



Initial Study/Mitigated Negative Declaration

Camp Far West Hydroelectric Relicensing Project

*Camp Far West Dam and Reservoir
6.5 Miles East of Wheatland, California*

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South Sutter Water District

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
APE	area of potential effects
ARB	California Air Resources Board
BMP	best management practices
B.P	Before Present
BSA	biological study area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalFire	California Department of Forestry and Fire Protection
CALNAGPRA	California Native American Graves Protection and Repatriation Act
Caltrans	California Department of Transportation
CARP	county aquatic resources program
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
C.F.R.	Code of Federal Regulations
cfs	cubic feet per second
CGC	California Government Code
CHSC	California Health and Safety Code
CNDDB	CDFW California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CPRC	California Public Resources Code
CRHR	California Register of Historical Resources
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EA	environmental assessment
EAP	Nevada County Energy Plan
EFH	essential fish habitat
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGC	Fish and Game Code
FLA	Final License Application

FR	Federal Register
FRAQMD	Feather River Air Quality Management District
GHG	greenhouse gas
GSA	Groundwater Sustainability Agency
GSP	groundwater sustainability plan
HCP	habitat conservation plan
HPMP	Historic Properties Management Plan
IPaC	USFWS Information for Planning and Consultation System
IS/MND	Initial Study/Mitigated Negative Declaration
ISWEBE	Inland Surface Waters, Enclosed Bays, and Estuaries
ITA	Indian Trust Assets
kv	kilovolt
LOP	Limited Operation Period
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MLD	most likely decedents
MRZ	mineral resource zones
MT	metric ton
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NID	Nevada Irrigation District
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSAQMD	Northern Sierra Air Quality Management District
NSRA	North Shore Recreation Area
NWI	National Wetland Inventory
OSHA	Occupational Safety and Health Administration
O ₃	ozone
Pb	lead
PCAPCD	Placer County Air Pollution Control District
PCCP	Placer County Conservation Program
PCSP	Placer County Sustainability Plan
PG&E	Pacific Gas and Electric Company
PM _{2.5}	fine particulate matter
PM ₁₀	inhalable particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
Project	Camp Far West Hydroelectric Project
Proposed Project	Camp Far West Hydroelectric Relicensing Project

RCRA	Resource Conservation and Recovery Act
RMS	root mean squared
ROG	reactive organic gases
RPR	resource preservation and recreation
RWQCB	regional water quality control board
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SSC	state species of concern
SSRA	South Shore Recreation Area
SSWD	South Sutter Water District
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCL	traditional cultural landscape
TCP	traditional cultural properties
TCR	tribal cultural resources
UAIC	United Auburn Indian Community of the Auburn Rancheria
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle-miles travelled
WQC	Water Quality Certification

1 Introduction

The South Sutter Water District (SSWD) owns and operates the Camp Far West Hydroelectric Project (Project). SSWD is seeking a new license from the Federal Energy Regulatory Commission (FERC) with a term of 50 years to continue operating the Camp Far West Hydroelectric Project. As part of the proposed approval of the new FERC license, SSWD is proposing the following five components (Proposed Project):

1. Modifying the FERC boundary;
2. Implementing a new flow regime;
3. Implementing environmental measures outlined in SSWD's Final License Application (FLA);
4. Increasing the height of the Camp Far West Spillway by 5 feet to raise the maximum reservoir elevation of the Camp Far West Reservoir; and
5. Relocating and improving recreation facilities.

1.1 Project Location

The Proposed Project is located along the Bear River 6.5 miles east of the City of Wheatland in Yuba, Nevada, and Placer counties in California. Figure 1.2-1 shows the location of the Proposed Project, existing Project facilities, and the existing and proposed FERC boundaries.

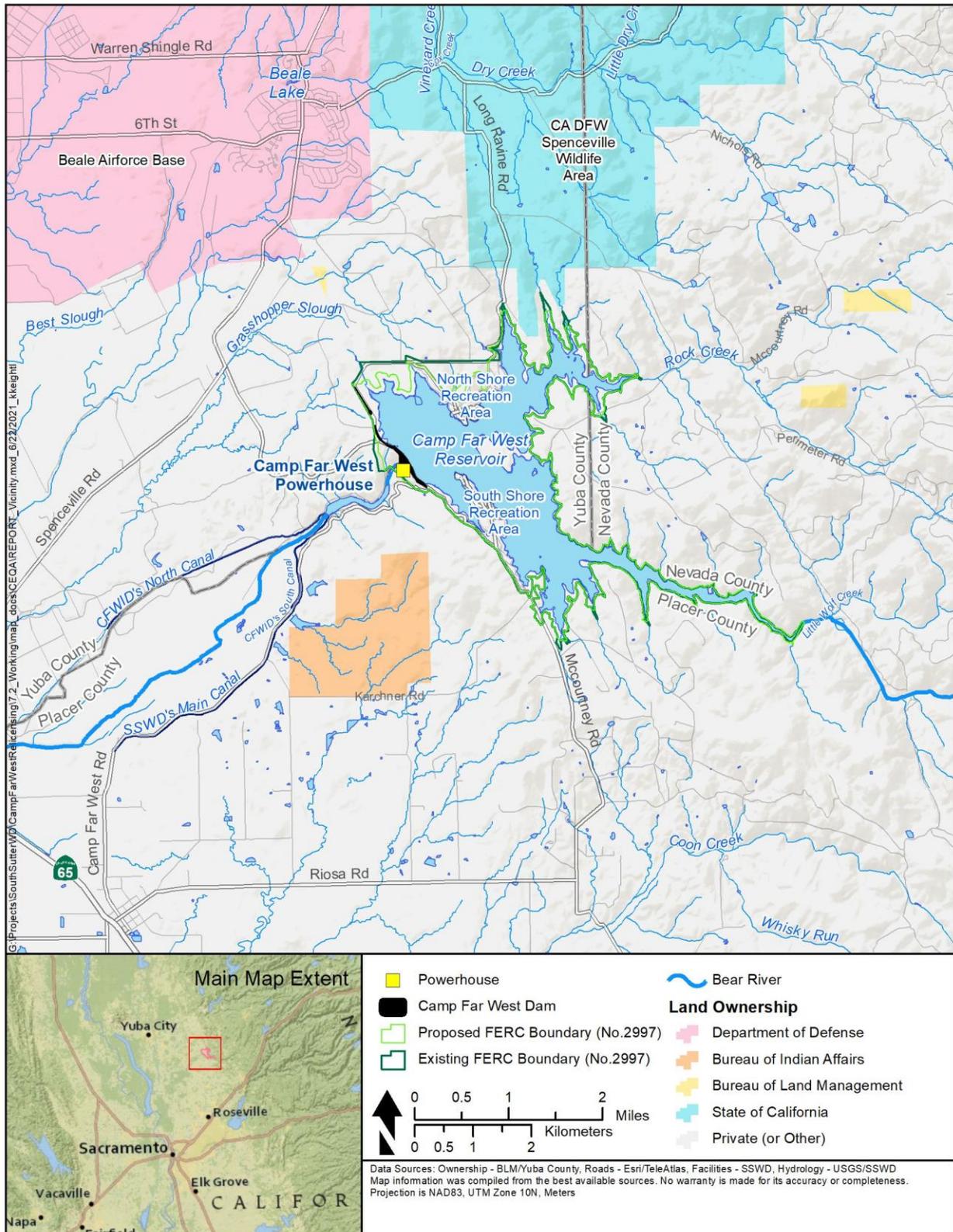
1.2 Existing Project Facilities

The existing Project consists of one development—Camp Far West Reservoir—that features one main dam, one powerhouse with an associated switchyard with a capacity of 6.8 megawatts (MW), and appurtenant facilities and structures, including recreation facilities and gages.

The Project does not include open water conveyance facilities, transmission lines, active borrow or spoil areas, the diversion dam located downstream from Camp Far West Dam, SSWD's Main Canal, Camp Far West Irrigation District's North and South canals, or the intake structures to these water delivery canals.

The FERC Project boundary is intended to encompass all lands necessary for the Project's safe operation and maintenance and for other purposes, such as recreation, shoreline control, and protection of environmental resources. For the Camp Far West Hydroelectric Project, the existing FERC Project boundary encompasses 2,863.7 acres of land. SSWD owns over 95 percent (2,710.5 acres) of the land within the FERC Project boundary, and the remaining 5 percent (153.2 acres) of the land is owned by private parties—no federal or state land occurs within or adjacent to the FERC Project boundary or along the Bear River downstream of the Project. The FERC Project boundary generally follows the 320-foot elevation contour around Camp Far West Reservoir, except additional lands at the northwestern end of the reservoir that include the North Shore Recreation Area (NSRA) and additional lands at the southwestern end of the reservoir that include the South Shore Recreation Area (SSRA).

Figure 1.2-1. Camp Far West Hydroelectric Relicensing Project Location



1.3 Project Objective

The Proposed Project operates primarily to provide irrigation water to growers in SSWD's and the Camp Far West Irrigation District's service areas. However, SSWD also operates the Proposed Project to meet Bear River streamflow requirements and to generate power. SSWD manages the Camp Far West Powerhouse and Switchyard. In addition to hydropower energy and water supply, the Proposed Project provides recreational opportunities to the region in the vicinity of the Project, including the Sacramento metropolitan area.

The benefits of the Proposed Project are available only if Proposed Project facilities can be operated, which is made possible by renewal of the FERC license. Therefore, the need for the Proposed Project is to obtain a new FERC license for continued operation, which, in turn, would provide low-cost water supply, low-cost hydroelectric power, reliable water supply, a diverse portfolio to maintain power grid reliability, and recreational opportunities. As such, the objective of the Proposed Project is to implement the proposed measures and operational components of the new license, as proposed by FERC and described in Section 1.5, *Description of Proposed Project*, which include administrative and operational changes in terms and conditions of the FERC license.

1.4 Scope of Analysis

This California Environmental Quality Act (CEQA) document considers the relicensing of the Camp Far West Hydroelectric Project in two ways. As described in Section 1, *Introduction*, SSWD proposes five components as part of the proposed approval of the new FERC license:

1. Administrative modification of the FERC Project boundary to add an area, including an existing Primary Project Road¹ and remove lands not necessary for operation of the Proposed Project;
2. Implementation of a new flow regime;
3. Implementation of environmental measures, including the *Bald Eagle Management Plan*, great blue heron (*Ardea herodias*) rookery management measure, *Recreation Facilities Plan*, and *Historic Properties Management Plan* (HPMP);
4. An increase in the height of the Camp Far West Spillway by 5 feet to raise the maximum reservoir elevation of the Camp Far West Reservoir; and
5. Recreation feature relocations and improvements.

The first four of these Proposed Project components will be analyzed at a project level in this CEQA review. The fifth proposed change will be analyzed at a programmatic level in this CEQA review. This is because while the recreation facilities requiring relocation or upgrade are identified as a result of the proposed reservoir pool raise, the specific improvements, locations of relocation, schedule of construction, and approach to achieving these requirements require further design and feasibility assessment. Once those activities are defined, SSWD will consider this CEQA document to determine whether additional CEQA study is necessary before it can move forward with those activities. Because these activities are part of the proposed new FERC license, they are considered as connected activities, in compliance with § 21159.27 of the CEQA guidelines, and are therefore part of this CEQA analysis considered programmatically. The purpose of this Initial Study/Mitigated

¹ A *Primary Project Road* is a term used in the Final License Application to FERC referring to a road that is used only for the purposes of the FERC Project. Only one Primary Project Road is associated with the Camp Far West Hydroelectric Project.

Negative Declaration (IS/MND) is to provide the public and decision-making agencies with information about the environmental impacts that could result from implementation of the Proposed Project.

1.5 Description of the Proposed Project

This section describes each of the five Proposed Project components in detail, beginning with the four components to be analyzed at a project level and concluding with the fifth component to be analyzed at a programmatic level.

Proposed FERC Project Boundary Change

SSWD proposes several changes to the existing FERC Project boundary in order to more accurately define lands necessary for the Proposed Project's safe operation and maintenance and for other purposes, such as recreation, shoreline control, and protection of environmental resources (SSWD 2019). Figure 1.5-1 shows the existing and proposed FERC Project boundaries and the lands to be added and removed from the FERC Project boundary. In total, 19.9 acres are proposed to be added and 209.6 acres are proposed to be removed. This can be broken down as the addition of 7.9 acres of private lands and removal of 0.8 acre of private lands, and the addition of 14.4 acres of SSWD-owned lands and removal of 211.2 acres of SSWD-owned lands. Where SSWD proposes to add private lands to the FERC Project boundary, SSWD has notified the landowner of this proposal.

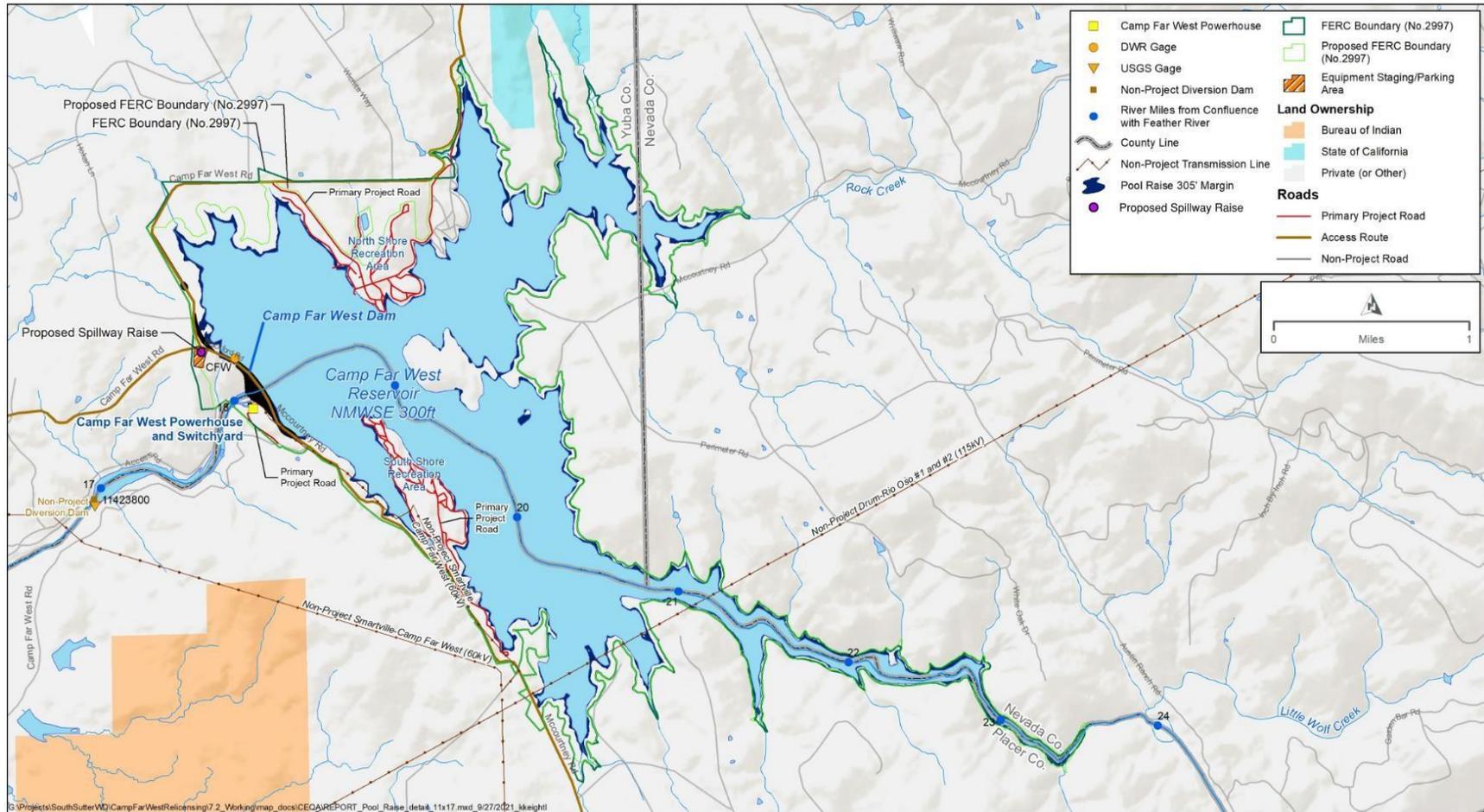
Proposed boundary changes include modifying the existing FERC Project boundary to remove lands surrounding the Camp Far West 60 kilovolt (kV) transmission line (owned and operated by the Pacific Gas and Electric Company [PG&E]), which is no longer part of the Project, and other lands not used for Project operations. Other Proposed Project FERC boundary changes include the addition of lands that are used for Project-related operation and maintenance, removal of lands that are no longer used for operation and maintenance, and addition of lands surrounding Camp Far West Reservoir that are required for operation and maintenance after the pool raise. The proposed changes include the following.

- The addition of rights-of-way for a road accessing the Camp Far West Powerhouse. SSWD owns this land (Placer County Assessor's Parcel Number 018-020-015-000).
- The removal of land to the west of the Camp Far West spillway that is no longer used for operation or maintenance. SSWD owns this land (Yuba County Assessor's Parcel Number 015-370-016-000).
- The removal of the land adjacent to Camp Far West Road that is no longer used for recreation, operation, or maintenance. SSWD owns this land (Yuba County Assessor's Parcel Numbers 015840021000, 015840022000, 015840020000, and 015370016000).
- The addition and removal of land such that the FERC Project boundary around Camp Far West Reservoir, where the FERC Project boundary is not encompassing Project facilities, is defined by the lesser (closer to the maximum reservoir elevation) of either the topographic contour of 320 feet, which is 20 feet above the 300-foot maximum reservoir elevation, or 200 horizontal feet from the 300-foot maximum reservoir elevation (FERC 2014). Lands in this proposed change are a combination of lands owned by private landowners and SSWD.

SSWD proposes the addition of one existing road to the FERC license as a primary access route for the Proposed Project. The road currently exists and does not require any construction or improvements; this change is purely an administrative change in the designations in the FERC license. The existing road is within the proposed and existing FERC Project boundaries.

The road extends approximately 0.25 mile from an existing SSWD locked gate at Camp Far West Road to the Camp Far West Powerhouse and Switchyard. The existing road, not open to the public for safety reasons, is used and maintained solely by SSWD to access the Camp Far West Powerhouse and Switchyard. It has an asphalt-paved surface approximately 20 feet wide and a shoulder width of approximately 2 feet. While the road was constructed when Camp Far West Powerhouse and Switchyard were constructed and is SSWD's only vehicular access route to Camp Far West Powerhouse and Switchyard, the road is not identified in the existing license as a Project facility.

Figure 1.5-1. Proposed Project Components



Implementation of New Flow Regime

The existing FERC Project license describes required minimum instream flows for the Bear River in Article 29, which states; “The Licensee shall maintain a continuous minimum flow of 25 cubic feet per second (cfs) from April 1 through June 30 and 10 cfs from July 1 through March 31 or inflow to the project reservoir, whichever is less, as measured immediately below the Camp Far West diversion dam to protect and enhance the fishery resources in Bear [River].” During the relicensing and in collaboration with resource agencies and interested stakeholders, SSWD proposed new measures in its FLA related to flows for the Proposed Project. These include minimum streamflows (dictated by water year types), pulse flows, and ramping rates (SSWD 2019). No changes to proprietary rights, title, land, or water rights are required to implement the proposed flow regime.

Minimum Streamflows

SSWD shall, within 30 days of issuance of the new license, meet the minimum streamflow requirements for the Bear River downstream of Camp Far West Dam and Powerhouse that are shown in Table 1.5-1. The change from existing streamflows to proposed streamflows, in cfs, is shown in parentheses. Streamflows may be temporarily modified in the event of an emergency or for short periods of time, according to consultation with and approval by the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Fish and Wildlife (CDFW), and State Water Resources Control Board (SWRCB). Water year types, including wet, above normal, below normal, dry, and critically dry, would be determined by usable inflow into Camp Far West Reservoir and California Department of Water Resources (DWR) Bulletin 120.

Table 1.5-1. Minimum Streamflows for the Camp Far West Hydroelectric Project, by Period and by Water Year Type^s, and Change in Streamflows from Existing Conditions

Period	Water Year Type				
	Wet Water Year (cfs)	Above Normal Water Year (cfs)	Below Normal Water Year (cfs)	Dry Water Year (cfs)	Critically Dry Water Year (cfs)
October 1–14	10 (0)	10 (0)	10 (0)	10 (0)	10 (0)
October 15–31	50 (+40)	25 (+15)	25 (+15)	10 (0)	10 (0)
November 1–14	100 (+90)	60 (+50)	30 (+20)	20 (+10)	10 (0)
November 15–February 28 (29)	125 (+115)	60 (+50)	30 (+20)	20 (+10)	15 (+5)
March 1–31	60 (+50)	40 (+30)	30 (+20)	20 (+10)	15 (+5)
April 1–30	40 (+15)	25 (0)	25 (0)	20 (-5)	15 (-10)
May 1–14	40 (+15)	25 (0)	25 (0)	15 (-10)	15 (-10)
May 15–31	25 (0)	25 (0)	20 (-5)	10 (-15)	10 (-15)
June 1–14	25 (0)	25 (0)	15 (-10)	10 (-15)	10 (-15)
June 15–30	20 (-5)	20 (-5)	10 (-15)	10 (-15)	10 (-15)
July 1–September 30	10 (0)	10 (0)	10 (0)	10 (0)	10 (0)

Notes: Change in streamflows from existing to proposed conditions shown in parentheses.

cfs = cubic feet per second

^a defined in SSWD’s Proposed Measure WR1

Fall and Spring Pulse Flows

SSWD shall, beginning in the first full calendar year after license issuance, provide the fall and spring pulse flows for the Bear River downstream of Camp Far West Dam and Powerhouse described in this measure.

