the Tribe failed to request consultation within 30 days of being notified by the lead agency about the Project under AB 52 (California Public Resources Code Section 21082.3(d)). Regarding item 1 above, under AB 52, the consultation is considered concluded when: (1) the parties agree to measures to mitigate or avoid significant effects on a TCR; or (2) a consulting party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (California Public Resources Code Section 21080.3.2[b]).

[4] For purposes of AB 52, "consultation" has the same meaning as provided in Section 65352.4 of the Government Code: Consultation means the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

AB 52 Consultation for the Proposed Project

On August 12, 2024, the Districts requested a list of Tribes traditionally and culturally affiliated with the Proposed Project's geographic area for AB 52 consultation from the Native American Heritage Commission (NAHC). The NAHC responded with a list of Tribes on August 23, 2024, and noted that a review of the Sacred Lands File maintained by the NAHC was positive for the presence of sacred lands for the Proposed Project's location. The list of Tribes from the NAHC matches the list of Tribes included in **Table 3.21- 1**, except for the North Fork Rancheria of Mono Indians, the Washo Tribe of Nevada and California, and the Torres Martinez Desert Cahuilla Indians, which were not included on the NAHC list. The North Fork Rancheria of Mono Indians and the Washoe Tribe of Nevada and California were consulted during the FERC licensing efforts for the La Grange Project. The Districts identified them as potentially traditionally and culturally affiliated with the geographic area of the Proposed Project. The Torres Martinez Desert Cahuilla Indians formally requested consultation on the Districts' CEQA Projects in a letter dated May 16, 2016. This Tribe was added to the list of Tribes that the Districts would contact for AB 52 consultation efforts.

On September 23, 2024, the Districts initiated the AB 52 consultation process by notifying Tribes traditionally and culturally affiliated with the geographic area of the Proposed **Project (See Table 3.21-1)** of the opportunity for consultation regarding TCRs related to the Proposed Project. In addition to Tribes traditionally and culturally affiliated with the geographic area, the Torres Martinez Desert Cahuilla Indians formally requested consultation on all of the Districts' related Projects on May 16, 2016. They were included in the 2024 outreach, although they did not respond to the 2024 outreach. On September 25, 2024, the Nototomne Cultural Preservation - Northern Valley Yokuts Tribe (Northern Valley Yokuts Tribe) responded with a consultation request. On October 01, 2024, the Tuolumne Me-Wuk Tribal Council responded with a consultation request. No other Tribes requested consultation under AB 52 in response to the 2024 outreach. The Districts began AB 52 consultation with the Northern Valley Yokuts Tribe on October 22, 2024, and the Tuolumne Band of Me-Wuk Indians on October 21, 2024.

Table 3.21-1. List of Tribes Contacted for the Opportunity to Consult

Amah Mutsun Tribal Band	Buena Vista Rancheria	California Valley Miwok Tribe
Calaveras Band	Chicken Ranch Rancheria	Ione Band of Miwok
Jackson Rancheria Band	Nashville Enterprise	North Fork Rancheria of Mono Indians
Nototomne Cultural Preservation – Northern Valley Yokuts Tribe	Pakan'yani Maidu	Picayune Rancheria
Southern Sierra Miwuk Nation	Tule River Indian Tribe	Tuolumne Band of Me-Wuk Indians
Washoe Tribe of Nevada and California	Wuksachi Indian Tribe - Eshom	Torres Martinez Desert Cahuilla Indians[1]

[1] On May 16, 2016, the Torres Martinez Desert Cahuilla Indians formally requested consultation on the Districts' CEQA Projects. However, the Tribe did not respond to the 2024 outreach.

The Districts held a meeting with the Northern Valley Yokuts Tribe on November 11, 2024, to introduce the Proposed Project, provide a description of the CEQA process, provide a brief description of the previous licensing studies, including previous cultural resources and TCP studies, and to discuss the Northern Valley Yokuts Tribe's preferences for conducting AB 52 consultation. As a result of this meeting,

the Districts provided the Northern Valley Yokuts Tribe with copies of the HPMPs and previously mentioned study reports completed for the FERC licensing efforts for both the Don Pedro Project and the La Grange Project.

The Districts held a meeting with the Tuolumne Band of Me-Wuk Indians on November 11, 2024, to introduce the Proposed Project, provide a description of the CEQA process, provide a brief description of the previous licensing studies, including previous cultural resources and TCP studies, and to discuss the Tuolumne Band of Me-Wuk Indians' preferences for conducting AB 52 consultation. As a result of this meeting, the Districts provided the Tuolumne Band of Me-Wuk Indians with copies of the HPMPs and previously mentioned study reports. Additionally, a site visit was held on December 16, 2024, with the Tribe to discuss the construction of a new visitor center and to visit several archaeological sites and the TCP documented during FERC relicensing efforts for the Don Pedro Project.

Outreach to the Torres Martinez Desert Cahuilla Indians has been conducted via email and phone. However, no response has been received from Torres Martinez Desert Cahuilla Indians.

Tribal consultation under AB 52 is ongoing and will be concluded as described in the section above.

A table summarizing consultation and outreach efforts to Native American Tribes by the Districts under AB 52 is provided below **(Table 3.21-2)**.

Table 3.21-2, Consultation Efforts Under AB 52

Tribe	AB 52 Notification Date	Request to Consult	Consultation Actions
Amah-Mutsun Tribal Band	September 23, 2024	None	On October 14, 2024, the District called Chairperson Valentine Lopez. Chairperson Lopez stated that the Proposed Project is out of their traditional territory, and the Tribe would not have any comments.
Buena Vista Rancheria	September 23, 2024	None	On October 14, 2024, the Districts' called Chairperson Jessalynn Tasteran and left a message with the front desk. No response has been received.
Calaveras Band of Mi-Wuk Indians	September 23, 2024	None	On October 14, 2024, the Districts' called Cultural Resources Specialist Debra Grimes to discuss the Proposed Project. On October 25, 2024, Specialist Grimes stated via phone and email that the Proposed Project is not within their traditional territories.
California Valley Miwok Tribe	September 23, 2024	None	On October 7, 2024, Chairperson Silvia Burley responded via email and letter that the California Valley Miwok Tribe had no comments or concerns with the Proposed Project.
Chicken Ranch Rancheria	September 23, 2024	None	On October 15, 2024, Environmental & Planning Manager Joanna Portillo-Hsu stated that the Tribe had no comments or concerns regarding the Proposed Project.

Tribe	AB 52 Notification Date	Request to Consult	Consultation Actions
Ione Band of Miwok	September 23, 2024	None	On October 14, 2024, Cultural Resources Clerk Timothy Morla asked the Districts if any soil testing has been completed. The Districts responded that the Proposed Project consists of existing structures and facilities. Clerk Morla had no further comments or questions.
Jackson Rancheria Band of Miwuk Indians	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe. No response was received.
Nashville Enterprise Miwok-Maidu Nishinam Tribe	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe and left a voicemail. No response was received.
North Fork Rancheria of Mono Indians	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe and left a voicemail. No response was received.
Nototomne Cultural Preservation (Northern Valley Yokuts Tribe)	September 23, 2024	Request for consultation	On September 25, 2024, President Katherine Perez responded that the Nototomne Cultural Preservation and the Northern Valley Yokuts Tribe would like to consult under AB 52. The Districts and the Tribe exchanged emails between October 22, 2024, and January 3, 2025. An online meeting with President Perez was held on November 22, 2024, to review the Proposed Project, provide an overview of previous cultural resources management efforts for the licensing, review the timeline and schedule, and provide next steps for AB 52 consultation, including the Tribes preferences for appropriate consultation. The Districts provided copies of the cultural study reports and the Historic Properties Management Plans.
Pakan'yani Maidu of Straw berry Valley Rancheria	September 23, 2024	None	On October 14, 2024, the Districts called the Tribe. The Tribe stated that they were catching up with their mail. No response was received.
Picayune Rancheria	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe. No response was received.

Tribe	AB 52 Notification Date	Request to Consult	Consultation Actions
Southern Sierra Miwuk Nation	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe and left a voicemail. No response was received.
Tule River Indian Tribe	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe and left a voicemail. No response was received.
Tuolumne Band of Me-Wuk Indians	September 23, 2024	Request for consultation	On October 1, 2024, Vice-Chairman Kyle Cox asked for a meeting to discuss the Project further. An online meeting was held on November 15, 2024, to review the Proposed Project, provide an overview of previous cultural resources management efforts for the licensing, review the timeline and schedule, and provide next steps for AB 52 consultation, including the Tribes' preferences for appropriate consultation. The Districts provided copies of the cultural study reports, the Historic Properties Management Plans, and interpretive exhibit information. Vice-Chairman Cox also requested a field visit. A field visit was conducted on December 16, 2024. Attendees included Vice-Chairman Cox, Micheal Cooke (TID), Bill Penney (TID), Ryan Reis (DPRA), Brannon Gomes (DPRA), and Danielle Risse (HDR). The Districts and the Tribe exchanged emails between October 21, 2024, and January 8, 2025.
Washoe Tribe of Nevada and California	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe and left a voicemail. No response was received.
Wuksachi Indian Tribe (Eshom)	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe. No response was received.
Torres Martinez Desert Cahuilla Indians	September 23, 2024	None	On October 14, 2024, the Districts attempted to call the Tribe and left a voicemail. No response was received.

Previous Tribal-Related Studies

The Districts conducted several cultural resources studies from 2015 to 2019 as part of the FERC licensing efforts for the Proposed Project, including two Native American Traditional Cultural Properties (TCP) studies, one for the Don Pedro Project and one for the La Grange Project. According to National Reister Bulletin 38, which was utilized for these studies, “A TCP, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in

maintaining the continuing cultural identity of the community" (Parker and King 1998:1). TCPs can be a location associated with traditional beliefs of a Native American Tribe, a place of religious or cultural importance to a Native American Tribe, or a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historical identity. According to the definitions of TCPs and TCRs, these resource types are similar because they represent a tangible value resource to a Native American Tribe[5]. As such, the findings of the District's TCP studies completed for the FERC licensing efforts are described here due to their relevancy and similarity to TCRs.

The Native American TCP study for the Don Pedro Project lasted from 2006 to 2011 as part of the FERC relicensing effort. For the La Grange Project, the Native American TCP study was conducted from 2016 to 2017. These TCP studies included contacting the Native American Heritage Commission (NAHC) for lists of potentially interested tribes and individuals and necessary tribal resources that may be documented in the NAHC's Sacred Lands files. The studies also included conducting background, archival, and literature research; field visits; oral interviews with tribal informants; and NRHP evaluation and reporting. The TCP studies included outreach to most of the Tribes listed above in **Table 3.21-1**. The study results for the Don Pedro Project are provided in a report provided to participating Tribes for review and comment (TID/MID 2015). The study results for the La Grange Project are provided in a report that was provided to participating Tribes for review and comment (TID/MID 2017). The TCP reports include confidential information supplied by tribal informants and were filed with FERC as privileged. Thus, the reports are provided only on a need-to-know basis. Public summaries that describe the TCP studies' methods and results but omit the privileged information are provided in the FLAs prepared and filed with FERC for both the Don Pedro Project and La Grange Project, respectively. The TCP studies identified one TCP within the Proposed Project Boundary related to the Don Pedro Project.

The TCP identified consists of a District (P-55-8925) comprising a plant gathering locale on a creek feeding the reservoir. Generations of Indians viewed these plants as a source of traditional foods, medicines, and materials for making baskets and ceremonial regalia. Plants are still harvested in this locality today, and their availability has contributed significantly to the maintenance of the Tuolumne Band of Me-Wuk Indians community's cultural traditions and identity. This plant gathering area was determined to be an NRHP-eligible District significant under Criterion A because of its association with a "pattern of events or a historical trend that made a significant contribution to the development of a community, a State, or the nation" (NPS 1995:12).

As described above, the Districts also developed HPMPs (TID/MID 2018, TID/MID 2019) to guide the management of cultural resources and to address potential impacts on historic properties during the term of the new FERC licenses that include avoidance, protection, monitoring, and mitigation measures. The HPMPs were developed in consultation with Native American Tribes, BLM, and the SHPO. The HPMP prepared for the Don Pedro Project includes management measures for avoiding impacts on the NRHP-eligible TCP District.

The Districts understand that locational and other information about TCPs, TCRs, or any historical resources can result in irreparable vandalism or other damages to these resources. As a result, locational information about these resources is kept confidential.

[5] However, the investigations into TCRs are a CEQA requirement, while investigations into TCPs are generally related to a federal agency's Section 106 of the NHPA compliance requirements.

3.21.2 Impact Analysis

Impact TCR-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

As described above, the Proposed Project AB 52 consultation with Native American Tribes is ongoing. The Proposed Project involves the continued operations of existing structures and would be generally consistent with existing operations. The Districts would maintain the Proposed Project facilities in the same manner as under the current license. Because the Proposed Project does not routinely involve ground-disturbing activities outside of ongoing maintenance activities such as routine maintenance of the facilities, vegetation management, and road maintenance, which are consistent with existing conditions, no impacts are expected for as yet unidentified TCRs related to routine operations and maintenance.