A fall pulse flow shall occur between November 10 and November 17 in each wet, above normal, and below normal water years. In wet water years, a second fall pulse flow shall occur between December 1 and December 7. A fall pulse flow is not required in dry and critically dry water years. Pulse flows would be determined by water year types and would range from 75 to 175 cfs per day for a 3-day period.

The spring pulse flow shall occur over a 6-day period. If an average daily flow equal to or greater than 200 cfs has occurred after April 1 of that year, the required spring pulse flow is not required in that year. A spring pulse flow is not required in wet and above normal water years. Pulse flows would be determined by water year types and would range from 50 to 200 cfs per day for a 6-day period.

The fall and spring pulse flows shall be measured as described in the *Minimum Streamflows* section above and are not additive to the minimum streamflows. Fall and spring pulse flows may be temporarily modified in the event of an emergency or for short periods of time according to consultation with and approval by USFWS, NMFS, CDFW, and SWRCB.

Ramping Rates

SSWD shall, when the average hourly release from Camp Far West Dam is less than 725 cfs from November through May, make a good faith effort to adhere to the ramping rates proposed in the FLA. The ramping rates shall also apply when making changes between minimum streamflow releases and implementing fall and spring pulse flows. Ramping rates are determined by the average hourly release for the previous hour, and the range in ramping rates is shown in Table 1.5-2. The ramping rate values shown in Table 1.5-2 are made in recognition of the physical limitations and challenges that the operator of the non-Project diversion dam encounters when manually installing flashboards with the existing infrastructure at the non-Project diversion dam.

Table 1.5-2. Ramping Rates

Time Period	Range of Target Maximum Reduction in Release (cfs)
November 1 through January 31	Make a good-faith effort not to reduce the combined release from Camp Far West Powerhouse and Camp Far West Dam Low-Level Outlet until such time as flow passes over the Camp Far West Spillway
February 1 through May 31	20–125
Springtime Installation of Flashboards at Non-Project Diversion Dam (April or May)	20–200

Notes: cfs = cubic feet per second

This condition is subject to temporary modification if required for repairs to the dam or associated equipment, by equipment malfunction, as directed by law enforcement authorities, or in emergencies. If SSWD temporarily modifies the requirements of this condition, SSWD shall make all

reasonable efforts to promptly resume performance of the requirements and shall notify USFWS, NMFS, CDFW, and SWRCB within 48 hours of the modification.

Implementation of Environmental Measures

The following environmental measures would be implemented as commitments of the Proposed Project. These measures are not currently in practice but are fully developed and ready for implementation upon approval and adoption of this CEQA review by SSWD and issuance of a new license by FERC.

Bald Eagle Management Plan

SSWD shall, within 1 year of license issuance, implement the *Bald Eagle Management Plan*. The *Bald Eagle Management Plan* is included in Appendix A (SSWD 2019). The *Bald Eagle Management Plan* would include surveys, establish buffers and limited operating periods, and track incidental sightings to ensure that Proposed Project-related activities do not result in the take of bald eagles (*Haliaeetus leucocephalus*). Measures included in the *Bald Eagle Management Plan* are described in Table 1.5-3.

Table 1.5-3. Bald Eagle Management Plan Measures

Measure	Description	Timeframe	Responsible Party
Conduct Nesting Surveys	South Sutter Water District (SSWD) would conduct nesting surveys via boat on Camp Far West Reservoir. Location data would be recorded, and photographs would be taken for all nests observed in a manner that does not disturb the breeding pair.	April or May, every 10 years	SSWD
Establish Bald eagle Management Buffers	SSWD would develop a map showing a 0.25-mile buffer around all documented active bald eagle nests for implementation of buffers by SSWD operators/staff, except as noted or otherwise agreed to by SSWD, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW). The Bear River Arm nest would be protected from recreational uses and other Project activities with a 660-foot buffer within the Federal Energy Regulatory Commission (FERC) Project Boundary. SSWD would place permanent signage in the Camp Far West Reservoir approximately 660 feet downstream of the nest stating, “no wake and quiet zone.” In years when nesting surveys do not occur throughout the Project, SSWD would visit each nest identified during the previous survey to establish whether the nest is active for the given year. If active, buffers and limited operating periods would be established.	Upon completion of the nest survey, every 10 years	SSWD
Establish Limited Operating Periods	SSWD would institute a limited operating period for all SSWD Project-related activities, as well as restrict public access, on SSWD land within the buffer areas in the FERC Project boundary.	January 1 through August 31 of each year where there is a nest(s) with an established buffer	SSWD
Record Incidental sightings	SSWD shall record incidental observations of other nesting raptors within and just outside (within 500 feet) the FERC Project boundary area while conducting bald eagle nest surveys and performing operation and maintenance activities. SSWD shall maintain a map of incidentally observed nesting raptors within the Project.	During the license term	SSWD

Great Blue Heron Rookery Management Measure

SSWD shall implement a limited operation period (LOP) from March 15 to July 31 within a 500-foot buffer of the great blue heron rookery presently located at the SSRA and other blue heron rookeries that may be identified on the Camp Far West Reservoir. Land barriers and appropriate signage shall be placed to designate the buffer zone during the limited operating period from the edge of the outside nest (SSWD 2019).

Recreation Facilities Plan

SSWD shall, within 1 year of license issuance, implement the *Recreation Facilities Plan*, which is included in Appendix B (SSWD 2019). SSWD shall be responsible for the annual maintenance, rehabilitation, and replacement of all the Proposed Project recreational facilities at the Camp Far West Reservoir recreation areas, as needed. SSWD intends to use a concessionaire for the administration, operation, and maintenance of the Proposed Project’s recreation facilities. The

Recreation Facilities Plan would include procedures for operational maintenance activities, major rehabilitation, and replacement of existing facilities because of the Camp Far West Reservoir pool raise. Measures included in the *Recreation Facilities Plan* are described in Table 1.5-4.

Table 1.5-4. Recreation Facilities Plan Measures

Measure	Description	Timeframe	Responsible Party
Perform operational maintenance	South Sutter Water District (SSWD) would perform operational maintenance activities including interior painting, repair of broken windows, light bulb replacement, cleaning, unplugging drains, greasing, servicing, inspecting, oiling, adjusting, tightening, aligning, and sweeping. Maintenance activities may include work needed to meet applicable laws, regulations, codes, and other legal direction (such as compliance with the Americans with Disabilities Act) as long as the original intent or purpose of the fixed asset is not changed. Annual operational maintenance includes those activities that are expected to occur on an annual or semi-annual schedule, as conditions warrant. Annual maintenance activities include, but are not limited to, straightening all vehicle barriers and signs, rehabilitating picnic tables, pumping or servicing vault or portable toilets, and conducting state and local required water quality testing of the water supply system.	Year round, during the license term	SSWD
Perform major recreational rehabilitation	SSWD shall be responsible for performing all needed rehabilitation of recreation features that currently exist at its recreation facilities. Rehabilitation activities include grading and repaving roads and parking areas; replacing fire rings, grills, picnic tables, and signs; maintaining sewage and water systems; and replacing docks and trash receptacles.	Year round, during the license term	SSWD
Replace affected recreational facilities due to Camp Far West Reservoir pool raise	SSWD would replace all the 104 recreation facilities requiring relocation because of the pool raise in-kind (that is, one-to-one replacement) within each respective recreational area.	Within 1 year of the Camp Far West Reservoir pool raise	SSWD

Historic Properties Management Plan

SSWD shall, within 1 year of license issuance, implement the HPMP (SSWD 2019).

The Federal Power Act² provides FERC the authority to issue licenses for non-federal hydropower projects on navigable waterways and/or federal lands. In considering a new license, FERC is the lead federal agency responsible for ensuring compliance with applicable federal laws, regulations, and policies pertaining to historic properties, including the National Historic Preservation Act of 1966 (NHPA), as amended.³ Section 106 of the NHPA (Section 106) directs federal agencies to consider the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (ACHP, or Council) a reasonable opportunity to comment on such undertakings.

² 16 United States Code (U.S.C.) § 791(a)–825(r)

³ 54 U.S.C. § 300101 et seq.

Because it is not possible to determine all of the effects of various activities that may occur over the term of a license, FERC typically requires, as a license condition, that the licensee develop and implement an HPMP that considers and manages effects on historic properties throughout the term of the license. FERC typically completes Section 106 by entering into a Programmatic Agreement or Memorandum of Agreement with the State Historic Preservation Officer (SHPO), and the ACHP, if it chooses to participate, that requires the licensee to develop and implement an HPMP. Additionally, FERC requires that the licensee develop the HPMP in consultation with various federal, state, tribal, and non-governmental parties who have interests in the licensee's project. Accordingly, SSWD anticipates that FERC would complete the Section 106 process for the relicensing of the Proposed Project by executing a Programmatic Agreement that would direct SSWD to implement this HPMP as a condition of a new FERC license. FERC shall ensure that the HPMP and all its procedures and stipulations are carried out during the new license term.

The HPMP describes the actions and processes for considering and managing historic properties within the area of potential effects (APE) under the terms of a new FERC license. The HPMP guides SSWD's personnel when performing operation and maintenance activities and defines site treatments designed to address ongoing and future effects on historic properties. Because of the physical size of the APE, the number of documented cultural resources, and the duration of the new license, this plan provides both broad adaptive management concepts and specific implementation steps. The HPMP is intended to

- provide measures needed to avoid, minimize, or otherwise resolve adverse effects on historic properties within the APE;
- provide proactive direction to, as appropriate, help protect, preserve, and interpret significant cultural resources in the APE;
- establish procedures intended to facilitate the consideration of potential impacts on historic properties resulting from proposed future Project-related activities; and
- describe a process of consultation⁴ with appropriate state and federal agencies and with tribes who may have interests in historic properties within the APE.

The HPMP has been developed in accordance with the U.S. Department of the Interior's (USDOI's) standards and guidelines (USDOI 1983, USDOI 1997) and with the *Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects* (FERC 2002), issued jointly by FERC and the ACHP.

Camp Far West Reservoir Pool Raise

Recent aerial surveying and topographic mapping shows that the Camp Far West Reservoir stores approximately 93,737 acre-feet of water at its existing Camp Far West Reservoir Maximum Reservoir Elevation of 300 feet. This is roughly 10 percent less than the storage capacity anticipated when the dam was enlarged in 1964, and the amount of storage authorized in SSWD's water rights. Therefore, SSWD proposes to raise the maximum reservoir elevation of Camp Far West Reservoir by 5 feet to an elevation of 305 feet. The pool raise would increase Camp Far West Reservoir storage by 9,836 acre-feet to a capacity of 103,573 acre-feet at Camp Far West Reservoir's new

⁴ *Consultation* is defined as "the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process" [36 Code of Federal Regulations (C.F.R.) § 800.16(f)].

maximum reservoir elevation of 305 feet (see Figure 1.5-1). The latter capacity is consistent with the maximum annual storage quantity authorized in SSWD's water rights.

When the pool raise is complete, the auxiliary spillway, in combination with the modified existing spillway, would have a combined capacity of 126,600 cfs at a water surface elevation of 318.5 feet. No changes to proprietary rights, title, land or water rights would be warranted as a result of the proposed pool raise.

Construction Methods

The existing spillway crest modifications to facilitate the pool raise would involve demolishing the existing concrete cap, adding 1,730 cubic yards of concrete to raise the spillway crest from an elevation of 300 feet to an elevation of 305 feet, and anchoring the new concrete with steel dowels. The spillway design would not change from its existing reinforced concrete, ungated, ogee-type weir, and the existing 300-foot crest length would not change. See Figure 1.5-1 for the location of construction areas and the 305-foot pool raise margin.

A contractor staging area would be located south of Blackford Road, immediately adjacent to the auxiliary spillway. Activities at the staging area would include parking for concrete trucks and other construction vehicles, temporary storage of material (for example, rebar for new concrete crest and demolished concrete), and meetings. The construction labor force would be from the local labor force pool and average 15 workers per day over the construction period. At this time, SSWD anticipates the staging area would encompass 3.71 acres (Figure 1.5-2). The total area of disturbance, including the new area of inundation, would be less than 30 acres.

Concrete would be brought from off site (within 100 miles); thus, no on-site borrow areas would be associated with the pool raise. Steel needed for the pool raise would be transported from Sacramento. The approximately 550 cubic yards of demolished concrete, rebar, and any other material from the spillway cap removal would be disposed of at an approved off-site facility that accepts construction waste, such as at the Western Regional Sanitary Landfill in Placer County, which is permitted to receive construction waste in the quantities anticipated and is located within 50 miles of the Project (WPWMA 2018). Location and disposal of hazardous waste materials is not expected to occur for the pool raise.

Construction-related traffic would be spread over the duration of the pool raise work. During this period, the existing bridge over the spillway would likely be closed to through traffic and detours around the dam may be required. During construction and the bridge closure, local residents would use McCourtney Road and then Riosa Road to access Highway 65 for north-to-south travel to Wheatland and the Sacramento area (Figure 1.5-3). Closures and detours would be coordinated with Yuba County. The bridge would be reopened following completion of the pool raise. There would be no work within the reservoir or the construction of any additional haul routes for the existing spillway modifications for the pool raise.

Figure 1.5-2. Camp Far West Reservoir Pool Raise Project Elements

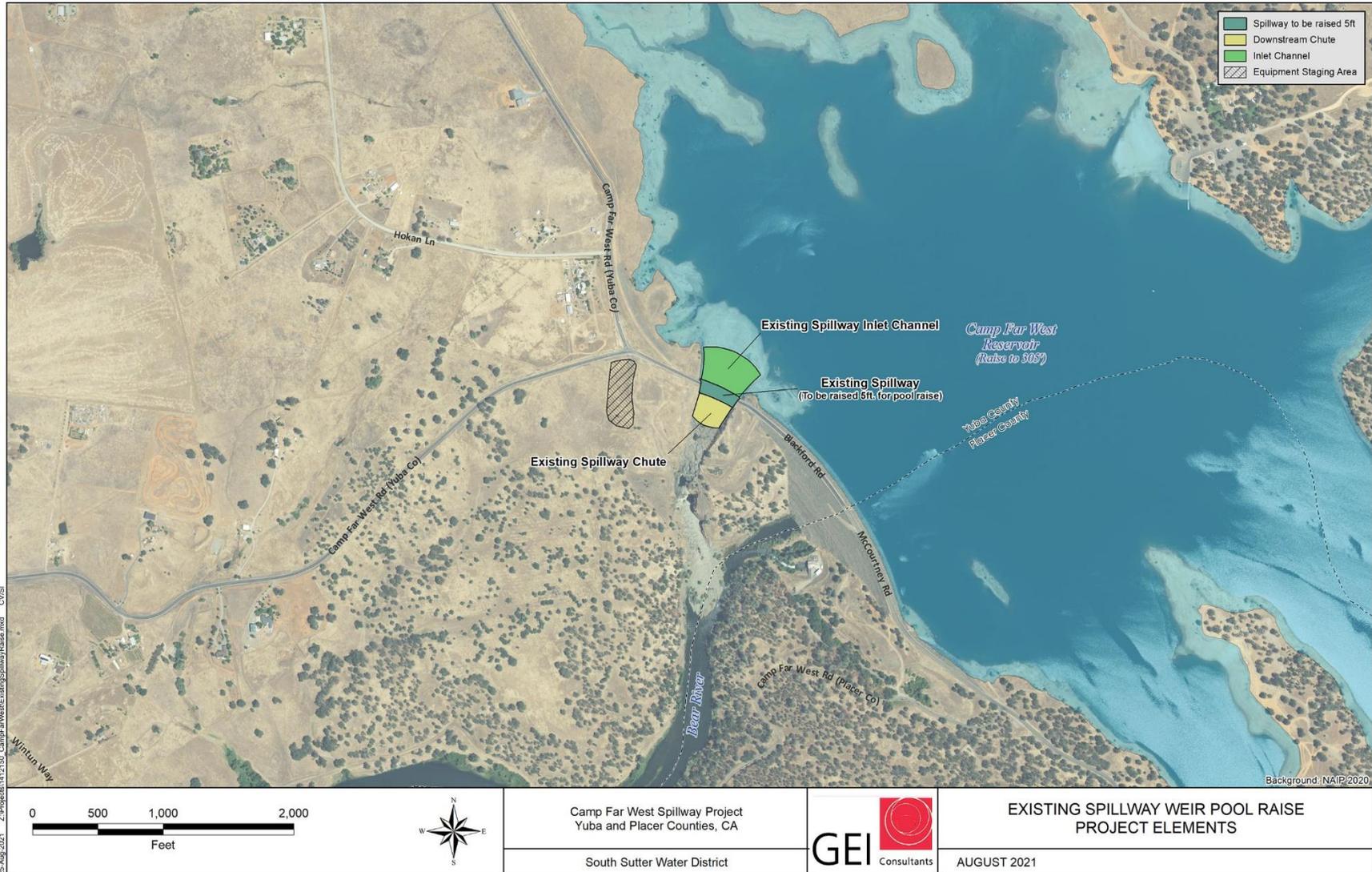
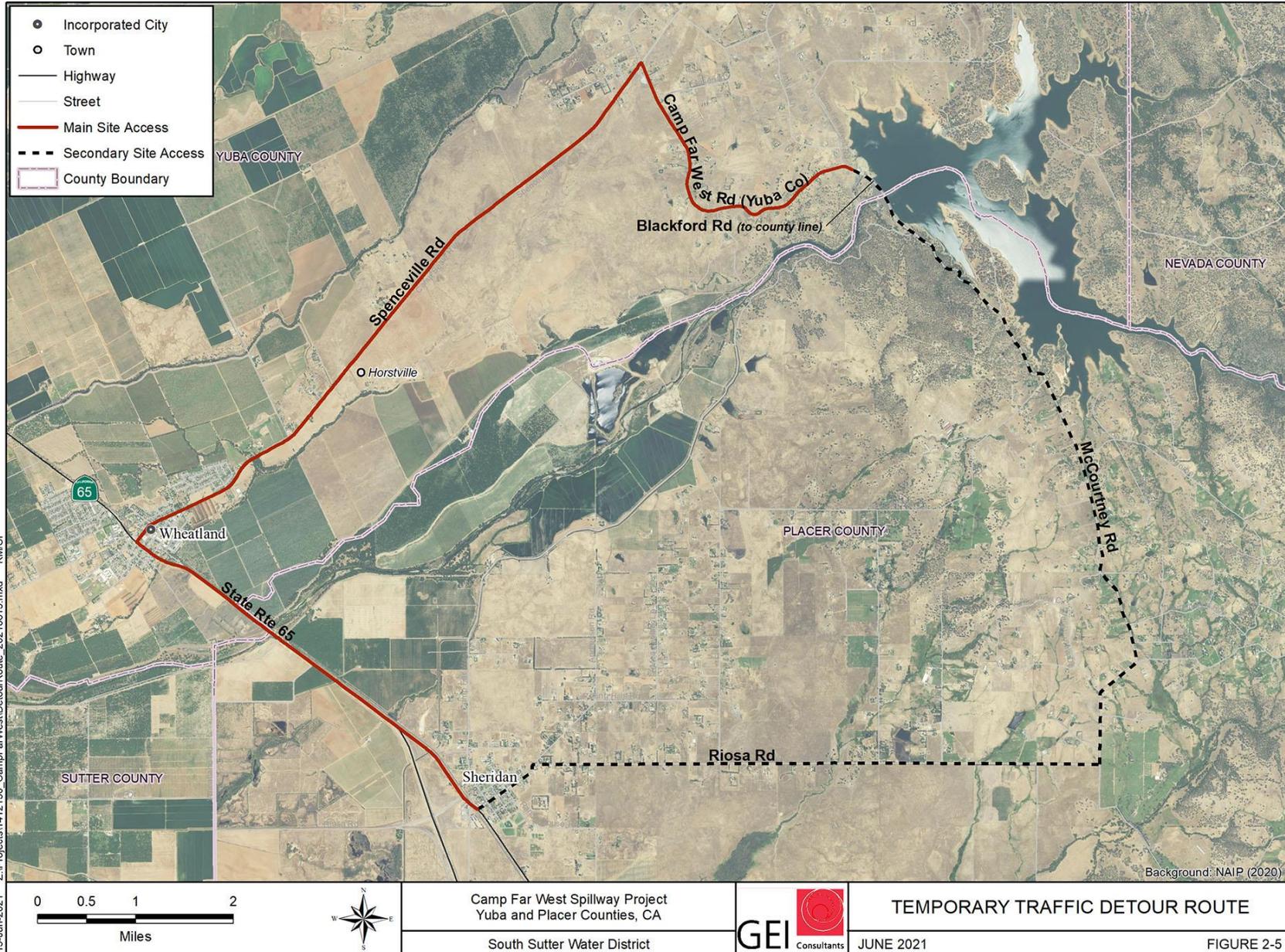


Figure 1.5-3. Camp Far West Reservoir Pool Raise Temporary Traffic Detour Route



Construction Schedule

At this time, SSWD anticipates that planning, design, and construction would take approximately 2 years to complete. Construction is anticipated to begin between 2024 and 2026.