However, TCR identification in the FERC Project Boundary is ongoing through consultation, and the potential exists for unidentified TCRs to be encountered, identified, and affected during the life of the FERC license for the Proposed Project. Mitigation measure **MM-TCR-1** is proposed to avoid, minimize, and reduce potential impacts to unidentified TCRs. MM-TCR-1 requires implementation of specific clauses within the HPMPs, as well as additional feedback through the AB 52 consultation process from the Native American Tribes, on how to handle and treat the discovery of unknown tribal cultural resources. Therefore, with the implementation of MM-TCR-1, the Proposed Project would have a **less than significant impact with mitigation incorporated** on unknown tribal cultural resources.

Mitigation Measures:

MM-TCR-1 Discovery of Tribal Cultural Resources. In accordance with the provisions provided in Sections 4.3 through 4.7 of the Don Pedro Project HPMP and Sections 3.0 through 4.1.1.3 of the La Grange Project HPMP, consultation will occur with Native American tribes on an activity-by-activity basis to ensure TCRs are identified within the Proposed Project Boundary. If a resource is determined to be a TCR as defined by the Public Resources Code, Section 20174, during consultation under Sections 4.3 through 4.4 of the Don Pedro Project HPMP and Section 3.0 of the La Grange Project HPMP, and will be potentially impacted by the Project, appropriate TCR-specific measures will be developed consistent with Public Resources Code Section 21084.3, and impacts will be reduced to a less than significant level pursuant to Sections 4.4 through 4.6 of the Don Pedro Project HPMP and Sections 3.0 through 4.0 of the La Grange Project HPMP.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

As described above, the Proposed Project AB 52 consultation with Native American Tribes is ongoing. The Districts are conducting AB 52 consultation according to CEQA requirements with California Native American tribes traditionally and culturally affiliated within the geographic area of the FERC Project Boundary. The Proposed Project involves the continued operations of existing structures and would be

generally consistent with existing operations. The Districts would maintain the Proposed Project facilities in the same manner as under the current license. Because the Proposed Project does not routinely involve ground-disturbing activities outside of ongoing maintenance activities such as routine maintenance of the facilities, vegetation management, and road maintenance, which are consistent with existing conditions, no impacts are expected for as yet unidentified TCRs related to routine operations and maintenance.

As stated under Impact TCR-1-i, TCR identification is ongoing through consultation, and the potential exists for unidentified TCRs to be encountered, identified, and affected during the life of the FERC license for the Proposed Project. Mitigation measure **MM-TCR-1** is proposed to avoid, minimize, and reduce potential impacts to unidentified TCRs. MM-TCR-1 requires implementation of specific clauses within the Historic Properties Management Plan, as well as additional feedback through the AB 52 consultation process from the Native American Tribes, on how to handle and treat the discovery of unknown tribal cultural resources. Therefore, with the implementation of MM-TCR-1, the Proposed Project would have a **less than significant impact with mitigation incorporated** on unknown tribal cultural resources.

Mitigation Measures:

MM-TCR-1 Discovery of Tribal Cultural Resources. See above.

3.22 Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
UTIL-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

3.22.1 Environmental Setting

The Districts operate water storage and electrical generation facilities within the Proposed Project Area. The Proposed Project is located on the Tuolumne River in Tuolumne and Stanislaus counties. The

Proposed Project includes facilities and operations primarily for irrigation, M&I uses, flood control, and recreation.

3.22.2 Impact Analysis

Impact UTIL-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The Proposed Project would not increase the Proposed Project Area's residential, commercial, or industrial use. No additional ground would be disturbed during the Proposed Project's construction, and no existing utilities would need to be updated to accommodate increased use. The Proposed Project would not impact the drainage of the Proposed Project Area. Therefore, the Proposed Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. As a result, the Proposed Project would have **no impact**, and no mitigation is required.

Impact UTIL-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The Proposed Project would not change storage capacity at the Don Pedro or La Grange Project. In addition, the Proposed Project would not change the source of water used within the Proposed Project Area, and the operation of the Proposed Project would not create additional demand for water above existing conditions. Therefore, the Proposed Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. As a result, the Proposed Project would have **no impact**, and no mitigation is required.

Impact UTIL-3: Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The Proposed Project would not increase wastewater use or require additional wastewater infrastructure. Sanitary waste disposal needs for facilities associated with the Proposed Project would continue to be served primarily by vault toilets, which would be periodically pumped, with the sewage transported to an appropriate facility with adequate disposal capacity. No other development is proposed as part of the Project that would require additional wastewater treatment, nor is the Proposed Project expected to encourage such development. Therefore, the Proposed Project would have **no impact** on wastewater treatment availability, and no mitigation is required.

Impact UTIL-4: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Proposed Project would not generate solid waste above local standards or infrastructure capacity. Waste generation during construction would be temporary. Operations and maintenance of the Proposed Project would not create a significant new source of solid waste nor change the method of waste disposal when compared to existing conditions. Therefore, the Proposed Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair

the attainment of solid waste reduction goals. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact UTIL-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

During routine maintenance, excess materials such as lumber, paint, pipe, wiring, and similar materials would be returned to TID or MID facilities, as appropriate, and used for other applications. Materials that are not usable and other waste would be disposed of at proper waste transfer stations. All activities associated with the Proposed Project implementation must comply with applicable solid waste disposal laws and policies. Any hazardous waste generated by the Proposed Project would be disposed of according to relevant statute or regulation at an appropriate disposal site as addressed in Section 3.12, Hazards and Hazardous Materials. Therefore, the Proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. As a result, the Proposed Project would have **no impact**, and no mitigation is required.

3.23 Wildfire

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
WILDFIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
WILDFIRE-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
WILDFIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
WILDFIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

3.23.1 Environmental Setting

CALFIRE has rated areas within California for their potential fire hazards. CALFIRE has developed a fire hazard severity scale to quantify this possible risk and predict the damage a fire is likely to cause. State Responsibility Areas are areas where the state manages fire hazards. They use a scale that includes moderate, high, and very high ratings. Areas where another entity manages fire hazards, are referred to as Federal Responsibility Areas and Local Responsibility Areas. There are no Local Responsibility Areas in the Proposed Project Area.

Most of the area occupied by the Proposed Project for which the state of California is responsible for managing fire hazards qualifies as Very High Fire Hazard Severity Zones, as defined by CALFIRE (CALFIRE 2023a, CALFIRE 2023b). Other areas within the Proposed Project Area are Federal Responsibility Areas managed by the BLM. However, these are interspersed with State Responsibility

Areas rather than isolated, so this analysis assumes a consistent rating of Very High Fire Severity Zones throughout those areas.

3.23.2 Impact Analysis

Impact WILDFIRE-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Both Stanislaus and Tuolumne counties have Emergency Operations Plans that address wildfire response. The Districts also have a Don Pedro Emergency Action Plan and Fire Prevention and Response Management Plan (TID/MID 2017).

Temporarily, routine maintenance associated with the Proposed Project could result in short-term and minor impacts on local traffic during the work period. However, this potential impact would not impair an emergency operations plan as the Proposed Project would implement a Transportation System Management Plan within one year of license issuance.

On a long-term basis, operations and maintenance of the Proposed Project would not increase traffic in the Proposed Project Area to the extent that emergency response times would be impaired, and the Proposed Project would not involve inundation of routes or constructions of any other facilities that could affect existing evacuation and emergency service routes. The Districts' Fire Prevention and Response Management Plan (TID/MID 2017) includes key access routes for fire control and extinguishing fires in the Proposed Project Area.

Implementing the management plans associated with the Proposed Project would not impair adopted emergency response plans or evacuation plans compared to existing conditions. See Section 3.20 of this document, *Transportation*, for additional analysis on transportation-related emergency access. Therefore, the Proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact WILDFIRE-2: Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Proposed Project Area is centered on rivers, lakes, and reservoirs, and implementation requires minimal construction. As it occupies the surface water and surrounding space within the Proposed Project Area, the Proposed Project will be nearer sea level, and its implementation will not impact prevailing winds. Similarly, the slope of the area will not be affected by implementing the Proposed Project. Operations and maintenance activities will remain consistent with existing conditions. As such, implementing the Proposed Project would not exacerbate the possibility of wildfire risks.

The Proposed Project Area does not include notable concentrations of residents. Most occupants would be working or recreating in the area and could be evacuated in the event of a wildfire. Further, implementing the Proposed Project would not involve expanding the FERC Boundary or Proposed Project Area to include additional occupants, nor would it induce such growth. Therefore, the Proposed Project would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact WILDFIRE-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power

lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Proposed Project includes only minor improvements, no significant expansion of footprint, and no additional infrastructure would be required to maintain fire hazard awareness or prevention. According to the District's Fire Prevention and Response Management Plan (TID/MID 2017), operations that involve any motorized equipment/tool used within the Proposed Project Area may be required to take specific fire prevention actions and measures during the fire precautionary periods, including ignition resistant construction. Tools and equipment may be inspected by CALFIRE or the BLM (on BLM lands) to ensure compliance with fire safety rules. All District vehicles and each job site where construction occurs must have McLeod tools, shovels, and radios at all times while in the field to facilitate the Districts' emergency response preparedness and avert small fires (TID/MID 2017).

Although the Proposed Project would have similar operations and maintenance to existing conditions, considering the Very High Fire Severity Zones in and surrounding the Proposed Project (CALFIRE 2023a, CALFIRE 2023b), the potential exists to exacerbate fire risk, or that may result in temporary or ongoing impacts to the environment. Implementation of management plans associated with the Proposed Project would reduce such impacts. Therefore, the Proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

Impact WILDFIRE-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Proposed Project is based on bodies of water located between mountains. As such, there is very little space for downslope effects. The Proposed Project Area contains multiple operating dams that regulate the flow of its constituent rivers. This action limits many potential severe and diverse impacts downstream. Under the Proposed Project, these dams would continue to operate and manage such downstream impacts. The Proposed Project includes less than significant changes to drainage patterns. It would result in minimal change in runoff, as it only requires limited ground disturbance in areas that have already been disturbed. Therefore, the Proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. As a result, the Proposed Project would have a **less than significant impact**, and no mitigation is required.

3.24 Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
MFS-1: Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
MFS-2: Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
MFS-3: Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

3.24.1 Impact Analysis

Impact MFS-1: Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The Proposed Project would involve limited construction activities, routine maintenance and ongoing operations of facilities. O&M of the Proposed Project would not greatly differ from existing O&M. The new license requires implementation of new articles, environmental measures, management plans, and BLM 4(e) conditions on BLM lands to provide environmental protection as part of the Proposed Project. Nonetheless, the Proposed Project was found to have potentially significant impacts on biological resources, paleontological resources, and TCRs as described in the aforementioned sections.

Section 3.7, *Biological Resources*, analyzed the potential impacts of the Proposed Project on fish and wildlife species and their habitats, including sensitive natural communities and special-status species. While the Proposed Project could potentially 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 USFWS, mitigation measures have been identified, where appropriate, to lessen any impacts to a less than significant level. In addition, the FEIS (FERC 2020) identified several measures to mitigate for potential effects of Project activities through avoidance, protective actions, and monitoring and reporting. Furthermore, several measures would have a beneficial impact on habitat conditions for ESA and CESA-listed species within the Proposed Project Area and lower Tuolumne River.

Sections 3.8, *Cultural Resources*, and 3.21, *TCRs*, analyzed the potential impacts of the Proposed Project on resources that represent examples of California history and prehistory, including resources of geographical or cultural significance to local tribes. Proposed Project operation or maintenance, erosion, and recreation could expose and damage previously unidentified cultural resources that could be historical. In addition, previously identified resources could have new components or characteristics revealed throughout the new licenses that were previously unknown. The proposed measures to address such inadvertent discoveries (i.e., the unexpected exposure of previously unknown and unrecorded resources) during the terms of the new licenses. Training personnel in the procedures required to avoid unplanned impacts on cultural and tribal resources will help to prevent inadvertent disturbances and allow for the evaluation and potential mitigation of impacts before any disturbances or destruction, thereby resulting in the Proposed Project having a less than significant impact on cultural and tribal resources, and no additional mitigation is required.

Section 3.10, *Geology and Soils*, analyzed the potential impacts of the Proposed Project on paleontological resources. Proposed Project operation or maintenance, erosion, and recreation could expose and damage previously unidentified paleontological resources. While the Proposed Project could potentially directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, mitigation measures have been identified, to address inadvertent discoveries (i.e., the unexpected exposure of previously unknown and unrecorded resources) to lessen any impacts to a less than significant level.

Therefore, through implementation of the various conditions and plans of the new licenses as well as mitigation measures presented in this document, the Proposed Project would result in a **less than significant impact with mitigation incorporated** on the environment.

Mitigation Measures: See *Section 3.7.2, Biological Resources, Section 3.10.2, Geology and Soils, and Section 3.21.2, Tribal Cultural Resources*.

Impact MFS-2: Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Air pollutants and GHG emissions, as assessed under CEQA, are inherently recognized as cumulative impacts. Project-level thresholds of significance for these emissions are used in the determination of whether a project's individual emissions would make a cumulatively considerable contribution to a significant impact. Based on the analysis contained in this document, both air quality and GHG emissions would remain substantially below the defined thresholds of significance. Therefore, the Proposed Project would not make a cumulatively considerable contribution to a wider adverse air quality or GHG impact.