The schedule and general sequencing of events for the proposed pool raise is shown in Table 1.5-5. A brief narrative description of the major tasks listed in Table 1.5-5 is presented below.

Table 1.5-5. Draft Preliminary Schedule for Construction of the Pool Raise

Task #	Task Name	Duration
1	Complete pool raise design and geotechnical investigations	24 months
2	Complete environmental permitting and obtain regulatory approvals <ul style="list-style-type: none"> • consult agencies regarding engineering evaluations • obtain all necessary permits and approvals 	12 months
3	Site preparation <ul style="list-style-type: none"> • notify adjacent landowners of upcoming pool raise • hold on-site kickoff meeting to discuss logistics, work sequence and safety • prepare site for demolition, including traffic control 	1 month
4	Construction <ul style="list-style-type: none"> • demolish existing cap and remove waste • prepare foundation for new concrete • construct forms for new concrete • install rebar and pour new concrete 	10 months
5	Site cleanup and restoration	1 month
Total		4 years

Recreation Feature Rehabilitation, Replacement, and Relocation

While the Project recreation areas are able to meet the current and future recreational demand, some of the recreation features need replacement or rehabilitation to maintain their proper functioning condition. Nearly all of the features would require replacement or rehabilitation during the term of the new license to maintain the features in proper functioning condition, particularly the restrooms, potable water system, and the circulation roads, which would need near-term rehabilitation to maintain a safe and proper functioning condition. A detailed list of expected rehabilitation and replacement activities is provided in the *Recreation Facilities Plan* in Appendix B. The specific methods, location, and design of the rehabilitation and replacement activities would be completed according to the *Recreation Facilities Plan*. For the purpose of this environmental review, the proposed recreation feature rehabilitation, replacement, and relocation is analyzed at a programmatic level. Prior to replacing or rehabilitating Proposed Project recreation features, SSWD would complete necessary CEQA review and obtain all necessary permits and approvals. All work related to the recreation facilities' relocation and described in the following section would take no more than 90 days of active construction. However, the work would occur in phases throughout one full calendar year within five years after the new license is issued from FERC to minimize any impacts on recreation area visitors and experiences—mostly outside the peak recreation season (that is, Memorial Day through Labor Day holiday weekends). Refer to Section 3.3.6.2.1 in Exhibit E of the Application for New License for additional details (SSWD 2019).

As a result of the pool raise, an estimated 104 recreational site features would require relocation at the NSRA and SSRA (Figure 1.5-1). Most of the features requiring relocation (that is, 59 percent) would be attributable to the pool raise by either partially or fully inundating the features. In these instances, the inundated features would be relocated, rerouted, or realigned to avoid inundation. The remaining features requiring relocation (that is, 41 percent) would be because the pool raise would not inundate the feature, but would closely abut the feature, likely resulting in flooding and/or erosion impacts on the features as a result of wind, wave, or high-flow events. In a few instances, a feature would require relocation because an inundated segment of a circulation road would likely be realigned through these features. See Appendix C for a Recreation Area Impacts Mapbook showing the locations of the 104 recreation features that would require relocation due to the pool rise. The impacted area of the recreation features requiring relocation due to the pool raise is estimated to be approximately 15 acres.

At NSRA, an estimated 57 site features would require relocation because of the pool raise, including 21 campsite living spaces (table and/or grill area), 19 campsite vehicle spurs, 13 circulation road segments (2,410 feet of dirt roads and 480 feet of paved roads), 2 boat ramp and parking area segments, 1 picnic site, and 1 water hydrant. Most of the recreational site features at NSRA requiring relocation would be at the family campground (43 features), followed by the dispersed use areas (6 features—all dirt roads), group campground (4 features), and the day use area and boat launch features (each with 2 features). At the family campground, most of the features requiring relocation would be campsite living spaces and vehicle spurs (each with 19 sites) with 5 road (dirt surface) segments. At the group campground, one of the two group campsites would be fully inundated. At the dispersed use areas, all of the features requiring relocation would be the dirt roads (1,410 feet) that provide shoreline access.

At SSRA, an estimated 47 site features would require relocation, including 15 circulation road segments (3,720 feet of dirt roads and 1,140 feet of paved roads), 11 campsite living spaces (table and/or grill area), 9 picnic sites, 7 campsite vehicle spurs, 1 boat ramp turnaround area, 1 parking area, 1 swim beach, 1 water hydrant, and 1 stage. Most of the recreational site features at SSRA requiring relocation would be at the family campground (22 features), followed by the day use area (14 features), dispersed use areas (9 features—all dirt road segments), the swim beach (2 features), and the boat launch (1 feature). At the family campground, most of the features requiring relocation would be campsite living spaces (11 sites), vehicle spurs (7 sites), and road segments (3 segments). At the dispersed use areas, all of the features requiring relocation would be the dirt roads (2,710 feet) that provide shoreline access. The entire swim beach would be inundated. Notably, at five campsites in the family campground, the campsite living space and vehicle spurs would require relocation because an inundated segment of the campground circulation road would likely be realigned through these campsites.

Schedule

The construction work to relocate, reroute, or realign the features requiring relocation would be completed in one calendar year. Overall, most of the construction would occur outside the peak recreation season (that is, Memorial Day through Labor Day holiday weekends). In instances where construction would be necessary during the peak season, the work would be restricted to select areas and conducted during low-use periods (that is, weekdays) to minimize any impacts on the recreation features and visitor experiences.

1.6 Environmental Review Process

This environmental review is being completed to support three decisions:

1. SSWD's decision to approve the relicensing process;
2. SWRCB's decision to approve the Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) associated with that new license; and
3. SSWD's decision to approve the proposed pool raise.

Relicensing Process

The FLA was filed with FERC on July 1, 2019. Information related to SSWD's Proposed Project and filings completed throughout the process were made available to the public on the relicensing website for the Camp Far West Hydroelectric Project (<https://sswdrelicensing.com/home/>) and in the docket (P-2997) on FERC's eLibrary online⁵ (SSWD 2019).

FERC's decision regarding issuance of a new license for the continued operation of the Project with the terms and conditions as proposed in SSWD's FLA triggers the need for National Environmental Policy Act (NEPA) compliance. As such, FERC will lead the development of an environmental assessment (EA) and the resulting NEPA documents. FERC will demonstrate compliance with federal regulations, such as the CWA, the Endangered Species Act (ESA), and the NHPA.

Additional regulatory permitting for Proposed Project operation and maintenance and routine activity-specific maintenance is not anticipated because the federal license is authorizing those activities, and the Project commitments in the new FERC license are specifically designed to be consistent with regulatory requirements, thus minimizing the need for activity-specific maintenance permitting. That said, additional permitting needs would be determined by SSWD's regulatory compliance specialists on a case-by-case basis during the term of the new FERC license.

Activities beyond routine Proposed Project operation and maintenance and commitments defined in SSWD's FLA, as amended, are not addressed in this IS/MND, and would be assessed for CEQA compliance and permitting requirements separately as any non-routine operation and maintenance activities arise.

SSWD already has the water rights necessary to operate the Proposed Project. SSWD will file an application for a water quality certificate with the SWRCB within 60 days after the date that FERC issues a notice that SSWD's Application for New License is ready for environmental analysis (18 Code of Federal Regulations [C.F.R.] § 4.34(b)(5)). SSWD cooperates, and will continue to cooperate, with the California Division of Safety of Dams (DSOD) on annual inspections of Project dams.

Below is a description of the Project relicensing process completed to date, as well as the remaining steps to be completed (Table 1.6-1). Currently, FERC formally filed a public notice on August 5, 2021, saying that SSWD's FLA is ready for environmental analysis and SSWD filed a request for a CWA Section 401 WQC.

⁵ FERC's eLibrary online: <https://elibrary.ferc.gov/eLibrary/>

Table 1.6-1. Camp Far West Hydroelectric Project Relicensing Process [Update dates as needed.]

Process Step	State or Federal Review	Date of Completion
South Sutter Water District (SSWD) filed a Pre-Application Document and Notice of Intent to File a Request for New License with the Federal Energy Regulatory Commission (FERC) for the Camp Far West Hydropower Project	Federal	3/14/2016
SSWD held the required site visit and joint agency/public meeting to discuss the relicensing process, the Project, and the potential studies	Federal	6/27/2016
SSWD filed revised Study Plans based on changes received in writing and during a November 21, 2016, meeting by resource agencies and stakeholders.	Not applicable	1/9/2017
SSWD implemented studies and provided the study data to resource agencies and interested stakeholders when available.	Federal	2017–2018
SSWD made its Draft License Application available for a 90-day review.	Federal	12/28/2018
SSWD filed the Final License Application. In addition, a Privileged Historic Properties Management Plan was distributed to FERC, the California Department of Parks and Recreation, the State Historic Preservation Office, and Native American tribes as part of a formal request for review under Section 106.	Federal	6/28/2019
FERC issued Scoping Document 1, beginning the public scoping process to ensure that FERC identifies and analyzes all pertinent issues, and has the information needed, to ensure the environmental assessment (EA) will be thorough and balanced.	Federal	6/9/2020
FERC issued Scoping Document 2, continuing the public scoping process to ensure that FERC identifies and analyzes all pertinent issues, and has the information needed, to ensure the EA will be thorough and balanced.	Federal	3/16/2021
FERC issued Notice of Application Ready for Environmental Analysis, and Soliciting Comments, Recommendations, Terms and Conditions, and Prescriptions	Federal	3/16/2021
Under FERC's regulations, once FERC issues its public notice that SSWD's FLA is ready for environmental analysis, SSWD will have 60 days to file with FERC a copy of a request for a Clean Water Act (CWA) Section 401 Water Quality Certificate.	State	5/17/2021
State Water Resources Control Board may issue a WQC or waive its issuance.	State	On or before 5/17/2022
FERC will comply with National Environmental Policy Act requirements, conduct an environmental review, and will prepare and issue an EA. This is being completed separately.	Federal	To be determined
FERC will complete its Section 7 Endangered Species Act and Section 106 National Historic Preservation Act requirements and will document its compliance with other federal statutes and regulations as provided for at 18 Code of Federal Regulations § 5.18(b)(3).	Federal	To be determined
FERC will make a decision on issuing a new license and, if so, under what terms and conditions within its authority as outlined in the Federal Power Act, as amended.	Federal	To be determined
SSWD will make a decision on approval of the Camp Far West Reservoir pool raise.	State/ Federal	To be determined

CEQA Baseline

The CEQA analysis for the Proposed Project will be evaluated against the baseline conditions that are currently existing, including: the current FERC Project boundary, existing facilities, current operations and routine maintenance activities, current protective measures, and current surrounding environment.

SSWD-Proposed Project commitments, including a new flow regime and environmental measures, will be analyzed as a commitment of the Proposed Project. Conclusions in the CEQA impact analysis will be drawn after the inclusion of Project commitments. Mitigation for the Proposed Project will be considered after the inclusion of Project commitments and added if Project commitments still do not reduce impacts to a less than significant level.

Public Review Process

Public involvement is an integral part of the CEQA environmental review process. CEQA requires the disclosure of information about proposed projects to the public and agency decision-makers and seeks to foster public participation and informed decision making.

This IS/MND is being circulated for public review to the California Office of Planning and Research State Clearinghouse for distribution to appropriate resource agencies and posting on CEQAnet, and to the Placer, Nevada, and Yuba county clerks for posting. The IS/MND is also available at www.sswdrelicensing.com The IS/MND is being circulated and written comments are being accepted from October 29 through November 29, 2021.

2 Environmental Checklist Form

1. Project Title: Camp Far West Hydroelectric Project Relicensing
2. Lead Agency name and address: South Sutter Water District, 2464 Pacific Avenue, Trowbridge, CA 95659
3. Contact person and phone number: Brad Arnold, General Manager, (530) 656-2242
4. Project location: The Proposed Project is located along the Bear River 6.5 miles east of the City of Wheatland, CA in Yuba, Nevada, and Placer counties.
5. General Plan designation: The Proposed Project is designated for natural resources in the *Yuba County General Plan* (Yuba County 2011a), rural in Nevada County, and agriculture/timberland in Placer County.
6. Zoning: The Proposed Project is zoned for Agriculture and Resource Preservation and Recreation in Yuba County, Agriculture in Nevada County, and Agriculture and Resort in Placer County.
7. Description of project: The SSWD owns and operates the Camp Far West Hydroelectric Project. SSWD is seeking a new license from FERC with a term of 50 years to continue operating the Camp Far West Hydroelectric Project. As part of the proposed approval of the new FERC license, SSWD is proposing five project components: Modify the FERC Project boundary; Implement a new flow regime; Implement environmental measures; Increase the height of the Camp Far West Spillway by 5 feet to raise the maximum reservoir elevation of the Camp Far West Reservoir; and Rehabilitate, replace, and relocate recreation features.

8. Surrounding land uses and setting: The Proposed Project is located in a rural area along the Bear River used predominately for natural space, recreation, and agriculture.
9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.): Permits and approvals for the Proposed Project include FERC license approval, State Water Resource Control Board CWA Section 401 Clean Water Certification Approval, ESA Section 7 consultation, NHPA Section 106 consultation, and NEPA compliance.
10. 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.? SSWD has notified tribes who have expressed interest regarding the Proposed Project.

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.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input checked="" type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

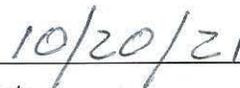
Determination (To be Completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the 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 ENVIRONMENTAL IMPACT REPORT 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 ENVIRONMENTAL IMPACT REPORT 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:

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 is 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.

2.1 Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project is located along the Bear River in Yuba, Nevada, and Placer counties in California, approximately 17 miles southeast of Marysville and 6.5 miles east of the City of Wheatland. The Proposed Project encompasses the entirety of Camp Far West Reservoir, the existing Camp Far West Dam Spillway, two large recreational facilities, numerous access roads, and both private and publicly owned lands. Camp Far West Road provides paved public access to the Proposed Project site, crosses the dam, and provides views of the reservoir and main recreation facilities associated with the reservoir.

The foothill regions of Yuba, Placer, and Nevada counties and the surrounding vicinity are dominated by annual grasslands, blue oak-foothill pine woodlands, and areas of mixed chaparral. Historically, this region was used for grazing and mining (Yuba County 2011a, Nevada County 1996, Placer County 2013a). Today, scattered grazing, agriculture, rural residential sites, recreation, a military installation, and a wildlife management area are the primary land uses near the Proposed Project. More detail on existing land use in and around the Proposed Project can be found in Section 2.11, *Land Use and Planning*. Grazing takes place in the surrounding lightly wooded hills and grasslands, while most of the orchard and field agriculture (particularly rice) occurs in the Central Valley region immediately to the west of the Proposed Project (Yuba County 2011a). Rural residential development has become an increasing part of the foothill landscape (Yuba County 2011a). Several rural residential sites are located within 1 mile of the Proposed Project, immediately to the north and west. Recreational opportunities, including boating, fishing, camping, and picnicking

are available at Camp Far West Reservoir directly to the east of the Proposed Project. Beale Air Force Base is located approximately 3 miles to the northwest of the Proposed Project, and Spenceville Wildlife Management and Recreation Area is located approximately 2 miles north of the Proposed Project. Additionally, hydroelectric generating facilities are located below the dam, but are a minimal part of the landscape setting.

No officially designated state or county scenic highways or highways eligible for official designation are located within or near the Proposed Project site (Caltrans 2021). Additionally, there are no officially designated scenic vistas within or near the Proposed Project site. However, the foothills surrounding the Proposed Project site provide views of the Central Valley below, as well as distant views of the Sutter Buttes and rivers. Furthermore, Camp Far West Reservoir is a visual attraction because of the wide expanse of water, rugged shoreline, and various recreational opportunities. The Proposed Project site is highly visible from the main access road, the Camp Far West Reservoir water surface, and from the reservoir's recreational facilities, including the main campgrounds, boat launches, and swimming beaches.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

1963 Scenic Highway Program

The California Scenic Highway Program was established by the State Legislature through Senate Bill 1467. Senate Bill 1467 added Sections 260 through 263 to the Streets and Highways Code. In these statutes, the State proclaims intent to, "establish the State's responsibility for the protection and enhancement of California's natural scenic beauty by identifying those portions of the State highway system which, together with adjacent scenic corridors, require special conservation treatment" (Caltrans 2021).

This legislation places the Scenic Highway Program under the stewardship of the California Department of Transportation (Caltrans), giving the agency full possession and control of all state highways. The legislation further declares the intent of the state to assign responsibility for the regulation of land use and development along scenic highways to the appropriate state and local governmental agencies. Additionally, a county highway component exists that adds the Scenic Highway Program in Section 154 of the Streets and Highways Code (Caltrans 2021).

Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

Impact Conclusion: *No Impact.*

While there are no officially designated scenic vistas within or near the proposed FERC Project boundary, Camp Far West Reservoir is a visual attraction and many of the Proposed Project site activities, mainly the spillway expansion and the relocation and enhancement of recreational features, would be highly visible from the reservoir's main access road, the reservoir's water surface, and from the reservoir's main recreational facilities.

Implementing the proposed FERC Project boundary change, new flow regime, environmental measures, and Camp Far West Reservoir pool raise would have no negative impacts on the visual

quality of the area. In fact, the proposed pool raise would result in higher water levels in the reservoir at times and may prove to be more attractive to recreationists, residents, wildlife, and other visitors.

Recreation Feature Rehabilitation, Replacement, and Relocation

Although recreation feature rehabilitation, relocation, and replacement may cause temporary visual disturbance during construction, operation of these activities after construction would be consistent with current operations and would not create new visual impairment. Improvements would be designed to retain the visual character of the area, blend with the natural environment, and be consistent with existing exterior features and aesthetics. Additionally, no new facilities are anticipated to be added as part of the Proposed Project. Therefore, because no designated scenic vistas are located within the Proposed Project vicinity and because project activities and improvements would be consistent with existing aesthetics, implementation of the Proposed Project would have no impact on scenic vistas.

Mitigation Measures: None required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

Impact Conclusion: Less than Significant Impact.

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would have no impact on scenic resources.

Under existing conditions, the Proposed Project site encompasses 2,863.7 acres and includes the entirety of Camp Far West Reservoir and of surrounding lands that can be characterized mainly by annual grasslands, blue oak (*Quercus douglasii*) woodlands, blue oak foothill pine (*Pinus sabiniana*), and montane hardwood. As described in the *Environmental Setting* section above, there are no state designated scenic highways in the Proposed Project area, but the Proposed Project area is considered a local visual attraction.

Camp Far West Reservoir Pool Raise

The pool raise would involve demolishing the concrete cap on the existing Camp Far West Dam Spillway, adding approximately 1,730 cubic yards of concrete to raise the existing spillway crest from an elevation of 300 feet to an elevation of 305 feet, and anchoring the new concrete with steel dowels. Construction of the spillway modification would maintain the general scenic nature of the area but would increase the overall spillway footprint and potentially eliminate some of the surrounding upland habitats. As described in Section 2.4, *Biological Resources*, proposed mitigation measures would reduce the area of construction disturbance to the smallest footprint feasible and would require temporarily disturbed areas to be revegetated with native species. The Proposed Project would include areas designated for employee parking, equipment staging and vehicle refueling, and clean fill disposal. Concrete would be brought from off site (within 100 miles); thus, no on-site borrow areas would be associated with the pool raise. Construction vehicles and equipment would be located on site and would use local roads and highways. However, construction-related traffic would be spread over the duration of the pool raise work. There would be no work within the reservoir or construction of any additional haul. Therefore, visual impacts would be minimal and the additional 5 feet of water resulting from the proposed inundation would not greatly alter the existing visual character of the reservoir.

Recreation Feature Rehabilitation, Replacement, and Relocation

As a result of the proposed Camp Far West Reservoir pool raise, approximately 104 existing recreational site features would require relocation; 57 at the NSRA and 47 at the SSRA. Because design is not complete, it is not possible to determine all of the effects of various activities that may occur over the term of a license at this time. Therefore, as a license condition, the licensee is required to develop and implement various management plans that consider and manage effects on resources throughout the term of the license. The *Recreation Facilities Plan* has been developed to manage the recreation sites at Camp Far West. Specific designs and methods for the relocation and/or modification of the 104 recreational site features would require formal review and further adherence to visual standards through the *Recreational Facilities Plan* (Appendix B). None of these recreational features is considered to be historic and no historic structures would be affected by the proposed recreational feature rehabilitation, replacement, and relocation. Further, a 5-foot rise would not cover rock outcroppings, as there would not be enough additional water, and no historic buildings would be inundated. It is likely that the rehabilitation, replacement, or relocation of the 104 recreational features may disrupt or eliminate some upland vegetation communities depending on the type of rehabilitation or the size of the footprint of the replaced or relocated facilities. The *Recreational Facilities Plan* and other adopted plans would account for any disturbed or eliminated vegetation communities to preserve visual character.

As a result, impacts to scenic resources would be less than significant.

Mitigation Measures: *None required.*

c) *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?*

Impact Conclusion: *Less Than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regimes, and environmental measures would not alter the existing visual character of the Proposed Project area.