Soils and hydrology impacts related to runoff and siltation could extend off site and result in a larger impact when combined with the existing runoff along roads and other uses in the area. The Proposed Project Erosion Control Plan and all construction activities would adhere to storm water discharge permitting requirements. As such, these impacts would not make a cumulatively considerable contribution to a more widespread impact. Water management, flows, and water quality under the Proposed Project, as described in this Chapter, are generally anticipated to improve conditions and therefore would be beneficial.

There are no other current or reasonably foreseeable, major projects proposed in the FERC Project Boundary of the Don Pedro Project and the La Grange Project at this time. Other projects will likely occur in the future and over the term of the licenses, such as roadway improvements, spillway and dam improvements, recreational improvements, etc. but it would be speculative to assess these types of projects at this time. The river basin and tributaries of the Proposed Project Area are very complex hydrological systems with various jurisdictions and service providers other than TID and MID managing facilities and water rights. Thus, the Districts do not have full control over the conditions in the LTR. Therefore, based on the analyses in this document and through implementation of the new license articles, environmental measures, management plans, BLM 4(e) conditions on BLM lands, and proposed mitigation measures presented in this document, the Proposed Project would result in a **less than significant impact with mitigation incorporated** and is not expected to result in cumulatively considerable environmental effects.

Mitigation Measures: See *Section 3.7.2, Biological Resources, Section 3.10.2, Geology and Soils, and Section 3.21.2, Tribal Cultural Resources*.

Impact MFS-3: Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

The Districts' joint purposes of the Don Pedro Project and the La Grange Project are to continue to provide a source of hydroelectric power, provide flood control benefits, and serve as a water supply for both municipal and irrigation purposes for the Districts, as well as allow the Districts to generate electricity for the term of the licenses. The issuance of new licenses and acceptance of the Proposed Project would involve implementation of environmental measures, 4(e) conditions, and license conditions as well as routine maintenance and continued operation of the Proposed Project. The Proposed Project would also result in minor recreation improvements that would have a beneficial impact on people who use recreation facilities in the FERC Project Boundary. As described in the previous sections within this document, no activities associated with the Proposed Project would either directly or indirectly cause a substantial adverse impact on human beings. Therefore, the Proposed Project would have **no impact**, and no mitigation is required.

4.0 List of Preparers

Name	Title
Ariel Cohen	Environmental Planner
Danielle Risse	Senior Cultural Resources Specialist
Danielle Tannourji	Senior Biologist
Gaea Bailey	Regulatory Specialist
Hannah Sanders	Environmental Planner
Jeff Weaver	Senior Project Manager
Joe Bashore	Environmental Planner
Kamil Rochon	Cultural Resources Specialist
Keir Keightley	Senior GIS Analyst
Linda Fisher	Senior Environmental Project Manager
Matt Paquette	Senior Environmental Planner - Recreation
Max Savage	Environmental Planner
Peter Drobny	Assistant Project Manager – Fisheries
Stephen Zipper	Senior Project Manager – Fisheries
Terry Farmer	Senior Environmental Planner
Vicky Hsu	Senior Air Quality Specialist
Jim Lynch	Senior Advisor

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No references are included in this Chapter.

Chapter 2

No references are included in this Chapter.

Chapter 3

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3.24 Mandatory Findings of Significance

No references are included in this Section.

Appendix A. Biological Resources Information

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Tuolumne County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Fisher Pekania pennanti There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3651	Endangered
Gray Wolf Canis lupus There is **final** critical habitat for this species. https://ecos.fws.gov/ecp/species/4488	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Foothill Yellow-legged Frog Rana boylii — Endangered

There is **proposed** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/5133

Western Spadefoot Spea hammondii — Proposed Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5425

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Conservancy Fairy Shrimp Branchinecta conservatio — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/8246

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Chinese Camp Brodiaea Brodiaea pallida Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8290	Threatened
Hartweg's Golden Sunburst Pseudobahia bahiifolia Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1704	Endangered
Layne's Butterweed Senecio layneae Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4062	Threatened
Red Hills Vervain Verbena californica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7344	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Foothill Yellow-legged Frog Rana boylii https://ecos.fws.gov/ecp/species/5133#crithab	Proposed

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON

Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

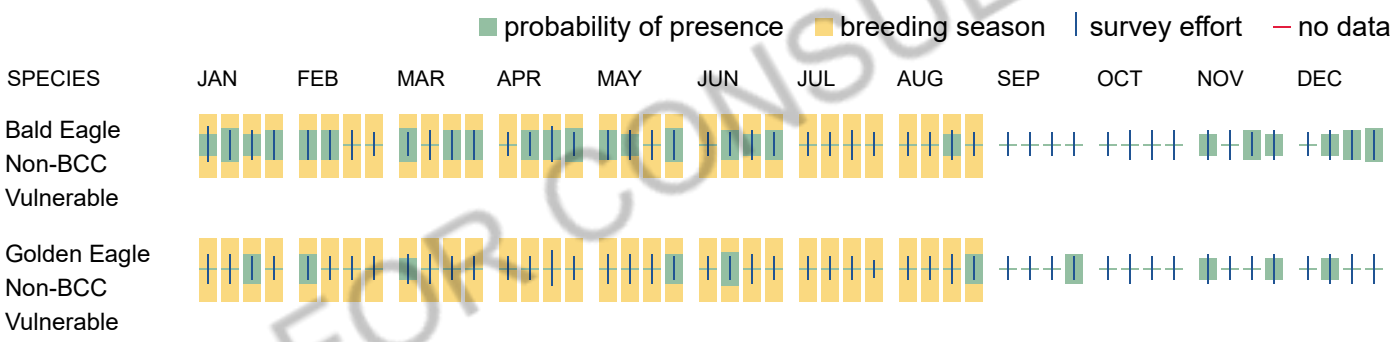
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests

might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow Passerculus sandwichensis beldingi This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black Swift Cypseloides niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black-chinned Sparrow Spizella atrogularis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447	Breeds Apr 15 to Jul 31
Bullock's Oriole Icterus bullockii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull Larus californicus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Cassin's Finch Haemorhous cassinii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Spinus lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Nuttall's Woodpecker Dryobates nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Santa Barbara Song Sparrow Melospiza melodia graminea This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Screech-owl Megascops kennicottii cardonensis This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jun 30
White-headed Woodpecker Dryobates albolarvatus gravirostris This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Aug 15
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

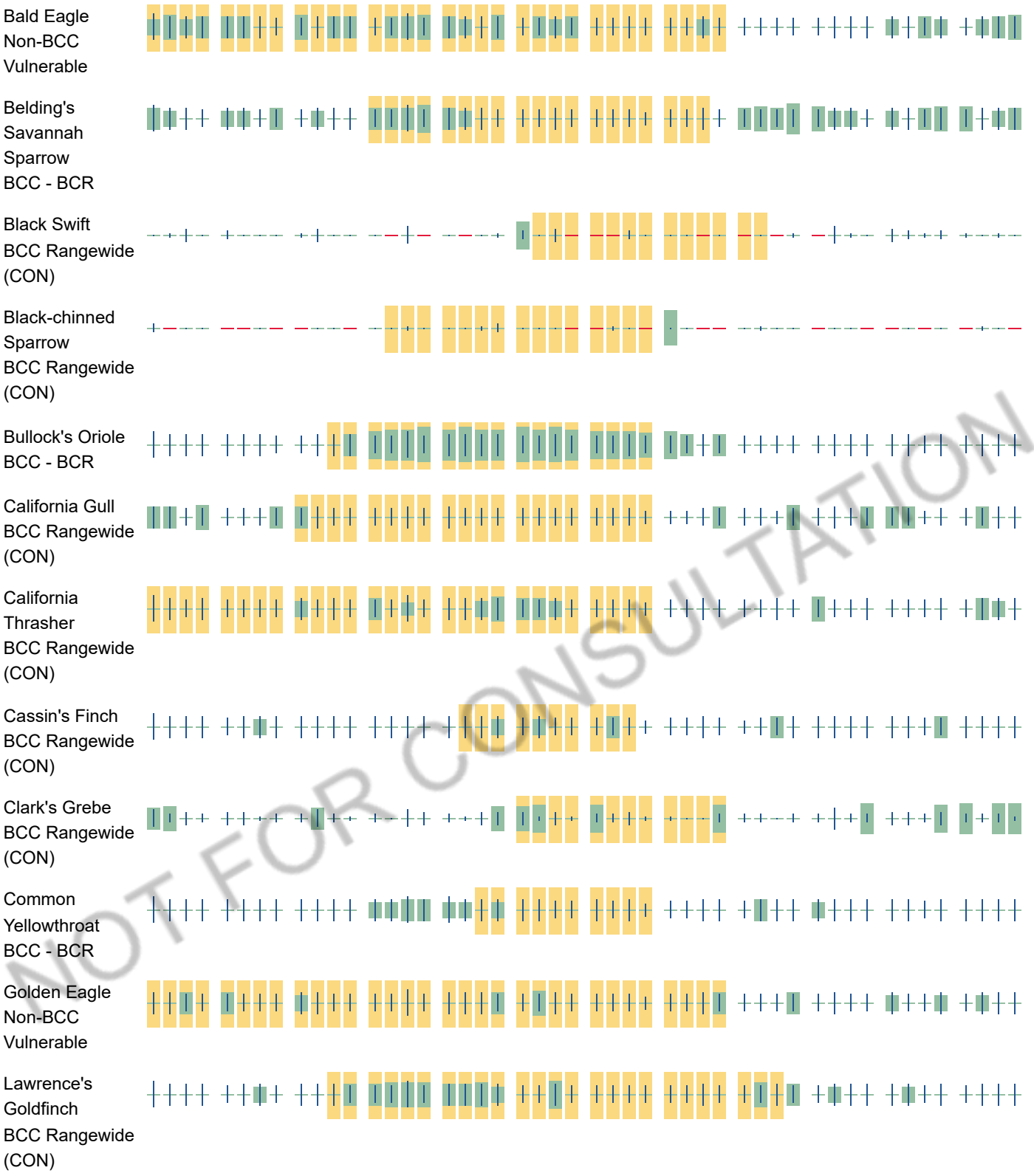
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

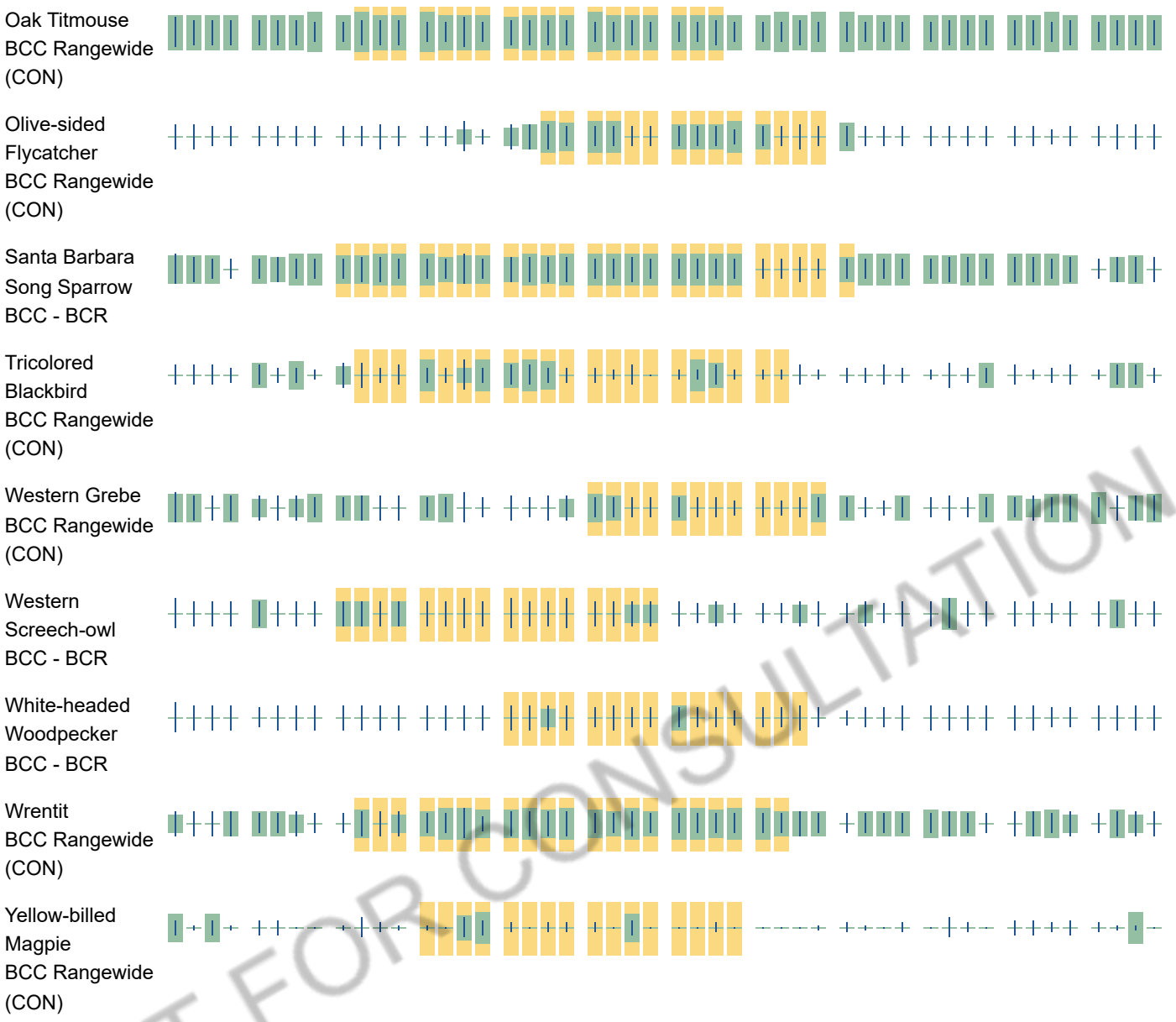
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

probability of presence breeding season survey effort no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC





Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the

levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in

activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Stanislaus and Tuolumne counties, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Fisher Pekania pennanti There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3651	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog Rana boylii There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5133	Endangered
Western Spadefoot Spea hammondii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Hartweg's Golden Sunburst Pseudobahia bahiifolia Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1704	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental

Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

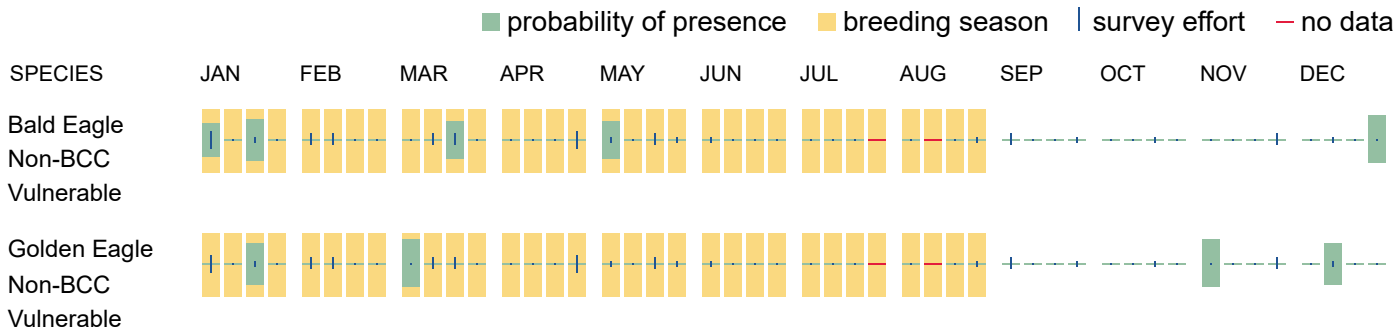
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow Passerculus sandwichensis beldingi This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole Icterus bullockii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25

California Gull Larus californicus — Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Spinus lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Nuttall's Woodpecker Dryobates nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Santa Barbara Song Sparrow Melospiza melodia graminea This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

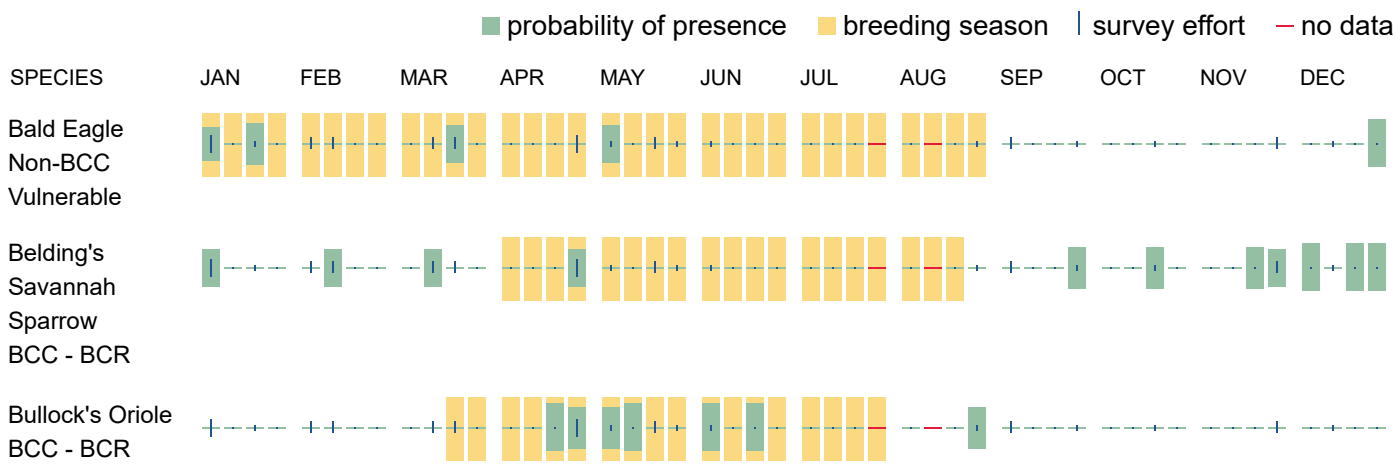
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

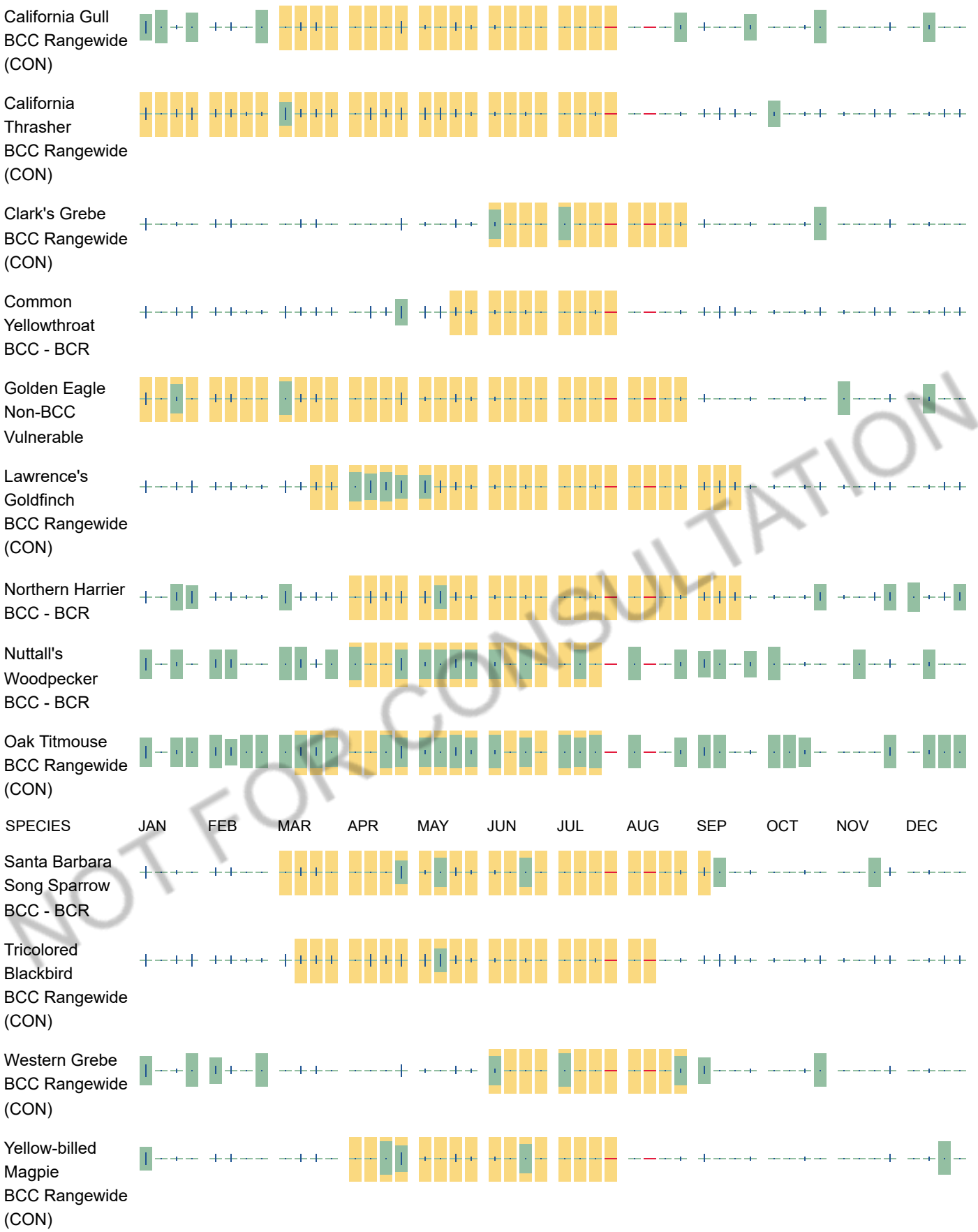
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce

potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND
- PEM1Ch

FRESHWATER FORESTED/SHRUB WETLAND
- PFOCh

LAKE
- L1UBHh

RIVERINE
- R3UBH
- R2UBHx
- R5UBFx
- R4SBA
- R5UBF

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Fisher Pekania pennanti There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3651	Endangered
Gray Wolf Canis lupus There is **final** critical habitat for this species. https://ecos.fws.gov/ecp/species/4488	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Spotted Owl Strix occidentalis occidentalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7266	Proposed Threatened

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

https://ecos.fws.gov/ecp/species/2076

Foothill Yellow-legged Frog Rana boylii — Endangered

There is **proposed** critical habitat for this species. Your location overlaps the critical habitat.

https://ecos.fws.gov/ecp/species/5133

Western Spadefoot Spea hammondii — Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/5425

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Conservancy Fairy Shrimp Branchinecta conservatio — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/8246

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2246

Flowering Plants

NAME — STATUS

Chinese Camp Brodiaea Brodiaea pallida — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8290

Colusa Grass Neostapfia colusana — Threatened
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/5690

Fleshy Owl's-clover Castilleja campestris ssp. succulenta — Threatened
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/8095

Greene's Tuctoria Tuctoria greenei — Endangered
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/1573

Hairy Orcutt Grass Orcuttia pilosa — Endangered
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/2262

Hartweg's Golden Sunburst Pseudobahia bahiifolia — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1704

Hoover's Spurge Chamaesyce hooveri — Threatened
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/3019

Layne's Butterweed Senecio layneae — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4062

Red Hills Vervain Verbena californica — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7344

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
California Tiger Salamander Ambystoma californiense https://ecos.fws.gov/ecp/species/2076#crithab	Final
Colusa Grass Neostapfia colusana https://ecos.fws.gov/ecp/species/5690#crithab	Final

Fleshy Owl's-clover Castilleja campestris ssp. succulenta https://ecos.fws.gov/ecp/species/8095#crithab	Final
Foothill Yellow-legged Frog Rana boylii https://ecos.fws.gov/ecp/species/5133#crithab	Proposed
Greene's Tuctoria Tuctoria greenei https://ecos.fws.gov/ecp/species/1573#crithab	Final
Hairy Orcutt Grass Orcuttia pilosa https://ecos.fws.gov/ecp/species/2262#crithab	Final
Hoover's Spurge Chamaesyce hooveri https://ecos.fws.gov/ecp/species/3019#crithab	Final
Vernal Pool Fairy Shrimp Branchinecta lynchi https://ecos.fws.gov/ecp/species/498#crithab	Final

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald and Golden Eagle information is not available at this time

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (FWS). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The FWS interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Migratory bird information is not available at this time