Camp Far West Reservoir Pool Raise

Construction of the Camp Far West Reservoir Pool Raise would be temporary in nature and would not substantially or permanently degrade the existing visual character or quality of public views of the site and its surroundings. As previously discussed, the pool raise would involve demolishing the concrete cap on the existing Camp Far West Dam Spillway, adding approximately 1,730 cubic yards of concrete to raise the existing spillway crest, and anchoring the new concrete with steel dowels. This work would include areas for employee parking and vehicle staging and refueling. SSWD has retained the area located immediately west of the auxiliary spillway for staging needs. Any temporary staging, material stockpiling, and vehicle refueling areas associated with the Proposed Project would be graded, hydroseeded, and returned to its original condition after work is completed. Construction vehicles and equipment would be located on site and would use local roads and highways. However, many of the materials and equipment staged on site would be removed following completion of the Proposed Project to return the site to pre-construction conditions. Additionally, a slightly higher spillway crest and inundation would be minor alterations and likely enhance the visual quality of the area.

Recreation Feature Rehabilitation, Replacement, and Relocation

As previously discussed, the pool raise would result in the rehabilitation, replacement, or relocation of 104 recreational features. This work would adhere to adopted resource management plans and follow site-specific best management practices (BMPs). It is likely that the rehabilitation, replacement, or relocation of the 104 recreational features may disturb or eliminate some upland vegetation communities. The total area disturbed or eliminated would be determined by the type of rehabilitation or the size of the footprint of the replaced or relocated features. Although recreation feature rehabilitation, relocation, and replacement may cause a short-term visual disturbance, these activities are temporary in nature and would not be any less intrusive to the eye than current facilities and would not permanently adversely impact the visual quality of the site. Improvements would be designed to be visually pleasing and blend with the natural environment and match existing recreational facility external aesthetics. Additionally, no new facilities are anticipated to be added as part of the Proposed Project.

Therefore, because most of the visual alterations during construction would be short term, temporary and contained to site-specific areas, the Proposed Project is not anticipated to substantially degrade the existing visual character or quality of the Proposed Project area, impacts would be less than significant, and no further mitigation would be required.

Mitigation Measures: *None required.*

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Conclusion: *No Impact.*

Implementing the proposed FERC Project boundary change; new flow regime; environmental measures; pool raise; and recreation feature rehabilitation, replacement, and relocations would not cause substantial light or glare. No new stationary or permanent sources of light or glare are included with any of the Proposed Project components. Reflective building materials are not proposed for use. The operation of construction vehicles and equipment may result in the addition of light or glare. Operation of construction vehicles and equipment would mostly occur during daylight hours and would not substantially increase light or glare in the area. Therefore, the Proposed Project would have no impact related to the creation of new sources of substantial light or glare, and no mitigation would be required.

Mitigation Measures: *None required.*

2.2 Agriculture and Forestry Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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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:

a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Crop and grazing lands make up approximately 60 percent of Yuba County's land area, with agriculture being the single most important economic activity and largest land use in the county. Timberlands make up approximately 77 percent of Yuba County's land area. The predominant land uses in Nevada County are forest and rural, making up approximately 85 percent of the county's land uses (SSWD 2019). Croplands dominate the Central Valley floor while grazing lands are mostly found in the foothill region of the county (Yuba County 2011a). Large forested areas of the three counties encompassing the Proposed Project provide habitat, surface water supply, visual

resources, and timber resources. Similar to agriculture, timber harvest is a major part of the local economy.

The Proposed Project is zoned for agriculture and resource preservation and recreation in Yuba County, agriculture in Nevada County, and agriculture and resort in Placer County. Further detail regarding land use in the vicinity of the Proposed Project can be found in Section 2.11, *Land Use and Planning*. Despite being zoned exclusively for agriculture, most of the surrounding land has been designated as other land, which consists of land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres (FMMP 2017). No forest land or timberland is located near the Proposed Project site.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Williamson Act Program

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use.

Impact Analysis

a) 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?

Impact Conclusion: *No Impact.*

The proposed FERC Project boundary change would add 19.9 acres and remove 209.6 acres of land from the existing FERC Project boundary. This can be broken down as the addition of 7.9 acres of private lands and removal of 0.8 acres of private lands, and the addition of 14.4 acres of SSWD-owned lands and removal of 211.2 acres of SSWD-owned lands. The FERC Project boundary change would not result in changes in land use or designation.

In Yuba County, the Proposed Project is located in natural resource land use designation area (Yuba County 2011a) and is located within resource preservation and recreation (RPR) and agricultural/residential (AR-20) zoning. The RPR zoning is focused on the preservation of land for recreational use and the protection of natural resources and wildlife (Yuba County 2021a).

In Placer County, the Proposed Project is located in agriculture/timberland land use designation area (Placer County 2021a) and is located within agriculture and residential zoning. The agricultural zoning district identifies land for the production of food and fiber, including areas of prime agricultural soils, and other productive and potentially productive lands where commercial agricultural uses can exist without creating conflicts with other land uses, or where potential conflicts can be mitigated (Placer County 2013a).

In Nevada County, the Proposed Project is located in rural land use designation (Nevada County 1996) and is located within general agricultural (AG-40) zoning. The rural land use is aimed to provide for development of compatible uses within a rural setting. Such uses include agricultural

operations and production, natural resource production and management, and low-intensity recreation (Nevada County 1996).

All lands in Nevada County bordering the reservoir are zoned as general agriculture (Nevada County 1996). The lands directly bordering the reservoir in Placer County are also all zoned as farm/agricultural and residential uses (Placer County 2021a). Lands in Yuba County bordering the reservoir are zoned as exclusive agricultural district and agricultural residential (Yuba County 2021a). However, the proposed FERC Project boundary change would not include areas of prime farmland, unique farmland, or farmland of statewide importance. Further, implementing the new flow regime, environmental measures, Camp Far West Reservoir pool raise, and future recreation feature rehabilitation, replacement, or relocation components would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural use (FMMP 2017). Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Impact Conclusion: No Impact.

The Proposed Project is zoned for agriculture and resource preservation and recreation in Yuba County, agriculture in Nevada County, and agriculture and resort in Placer County; however, no land enrolled in a Williamson Act contract is located within the proposed FERC Project boundary change.

Further, implementing the new flow regime, environmental measures, Camp Far West Reservoir pool raise, and future recreation feature rehabilitation, replacement, and relocation components would not include areas under a Williamson Act contract (FMMP 2017). Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

c) 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))?

Impact Conclusion: No Impact.

Because no lands zoned as forest land or timberland are located within the Proposed Project area, the Proposed Project would not conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timber Production (Yuba County 2011a, Nevada County 1996, Placer County 2013a). Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Impact Conclusion: No Impact.

Because no forest land is located within the Proposed Project, the Proposed Project would not result in the loss of forest land to non-forest use. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

e) *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?*

Impact Conclusion: *No Impact.*

Because no farmland or forestland is located within the Proposed Project area, the Proposed Project would not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural use or forest land to non-forest use. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

2.3 Air Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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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:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The Proposed Project is located in Yuba, Nevada, and Placer counties. Project facilities located within Yuba County are under the jurisdiction of the Feather River Air Quality Management District (FRAQMD). Project facilities located within the Nevada County are under the jurisdiction of the Northern Sierra Air Quality Management District (NSAQMD), while Project facilities located within the Placer County are under the jurisdiction of the Placer County Air Pollution Control District (PCAPCD).

Criteria Air Pollutants

Air pollutants emitted into the ambient air by stationary and mobile sources are known as criteria air pollutants, which are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), inhalable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants such as ozone (O₃) through chemical and photochemical reactions in the atmosphere. The sources and health effects of these criteria air pollutants are summarized in Table 2.3-1.

Table 2.3-1. Sources and Effects of Major Criteria Air Pollutants

Pollutant	Sources	Effects
Ozone (O ₃)	Chemical reaction of ROG and NO _x in the presence of sunlight and heat.	Aggravation of respiratory and cardiovascular diseases. Irritation of eyes. Impairment of cardiopulmonary function. Plant leaf injury.
Carbon Monoxide (CO)	By-products from incomplete combustion of fuels and other carbon containing substances, such as motor exhaust. Natural events, such as decomposition of organic matter.	Impairment of mental function. Impairment of vision. Death at high levels of exposure. Aggravation of some heart diseases.
Nitrogen Dioxide (NO ₂)	Motor vehicle exhaust. High temperature stationary combustion. Atmospheric reactions.	Aggravation of respiratory illness. Reduced visibility. Reduced plant growth. Formation of acid rain.
Suspended Particulate Matter (PM ₁₀ and PM _{2.5})	Combustion of solid fuels. Construction activities. Industrial processes. Unpaved roads. Atmospheric chemical reactions.	Reduced lung function. Aggravation of respiratory and cardiorespiratory diseases. Increased cough and chest discomfort. Reduced visibility. Premature death.
Sulfur Dioxide (SO ₂)	Combustion of sulfur-containing fossil fuels. Smelting of sulfur-bearing metal ores. Industrial processes.	Aggravation of respiratory diseases (asthma, emphysema). Reduced lung function. Irritation of eyes. Reduced visibility. Contributes to acid rain. Damages statues and monuments.
Lead (Pb)	Lead-based industrial processes like battery production and smelters. Lead paint. Leaded gasoline.	Impairment of blood function and nerve construction. Behavioral and hearing problems in children. Decreased plant and animal growth.

Source: USEPA 2021

Toxic Air Contaminants

Toxic air contaminants (TACs) are pollutants that cause or may cause cancer or other serious health effects such as birth defects; neurological and reproductive disorders; or chronic eye, lung, or skin irritation. TACs also may cause adverse environmental and ecological effects. TACs include substances such as volatile organic compounds, chlorinated hydrocarbons, asbestos, dioxin, toluene, gasoline engine exhaust, particulate matter emitted by diesel engines, and metals such as cadmium, mercury, chromium, and lead compounds, among many others.

Diesel engines emit a complex mixture of pollutants, including very small carbon particles, or "soot" coated with numerous organic compounds, known as diesel particulate matter (DPM). In 1998, the California Air Resources Board (ARB) identified DPM as a TAC. A primary source of DPM emissions is combustion from diesel engines, such as those in trucks and other motor vehicles. DPM is of concern because it is a potential source of both cancer and non-cancer health effects, and because it is present at some concentration in all developed areas of the state. DPM contributes to numerous

health impacts that have been attributed to particulate matter exposure, including increased hospital admissions, particularly for heart disease, but also for respiratory illnesses, and even premature death.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular and respiratory diseases. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The nearest sensitive receptor is a rural residence located along Hokan Lane, just north of the Camp Far West Road and Hokan Lane intersection, approximately 2,000 feet from the limits of the Project site.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Federal Clean Air Act

The Federal Clean Air Act (FCAA), as amended, is the primary federal law governing air quality. The FCAA is regulated by U.S. Environmental Protection Agency (USEPA), which sets standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS standards have been established for six criteria air pollutants: CO, NO₂, O₃, SO₂, PM₁₀, and PM_{2.5}. In addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. The federal regulatory schemes also cover TACs.

The FCAA requires USEPA to designate areas as attainment or nonattainment for each criteria pollutant based on whether the NAAQS have been achieved. An attainment/unclassifiable designation means that the area has sufficient data to determine that the area is meeting the NAAQS or that due to no data or insufficient data, USEPA cannot make a determination.

California Clean Air Act

The California Clean Air Act (CCAA) is administered by the ARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. ARB is responsible for meeting the state requirements of the FCAA, administering the CCAA, establishing the California Ambient Air Quality Standards (CAAQS), and establishing motor vehicle emissions standards.

CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

The CCAA requires ARB to designate areas in California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

Table 2.3-2 presents the attainment status of Yuba, Nevada and Placer counties relative to the NAAQS and CAAQS.

Table 2.3-2. Ambient Air Quality Attainment Status

Pollutant	Yuba County	Nevada County	Placer County
National Ambient Air Quality Standards (NAAQS)			
8-hour O ₃	Unclassified/Attainment	Nonattainment	Nonattainment
PM ₁₀	Unclassified	Unclassified	Unclassified
PM _{2.5}	Unclassified/Attainment	Unclassified/Attainment	Unclassified/Attainment
CO	Unclassified/Attainment	Unclassified/Attainment	Unclassified/Attainment
NO ₂	Unclassified/Attainment	Unclassified/Attainment	Unclassified/Attainment
SO ₂	Unclassified/Attainment	Unclassified/Attainment	Unclassified/Attainment
Pb	Unclassified/Attainment	Unclassified/Attainment	Unclassified/Attainment
California Ambient Air Quality Standards (CAAQS)			
O ₃	Nonattainment	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Nonattainment	Nonattainment
PM _{2.5}	Attainment	Unclassified	Unclassified
CO	Unclassified	Unclassified	Unclassified
NO ₂	Attainment	Attainment	Attainment
SO ₂	Attainment	Attainment	Attainment
Pb	Attainment	Attainment	Attainment
Sulfates	Attainment	Attainment	Attainment
Hydrogen Sulfide	Unclassified	Unclassified	Unclassified
Visibility Reducing Particles	Unclassified	Unclassified	Unclassified

Source: ARB 2021

Notes: O₃ = ozone, PM₁₀ = particulate matter 10 micrometers or less in diameter, PM_{2.5} = particulate matter 2.5 micrometers or less in diameter, CO = carbon monoxide, NO₂ = nitrogen dioxide, SO₂ = sulfur dioxide, Pb = lead.

California Mobile Source Regulations

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (Hot Spots Act). The Tanner Act created the state’s program to reduce exposure to air toxics, including DPM, which ARB identified as a TAC in 1998. The Hot Spots Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and stationary source plans to reduce these risks.

ARB has adopted a comprehensive *Diesel Risk Reduction Plan* (ARB 2000) to reduce emissions from both new and existing diesel-fueled engines and vehicles. The ARB has also adopted regulations to reduce emissions from both on-road and off-road heavy-duty diesel vehicles (for example, equipment used in construction). These regulations, known as airborne toxic control

measures, reduce the idling of school buses and other commercial vehicles, control DPM, and limit the emissions of ocean-going vessels in California waters. Regulations also include measures to control emissions of air toxics from stationary sources.

Thresholds of Significance

FRAQMD's *Indirect Source Review Guidelines* (FRAQMD 2010) identifies CEQA thresholds of significance for certain criteria air pollutants to assist lead agencies in determining air quality impacts for projects. The thresholds of significance adopted by the FRAQMD are presented in Table 2.3-3.

Table 2.3-3. FRAQMD Thresholds of Significance

Pollutant	Construction Threshold	Operational Threshold
NO _x	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year	25 lbs/day
ROG	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year	25 lbs/day
PM ₁₀	80 lbs/day	80 lbs/day
PM _{2.5}	Not yet established	Not yet established

Source: FRAQMD 2010

Notes: lbs = pound, NO_x = nitrogen oxide, ROG = reactive organic gas, PM₁₀ = particulate matter 10 micrometers or less in diameter, PM_{2.5} = particulate matter 2.5 micrometers or less in diameter.

To assist local jurisdictions in evaluating air quality impacts, the NSAQMD has published the *Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects* (NSAQMD 2009) that includes thresholds of significance used in evaluating land use projects. The thresholds of significance adopted by the NSAQMD are presented in Table 2.3-4.

Table 2.3-4. NSAQMD Thresholds of Significance

Pollutant	Level A Threshold	Level B Threshold
NO _x	<24 lbs/day	24-136 lbs/day
ROG	<24 lbs/day	24-136 lbs/day
PM ₁₀	<79 lbs/day	79-136 lbs/day

Source: NSAQMD 2009

Notes: lbs = pound, NO_x = nitrogen oxide, ROG = reactive organic gas, PM₁₀ = particulate matter 10 micrometers or less in diameter.

The PCAPCD's *CEQA Handbook* (PCAPCD 2017) provides guidance for evaluating project-level air quality impacts, including thresholds of significance to assist lead agencies in evaluating the significance of project-generated emissions. The thresholds of significance adopted by the PCAPCD are presented in Table 2.3-5.

Table 2.3-5. PCAPCD Thresholds of Significance

Pollutant	Construction Threshold	Operational Threshold
NO _x	82 lbs/day	55 lbs/day
ROG	82 lbs/day	55 lbs/day
PM ₁₀	82 lbs/day	55 lbs/day

Source: PCAPCD 2017

Notes: lbs = pound, NO_x = nitrogen oxide, ROG = reactive organic gas, PM₁₀ = particulate matter 10 micrometers or less in diameter.

No construction would occur in Nevada County; therefore, the Proposed Project’s construction emissions are compared against FRAQMD and PCAPCD thresholds of significance.

Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

Impact Conclusion: *No Impact.*

Proposed FERC Project Boundary Change

The existing land use and proposed FERC Project boundary change is an administrative change, resulting in no physical change to vehicles traversing the area. Therefore, the proposed FERC Project boundary change would not generate criteria air emissions in the Proposed Project area. As a result, the Proposed Project would not conflict with or obstruct implementation of the relevant air quality plans, and no impact would occur. No mitigation would be required.

Implementation of New Flow Regime and Environmental Measures

Implementation of the new flow regime and environmental measures would generate criteria air emissions from the use of worker vehicles for monitoring activities. However, the criteria air emissions generated by implementing a new flow regime and environmental measures would be minimal and immeasurable due to the infrequency of these activities. Therefore, there would be no conflict with or obstruction of implementing the relevant air quality plans. As a result, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement and Relocation

The FRAQMD and PCAPCD have established CEQA guidelines that set forth significance thresholds, below which a project may be safely assumed to conform to the relevant air quality plans for this area. Construction of the Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, or relocation would generate short-term criteria pollutant emissions. As shown in Table 2.3-7 and Table 2.3-8, the construction emissions associated with the pool raise would be below the established significance thresholds. As discussed in checklist item b), the recreation feature rehabilitation, replacement, or relocation would have a smaller air quality impact than the pool raise. The pool raise and recreation feature rehabilitation, replacement, or relocation 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. Therefore, the Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, or relocation would not conflict with or obstruct implementation of the relevant air quality plans. As a result, no impact would occur, and no mitigation is required.

Mitigation Measures: None required.

b) 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?

Impact Conclusion: Less than Significant Impact.

Proposed FERC Project Boundary Change

The existing land use and proposed FERC Project boundary change would have no differences, resulting in no change to vehicles traversing the area. Therefore, the proposed FERC Project boundary change would not generate criteria air emissions in the Proposed Project area, and there would be no cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. As a result, no impact would occur, and no mitigation would be required.

Implementation of New Flow Regime and Environmental Measures

Implementation of the new flow regime and environmental measures would generate criteria air emissions from the use of worker vehicles for monitoring activities. However, the criteria air emissions generated by implementing the new flow regime and environmental measures would be minimal and immeasurable due to the infrequency of these activities. Therefore, there would be no 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, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise

Construction activities for the Camp Far West Reservoir pool raise would generate criteria air pollutant emissions from demolition, filling, compacting, excavating, fueling activities, and operating construction equipment. Short-term proposed construction and ground disturbing activities would involve use of construction equipment, haul trucks, and construction labor commute vehicles. The construction labor force is estimated to average 15 persons over the construction period. This equates to approximately 8 personnel on site daily, including site supervisor, engineers, transportation equipment operators, and construction personnel. Table 2.3-6 lists the major equipment expected to be required for the construction activities.

Table 2.3-6. Construction Equipment

Activity	Equipment Type	Quantity
General Construction Labor	Pickup Truck	1
Site Preparation/Clearing (including demolition of existing foundation)	Grader	1
	Crawler Tractor	2
	Backhoe	2
	Water Truck	1
	Air Compressor	2
	Excavator	2
	Concrete Saw	1
	Rubber Tired Loader	1
Construction (including excavation, pouring of concrete, construction of forms for new concrete, installation of rebar)	Water Truck	1
	Air Compressor	1
	Backhoe	2
	Crawler Tractor	1
	End Dump Truck	4
	Welder	1
	Generator	1
	Crane	1
General Deliveries and Transport	Tractor Trailer	1
	Ready-Mix Concrete Truck	1
	Concrete Pump Truck	1
Site Restoration	Hydroseeding Truck	1
	Tackifier/Mulch Truck	1

Notes: All equipment, quantities, and activity descriptions are conceptual estimates; actual material quantities and equipment type/quantities depend on final design and construction approach related to contractor means and methods.

The California Emissions Estimator Model (CalEEMod Version 2016.3.2) was used to calculate construction criteria pollutant emissions from the proposed pool raise. Table 2.3-7 and Table 2.3-8 presents an estimate of construction criteria pollutant emissions. The detailed CalEEMod output is included in Appendix D. Criteria pollutant emissions generating activities associated with the pool raise would be located within Yuba and Placer counties. No construction work is anticipated in Nevada County. Therefore, for the purposes of this analysis, the thresholds of significance established by the FRAQMD and PCAPCD are the applicable thresholds.

Table 2.3-7. Construction Criteria Pollutant Emissions in Tons/Year

Construction Emissions	NO _x	ROG	PM ₁₀
Annual Emissions	2.24	0.28	0.14
FRAQMD Thresholds of Significance	4.5	4.5	-
Exceeds FRAQMD Thresholds of Significance?	No	No	-

Notes: NO_x = nitrogen oxide, ROG = reactive organic gas, PM₁₀ = particulate matter 10 micrometers or less in diameter; FRAQMD = Feather River Air Quality Management District.

Table 2.3-8. Construction Criteria Pollutant Emissions in Lb/Day

Construction Emissions	NO _x	ROG	PM ₁₀
Maximum Daily Emissions	20.03	2.51	1.26
FRAQMD Thresholds of Significance	25	25	80
Exceeds FRAQMD Thresholds of Significance?	No	No	No
PCAPCD Thresholds of Significance	82	82	82
Exceeds PCAPCD Thresholds of Significance?	No	No	No

Notes: lbs = pounds, NO_x = nitrogen oxide, ROG = reactive organic gas, PM₁₀ = particulate matter 10 micrometers or less in diameter; FRAQMD = Feather River Air Quality Management District; PCAPCD = Placer County Air Pollution Control District.