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Query Criteria: Quad IS (Chinese Camp (3712074) OR La Grange (3712064) OR Moccasin (3712073) OR Penon Blanco Peak (3712063) OR Sonora (3712084) OR Standard (3712083) OR New Melones Dam (3712085) OR Keystone (3712075) OR Cooperstown (3712065))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Actinemys marmorata northwestern pond turtle	G2 SNR	Proposed Threatened None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	600 1,250	1160 S:4	1	0	1	0	0	2	4	0	4	0	0
Agelaius tricolor tricolored blackbird	G1G2 S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered USFWS_BCC-Birds of Conservation Concern	120 1,252	960 S:8	1	0	0	0	2	5	5	3	6	2	0
Agrostis hendersonii Henderson's bent grass	G2Q S2	None None	Rare Plant Rank - 3.2	950 950	26 S:1	0	0	0	0	0	1	1	0	1	0	0
Allium jepsonii Jepson's onion	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz USFS_S-Sensitive	1,800 1,800	25 S:1	0	0	1	0	0	0	1	0	1	0	0
Allium tuolumnense Rawhide Hill onion	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	840 1,650	25 S:24	3	7	1	0	0	13	17	7	24	0	0
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	G2G3T3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	0 1,004	1329 S:8	0	1	0	0	0	7	7	1	8	0	0
Anodonta californiensis California floater	G3 S2?	None None	USFS_S-Sensitive	505 505	6 S:1	0	0	0	0	0	1	1	0	1	0	0
Antrozous pallidus pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	500 1,350	425 S:6	1	1	0	0	0	4	6	0	6	0	0
Arctostaphylos nissenana Nissenan manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	2,100 2,100	13 S:1	0	1	0	0	0	0	0	1	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Athene cunicularia burrowing owl	G4 S2	None Candidate Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	1,700 1,700	2133 S:1	0	0	0	1	0	0	0	1	1	0	0
Balsamorhiza macrolepis big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive		51 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus crotchii Crotch's bumble bee	G2 S2	None Candidate Endangered	IUCN_EN-Endangered	169 2,605	640 S:6	1	3	0	0	0	2	1	5	6	0	0
Bombus morrisoni Morrison bumble bee	G3 S1S2	None None	IUCN_VU-Vulnerable	200 200	86 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus pensylvanicus American bumble bee	G3G4 S2	None None	IUCN_VU-Vulnerable	225 350	810 S:2	0	0	0	0	0	2	2	0	2	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	251 1,425	804 S:3	0	1	0	0	0	2	2	1	3	0	0
Brodiaea pallida Chinese Camp brodiaea	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 IUCN_EN-Endangered	550 1,260	5 S:2	1	1	0	0	0	0	0	2	2	0	0
Buteo swainsoni Swainson's hawk	G5 S4	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	200 200	2585 S:1	0	0	0	0	0	1	1	0	1	0	0
Calycadenia hooveri Hoover's calycadenia	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	260 400	37 S:9	2	1	0	0	0	6	6	3	9	0	0
Calycadenia spicata spicate calycadenia	G3? S3	None None	Rare Plant Rank - 1B.3	235 990	41 S:5	0	0	0	0	0	5	5	0	5	0	0
Camissonia lacustris grassland suncup	G2 S2	None None	Rare Plant Rank - 1B.2	2,400 2,400	14 S:1	0	0	0	0	0	1	1	0	1	0	0
Castilleja campestris var. succulenta succulent owl's-clover	G4?T2T3 S2S3	Threatened Endangered	Rare Plant Rank - 1B.2	235 300	99 S:5	0	0	0	0	0	5	5	0	5	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Chlorogalum grandiflorum Red Hills soaproot	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	870 1,800	137 S:23	2	4	0	0	0	17	20	3	23	0	0
Clarkia biloba ssp. australis Mariposa clarkia	G4G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	850 1,240	119 S:18	2	1	0	0	0	15	0	18	18	0	0
Clarkia rostrata beaked clarkia	G2G3 S2S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	200 1,000	74 S:14	0	1	2	0	0	11	8	6	14	0	0
Corynorhinus townsendii Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	350 1,680	635 S:5	0	0	1	0	0	4	4	1	5	0	0
Cryptantha hooveri Hoover's cryptantha	GH SH	None None	Rare Plant Rank - 1A	250 250	4 S:1	0	0	0	0	1	0	1	0	0	1	0
Cryptantha mariposae Mariposa cryptantha	G2G3 S2S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	300 1,275	9 S:4	0	0	0	0	0	4	4	0	4	0	0
Cryptantha spithamaea Red Hills cryptantha	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	900 1,550	6 S:4	0	0	0	0	0	4	4	0	4	0	0
Desmocerus californicus dimorphus valley elderberry longhorn beetle	G3T3 S3	Threatened None		1,250 2,850	271 S:4	0	2	2	0	0	0	2	2	4	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Diplacus pulchellus yellow-lip pansy monkeyflower	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	2,200 3,000	78 S:2	0	0	0	0	0	2	2	0	2	0	0
Dipodomys heermanni dixoni Merced kangaroo rat	G4T2 S2	None None		350 600	21 S:2	0	1	0	0	0	1	1	1	2	0	0
Downingia pusilla dwarf downingia	GU S2	None None	Rare Plant Rank - 2B.2	230 406	132 S:14	2	0	0	0	0	12	11	3	14	0	0
Eremophila alpestris actia California horned lark	G5T4Q S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	239 239	94 S:1	0	0	0	0	0	1	1	0	1	0	0
Erethizon dorsatum North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	1,223 1,423	523 S:2	0	0	0	0	0	2	0	2	2	0	0
Eryngium pinnatisectum Tuolumne button-celery	G2 S2	None None	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz	1,200 3,000	30 S:9	0	0	0	0	0	9	9	0	9	0	0
Eryngium spinosepalum spiny-sepaled button-celery	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	500 900	108 S:2	0	0	1	0	0	1	2	0	2	0	0
Erythranthe marmorata Stanislaus monkeyflower	G2? S2?	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	1,000 1,050	10 S:2	0	0	0	0	0	2	2	0	2	0	0
Erythronium tuolumnense Tuolumne fawn lily	G2G3 S2S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive		35 S:1	0	0	0	0	0	1	1	0	1	0	0
Euderma maculatum spotted bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,700 2,700	68 S:1	0	0	0	0	0	1	1	0	1	0	0
Eumops perotis californicus western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern	450 1,500	296 S:10	0	1	0	0	0	9	10	0	10	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Euphorbia hooveri Hoover's spurge	G1 S1	Threatened None	Rare Plant Rank - 1B.2	250 250	29 S:1	0	1	0	0	0	0	1	0	1	0	0
Falco mexicanus prairie falcon	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	1,650 1,650	451 S:1	0	0	0	0	0	1	1	0	1	0	0
Fritillaria agrestis stinkbells	G3 S3	None None	Rare Plant Rank - 4.2	940 1,300	32 S:3	0	0	1	0	0	2	3	0	3	0	0
Githopsis tenella delicate bluecup	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	1,500 1,500	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive	250 860	334 S:4	3	0	1	0	0	0	2	2	4	0	0
Hesperoleucus symmetricus serpentinus Red Hills roach	GNRT1 S1	None None	AFS_VU-Vulnerable BLM_S-Sensitive CDFW_SSC-Species of Special Concern	800 1,300	8 S:8	1	1	3	1	0	2	8	0	8	0	0
Hesperoleucus symmetricus symmetricus central California roach	GNRT3 S3	None None	CDFW_SSC-Species of Special Concern	900 2,750	8 S:7	0	3	2	1	0	1	7	0	7	0	0
Lagophylla dichotoma forked hare-leaf	G2 S2	None None	Rare Plant Rank - 1B.1		7 S:2	0	0	0	0	0	2	2	0	2	0	0
Lasiurus cinereus hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern	850 850	238 S:3	0	0	0	0	0	3	3	0	3	0	0
Lasiurus frantzii western red bat	G4 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	850 850	128 S:1	0	0	0	0	0	1	1	0	1	0	0
Lomatium congdonii Congdon's lomatium	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	1,100 1,600	20 S:17	0	3	2	0	0	12	13	4	17	0	0

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lupinus spectabilis shaggyhair lupine	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	1,000 1,800	24 S:5	0	2	0	0	1	2	5	0	4	1	0
Monadenia circumcarinata keeled sideband	G3 S3	None None	BLM_S-Sensitive IUCN_VU-Vulnerable	1,750 1,750	6 S:2	0	0	0	0	0	2	1	1	2	0	0
Monadenia mormonum hirsuta hirsute Sierra sideband	G2T1 S1	None None	BLM_S-Sensitive IUCN_DD-Data Deficient	1,300 1,850	4 S:3	0	1	0	0	0	2	3	0	3	0	0
Monadenia tuolumneana Tuolumne sideband	G1 S1	None None	BLM_S-Sensitive	2,300 2,300	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Monardella leucocephala Merced monardella	GX SX	None None	Rare Plant Rank - 1A	180 200	3 S:2	0	0	0	0	2	0	2	0	0	0	2
Monardella venosa veiny monardella	G1 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	860 860	4 S:1	1	0	0	0	0	0	1	0	1	0	0
Mylopharodon conocephalus hardhead	G3 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	70 70	33 S:1	0	0	0	0	0	1	0	1	1	0	0
Myotis volans long-legged myotis	G4G5 S3	None None	IUCN_LC-Least Concern		117 S:1	0	0	0	0	0	1	1	0	1	0	0
Myotis yumanensis Yuma myotis	G5 S4	None None	BLM_S-Sensitive IUCN_LC-Least Concern	850 850	265 S:2	0	0	0	0	0	2	2	0	2	0	0
Navarretia paradoxiclara Patterson's navarretia	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	1,025 1,250	11 S:4	0	0	0	0	0	4	1	3	4	0	0
Neostapfia colusana Colusa grass	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	230 280	66 S:9	1	0	3	1	4	0	5	4	5	2	2

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	G5T2Q S2	Threatened None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern		31 S:1	0	0	0	0	0	1	0	1	1	0	0
Orcuttia pilosa hairy Orcutt grass	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	250 250	35 S:1	0	0	0	0	1	0	1	0	0	0	1
Packera layneae Layne's ragwort	G2 S2	Threatened Rare	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	815 1,650	48 S:7	0	4	0	0	0	3	7	0	7	0	0
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	1,100 1,100	504 S:1	0	0	0	0	0	1	1	0	1	0	0
Phrynosoma blainvillii coast horned lizard	G4 S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	1,320 1,320	841 S:1	0	1	0	0	0	0	1	0	1	0	0
Pseudobahia bahiifolia Hartweg's golden sunburst	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	240 320	27 S:8	2	5	0	0	1	0	4	4	7	1	0
Rana boylii pop. 5 foothill yellow-legged frog - south Sierra DPS	G3T2 S2	Endangered Endangered	BLM_S-Sensitive USFS_S-Sensitive	700 2,654	274 S:12	0	2	2	0	4	4	7	5	8	0	4
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	1,500 1,500	1796 S:1	0	0	0	0	1	0	1	0	0	1	0
Senecio clevelandii var. heterophyllus Red Hills ragwort	G4?T2Q S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	850 1,300	12 S:12	4	6	0	0	0	2	6	6	12	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Spea hammondii western spadefoot	G2G3 S3S4	Proposed Threatened None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	230 375	1445 S:6	0	1	0	0	0	5	6	0	6	0	0
Stygobromus gradyi Grady's Cave amphipod	G1 S1	None None	IUCN_VU-Vulnerable	1,350 1,350	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Stygobromus harai Hara's Cave amphipod	G1 S1	None None	IUCN_VU-Vulnerable	2,350 2,350	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	400 400	648 S:1	0	0	0	0	0	1	1	0	1	0	0
Tuctoria greenei Greene's tuctoria	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1	240 240	50 S:1	0	0	0	0	1	0	1	0	0	1	0
Verbena californica Red Hills vervain	G2 S2	Threatened Threatened	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	850 1,200	12 S:12	2	3	3	0	0	4	5	7	12	0	0
Vireo bellii pusillus least Bell's vireo	G5T2 S3	Endangered Endangered		180 840	505 S:2	0	0	0	0	2	0	2	0	0	1	1
Vulpes macrotis mutica San Joaquin kit fox	G4T2 S3	Endangered Threatened		300 300	1020 S:1	0	0	0	0	0	1	1	0	1	0	0

CNPS Rare Plant Inventory

California Native Plant Society

Search Results

49 matches found. Click on scientific name for details

Search Criteria: , 9-Quad include [**3712084:3712083:3712073:3712074:3712085:3712065:3712075:3712064:3712063**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Agrostis hendersonii	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	None	None	G2Q	S2	3.2		1974-01-01	 ©2005 Steve Matson
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2019 Steven Perry

Allium sanbornii var. *congdonii*	Congdon's onion	Alliaceae	perennial bulbiferous herb	Apr-Jul	None	None	G3T3	S3	4.3	Yes	1994-01-01	 © 2008 Steven Perry
Allium tuolumnense	Rawhide Hill onion	Alliaceae	perennial bulbiferous herb	Mar-May	None	None	G2	S2	1B.2	Yes	1980-01-01	 © 2010 Steven Perry
Arctostaphylos nissenana	Nissenan manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	None	None	G1	S1	1B.2	Yes	1974-01-01	 David Graber
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	 ©1998 Dean Wm. Taylor
Brodiaea pallida	Chinese Camp brodiaea	Themidaceae	perennial bulbiferous herb	May-Jun	FT	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2014 Robert E. Preston, Ph.D.

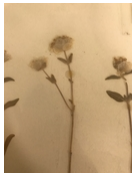
Calycadenia hooveri	Hoover's calycadenia	Asteraceae	annual herb	Jul-Sep	None	None	G2	S2	1B.3	Yes	1980-01-01	No Photo Available
Calycadenia spicata	spicate calycadenia	Asteraceae	annual herb	May-Sep	None	None	G3?	S3	1B.3		2023-04-05	 © 2023 Christopher Bronny
Camissonia lacustris	grassland suncup	Onagraceae	annual herb	Mar-Jun	None	None	G2	S2	1B.2		2022-09-19	 © 2021 Ryan O'Dell
Castilleja campestris var. *succulenta*	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	FT	CE	G4? T2T3	S2S3	1B.2	Yes	1984-01-01	No Photo Available
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	(Apr)May-Jul	None	None	G4	S4	4.3	Yes	1980-01-01	No Photo Available
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G3	S3	1B.2	Yes	1974-01-01	 © 2004 George W. Hartwell

Clarkia biloba ssp. *australis*	Mariposa clarkia	Onagraceae	annual herb	Apr-Jul	None	None	G4G5T3	S3	1B.2	Yes	1980-01-01	No Photo Available
Clarkia rostrata	beaked clarkia	Onagraceae	annual herb	Apr-May	None	None	G2G3	S2S3	1B.3	Yes	1974-01-01	No Photo Available
Cryptantha hooveri	Hoover's cryptantha	Boraginaceae	annual herb	Apr-May	None	None	GH	SH	1A	Yes	1974-01-01	No Photo Available
Cryptantha mariposae	Mariposa cryptantha	Boraginaceae	annual herb	Apr-Jun	None	None	G2G3	S2S3	1B.3	Yes	1974-01-01	No Photo Available
Cryptantha spithamaea	Red Hills cryptantha	Boraginaceae	annual herb	Apr-May	None	None	G2	S2	1B.3		2014-12-18	No Photo Available
Delphinium hansenii ssp. *ewanianum*	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	Yes	1994-01-01	No Photo Available
Diplacus pulchellus	yellow-lip pansy monkeyflower	Phrymaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2018 Sierra Pacific Industries

Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	 © 2013 Aaron Arthur
Eriogonum tripodum	tripod buckwheat	Polygonaceae	perennial deciduous shrub	May-Jul	None	None	G4	S4	4.2	Yes	1974-01-01	 ©2008 Steven Perry
Eriophyllum confertiflorum var. *tanacetiflorum*	tansy-flowered woolly sunflower	Asteraceae	perennial shrub	May-Jul	None	None	G5T2?Q	S2?	4.3	Yes	2001-01-01	No Photo Available
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual/perennial herb	May-Aug	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2007 Robert E. Preston, Ph.D.
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1980-01-01	No Photo Available

Erythranthe grayi	Gray's monkeyflower	Phrymaceae	annual herb	May-Jul	None	None	G2G3Q	S2S3	4.3	Yes	1974-01-01	No Photo Available
Erythranthe marmorata	Stanislaus monkeyflower	Phrymaceae	annual herb	Mar-May	None	None	G2?	S2?	1B.1	Yes	1974-01-01	No Photo Available
Erythronium tuolumnense	Tuolumne fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G2G3	S2S3	1B.2	Yes	1974-01-01	No Photo Available
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	(May-Jun)Jul-Sep(Oct)	FT	None	G1	S1	1B.2	Yes	1974-01-01	 © 2020 Neal Kramer
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01	 © 2016 Aaron Schusteff
Githopsis pulchella ssp. *serpentinicola*	serpentine bluecup	Campanulaceae	annual herb	May-Jun	None	None	G4T3	S3	4.3	Yes	2001-01-01	 © 2019 Barry Breckling

Githopsis tenella	delicate bluecup	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.3	Yes	2001-01-01	No Photo Available
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2017 John Doyen
Jepsonia heterandra	foothill jepsonia	Saxifragaceae	perennial herb	Aug-Dec	None	None	G3	S3	4.3	Yes	1994-01-01	 © 2014 Belinda Lo
Lagophylla dichotoma	forked hare-leaf	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.1	Yes	2012-03-13	 © 2010 Chris Winchell
Lomatium congdonii	Congdon's lomatium	Apiaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available

Lupinus spectabilis	shaggyhair lupine	Fabaceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Monardella leucocephala	Merced monardella	Lamiaceae	annual herb	May-Aug	None	None	GX	SX	1A	Yes	1974-01-01	 © 2020 Hannah Kang
Monardella venosa	veiny monardella	Lamiaceae	annual herb	May-Jul	None	None	G1	S1	1B.1	Yes	1984-01-01	 © 2007 George W. Hartwell
Navarretia paradoxiclara	Patterson's navarretia	Polemoniaceae	annual herb	May-Jun(Jul)	None	None	G2	S2	1B.3	Yes	2016-04-27	No Photo Available
Neostapfia colusana	Colusa grass	Poaceae	annual herb	May-Aug	FT	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	FE	CE	G1	S1	1B.1	Yes	1980-01-01	 © 2003 George W. Hartwell

Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	Yes	1974-01-01	 Steve Tyron
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	None	None	G3	S3	4.2	Yes	1984-01-01	No Photo Available
Pseudobahia bahiifolia	Hartweg's golden sunburst	Asteraceae	annual herb	Mar-Apr	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Senecio clevelandii var. *heterophyllus*	Red Hills ragwort	Asteraceae	perennial herb	May-Jul	None	None	G4?T2Q	S2	1B.2	Yes	1994-01-01	No Photo Available
Trichostema rubisepalum	Hernandez bluecurls	Lamiaceae	annual herb	Jun-Aug	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	G1	S1	1B.1	Yes	1974-01-01	 ©2008 F. Gauna
Verbena californica	Red Hills vervain	Verbenaceae	perennial herb	May-Sep	FT	CT	G2	S2	1B.1	Yes	1984-01-01	No Photo Available

Showing 1 to 49 of 49 entries

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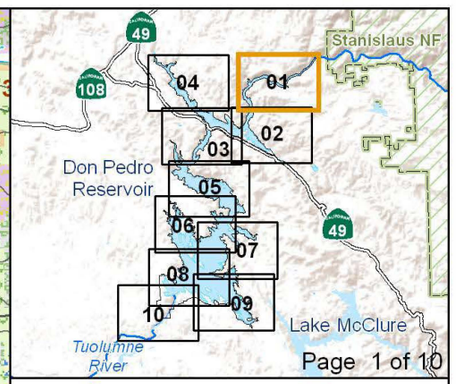


33 34 35 36

1750 1500 2000 2250

Richards Ranch

Blanket Creek

Rough and Ready Creek

Kress Ranch

T1N, R15E
T1S, R15E

T1N, R16E
T1S, R16E

Turnback Creek

Tuolumne River

Don Pedro
Reservoir

Tuolumne River-Arm

1 2 3 4 5 6 7 8 9 10 11 12

1000 1250 1500 1750 2000 2250 2500

Wards Ferry Rd

Deer Creek

Ponderosa Way

55 River Miles to Confluence with San Joaquin River

FERC Project Boundary (No. 2299)

Vegetation Type

- Agriculture (General)
- Barren
- Chamise
- Lower Montane Mixed Chaparral
- Annual Grasses and Forbs
- Riparian Mixed Hardwood
- Interior Mixed Hardwood
- Gray Pine
- Ponderosa Pine
- Canyon Live Oak
- Blue Oak
- Interior Live Oak

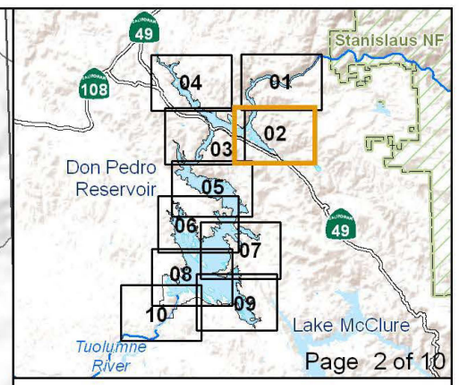
Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

Map information was compiled from the best available sources.
No Warranty is made for its accuracy or completeness.
Data Sources: Vegetation - Calveg (USFS, Region 5);
Roads, Streams - ESRI 9.3 Data; Ownership,
PLSS - CA BLM; FERC Boundary, Recreation, Facilities: MID/TID.
Data is CA SPCS, zone III, ft. Contour interval is 50 ft (NAVD 88).



Tuolumne River Arm

Moccasin Arm

Don Pedro Reservoir

Moccasin Point Recreation Area

Moccasin Reservoir

Moccasin Creek PH (CCSF)

Moccasin

Priest

Lake McClure

Tuolumne River

Deer Creek

Wa Hine Dr

Jacksonville Rd

Grizzly Cir

Cocoran Gray Rd

River Rd

Moccasin Creed D Rd

Moccasin Switchback Rd

Old Priest Grade

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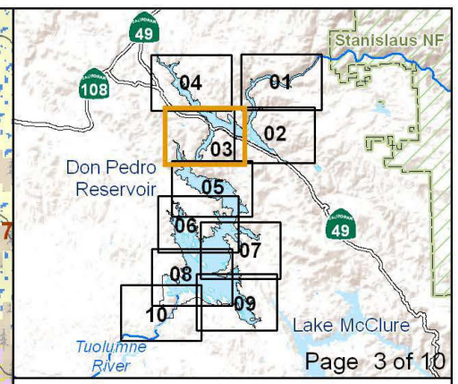

Woods Creek Arm

Don Pedro Reservoir

Kaiaka Creek

Jacksonville Rd

Wa Hine Dr

Hungry Hill

Poor Man's Gulch

Sixbit Gulch

Railroad Canyon

T1S R14E
T1S R15E

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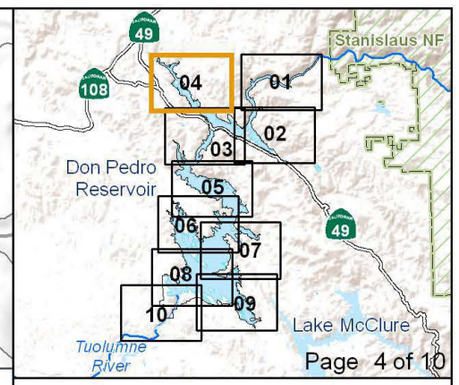

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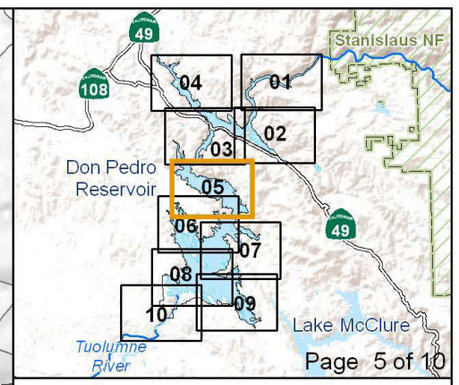

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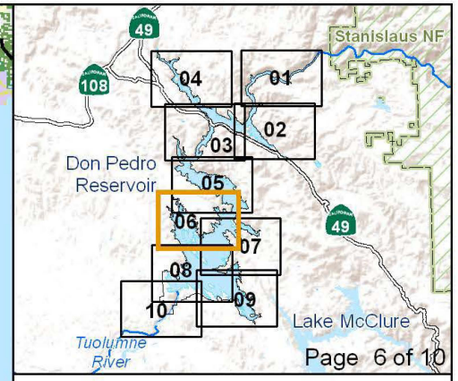

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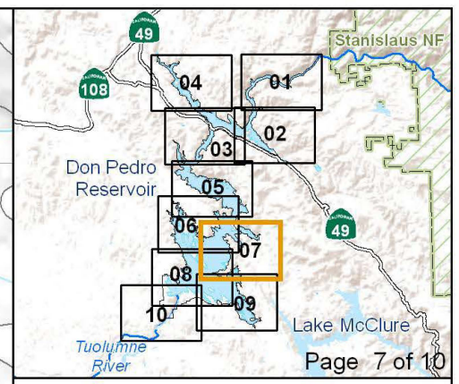

Don Pedro Reservoir

Middle Bay

Big Oak Island

Hatch Creek Arm

Hatch Creek

First Creek

Willow Creek

Piney Creek

Marshes Flat Rd

Arboleda Dr

Don Pedro Rd

Lozano St

Cadena Way

Enramada Dr

Lagunitas Dr

Blanchard Rd

Granite Springs Rd

Chicharra Way

T2S, R15E / T2S, R14E

13 19 20 21 24 25 28 29 30 31 32 33 36

60 61 58 59

1000 1250 1500

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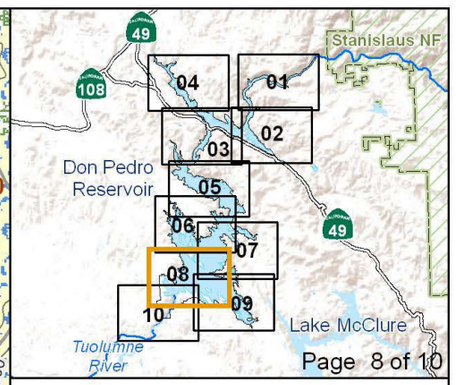

Middle Bay
North Bay
Mine Island
Eagle Island (historical)
Big Oak Island
Don Pedro Rd
Don Pedro Camp (historical)
Buzzard Point
Old Don Pedro Dam
Big Island (historical)
D o n P e d r o R e s e r v o i r
T2S, R14E
T3S, R14E
T2S, R15E
T3S, R15E
West Bay
South Bay
Laughlin Island
Blue Oaks Recreation Area
Don Pedro Dam
Bonds Flat Rd
Riley Ridge
Don Pedro Recreation Agency Headquarters
Don Pedro Powerhouse
Fleming Meadows Recreation Area
Big Creek
La Grange Impoundment
Blank Peak
Penole Peak
1000
750
500
59

55 River Miles to Confluence with San Joaquin River

FERC Project Boundary (No. 2299)

Vegetation Type

- Agriculture (General)
- Barren
- Chamise
- Lower Montane Mixed Chaparral
- Annual Grasses and Forbs
- Riparian Mixed Hardwood
- Interior Mixed Hardwood
- Gray Pine
- Ponderosa Pine
- Canyon Live Oak
- Blue Oak
- Interior Live Oak