Annual construction emissions are not expected to exceed FRAQMD's threshold of significance for NO_x and ROG, as shown in Table 2.3-7. As shown in Table 2.3-8, maximum daily NO_x, ROG and PM₁₀ emissions during construction would not exceed the thresholds of significance established by FRAQMD and PCAPCD.

As mentioned above in item a, FRAQMD and PCAPCD have developed thresholds of significance that focus on quantifying and reducing emissions from construction projects in the region. For the purposes of this analysis, net increases of criteria pollutants would be deemed cumulatively considerable if they were to exceed the thresholds developed by FRAQMD and PCAPCD.

Criteria pollutant emissions associated with the pool raise would be well below the thresholds of significance established by FRAQMD and PCAPCD. Potential air quality impacts would be further reduced through SSWD's compliance with FRAQMD's and PCAPCD's dust control plans and other standard measures for construction projects. Therefore, the Camp Far West Reservoir pool raise's incremental contribution to criteria pollutant emissions are not cumulatively considerable, resulting in a less than significant impact. No mitigation would be required.

Recreation Feature Rehabilitation, Replacement, and Relocation

The recreation facilities requiring rehabilitation, replacement, or relocation would generate short-term construction greenhouse gas (GHG) emissions. However, the specific rehabilitation/replacement, relocation, schedule of construction, and approach to achieving these objectives require further design and feasibility assessment. The area of disturbance associated with the recreational feature rehabilitation, replacement, and relocation is estimated to be approximately 15 acres. This is much smaller than the area to be disturbed by the Camp Far West Reservoir pool raise (less than 30 acres). Therefore, the recreational feature relocations and improvements are anticipated to have a smaller air quality impact than the pool raise. As a result, impacts would be less than significant, and no mitigation would be required.

Mitigation Measures: None required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would not generate criteria pollutant emissions in the Proposed Project area; therefore, would not expose sensitive receptors to substantial pollutant concentrations. As a result, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement and Relocation

The nearest sensitive receptor is a rural residence located along Hokan Lane, just north of the Camp Far West Road and Hokan Lane intersection, approximately 2,000 feet from the limits of the Proposed Project site. Construction-related activities associated with the Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, and relocation have the potential to generate concentrations of TACs, specifically DPM, from the use of diesel equipment. However, construction would be temporary and would occur over a relatively short duration in comparison to the operational lifetime of the Proposed Project. Only portions of the Proposed Project site would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location on the Proposed Project site. Operation of construction equipment within portions of the Proposed Project site would allow for the dispersal of TAC emissions and would avoid continuous construction activity in the portions of the Proposed Project site closest to existing sensitive receptors. In addition, all construction equipment and operation would be regulated per ARB's regulations for heavy-duty diesel vehicles. Project construction would also be required to comply with all applicable FRAQMD and PCAPCD rules and regulations, including those related to construction equipment. Therefore, TAC emissions during construction would not expose sensitive receptors to substantial pollutant concentrations, resulting in a less than significant impact. No mitigation would be required.

Mitigation Measures: *None required.*

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would not result in emissions of odors in the Proposed Project area. As a result, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement and Relocation

The nearest sensitive receptor is a rural residence located along Hokan Lane, just north of the Camp Far West Road and Hokan Lane intersection, approximately 2,000 feet from the limits of the Proposed Project site. Construction work associated with the Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, and relocation would generate diesel exhaust emissions from onsite construction equipment. The diesel exhaust emissions would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Therefore, Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, and relocation would not generate emissions of odors affecting a substantial number of people, resulting in a less than significant impact. No mitigation would be required.

Mitigation Measures: **None required.**

2.4 Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

This section describes the regional and local environmental setting regarding biological resources. For the purposes of this analysis, the biological study area (BSA) includes the entirety of the proposed FERC Project boundary, all associated permanent and temporary structures and components required for construction, plus a 0.5-mile buffer. This 0.5-mile buffer satisfies requirements for surveying included in current California Department of Fish and Wildlife (CDFW)-approved guidance, such as the Swainson’s Hawk Technical Advisory Committee’s 2010 *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s*

Central Valley (CDFW 2000), for the state listed Swainson’s hawk (*Buteo swainsoni*). Additionally, the Lower Bear River from Camp Far West Dam to the confluence with the Feather River is included in the BSA to characterize impacts from the new flow regime associated with the Proposed Project. Figure 2.4-1 shows the existing FERC Project boundary, the proposed FERC Project boundary, and the BSA.

Studies Performed to Date

The following biological studies and/or surveys have been completed to date for the BSA.

Camp Far West Hydroelectric Project Relicensing Studies

As part of the relicensing process, three terrestrial resources studies, three threatened and endangered species studies, and five aquatic resources studies were conducted between 2017 and 2018. The final data summaries for the completed studies have been posted to SSWD’s relicensing website⁶ and are summarized in the FLA in Volume II Exhibit E (SSWD 2019). These studies are summarized in Table 2.4-1.

Table 2.4-1. Resource Studies Filed with the Final License Application (FLA)

Study Number	Study Name	Year Completed
<i>Terrestrial Resources Studies</i>		
4.1	<i>Special-status Plants and Non-native Invasive Plants</i>	2017
4.2	<i>Special-status Wildlife – Raptors</i>	2017
4.3	<i>Special-status Wildlife – Bats</i>	2017
<i>Threatened and Endangered Species Studies</i>		
5.1	<i>Endangered Species Act (ESA) Listed Plants</i>	2017
5.2	<i>ESA-listed Wildlife – Valley Elderberry Longhorn Beetle Study</i>	2017/2018
5.3	<i>ESA-listed Amphibians – California Red-legged Frog Study</i>	2017
<i>Aquatic Resource Studies</i>		
2.2	<i>Water Temperature Modeling</i>	2017
3.1	<i>Salmonid Redd Study</i>	2018
3.2	<i>Stream Fish Populations Study</i>	2018
3.3	<i>Instream Flow Study</i>	2018
3.4	<i>Benthic Macroinvertebrate Study</i>	2017

Reconnaissance Surveys

HDR biologists conducted reconnaissance level surveys on April 27 and December 20, 2016, as well as July 5 and August 3, 2017, as part of the SSWD’s Camp Far West Spillway Expansion Project (expansion project, SSWD 2018). Surveys covered the entire expansion project footprint, including the proposed auxiliary spillway, road re-routes and widening, as well as proposed parking and staging areas. As part of this effort, HDR also evaluated adjacent areas, roughly 25 feet beyond the

⁶ South Sutter Water District. 2019. South Sutter Water District Public Relicensing Website. Accessed May 6, 2021. <https://sswdrelicensing.com/home/quick-links/>

expansion project footprint, where access was permitted (SSWD 2018). A large portion of the expansion project footprint overlaps the existing and proposed FERC Project boundaries.

Aquatic Resources Delineations

As part of SSWD's expansion project, HDR biologists conducted an aquatic resources delineation on February 1 and February 6, 2018, in accordance with guidelines listed in the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (Environmental Laboratory 2008). USACE issued a preliminary jurisdictional determination for aquatic resources associated with the expansion project on September 13, 2018 (SSWD 2018).

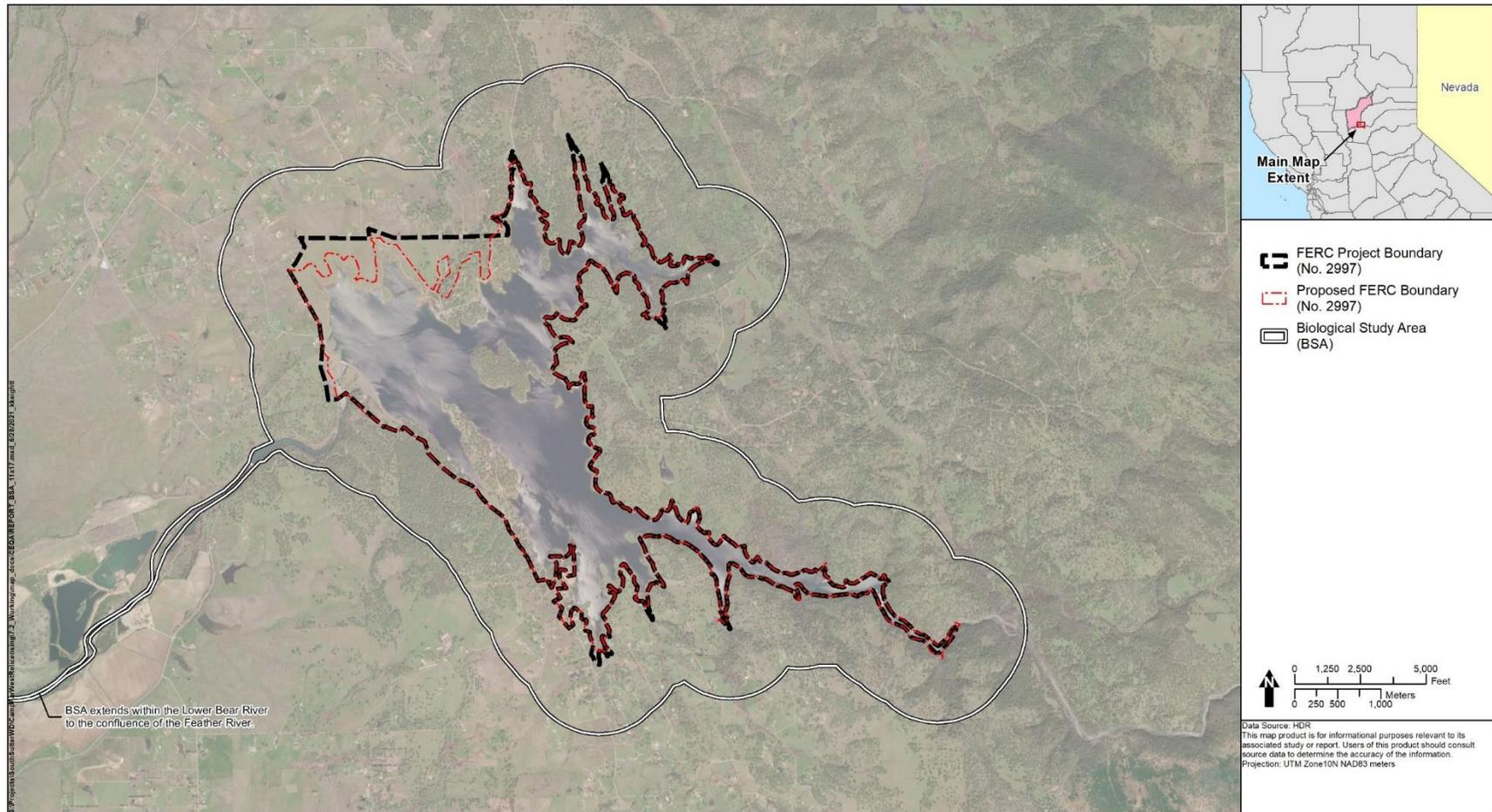
Additionally, Sycamore Environmental Consultants, Inc. (Sycamore Environmental) conducted an aquatic resources delineation of the entire Camp Far West Reservoir (including areas expected to be inundated by the anticipated 5-foot pool raise) between March and June 2013, following the same methods and procedures described above (Sycamore Environmental 2013a).

Literature Review

The following sources were used to characterize the environmental setting in the BSA. Project-related documentation was reviewed for site-specific data regarding special-status species habitat suitability. Additionally, preliminary database searches were performed of the following to identify special-status species and their habitats, as well as aquatic resources, with the potential to occur in the BSA:

- Camp Far West Spillway Expansion Project IS/MND (SSWD 2018)
- Camp Far West Final License Application (SSWD 2019)
- Camp Far West Biological Assessment (Sycamore Environmental 2013b)
- USFWS Information for Planning and Consultation System (IPaC) (USFWS 2021a)
- USFWS Critical Habitat Mapper (USFWS 2021b)
- USFWS National Wetland Inventory (NWI) (USFWS 2021c)
- CDFW California Natural Diversity Database (CNDDDB) QuickView Tool in BIOS 5 (CDFW 2021a)
- CDFW California Wildlife Habitat Relationships (CWHR) System database (CDFW 2021b)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2021)
- National Marine Fisheries Service (NMFS), California Species List Tool, Google Earth Application (NMFS 2021)
- Google Earth™ mapping service aerial imagery of the BSA (Google Earth 2021)
- Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2021)

Figure 2.4-1. The existing FERC Project Boundary, Proposed FERC Project Boundary, and the BSA.



The Camp Far West Spillway expansion project IS/MND, FLA, and biological assessment were reviewed for existing data on biological resources in the BSA. The USFWS IPaC System was queried to identify USFWS-regulated species that have the potential to occur in the BSA, and the USFWS Critical Habitat Portal was queried to identify designated critical habitat in or adjacent to the BSA. A query of the CNDDDB provided a list of processed and unprocessed occurrences for special-status species in the Camp Far West, Lincoln, Smartville, Rough and Ready, Sheridan, Wheatland, Browns Valley, Wolf, and Gold Hill, California, U.S. Geological Survey (USGS) 7.5-minute quadrangles. Further, the CNPS database was queried to identify special-status plant species with the potential to occur in the aforementioned USGS quadrangles. Lastly, the USFWS NWI database and Google Earth aerial imagery were reviewed to identify potential aquatic resources in the BSA, while the NRCS Web Soil Survey was queried to identify soil classifications in the BSA. A summary of the database search results and conclusions regarding the potential for each species to be impacted by Proposed Project-related activities are provided in the special-status species subsection.

Regional Setting

The BSA is located in the Sierra Nevada foothills ecological section of the Sierran steppe-mixed forest-coniferous forest-alpine meadow ecological province (McNab et al. 2007). The landscape of the Sierra Nevada foothills section is characterized as a block-mountain range composed of sedimentary, granitic, volcanic, and ultramafic substrates. Cover types in this section consist of oak woodland, annual and perennial grasslands, chaparral, and pine forest. Surface water is characterized by rapidly flowing streams, draining west into the Central Valley. Summers are hot and dry, while winters are mild (McNab et al. 2007). In addition, reservoirs for municipal water supply, irrigation, and flood control are common.

The Sierra Nevada foothills section is further subdivided into five subsections, including the lower foothills metamorphic belt ecological subsection, which includes the BSA. This subsection spans the lower elevation western edge of the Sierra Nevada and has a hot and subhumid climate. This subsection is on moderately steep hills and mountains at the western foot of the Sierra Nevada. The predominant vegetative community in this subsection is blue oak woodland with scattered grassland, chaparral, and valley oak woodland (McNab et al. 2007). Several large rivers cross this subsection, including the Bear, Yuba, and American rivers. All but the largest tributary streams are dry during summer months.

Local Setting

The BSA is located on the toe of the western Sierra Nevada foothills. Topography across the BSA is flat to gently rolling, with some steep slopes occurring near the spillway and along the Bear River, downstream of the reservoir. Elevation in the BSA ranges from approximately 150 to 550 feet above mean sea level. The Upper Bear River hydrologic unit (18020126) encompasses the entire BSA. Two major water bodies occur in and adjacent to the BSA: Camp Far West Reservoir and the Bear River. Surface water in the BSA flows into one of these two water bodies. The NRCS Web Soil Survey identifies 23 soil types in the BSA, in addition to water. In general, the soil types are well drained, composed predominantly of loam, and include a mix of metamorphic parent materials (NRCS 2021).

Vegetation Communities

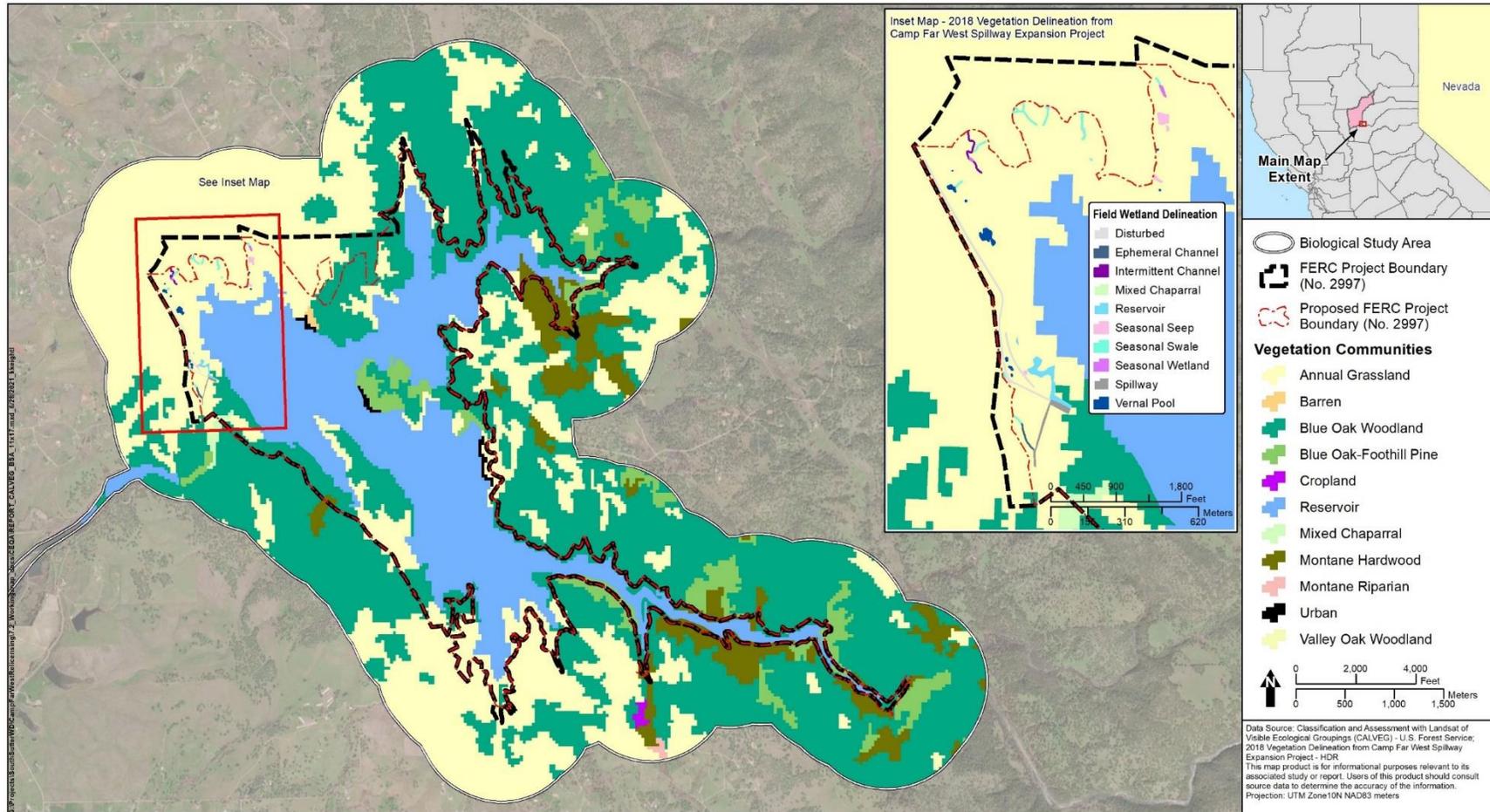
Vegetation communities in the BSA were characterized by reviewing the U.S. Forest Service (USFS) Calveg layers and reviewing ground-truthed data outlined in the *Studies Performed to Date* section above. Communities in the BSA include annual grassland, blue oak woodland, blue oak foothill-pine, disturbed, ephemeral channel, intermittent channel, mixed chaparral, montane hardwood, reservoir, seasonal seep, seasonal swale, seasonal wetland, spillway, urban, and vernal pool. Figure 2.4-2 depicts the Calveg types overlain with 2018 USACE-verified aquatic resources in the BSA (SSWD 2018). Descriptions of common species associated with each vegetation community, as well as the results of reconnaissance surveys are presented in the following subsections. General community descriptions are derived from CDFW's CWHR System database (2021b).

Annual Grassland

Most of the BSA is characterized by annual grassland, an upland vegetation community. The dominant species are non-native annual grasses, including Italian ryegrass (*Festuca perennis*), wild oats (*Avena barbata* and *Avena fatua*), a variety of bromes (*Bromus* spp.), quaking grasses (*Briza maxima* and *Briza minor*) and medusahead (*Elymus caput-medusae*). Associates include weedy forbs, such as longbeak stork's bill (*Erodium botrys*), tall sock-destroyer (*Torilis arvensis*), proliferous pink (*Petrorhagia dubia*), and rose clover (*Trifolium hirtum*), with a sparse scattering of native species, such as harvest brodiaea (*Brodiaea elegans* ssp. *elegans*). Most of the annual grassland in the BSA appears to be grazed by cattle. Sparse cottonwood (*Populus fremontii*) and willow (*Salix* spp.), including red willow (*Salix laevigata*), are scattered along the boundary between annual grasslands and the reservoir.

Annual grasslands provide foraging habitat for a wide variety of wildlife species, including raptors, seed-eating birds, small mammals, amphibians, and reptiles. However, some require special habitat features such as cliffs, caves, ponds, or habitats with woody vegetation for breeding, resting, and escape cover. Reptiles commonly associated with this habitat type include western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalis viridis*). Mammals commonly found in this habitat type include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), American badger (*Taxidea taxus*), and coyote (*Canis latrans*). Common birds known to breed in annual grasslands are horned lark (*Eremophila alpestris*) and western meadowlark (*Sturnella neglecta*).