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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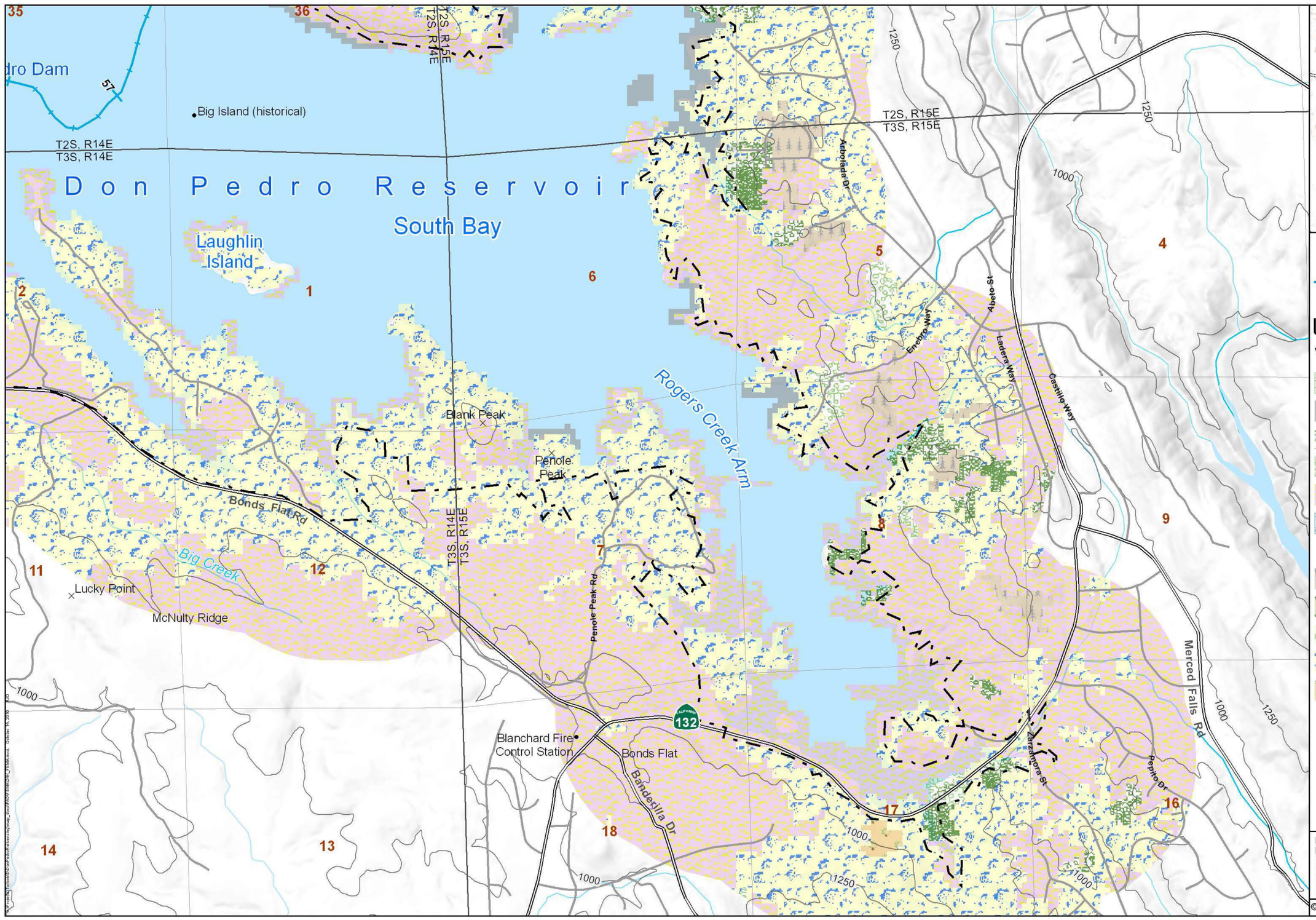
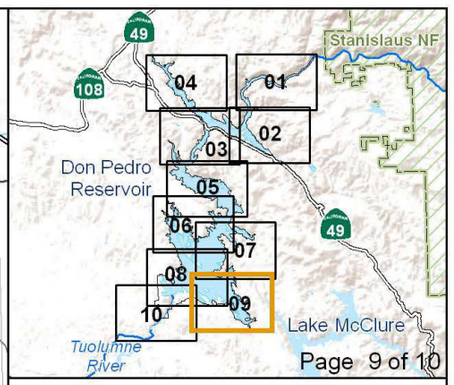
No Warranty is made for its accuracy or completeness.
Data Sources: Vegetation - Calveg (USFS, Region 5);
Roads, Streams - ESRI 9.3 Data; Ownership,
PLSS - CA BLM; FERC Boundary, Recreation, Facilities: MID/TID.
Data is CA SPCS, zone III, ft. Contour interval is 50 ft (NAVD 88).





55 River Miles to Confluence with San Joaquin River

FERC Project Boundary (No. 2299)

Vegetation Type

- Agriculture (General)
- Barren
- Chamise
- Lower Montane Mixed Chaparral
- Annual Grasses and Forbs
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- Gray Pine
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- Canyon Live Oak
- Blue Oak
- Interior Live Oak

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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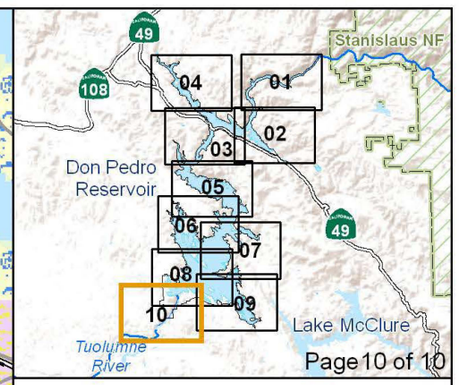

West Bay

Don Pedro Reservoir

Blue Oaks Recreation Area

Don Pedro Dam

Fleming Meadows Recreation Area

Bonds Flat Rd

Don Pedro Recreation Agency Headquarters

Don Pedro Powerhouse

Riley Ridge

Big Creek

Lugo

59

Cooperstown Rd

Lucky Point

McNulty Spring

Ben Brow Hill

La Grange Impoundment

La Grange Dam

La Grange PH

Tuolumne River

132

1 2 3 4 5 6 7 8 9 10 11 14 15 16 17 18

50 51 52 53 54

250 500 750 1000

55 River Miles to Confluence with San Joaquin River

FERC Project Boundary (No. 2299)

Vegetation Type

- Agriculture (General)
- Barren
- Chamise
- Lower Montane Mixed Chaparral
- Annual Grasses and Forbs
- Riparian Mixed Hardwood
- Interior Mixed Hardwood
- Gray Pine
- Ponderosa Pine
- Canyon Live Oak
- Blue Oak
- Interior Live Oak

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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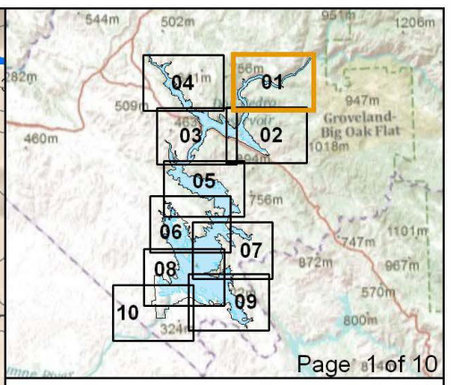

Powerhouse

Dam

Transmission Line

FERC Project Boundary (No. 2299)

Recreation Site

National Wetland Inventory

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

Land Ownership

Bureau of Land Management

State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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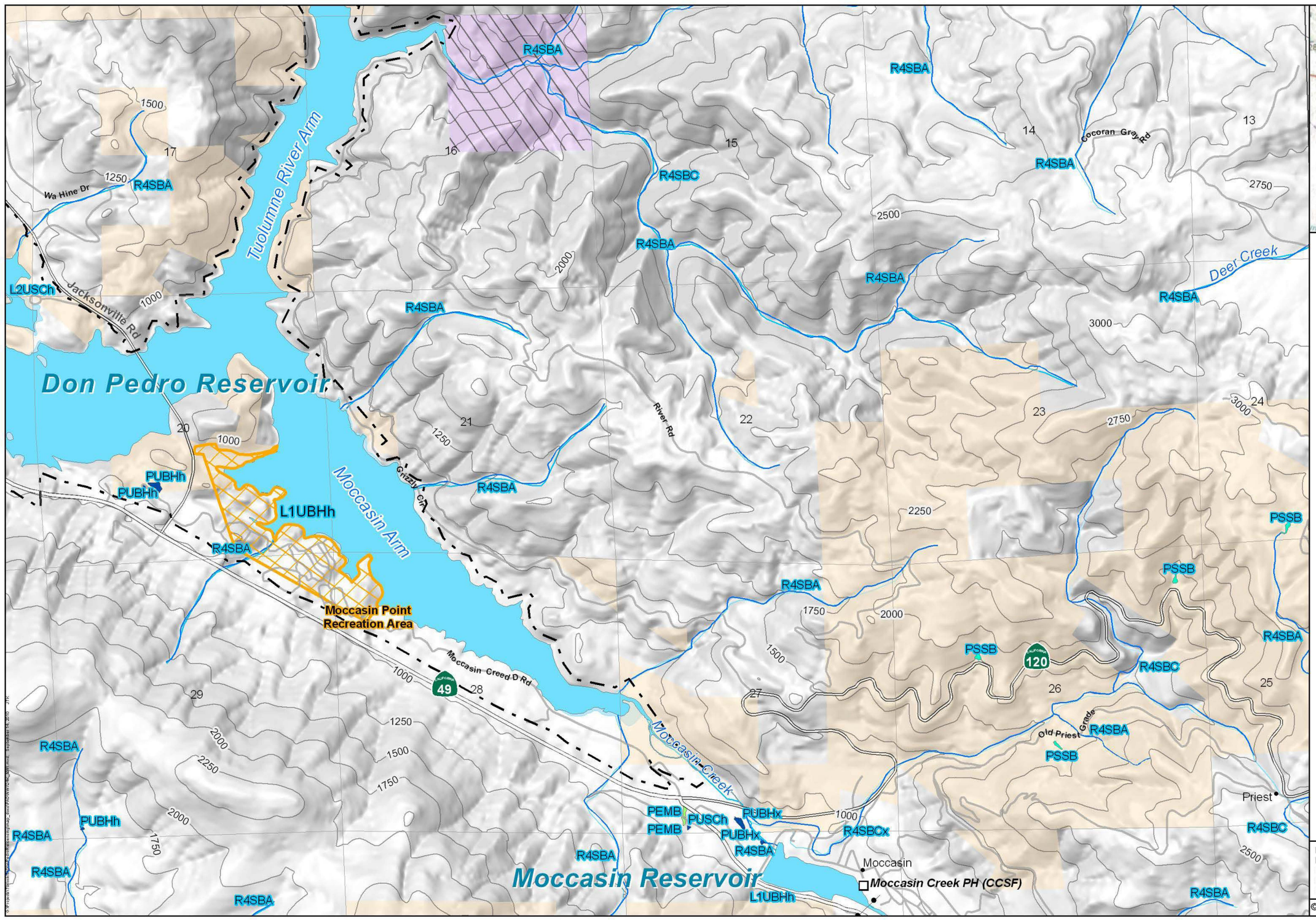

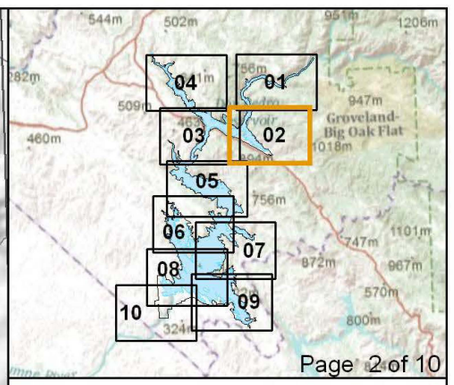

- Powerhouse
- Dam
- Transmission Line
- FERC Project Boundary (No. 2299)
- Recreation Site

National Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Land Ownership

- Bureau of Land Management
- State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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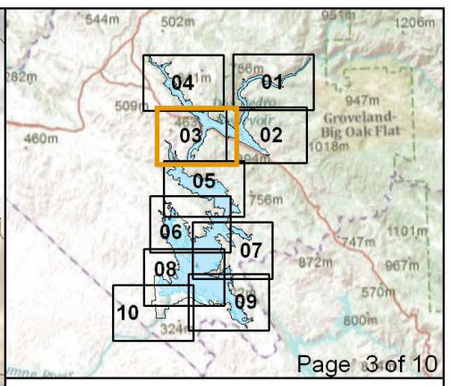

Powerhouse

Dam

Transmission Line

FERC Project Boundary (No. 2299)