Figure 2.4-2. Vegetation Communities in the BSA



Blue Oak Woodland

The second largest vegetation community in the BSA is blue oak woodland with an annual grassland understory; both upland vegetation communities. Scattered foothill pines and valley oak (*Quercus lobata*) contribute to the sparse tree canopy. Blue oak woodlands produce acorns used as forage by a variety of wildlife species, including acorn woodpecker (*Melanerpes formicivorus*), western scrub-jay (*Aphelocoma californica*), and black-tailed deer (*Odocoileus hemionus*). Trees containing cavities provide nesting habitat for birds such as the western bluebird (*Sialia mexicana*), tree swallow (*Tachycineta bicolor*), and northern flicker (*Colaptes auratus*) as well as potential roost sites for bats. Raptors, including the red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and great horned owl (*Bubo virginianus*), may nest in these woodlands. Coyotes and gray foxes (*Urocyon cinereoargenteus*) may forage within this habitat, and wildlife species dominant in annual grassland habitat (see above) flourish beneath the oak canopy.

Blue Oak-Foothill Pine

The eastern portion of the BSA is characterized by blue oak foothill pine with an annual grassland understory; both upland vegetation communities. Blue oak and foothill pine typically comprise the overstory of this habitat, with blue oak dominant. Tree species typically associated with this habitat include interior live oak (*Quercus wislizeni*) and California buckeye (*Aesculus californica*). Associated shrub species can include ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), California coffeeberry (*Rhamnus californica*), poison-oak (*Toxicodendron diversilobum*), silver lupine (*Lupinus albifrons*), rock gooseberry (*Ribes quercetorum*), and California redbud (*Cercis occidentalis*). Blue oak woodlands provide breeding and foraging habitat for a large variety of wildlife species similar to those found in blue oak woodland habitat.

Mixed Chaparral

Mixed chaparral can be found in the southern portions of the BSA. Dominant species include scrub oak (*Quercus berberidifolia*) and several species of ceanothus and manzanita. Commonly associated shrubs include chamise (*Adenostoma fasciculatum*), birchleaf mountain mahogany (*Cercocarpus montanus*), silk-tassel (*Garrya elliptica*), toyon (*Heteromeles arbutifolia*), yerba-santa (*Eriodictyon californicum*), California buckeye, poison-oak, and California fremontia (*Fremontodendron californicum*). Common associates may include acorn woodpeckers, jack rabbits, mule deer, coyotes, and alligator lizards (*Elgaria multicarinata*).

Montane Hardwood

Montane hardwood, an upland vegetation community, can be found along the northeastern edge and Bear River portions of the BSA. Mid-elevation associates can include Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), California-laurel (*Umbellularia californica*), California black oak (*Quercus kelloggii*), and bristlecone fir (*Abies bracteata*), foothill pine, and coast live oak (*Quercus agrifolia*) (abundant at lower elevations). Understory vegetation is mostly scattered woody shrubs, including manzanita, mountain-mahogany (*Cercocarpus betuloides*), poison-oak, and a few forbs. Wildlife associates may include propagators of acorns, such as scrub jays, Steller's jays (*Cyanocitta stelleri*), acorn woodpecker, and western gray squirrel (*Sciurus griseus*), plus those that forage for acorn including, wild turkey (*Meleagris gallopavo*), mountain quail (*Oreortyx pictus*), band-tailed pigeon (*Patagioenas fasciata*), California ground squirrel, dusky-footed woodrat (*Neotoma fuscipes*), black bear (*Ursus americanus*), and

mule deer. Numerous amphibian and reptile species are also known to occur on the forest floor in the montane hardwood habitat.

Disturbed

Disturbed portions of the BSA include the levee tops, roads and road shoulders, and various other areas with a history of disturbance supporting ruderal upland vegetation. These areas are a mix of human-made structures, hardscape, rocky slopes, and semi-barren areas with sparse vegetation consisting primarily of non-native annual grasses and invasive weeds. Because of the high degree of disturbance, these areas generally have a low habitat value for wildlife, although several species adapted for disturbed conditions can use these areas.

Ephemeral Channel

Ephemeral features have flowing water for only a short duration after precipitation events in a normal year. The beds of ephemeral streams are located above the water table year-round; therefore, groundwater is not a source of water for these features, and runoff from rainfall and snowmelt are the primary water sources. Due to the short hydroperiod, the vegetation within ephemeral channels in the BSA are characteristic of the surrounding community types, and thus, provides a similar habitat value. The ephemeral channels are a mix of scoured, unvegetated channel segments and segments characterized by herbaceous vegetation similar to the surrounding grasslands.

Intermittent Channel

Intermittent channels have flowing water during portions of the year when groundwater provides water for stream flow. Runoff from rainfall is a supplemental source of water for stream flows. During the dry months, these features typically do not have flowing water. The intermittent channel in the BSA is fed by a mix of an upstream, off-site impoundment and on-site seeps (groundwater). Like the ephemeral channel, some portions of the intermittent channel are scoured bare by water movement. Other portions of the channel support herbaceous vegetation such as seaside barley (*Hordeum marinum*), Carter's buttercup (*Ranunculus bonariensis*), and coyote thistle (*Eryngium* sp.).

Reservoir

Camp Far West Reservoir is considered an open water/reservoir vegetation community, which is a wide, shallow, man-made storage reservoir that is impounded by Camp Far West Dam. The reservoir currently has a gross storage capacity of 93,740 acre-feet and a maximum depth near the dam of approximately 150 feet. Camp Far West Reservoir's shoreline is predominantly bare soil or rock. Sparse willows and cottonwoods are scattered along the shoreline, while the groundcover is composed of invasive weeds consistent with species found in annual grassland in the BSA. Water levels within Camp Far West Reservoir currently fluctuate up to 120 feet on an annual basis, from a low of approximately 190 feet above sea level to over 300 feet above sea level.

Suspended organisms, such as plankton, are found in the open water of lacustrine habitats. Submerged plants, such as algae and pondweeds, serve as supports for smaller algae and as cover for other aquatic species. Floating plants offer food and support for numerous herbivorous animals that feed on both plankton and floating plants. The state-endangered bald eagle has been documented nesting along Camp Far West Reservoir. Most reservoirs support fish life; intermittent types usually do not.

Seasonal Seep

Seeps differ from vernal pools in the BSA by having different topography, water source, and vegetation. For example, seeps in the BSA are located on slopes and are not depressional like vernal pools. Because of this, the hydrology of seeps is not driven by surface water flow from rainwater. Instead, the seeps are fed solely by groundwater. Plant species associated with seeps are slightly different from vernal pools and include rush (*Juncus* spp.), spike rush (*Eleocharis macrostachya*), rabbit's-foot grass (*Polypogon monspeliensis*), seep monkey flower (*Erythranthe guttata*), dallis grass (*Paspalum dilatatum*), and dock (*Rumex* spp.).

Seasonal Swale

Seasonal swales in the BSA are defined as linear drainage features that fall somewhere between ephemeral channel and wetland. These linear features support hydrophytic vegetation similar to that found in vernal pools and seep features in the BSA. Most swales are adjacent to and associated with the drainage of other aquatic features in the BSA.

Seasonal Wetland

Seasonal wetlands in the BSA are features located adjacent to linear channels or the reservoir, and function as a floodplain of sorts. Hydrologically, seasonal wetlands in the BSA differ from vernal pools and seasonal seeps, as seasonal wetlands are dependent on adjacent features. Vegetatively, seasonal wetlands are not so different from other features, with the exception of the wetland bordering the northern portion of the reservoir, which is covered in a dense layer of woody debris and does not support plant cover.

Spillway

This cover type is characterized by the rock spillway associated with the existing dam. The area is devoid of vegetation, has sheer rock slopes on either side, and experiences perennial flows contingent on the release volumes from the reservoir.

Urban

Urban portions of the BSA include the existing roads and road shoulders; infrastructure, including the dam and spillway; recreational areas and facilities; boat launches; and various other areas with a history of disturbance supporting ruderal, ornamental, or introduced vegetation. Because of the high degree of disturbance, these areas generally have a low habitat value for wildlife, although several species adapted for disturbed conditions can use these areas.

Vernal Pool

Vernal pools are areas that are ephemerally wet as a result of the accumulation of surface water flow from rainwater in depressional areas. Several vernal pools are scattered throughout the grassland portions of the BSA, as well as along the edges of roads and the reservoir. These features are dominated by low-growing hydrophytic vegetation and seasonal hydrology. Species observed during surveys include seaside barley, annual hairgrass (*Deschampsia danthonioides*), Italian ryegrass, spike rush, Carter's buttercup, watercress (*Nasturtium officinale*), coyote thistle, and fiddle dock (*Rumex pulcher*).

Sensitive Natural Communities

Sensitive natural communities are those that are of special concern to resource agencies or those that are protected under CEQA, Sections 1600–1603 of the Fish and Game Code (FGC), and/or Sections 401 and Section 404 of the CWA. Special-status communities that exist within the BSA include aquatic resources and a handful of vegetation communities identified by CDFW as S2 or S3⁷. The vegetation community descriptions above were based on data obtained from the USFS Calveg data layers; however, sensitive natural communities identified by CDFW are based on their VegCAMP data. The FLA described and mapped CDFW VegCAMP data within the FERC boundary in Section 3.3.04. The VegCAMP query performed during FLA preparation identified the following sensitive natural communities with rankings of S2 and S3: 1) California buckeye; 2) valley oak; 3) red willow; 4) cottonwood; 5) interior live oak, and 6) foothill pine. Ground-truthed data on the presence, location, and/or extent of the aforementioned sensitive natural communities has not been performed to date.

A USACE-verified preliminary jurisdictional determination was issued on September 13, 2018, for SSWD's expansion project. This delineation effort found the following features in addition to the reservoir and existing spillway: 83 aquatic resources, including 1 ephemeral channel, 1 intermittent channel, 4 portions of Camp Far West Reservoir, 19 seasonal swales, 2 seasonal wetlands, 22 seeps, 1 spillway, and 32 vernal pools. Additionally, the jurisdictional delineation conducted within the potential impact area of the 5-foot pool raise found the following features: Camp Far West Reservoir, two perennial channels (Bear River and Rock Creek), 24 intermittent channels, 52 ephemeral channels, one seasonal pond, 5 seasonal wetlands, 10 seasonal wetland swales, 9 seeps, 11 emergent wetlands, 6 irrigated wetlands, and 1 scrub-shrub wetland.

Aquatic resources provide habitat, foraging, cover, migration, and movement corridors for both special-status and common species. In addition to habitat functions, these features provide physical conveyance of surface water flows capable of handling large storm water events. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Aquatic resources can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

Fisheries Habitat

Fisheries habitat present in the BSA include Camp Far West Reservoir, the Bear River, and several tributaries of the Bear River, most notably Rock Creek⁸. Camp Far West Reservoir and the streams in the BSA support rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), and a transitional warm water fish assemblage. Prior to the introduction of nonnative fishes, the Sierra Nevada native fish populations in accessible lakes and streams of the Sacramento-San Joaquin drainage included anadromous fish. Before the Camp Far West Dam was constructed in 1963, adult salmon historically ascended the Bear River as far as a barrier waterfall in the immediate vicinity of Camp Far West Dam (Yoshiyama et al. 2001). No waterfall currently exists in the area, so it has presumably been inundated by the reservoir (Yoshiyama et al. 2001). There are no known accounts

⁷ S2, Imperiled - Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.

S3, Vulnerable - Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.

⁸ Detailed information on each of these water bodies can be found in the Camp Far West Hydroelectric Project, FERC Project No. 2997-031 Final License Application (SSWD 2019)

of anadromous fishes of any kind upstream of the original barrier waterfall. It is estimated that less than 1 river mile of salmon habitat was lost from the Camp Far West Dam (Yoshiyama et al. 2001). The current limit of anadromy in the Lower Bear River extends to a non-Project diversion dam located approximately 1-mile downstream of Camp Far West Dam (SSWD 2019).

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS on all actions that may adversely affect essential fish habitat (EFH). EFH has been designated for Pacific salmon in the Lower Bear River up to the base of Camp Far West Dam (C.F.R. §§ 660.413). The designation does not identify specific salmon species or races (for example, spring-run or fall-run); however, Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and Central Valley fall- and late-fall-run Chinook salmon are species that occur in the Central Valley and are managed under the *Pacific Coast Salmon Fisheries Management Plan* (Pacific Fishery Management Council 2021). As discussed in the paragraph above, the non-Project diversion dam located approximately 1-mile downstream of Camp Far West Dam is the current limit of anadromy in the Lower Bear River.

Wildlife Movement Corridors

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 link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to 1) sustain species with specific foraging requirements, 2) preserve a species' distribution potential, and 3) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

Available data on movement corridors and linkages was accessed via the CDFW in BIOS 5 (2021a). Data reviewed included the Essential Connectivity Areas [ds620] layer, the Natural Landscape Blocks [ds621] layer, and the Missing Linkages in California [ds420] layer (Figure 2.4-3⁹). A Natural Landscape Block (ID #183) and Essential Connectivity Area occur in the southern and eastern portions of the BSA, crossing the Bear River at the upper end of Camp Far West Reservoir. Another Natural Landscape Block (#185) occurs south of the BSA and the Bear River, downstream of Camp Far West Dam. Additionally, a linkage for small grassland mammals was identified in the missing linkages layer that runs north-south through the BSA. Lastly, the Bear River, Rock Creek, and their associated riparian corridors facilitate aquatic and terrestrial wildlife movement through the BSA. The entire BSA consists of open and mostly undeveloped habitat, with lightly traveled roads. Except for Camp Far West Dam and the non-Project diversion dam downstream, no other impassable barriers occur within the BSA. This allows for movement of wildlife species around and through the BSA.

Special-status Species

Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area, or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies such as CDFW, USFWS, and private organizations such as CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as

⁹ Missing linkages are critical and at-risk habitat linkages throughout California. Essential connectivity areas more permeable to less permeable depict how easily wildlife can move through the landscape.

well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

- Listed, proposed, or candidates for listing under the federal ESA (50 C.F.R. § 17.11 – listed; 61 Federal Register (FR) 7591 – candidates)
- Listed or proposed for listing under the California Endangered Species Act (CESA) (FGC 1992 Section 2050 et seq.; 14 California Code of Regulations (CCR) § 670.1 et seq.)
- Designated as Species of Special Concern by CDFW
- Designated as Fully Protected by CDFW (FGC §§ 3511, 4700, 5050, and 5515)
- Species that meet the definition of rare or endangered under CEQA (14 CCR § 15380), including CNPS List Rank 1B and 2.

The results of USFWS, CDFW, NMFS, and CNPS database queries identified several special-status species with the potential to be impacted by the Proposed Project. Table 2.4-2 summarizes all special-status species returned in the database queries, a description of the habitat requirements for each species, and conclusions regarding the potential for each species to be affected by the Proposed Project. Only species that were determined to have the potential to be affected by Proposed Project-related activities in Table 2.4-2 would be discussed further.

Figure 2.4-3. Wildlife Movement Corridors in the BSA

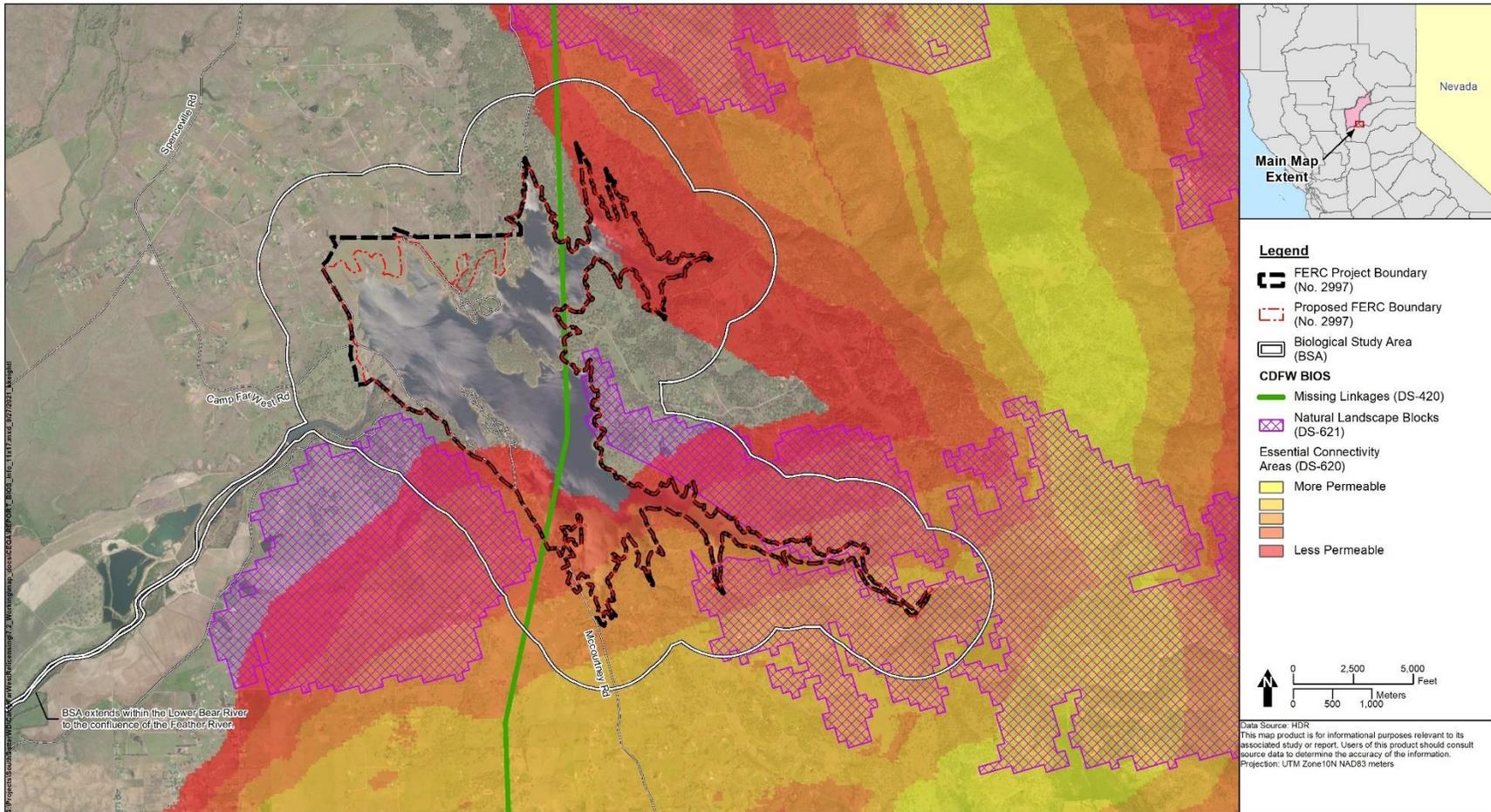




Table 2.4-2. Special-status Species with the Potential to Occur in the BSA

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
Plants							
<i>Balsamorhiza macrolepis</i>	big-scale balsamroot	1B.2	None	None	Occasionally in serpentine soils in chaparral, cismontane woodland, and grassland (Safford and Miller 2020). Elevation: 295–5,100 feet. Blooming period: March–June (CNPS 2021).	Y	Suitable habitat present.
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	1B.1	FE	SE	Serpentine or gabbro soils in openings of chaparral and cismontane woodland (Safford and Miller 2020). Elevation: 605–3,575 feet. Blooming period: April–July (CNPS 2021).	N	BSA is below the known elevation range for the species. Additionally, serpentinite and gabbroic soils not present (California Department of Conservation 2021c).
<i>Carex xerophila</i>	chaparral sedge	1B.2	None	None	Serpentine and gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest (Safford and Miller 2020). Elevation: 1,440–2,525 feet. Blooming period: March–June (CNPS 2021).	N	BSA is below the known elevation range for the species. Additionally, serpentinite and gabbroic soils not present (California Department of Conservation 2021c).
<i>Downingia pusilla</i>	dwarf downingia	2B.2	None	None	Vernal pools and mesic grassland. Elevation: 0–1,460 feet. Blooming period: March–May (CNPS 2021).	Y	Suitable habitat present. Species known to occur on Beale Air Force Base, less than 5 miles northeast of the Project area (CDFW 2021a).
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	1B.2	None	SE	Clay soils in vernal pools and lake margins of marshes and swamps. Elevation: 30–7,790 feet. Blooming period: April–August (CNPS 2021).	N	Clay dominated soils not present in the BSA (NRCS 2021).

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Ahart's dwarf rush	1B.2	None	None	Mesic soils in grassland. Elevation: 95–750 feet. Blooming period: March–May (CNPS 2021).	Y	Suitable habitat present.
<i>Legenere limosa</i>	legenere	1B.1	None	None	Vernal pools. Elevation: 0–2,885 feet. Blooming period: April–June (CNPS 2021).	Y	Suitable habitat present.
<i>Navarretia myersii</i> ssp. <i>myersii</i>	pincushion navarretia	1B.1	None	None	Often acidic soils in vernal pools. Elevation: 65–1,085 feet. Blooming period: April–May (CNPS 2021).	Y	Suitable habitat present.
<i>Wolffia brasiliensis</i>	Brazilian watermeal	2B.3	None	None	Shallow freshwater marshes and swamps. Elevation: 65–330 feet. Blooming period: April and December (CNPS 2021).	Y	Species documented at Camp Far West Reservoir (Janes et al. 2018).
Invertebrates							
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	--	FE	None	Endemic to California vernal pools, almost entirely in the Central Valley, except for one population along the central coast in Ventura County. Majority of sites inhabited by this species are large and turbid pools which remain inundated much longer than typical vernal pools (USFWS 2012a).	N	Associated with large playa-like vernal pools (USFWS 2005), which are absent from the action area. Nearest occurrence is 10 miles south (CDFW 2021a).



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	--	FT	None	Endemic to the grasslands of the Central Valley and the Central and South Coast Range mountains of California, and the Agate Desert of southern Oregon. Found only in cool water vernal pools and vernal pool-like habitats; does not occur in riverine, marine, or other permanent bodies of water (USFWS 2007a).	Y	Suitable habitat present.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	--	FT	None	Dependent on host plant, elderberry (<i>Sambucus</i> spp.), which most commonly grows in riparian woodlands, but also in some upland habitats such as oak savannas and annual grasslands. Current presumed range in Central Valley extends from Shasta County south to Fresno County, including the valley floor and lower foothills up to about 500 feet in elevation (USFWS 2017a).	Y	Suitable habitat present in the Proposed Project boundary.
<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	--	FE	None	Found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands. Patchily distributed across the Central Valley from Shasta County south to Tulare County with isolated occurrences in the East Bay Area (USFWS 2007b).	Y	Suitable habitat present.

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
Fishes							
<i>Acipenser medirostris</i>	green sturgeon (southern distinct population segment [DPS])	--	FT	SSC	Spawning occurs primarily in the Sacramento River, but those that spawn in the Feather and Yuba rivers are also part of the southern DPS. Oceanic waters, bays, and estuaries during non-spawning season. Enters San Francisco Bay late winter through early spring, and spawn occurs from April through early July. Spawn in cool sections of river mainstems in deep pools containing small to medium-sized gravel, cobble, or boulder substrate (NMFS 2015).	Y	Sturgeon (species unknown, but likely white sturgeon) have been observed in the Lower Bear River between the confluence with the Feather River and the Highway 65 bridge. However, the non-Project diversion dam located one mile downstream of Camp Far West Reservoir precludes anadromous fish from moving into the upper portion of the Lower Bear River (SSWD 2019).
<i>Entosphenus tridentatus</i>	Pacific lamprey	--	None	SSC	Cold, clear water for spawning and incubation. Peak spawning appears to be closely tied to water temperatures that are suitable for early development, but can occur at temperatures above 72°F. Adults use gravel areas to build nests, while ammocoetes need soft sediments in which to burrow during rearing. Nests are generally associated with cover, including gravel and cobble substrates, vegetation, and woody debris. Ammocoetes burrow into larger substrates as they grow. Ammocoetes also need detritus that produces algae for food and habitats with slow or moderately slow water velocities, such as low gradient riffles, pool tailouts and lateral scour pools (CDFW 2015).	Y	Pacific lamprey have been observed in the Lower Bear River, below Camp Far West Reservoir. However, the non-Project diversion dam located one mile downstream of Camp Far West Reservoir precludes anadromous fish from moving into the upper portion of the Lower Bear River (SSWD 2019).



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Hypomesus transpacificus</i>	delta smelt	--	FT	SE	Endemic to open waters of San Francisco Bay and Sacramento-San Joaquin River Delta. Distribution includes San Pablo Bay up through Suisun Bay, upstream through the delta to the Sacramento River below Isleton, and the San Joaquin River below Mossdale. Spawning is thought to take place in sloughs and shallow edge-water channels in the upper delta and in Montezuma Slough near Suisun Bay (USFWS 2010).	N	BSA occurs outside of known species range (USFWS 2016).
<i>Lampetra ayresii</i>	river lamprey	--	None	SSC	Occurs in the Sacramento-San Joaquin River systems, although it likely occurs elsewhere. Small lampreys that spend most of their lives in freshwater, with about 3 to 4 months in salt water. Adults migrate into freshwater for spawning in autumn (Moyle 2002).	N	BSA occurs outside of known species range (Moyle 2002).

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Oncorhynchus mykiss irideus</i> (pop. 11)	steelhead (central valley DPS)	--	FT	None	Includes naturally spawned anadromous steelhead originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries; excludes such fish originating from San Francisco and San Pablo Bays and their tributaries. This DPS does include steelhead from two artificial propagation programs: Coleman National Fish Hatchery Program and Feather River Fish Hatchery Program. Spawning habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning habitat includes estuarine and marine waters (NOAA 2019).	Y	Known to occur in the Lower Bear River, and designated critical habitat for this species extends along the Bear River up to the non-Project diversion dam located approximately one mile downstream from the Camp Far West Reservoir (USFWS 2018). This diversion dam precludes anadromous fish from moving into the upper portion of the Lower Bear River (SSWD 2019).
<i>Oncorhynchus tshawytscha</i> (pop. 6)	chinook salmon (Central Valley spring-run evolutionarily significant unit)	--	FT	ST	Currently found in the Sacramento-San Joaquin River Delta, the Sacramento River and its tributaries, including American, the Yuba and Feather rivers, and Mill, Deer, and Butte creeks. The numbers of adults are dependent on pool depth and volume, amount of cover, and proximity to gravel. Water temperatures greater than 80°F are lethal to adults (NMFS 2016).	Y	Occurs in the Lower Bear River. However, the non-Project diversion dam located 1 mile downstream of Camp Far West Reservoir precludes anadromous fish from moving into the upper portion of the Lower Bear River (SSWD 2019).



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
Amphibians							
<i>Rana boylei</i>	foothill yellow-legged frog	--	None	SE (Central Coast, S)	Ranges in the northern half of California except for the Central Valley, Modoc Plateau, and eastern side of the Sierra Nevada Mountains. Generally found in shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Eggs have been found at depths to 34 inches in water velocities of 0 - 0.69 feet per second and at most 40 feet from shore. Maximum water temperature for breeding is 79°F and 48 to 70°F is the preferred range. Tadpoles avoid areas below 55°F and prefer temperatures between 62°F and 72°F (Thomson et al. 2016).	N	BSA is outside the currently accepted species range of 600 feet. All populations in the region are at higher elevation sites over 12 miles east of the BSA (CDFW 2021a). No occurrences of this species are known from the BSA (SSWD 2019).

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Rana draytonii</i>	California red-legged frog	--	FT	SSC	Ponds/streams in humid forests, woodlands, grasslands, coastal scrub, and streamside with plant cover in lowlands or foothills. Breeding habitat includes permanent or ephemeral water sources: lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. From sea level to 5,000 feet (Nafis 2021). Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges (CDFW 2021b).	Y	Presumed present due to potentially suitable breeding habitat located within one mile of Camp Far West Reservoir and the BSA (SSWD 2019).
<i>Spea hammondi</i>	western spadefoot	--	None	SSC	Generally found in grasslands, oak woodlands, coastal sage scrub, and chaparral in washes, floodplains, alluvial fans, playas, and alkali flats. Natural and artificial water bodies are used for breeding. Specifically, vernal pools used by this species have an average ponding duration of 81 days, and successful recruitment occurs in ponds that last on average 21 days longer than larval development time. Pool temperature requirements are from 48 to 90°F. Pools with invasive species, such as crayfish (<i>Pacifasticus</i> spp.), or American bullfrogs (<i>Lithobates catesbeianus</i>) often, but not always, exclude this species (Thomson et al. 2016).	N	Not known to occur within the BSA or immediate vicinity (CDFW 2021a). Vernal pools in the BSA are likely not large enough to sustain ponding long enough to support larval development.



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
Reptiles							
<i>Emys marmorata</i>	western pond turtle	--	None	SSC	Ranges throughout California except for Inyo and Mono counties. Generally occurs in various water bodies including permanent and ephemeral systems either natural or artificial. Upland habitat that is at least moderately undisturbed is required for nesting and overwintering, in soils that are loose enough for excavation (Thomson et al. 2016).	Y	Camp Far West Reservoir and upstream portions of the BSA provide suitable habitat.
<i>Thamnophis gigas</i>	giant garter snake	--	FT	ST	Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November- mid March). Formerly ranged in the Central Valley from Butte County to Buena Vista Lake in Kern County, but now thought to be absent south of Fresno and in Stanislaus County (USFWS 2012b).	N	Project occurs outside of known species range (USFWS 2017b).

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
Birds							
<i>Agelaius tricolor</i>	tricolored blackbird	--	None	CT, SSC	<p>Mostly a year-round resident in California. Common locally throughout Central Valley and in coastal districts from Sonoma County south. Breeds locally in northeastern California. In winter, becomes more widespread along the central coast and San Francisco Bay area, and can be found in portions of the Colorado Desert (Hamilton 2004). Preferred nesting habitat includes cattails (<i>Typha</i> spp.), bulrushes (<i>Schoenoplectus</i> spp.), Himalayan blackberry (<i>Rubus armeniacus</i>), and agricultural silage. Dense vegetation is preferred but heavily lodged cattails not burned in recent years may preclude settlement. Need access to open water. Strips of emergent vegetation along canals are avoided as nest sites unless they are about 30 feet or more wide, but in some ponds, especially where associated with Himalayan blackberries and deep water, settlement may be in narrower fetches of cattails (CDFW 2021b).</p>	N	Suitable habitat not present.



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Ammodramus savannarum</i>	grasshopper sparrow	--	None	SSC	Nests in a variety of grassland habitats throughout much of the Central Valley, Coast Range Mountains, and the Inland Empire region. Prefers short to middle-height, moderately open grasslands with scattered shrubs. Avoids areas with high shrub cover (Shuford and Gardali 2008).	Y	Suitable habitat present.
<i>Aquila chrysaetos</i>	golden eagle	--	BGEPA	FP	Uncommon resident in hills and mountains throughout California, and an uncommon migrant and winter resident in the Central Valley and Mojave Desert. Prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops (CDFW 2021b).	Y	Suitable habitat present.
<i>Asio otus</i>	long-eared owl	--	None	SSC	Widespread but uncommon and local across California year-round, except in the Central Valley where it is a rarely encountered migrant and winter resident. Nests and roosts in dense stands of live oak (<i>Quercus</i> spp.) in riparian thickets with dense canopies near meadow edges. Also nests in dense stands of conifers at higher elevations (CDFW 2021b).	N	Suitable habitat not present.

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Athene cunicularia</i>	burrowing owl	--	None	SSC	Resident in much of the state in open, dry grasslands and various desert habitats. Requires open areas with mammal burrows; especially those of California ground squirrel (<i>Otospermophilus beecheyi</i>) Inhabits rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other open human disturbed lands such as airports and golf courses. Absent from northwest coast and elevations above 5,500 feet (CDFW 2021b).	Y	Species observed in Proposed Project boundary.
<i>Aythya americana</i>	redhead	--	None	SSC	Nests in freshwater emergent wetlands where dense stands of cattails and bulrushes are interspersed with areas of deep, open water. Also observed nesting in somewhat alkaline marshes and potholes (Shuford and Gardali 2008).	Y	Suitable habitat present.



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Buteo swainsoni</i>	Swainson's hawk	--	None	ST	Nests in oak savanna and cottonwood riparian areas adjacent to foraging habitat of grasslands, agricultural fields, and pastures where they often follow farm equipment to gather killed and maimed rodents. Breeding resident in the Central Valley, Klamath Basin, Northeastern Plateau, and in juniper-sagebrush flats of Lassen County. Limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley. Winters primarily in Argentina, with most birds absent from California October through February, though a few overwinter in the Sacramento-San Joaquin River Delta. Prolific migrant through southern California in spring and fall, with large mixed-age groups of birds frequently observed kettling high overhead on thermals or foraging together on freshly cut agricultural fields (CDFW 2021b).	Y	Suitable habitat present.

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Chlidonias niger</i>	black tern	--	None	SSC	Nests on the high plateaus of northeastern California, and locally in dwindling numbers in the Sacramento Valley from the Butte Sink to the Natomas Basin, and in the San Joaquin Valley from Merced County south to the Tulare Lake Basin. Nests in fresh emergent wetlands, lakes, ponds, moist grasslands, and flooded rice fields. On migration, some take coastal routes and forage offshore (CDFW 2021b).	N	Suitable habitat not present, and the BSA is just outside the known species range (CDFW 2021b).
<i>Circus hudsonius</i>	northern harrier	--	None	SSC	Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breed and forage in a variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats, and desert sinks (Shuford and Gardali 2008).	Y	Suitable habitat present and species observed onsite.
<i>Contopus cooperi</i>	olive-sided flycatcher	--	None	SSC	Nests in a wide variety of forest and woodland habitats below 9,000 feet in elevation in the coastal and mountainous portions of California. Occurs only as a migrant elsewhere in the state. Prefers forests and woodlands with adjacent meadows, lakes, or open terrain for foraging (CDFW 2021b).	N	BSA is outside of the known species range (CDFW 2021b).



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Elanus leucurus</i>	white-tailed kite	--	None	FP	Fairly common resident of the Central Valley, coast, and Coast Range Mountains. Nests in oak savanna, oak and willow riparian, and other open areas with scattered trees near foraging habitat. Forages in open grasslands, meadows, farmlands, and emergent wetlands. Often seen hover foraging over roadsides or grassy highway medians (CDFW 2021b).	Y	Suitable nesting and foraging habitat present throughout the BSA.
<i>Empidonax traillii</i>	willow flycatcher	--	None	SE	Uncommon summer resident in wet meadows and montane riparian habitats from 2,000 to 8,000 feet in elevation in the Sierra Nevada and Cascade Ranges. Most numerous where extensive thickets of low, dense willows (<i>Salix</i> spp.) edge on wet meadows, ponds, or backwaters (CDFW 2021b).	N	Suitable riparian vegetation not present in the BSA.
<i>Haliaeetus leucocephalus</i>	bald eagle	--	BGEPA	SE, FP	Permanent resident in the highest Coast Range mountains, across the Cascade Range, and down the Sierra Nevada to the eastern Transverse Ranges of San Bernardino and Riverside Counties. Uncommon migrant and winter visitor to lowland rivers, lakes, and reservoirs. Nests in large, old-growth, or dominant live trees with open branchwork, especially ponderosa pine (<i>Pinus ponderosa</i>). Requires large bodies of water or rivers with abundant fish, and adjacent snags (CDFW 2021b).	Y	Suitable habitat present, species observed onsite.

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Icteria virens</i>	yellow-breasted chat		None	SSC	Nests in early-successional riparian habitats with a well-developed shrub layer and an open canopy. Restricted to narrow borders of streams, creeks, sloughs, and rivers. Often nest in dense thickets of blackberry (<i>Rubus</i> spp.) and willow (Shuford and Gardali 2008).	N	Suitable habitat not present in the BSA.
<i>Lanius ludovicianus</i>	loggerhead shrike	--	None	SSC	Shrublands and open woodlands with a fair amount of grass cover and areas of bare ground. Requires tall shrubs or trees, fences, or power lines for hunting perches and territorial advertisement. Also requires open areas of short grasses, forbs, or bare ground for hunting, large shrubs or trees for nest placement, and thorny vegetation or barbed wire fences for impaling prey. Ranges across most of the state, but absent from the highest mountains and the northwest forests and coast (Shuford and Gardali 2008).	Y	Suitable habitat present.



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Laterallus jamaicensis coturniculus</i>	California black rail	--	None	ST, FP	Saline, brackish, and fresh emergent wetlands. Scarce, but true abundance difficult to determine due to small size and extremely secretive nature. Known to nest at scattered locations in the San Francisco Bay Area and Delta region, Point Reyes National Seashore, San Luis Obispo, and Orange counties, as well as the Imperial and Lower Colorado River Valleys. Appears intermittently and sparingly at a few locations in the Sacramento Valley (CDFW 2021b).	N	Suitable wetland and riparian vegetation not present in the BSA.
<i>Melospiza melodia</i>	song sparrow (Modesto population)	--	None	SSC	Often found in emergent freshwater marshes dominated by bulrushes (<i>Scirpus</i> spp.), cattails, and willow. Also nests in riparian forests of valley oak (<i>Quercus lobata</i>) with a sufficient understory of blackberry, along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites. Found throughout the Sacramento Valley, from the delta north to Chico (Shuford and Gardali 2008).	N	Suitable wetland and riparian vegetation not present in the BSA. Additionally, this is a sub-species that is limited to a range outside of the Proposed Project area (CDFW 2021b).

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Pelecanus erythrorhynchos</i>	American white pelican	--	None	SSC	In California, nests almost exclusively in large lakes in the Klamath Basin region. On migration and over winter, occurs across much of the state in open wetlands and sheltered bays and lagoons. Nests on ground on earthen, sandy, and rocky islands or rarely on peninsulas or floating tule mat islands. Nests may be in the open in the sand or interspersed with or adjacent to tall weeds and open, low-stature shrubs. Roosts along water edges, beaches, sandbars, or old driftwood (Shuford and Gardali 2008).	N	Outside of breeding range (CDFW 2021b).
<i>Riparia riparia</i>	bank swallow	--	None	ST	A colonial nester in riparian and lacustrine bluffs or cliffs with fine-textured or sandy soils into which the nest cavities are dug. Also nests in earthen banks as well as sand and gravel pits. Declined drastically in the state over the 20th Century due to loss of riparian habitat and stabilization of natural banks. Currently most numerous in the Sacramento Valley along the Sacramento, Feather, and American rivers, and Cache Creek in western Yolo County. Scarce and very local on the central coast. Occurs elsewhere in the state as an uncommon to rare migrant (CDFW 2021b).	N	Proposed Project is outside of the known species range (CDFW 2021b).



Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Setophaga petechia</i>	yellow warbler	--	None	SSC	Usually found in riparian deciduous habitats in summer: cottonwoods (<i>Populus</i> spp.), willows, alders (<i>Alnus</i> spp.), and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open coniferous forests (CDFW 2021b).	N	Suitable wetland and riparian vegetation not present in the BSA.
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	--	None	SSC	Nests in fresh marshes with tall, emergent vegetation such as bulrushes and cattails adjacent to deep water (Shuford and Gardali 2008).	N	Suitable wetland and riparian vegetation not present in the BSA.
Mammals							
<i>Antrozous pallidus</i>	pallid bat	--	None	SSC	Ranges across nearly all of California except for high elevation portions of the Sierra Nevada Mountains and Del Norte, western Siskiyou, Humboldt, and northern Mendocino Counties. Generally found in a wide variety of habitats but with some preference for drier areas. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings (CDFW 2021b).	Y	Suitable habitat present.

Scientific Name	Common Name	CNPS	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	--	None	SSC	Ranges throughout California except for high elevation portions of the Sierra Nevada Mountains. Generally prefers mesic habitats but known to occur in all non-alpine habitats of California. Roosting occurs in caves, tunnels, mines, buildings, or other structures and this species may use different roosting sites for day and night (CDFW 2021b).	Y	Suitable habitat present.
<i>Lasiurus blossevillii</i>	western red bat	--	None	SSC	Ranges across the Central Valley, as well as the coast and Coast Range mountains from Mendocino County south, and east across the Los Angeles area into the Inland Empire region. Occurs in most habitats except desert and alpine areas. Roosts in trees, sometimes shrubs, and typically at the margins of habitats (CDFW 2021b).	Y	Suitable habitat present.
<i>Taxidea taxus</i>	American badger	--	None	SSC	Ranges across nearly all of California except northernmost Humboldt and Del Norte Counties. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils (CDFW 2021b).	Y	Suitable habitat present.

Federal & State Status

(FC) Federal Candidate
(FE) Federally Endangered
(FD) Federally Delisted
(FPE) Federally Proposed Endangered
(FT) Federally Threatened
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service
(X) Critical habitat designated for this species

(SCE) State Candidate Endangered
(SCT) State Candidate Threatened
(SE) State Endangered
(SR) State Rare
(SSC) State Species of Special Concern
(ST) State Threatened
(FP) Fully Protected

California Native Plant Society (CNPS) Rare Plant Rank

Rareness Ranks
(1A) Presumed Extinct in California
(1B) Rare, Threatened, or Endangered in California and Elsewhere
(2) Rare, Threatened, or Endangered in California, But More Common Elsewhere
(3) More Species Information Needed
(4) Limited Distribution

Threat Ranks

(0.1) Seriously threatened in California
(0.2) Fairly threatened in California

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Federal

Endangered Species Act

The ESA provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code [U.S.C.] §§ 1531–1544). The ESA defines take to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Title 50, § 222, of the C.F.R. (50 C.F.R. § 222) further defined harm to include an act that actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including feeding, spawning, rearing, migrating, feeding, or sheltering.

ESA Section 7(a)(1) requires federal agencies to use their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with USFWS or NMFS if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may impact endangered or threatened species or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and lack a federal nexus, a Section 10(a)(1)(b) incidental take permit can be obtained from USFWS and/or NMFS.

Clean Water Act

The basis of the CWA was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 U.S.C. § 1251), and at this time, the CWA became the act’s commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the United States, as well as the establishment of surface water quality standards.

CWA SECTION 404

CWA Section 404 (33 U.S.C. § 1344) established the program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Under this regulation, certain activities proposed within waters of the United States require obtaining a permit prior to initiation. These activities include, but are not limited to, placement of fill for the purposes of development, water resource projects (for example, dams and levees), infrastructure development (for example, highways and bridges), and mining operations.