Recreation Site

National Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Land Ownership

- Bureau of Land Management
- State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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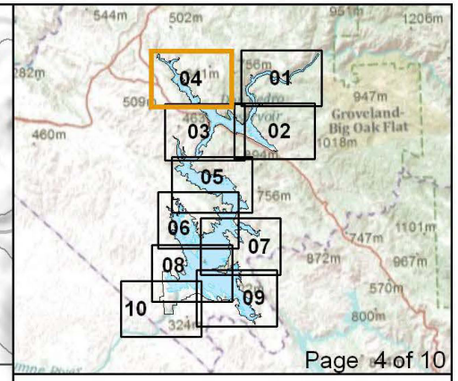

Powerhouse
Dam
Transmission Line
FERC Project Boundary (No. 2299)
Recreation Site

National Wetland Inventory

Freshwater Emergent Wetland
Freshwater Forested/ Shrub Wetland
Freshwater Pond
Lake
Other
Riverine

Land Ownership

Bureau of Land Management
State of California

Project Facility Label
Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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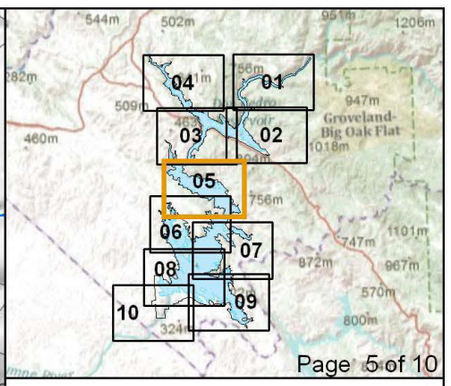

- Powerhouse
- Dam
- Transmission Line
- FERC Project Boundary (No. 2299)
- Recreation Site

National Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Land Ownership

- Bureau of Land Management
- State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

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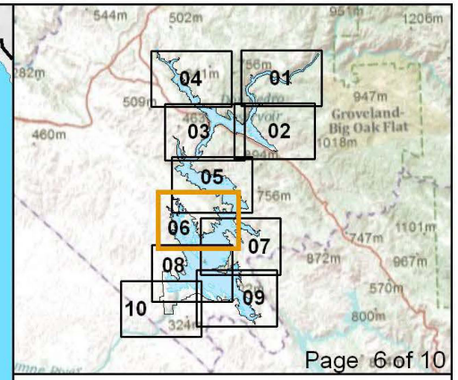

Powerhouse
Dam
Transmission Line
FERC Project Boundary (No. 2299)
Recreation Site

National Wetland Inventory

Freshwater Emergent Wetland
Freshwater Forested/ Shrub Wetland
Freshwater Pond
Lake
Other
Riverine

Land Ownership

Bureau of Land Management
State of California

Project Facility Label
Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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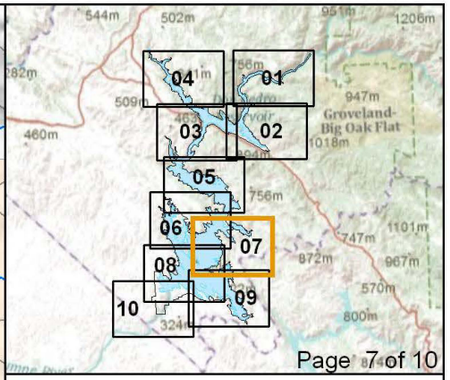

Powerhouse

Dam

Transmission Line

FERC Project Boundary (No. 2299)

Recreation Site

National Wetland Inventory

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

Land Ownership

Bureau of Land Management

State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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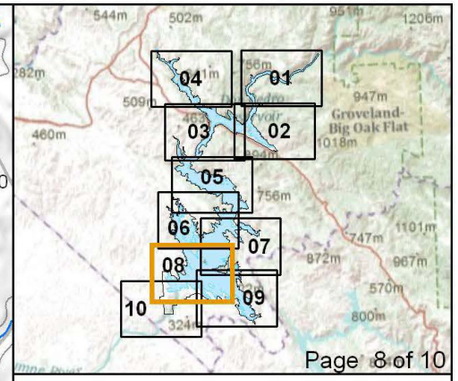

Powerhouse

Dam

Transmission Line

FERC Project Boundary (No. 2299)

Recreation Site

National Wetland Inventory

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

Land Ownership

Bureau of Land Management

State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

N

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Middle Bay

North Bay

Mine Island

Eagle Island (historical)

Big Oak Island

Don Pedro Reservoir

West Bay

South Bay

Laughlin Island

Blue Oaks Recreation Area

Fleming Meadows Recreation Area

Don Pedro Dam

Old Don Pedro Dam

Don Pedro Powerhouse

Don Pedro Camp (historical)

Buzzard Point

Big Island (historical)

Riley Ridge

Big Creek

Bonds Flat Rd

Don Pedro Rd

Blank Peak

Penole Peak

T2S, R14E

T3S, R14E

T2S, R15E

T3S, R15E

PEMCh PEMFh PUBHh PSSAh PEMB PUSCh PUBFh PUSAh PEMAh PUBFx PSSA PUBFh R4SBA L2USCh L2USAh L1UBHh

- Powerhouse
- Dam
- Transmission Line
- FERC Project Boundary (No. 2299)
- Recreation Site

National Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Land Ownership

- Bureau of Land Management
- State of California

Project Facility Label

Non-Project Facility Label

0 1,000 2,000 3,000 Feet

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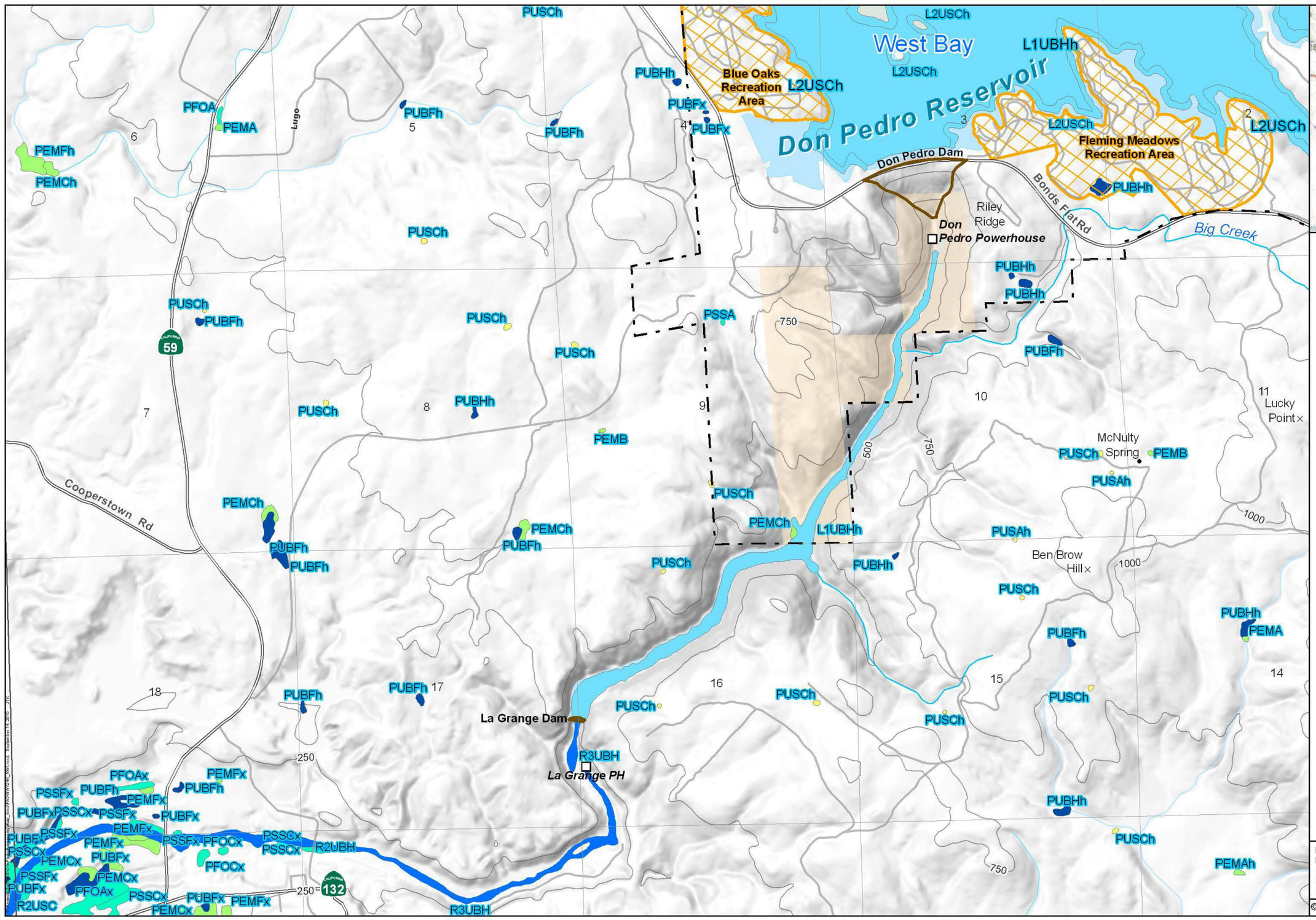

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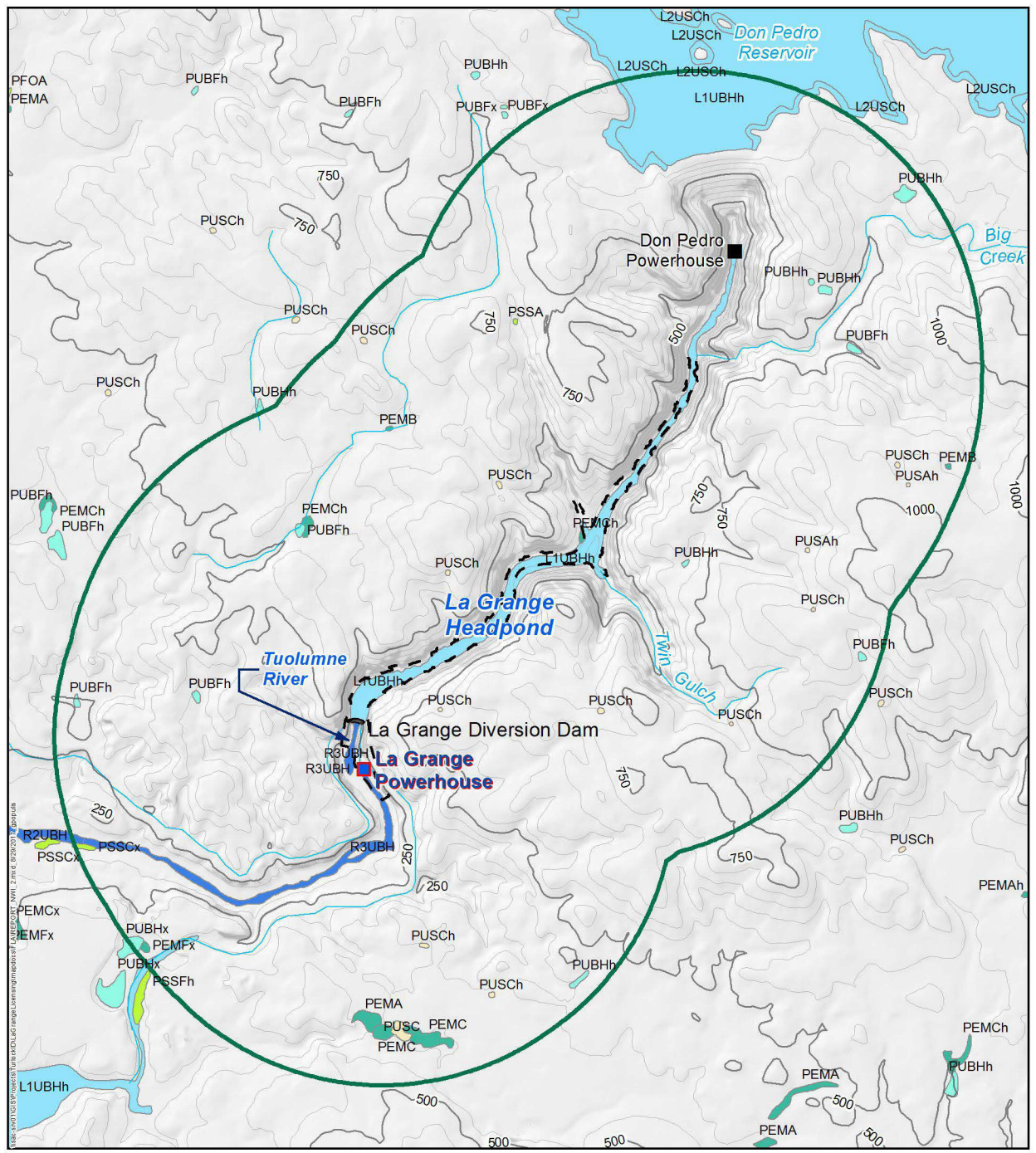

Legend

- FERC Project Boundary
- Project Powerhouse
- Non-Project Powerhouse
- 1 Mile Study Area
- La Grange Diversion Dam
- Stream

NWI Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

N

0 0.25 0.5 1 Miles

Data Sources: US Fish and Wildlife Service National Wetlands Inventory (NWI); Data is NAD 83, CA Stateplane Zone III, ft. Contour interval is 50 ft (NAVD 88).
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