The primary objective of this program is to prohibit the discharge of dredged or fill material if a practicable alternative to the proposed activities exists that results in less impact on waters of the United States, or the proposed activity would result in significant adverse impacts on these waters. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.

CWA SECTION 401

Under CWA Section 401 (33 U.S.C. § 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants or waives CWA Section 401 certification. CWA Section 401 provides states or tribes with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit or license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Denial of the certification prohibits the issuance of the federal permit or license, and a waiver allows the permit or license to be issued without state or tribal comment. Decisions made by states or tribes are based on the Proposed Project's compliance with USEPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the SWRCB is the primary regulatory authority for CWA Section 401 requirements (additional details in the following subsections).

Migratory Bird Treaty Act of 1918

Migratory birds are protected under the Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. §§ 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. § 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. § 21). Most birds found in the project vicinity would be protected under the MBTA.

Executive Order 13112 – Invasive Species

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the Proposed Project, USFWS and USACE would issue permits and, therefore, would be responsible for ensuring that the Proposed Project complies with Executive Order 13112 and does not contribute to the spread of invasive species.

Executive Order 11990 – Protection of Wetlands

Executive Order 11990 (42 FR 26961) requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless 1) no practicable alternative exists and 2) all practical measures have been taken to minimize harm to wetlands.

Federal Power Act of 1920

The Federal Power Act of 1920 (16 U.S.C. §1a) was enacted to coordinate the hydroelectric projects in the United States and encouraged the development of hydroelectric projects such as dams and reservoirs. Amendments made to the act in 1935 and 1986 added new provisions that incorporated fish and wildlife concerns in licensing, relicensing, and exemption procedures.

State

California Endangered Species Act

Under CESA, CDFW is responsible for maintaining a list of endangered and threatened species (FGC § 2070). CDFW also maintains a list of candidate species, which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of species of special concern, which serve as a species watch lists.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present and determine whether the proposed project would have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Proposed Project-related impacts on species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFW would be in the form of an incidental take permit.

California Fish and Game Code – Native Plant Protection Act

The Native Plant Protection Act (FGC §§ 1900–1913) prohibits taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species, if the owners first notify CDFW and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC § 1913). Project impacts on these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the Proposed Project.

California Fish and Game Code §§ 3503 and 3503.5

Sections 3503 and 3503.5 of the FGC provide regulatory protection to resident and migratory birds and all birds of prey within the state of California, including prohibiting taking nests and eggs, unless otherwise provided for by the FGC. Specifically, these sections of the FGC make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code.

California Fish and Game Code – Fully Protected Species

California statutes afford fully protected status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. FGC § 3505 makes it unlawful to take any egret, egret or osprey or any part of such a bird. FGC § 3511 protects from taking certain fully protected species including, but not limited to: 1) American peregrine falcon (*Falco peregrinus anatum*); 2) brown pelican (*Pelecanus occidentalis californicus*); 3) golden eagle (*Aquila chrysaetos*); 4) greater sandhill crane (*Grus canadensis tabida*) and; 5) white-tailed kite (*Elanus leucurus*).

FGC § 4700 identifies nine fully-protected mammals that cannot be taken; none of which that have the potential to occur in or around the Proposed Project area.

FGC § 5050 protects from taking five fully-protected reptiles and amphibians; none of which that have the potential to occur in or around the Proposed Project area.

FGC § 5515 identifies 10 fully-protected fish that cannot lawfully be taken, even with an incidental take permit; none of which that have the potential to occur in or around the Proposed Project area.

California Wetlands and Other Policies

The California Resources Agency and its various departments do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all of the following conditions are met:

1. The project is water dependent.
2. No other feasible alternative is available.
3. The public trust is not adversely affected.
4. Adequate compensation is proposed as part of the project.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The SWRCB implements the act's requirements at the state level and a regional water quality control board (RWQCB) implements requirements at the local level. The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

Clean Water Act Section 401 Water Quality Certification

CWA Section 401 (33 U.S.C. § 1341) requires that any applicant for a federal license or permit that may result in a pollutant discharge to waters of the United States, obtain a certification that the discharge would comply with USEPA water quality standards. The state or tribal agency responsible for issuing the CWA Section 401 certification may also require compliance with additional effluent limitations and water quality standards set forth in state and tribal laws. In California, the RWQCB is the primary regulatory authority for CWA Section 401 requirements.

The Central Valley is responsible for enforcing water quality criteria and protecting water resources near the Proposed Project. In addition, the RWQCB is responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements, or commonly, by issuing conditional waivers to waste discharge requirements. The RWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for CWA Section 404 permits issued by USACE. A request for water quality certification (including waste discharge requirements) by the RWQCB and an application for a General Permit for Storm Water Discharges Associated with Construction Activities are prepared and submitted following completion of the CEQA environmental document and submittal of the wetland delineation to USACE.

Delegated Permit Authority

California has been delegated permit authority for the National Pollutant Discharge Elimination System (NPDES) permit program, including stormwater permits for all areas except tribal lands. USACE issues CWA Section 404 dredge and fill permits; however, the state actively uses its CWA

Section 401 certification authority to provide that CWA Section 404 permits are in compliance with state water quality standards.

State Definition of Covered Waters

Under California state law, waters of the state means “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050(e)). Therefore, water quality laws apply to both surface water and groundwater. After the United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159 (2001), the Office of Chief Counsel of the SWRCB released a legal memorandum confirming the state’s jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act (Porter-Cologne), discharges to wetlands and other waters of the state are subject to state regulation, and this includes isolated wetlands. In general, the SWRCB regulates discharges to isolated waters in much the same way as they do for waters of the United States, using Porter-Cologne rather than CWA authority.

Non-governmental Agencies

California Native Plant Society

CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level concerning extinction. CNPS uses these data to create and maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2021). Potential impacts on populations of CNPS-listed plants receive consideration under CEQA review.

The following define CNPS listings:

- List 1A: Plants believed to be extinct.
- List 1B: Plants that are rare, threatened, or endangered in California and elsewhere.
- List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere.

All of the plant species on lists 1 and 2 meet the requirements of the Native Plant Protection Act, Section 1901, Chapter 10, or FGC Section 2062 and Section 2067, and are eligible for state listing. Plants appearing on lists 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered significant. Classifications for plants on List 3 (plants about which more information is needed) and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions or impact analysis was performed on species with these classifications.

Local

Nevada County General Plan

The Wildlife and Vegetation section of the *Nevada County General Plan* (Nevada County 1996) was originally approved in 1996 and was updated in 2008, 2010, and 2014. It includes policies to protect and promote the restoration of native and sensitive species and habitats. Those that are applicable to the Proposed Project are included below.

- Policy 13.4A addresses rare and endangered species and wetlands. It reads as follows:

No net loss of habitat functions or values shall be caused by development where rare and endangered species and wetlands of over 1 acre, in aggregate, are identified during the review of Proposed Projects. No net loss shall be achieved through avoidance of the resource, or through creation or restoration of habitat of superior or comparable quality, in accordance with guidelines of the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

- Policy 13.8 and 13.9 address heritage and landmark trees and groves. They read as follows:

As part of the Comprehensive Site Development Standards, include measures applicable to all discretionary and ministerial projects to minimize disturbance of heritage and landmark trees and groves. These measures shall include, but are not limited to, requirements for on-site vegetation inventories and mandatory clustering of development in areas likely to support such vegetation or habitat.

Development in the vicinity of significant oak groves of all oak species shall be designed and sited to maximize the long-term preservation of the trees and the integrity of their natural setting. The County shall adopt a regulation to protect native heritage oak trees and significant oak groves. All native oak tree species with a trunk diameter of 36" or greater shall be protected.

Placer County General Plan

The Natural Resources section of the *Placer County General Plan* (2013a) was originally adopted in 1994 and was updated in 2013. The section is extensive and multiple policies to protect and promote the restoration of native and sensitive species and habitats. Those that are applicable to the Proposed Project are included below.

- Policy 6A.1 Addresses sensitive habitat buffers. It reads as follows:

The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected, including riparian zones, wetlands, old growth woodlands, and the habitat of special status, threatened or endangered species (see discussion of sensitive habitat buffers in Part I of this Policy Document). Based on more detailed information supplied as a part of the review for a specific project or input from state or federal regulatory agency, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:

- *Reasonable use of the property would otherwise be denied;*
- *The location is necessary to avoid or mitigate hazards to the public;*
- *The location is necessary for the repair of roads, bridges, trails, or similar infrastructure;*
or,
- *The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.*

- Policy 6.B.1 Addresses wetlands. It reads as follows:

The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Wildlife. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

- Policy 6.B.4 Addresses adjacent upland habitat. It reads as follows:

The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.

- Policies 6.C.1, and 6.C.4 through 6.C.9 Address fish and wildlife habitat. They read as follows:

The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:

- *Wetland areas including vernal pools.*
- *Stream zones.*
- *Any habitat for special status, threatened, or endangered animals or plants.*
- *Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.*
- *Large areas of non-fragmented natural habitat, including blue oak woodlands, valley foothill and montane riparian, valley oak woodlands, annual grasslands, and vernal pool/grassland complexes.*
- *Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.*
- *Important spawning and rearing areas for anadromous fish.*

The County shall encourage private landowners to adopt sound fish and wildlife habitat management practices, as recommended by California Department of Fish and Wildlife officials, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the U.S. Army Corps of Engineers, and the Placer County Resource Conservation District.

The County shall support preservation of the habitats of threatened, endangered, and/or other special status species. Where County acquisition and maintenance is not practicable or feasible, federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats

The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.

The County shall support the preservation or reestablishment of fisheries in the rivers and streams within the County, whenever possible.

The County shall require new private or public developments to preserve and enhance existing riparian habitat unless public safety concerns require removal of habitat for flood control or other essential public purposes (See Policy 6.A.1.). In cases where new private or

public development results in modification or destruction of riparian habitat the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.

Placer County Conservation Program

Placer County, along with various partners and resource agencies, are in the process of preparing the *Western Placer County Habitat Conservation Plan (HCP)/ Natural Community Conservation Plan (NCCP)* and the *Western Placer County Aquatic Resources Program (CARP)* under the Placer County Conservation Program (PCCP). The PCCP, including the HCP/NCCP and CARP, were adopted in September 2020. Based on the boundary maps provided in the PCCP documents, a portion of the BSA is within the HCP/NCCP planning area (Placer County 2020a).

Yuba County General Plan

The Natural Resources Element of the *Yuba County General Plan* (Yuba County 2011a) was adopted June 7, 2011, and includes policies to protect and promote the restoration of native and sensitive species and habitats. Those that are applicable to the Proposed Project are included below.

- Action NR10.1 addresses oak woodlands and tree preservation. It reads as follows:

Following adoption of the 2030 General Plan, the County would adopt and implement a tree preservation and mitigation ordinance. This ordinance would implement state requirements for oak woodlands mitigation (as required by Public Resources Code Section 21083.4, including certain exemptions). The tree preservation ordinance would address native oak trees measuring 6 inches or more in diameter at breast height (dbh) and all other trees greater than 30 inches dbh. The ordinance would describe the process by which the County determines the significance of impacts related to tree removal. For oak woodlands, mitigation can occur through: conservation easements; planting (up to 50% of mitigation requirement); restoration; contribution to the Oak Woodlands Conservation Fund; or equally effective mitigation formulated by the County during development of this ordinance.

The action time frame was defined in the general plan update for an ordinance to be adopted by 2015; however, a tree preservation and mitigation ordinance had not yet adopted at the time this document was drafted.

Yuba-Sutter Natural Community Plan and Habitat Conservation Plan

Yuba and Sutter counties, along with city partners and resource agencies, are in the process of preparing the *Yuba-Sutter NCCP and HCP*. The NCCP/HCP would cover natural communities and special-status species found within the plan area. Based on the most recent boundary maps, it appears the BSA is not within the NCCP/HCP planning area, because the NCCP/HCP only covers western Yuba County.

Impact Analysis

The impact analysis is based on the Proposed Project description; the environmental setting; and on federal, state, and local regulatory requirements regarding impacts on biological resources. In addition, the impact analysis uses data collected from previously performed studies. Impacts on specific biological resources are identified and appropriate avoidance, minimization, and mitigation measures are discussed further below. Implementation of the proposed avoidance, minimization,

and mitigation measures would reduce potential impacts on biological resources to a less than significant level.

As detailed in Section 1.5, *Description of the Proposed Project*, SSWD proposes five project components analyzed below as part of the proposed approval of the new FERC license.

The proposed administrative modification of the FERC Project boundary would not result in impacts on biological resources and will, therefore, not be analyzed further in this section.

Implementation of New Flow Regime and Environmental Measures

As part of the FLA, SSWD has proposed four environmental measures for the new flow regime. These include minimum streamflows (Measures WR1 and AR1; dictated by water year types), pulse flows (Measure AR2), and ramping rates (Measure AR3). These are detailed in Section 1.5, *Description of the Proposed Project*, and are provided in Appendix E2 of the FLA (SSWD 2019). Implementation of the new flow regime is not anticipated to result in measurable impacts on biological resources beyond special-status fishes, because shifts in terrestrial vegetation and/or conversion of terrestrial habitats to aquatic habitats are not anticipated as a result of the new flow regime; therefore, this impact analysis only evaluates potential impacts associated with the new flow regime in relation to special-status fishes.

Implementation of the *Bald Eagle Management Plan* and great blue heron rookery management measure establish requirements to implement protective measures for these species and would, therefore, not result in adverse impacts on biological resources. As a result, these measures will only be discussed in relation to their benefit for bald eagles, great blue heron, and other special-status birds, as appropriate. Implementation of the HPMP would involve hand excavation of archaeological resources in areas proposed for ground disturbance. Impacts on biological resources associated with ground disturbing and vegetation clearing activities are analyzed in relation to the Camp Far West Reservoir pool raise and implementation of the *Recreational Facilities Plan*. The de minimis impacts associated with hand excavation of archaeological resources during HPMP implementation would be superseded by the significant impacts associated with ground disturbance and vegetation clearing during the pool raise construction and implementation of the *Recreational Facilities Plan*; therefore, the HPMP will not be analyzed further in this section.

Camp Far West Reservoir Pool Raise

The pool raise component includes two sub-components analyzed in this section (1) construction to raise the existing spillway 5-feet, and (2) the subsequent increase in the maximum pool inundation zone. Construction to raise the spillway would result in impacts on biological resources associated with ground disturbance, vegetation clearing, staging, and access. While the extent of the increased inundation zone associated with the pool raise is known, the exact frequency and duration can only be estimated based on a comparison of modeled storage in Camp Far West Reservoir for water years 1976 through 2014, completed for as part of the FLA (SSWD 2019). Based on these data, the reservoir does not reach maximum pool in all water years (12 out of 38 years were below maximum pool), and the reservoir stays at maximum pool between April and early June. Both Proposed Project sub-components are anticipated to impact biological resources and are, therefore, analyzed in more detail below.

Recreation Feature Rehabilitation, Replacement, and Relocation

The *Recreation Facilities Plan* includes three measures: (1) perform operational maintenance, (2) perform major recreational rehabilitation, and (3) replace affected recreational features due to

increased inundation from the Camp Far West Reservoir pool raise. As stated in the project description, this impact analysis will evaluate effects of the performance of operational maintenance activities at a project level; whereas, the performance of major recreational rehabilitation and replacement of affected recreation facilities will be evaluated at a programmatic level because the specific improvements, locations, schedule, and approach to implementing these measures requires further design and feasibility assessment.

The proposed operational maintenance activities include painting, repair of broken windows, light bulb replacement, cleaning, unplugging drains, greasing, servicing, inspecting, oiling, adjusting, tightening, aligning, and sweeping. Other maintenance activities may include work needed to meet applicable laws, regulations, codes, and other legal direction (such as compliance with the Americans with Disabilities Act) as long as the original intent or purpose of the fixed asset is not changed. Annual operational maintenance includes those activities that are expected to occur on an annual or semi-annual schedule, as conditions warrant. Annual maintenance activities include, but are not limited to, straightening all vehicle barriers and signs, rehabilitating picnic tables, pumping or servicing vault or portable toilets, and conducting state and local required water quality testing of the water supply system. Since the performance of operational maintenance activities is limited to existing facilities and would not result in additional ground disturbing activities, impacts on biological resources are not anticipated and will, therefore, not be analyzed further in this section.

Performance of major recreational rehabilitation is characterized as grading and repaving roads and parking areas; replacing fire rings, grills, picnic tables, and signs; maintaining sewage and water systems; and replacing docks and trash receptacles. Grading roads, maintenance of sewage and water systems, along with replacement of docks could result in impacts on biological resources depending on the location and extent of ground disturbing and/or vegetation clearing activities; however, the remaining rehabilitation activities are not anticipated to result in adverse impacts on biological resources. Replacement of affected recreational features is also anticipated to result in ground disturbing and vegetation clearing activities that could have a potentially significant impact on biological resources; therefore, the implementation of recreational features rehabilitation and replacement are analyzed further below.

a) *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?*

Impact Conclusion: *Potentially significant unless mitigation incorporated.*

Based on the results of the literature review and the findings from previous surveys, several special-status plant and wildlife species are known to occur, or have the potential to occur, in the BSA. The special-status species or species groups identified below were determined to have the potential to be affected either directly or through habitat modifications, or indirectly through effects that could occur post-activity. When information about the presence of a particular special-status species is unknown, but suitable habitat is present, then the impact analysis takes a conservative approach by inferring presence of special-status species within the BSA until preconstruction or protocol level surveys determine otherwise.

Special-status Plant Species

Suitable habitat for the following six species of special-status plants occurs in the BSA: big-scale balsamroot (*Balsamorhiza macrolepis*), dwarf downingia (*Downingia pusilla*), Ahart's dwarf rush

(*Juncus leiospermus* var. *ahartii*), legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), and Brazilian watermeal (*Wolffia brasiliensis*). Construction associated with the Camp Far West Reservoir pool raise and implementation of the recreational rehabilitation and replacement of affected recreational features may result in potentially significant impacts on the aforementioned special-status plants, should suitable habitat and individuals be present in or adjacent to areas of proposed ground disturbing or vegetation clearing activities. However, specific to the proposed Camp Far West Reservoir pool raise, increased inundation is not expected to result in significant adverse impacts on the six special-status plants with the potential to occur in the BSA. Big-scale balsamroot and Ahart's dwarf rush are associated with more upland habitat types that may be present adjacent to the reservoir; however, significant populations are not expected to be present immediately adjacent to the wetted reservoir. Dwarf downingia, legenere, and pincushion navarretia are all associated with vernal pools, and a review of previously mapped aquatic resources in the BSA, along with current and historical aerial photographs, revealed that no vernal pools are present in the area that would be inundated as a result of the pool raise. Brazilian watermeal is associated with freshwater marshes, which are also not anticipated to be adversely impacted by increased inundation because these habitats are likely to expand, not contract, with more available water. As a result, the increased inundation from Camp Far West Reservoir pool raise is not anticipated to result in potentially significant impacts on special-status plants. Suitable habitat does, however, occur where proposed pool raise construction and recreation feature rehabilitation, replacement, and relocation might occur, and therefore there, remains a potentially significant impact on special-status plants.

To minimize potentially significant impacts on special-status plant species associated with construction of the Camp Far West Reservoir pool raise and implementation of the recreational rehabilitation and replacement of affected recreational features to a less than significant level, mitigation measures **MM-BIO-01** through **MM-BIO-05** would be implemented.

Mitigation Measures:

- **MM-BIO-01 Minimize Disturbance Footprint.** During development for the Proposed Project, ground disturbance and vegetation clearing footprints would be reduced to the smallest area feasible. All areas to be avoided during construction activities would be fenced and/or flagged as close to construction limits as feasible.
- **MM-BIO-02 Restoration of Temporarily Disturbed Areas.** All exposed and/or disturbed areas resulting from ground disturbing activities would be returned to their original contour and grade, and restored using locally native grass and forb seeds, plugs, or a mix of the two. Areas would be seeded with species appropriate to their topographical and hydrological character. For example, temporarily disturbed wetlands would be seeded with native hydrophytic species typical to the region, whereas upland areas would be seeded with an upland grass and forb mix. Seeded areas would be covered with broadcast straw and/or jute netted.
- **MM-BIO-03 Pre-construction Special-status Plant Surveys.** Prior to initiation of ground disturbance activities associated with the construction of the pool raise and recreation rehabilitation and relocation, a qualified botanist would be retained to perform focused surveys to determine the presence or absence of special-status plant species with potential to occur in and adjacent to (within 50 feet, where appropriate) proposed impact areas. These surveys would be conducted in accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*

(2018), or as updated, which require rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Surveys would be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern. If the special-status plants are identified during surveys, then MM-BIO-04 shall be implemented.

- **MM-BIO-04 Special-status Plant Avoidance and Mitigation.** If any special-status plant species are found within 50 feet of ground disturbance or vegetation clearing areas associated with the proposed recreation feature rehabilitation, replacement, and relocation or the pool raise construction during MM-BIO-04, the following shall be implemented:
 - Any special-status plant species that are identified in or adjacent to the proposed ground disturbance or vegetation clearing areas, but not proposed to be disturbed, shall be protected by flagging, signage, orange plastic fence, and/or silt fence, as appropriate, based on site conditions to limit the effects of activities and material stockpiles on any special-status plant species.
 - If activities would result in the loss of greater than 10 percent of a population identified during surveys or occupied habitat for a special-status plant species, SSWD would develop a mitigation plan that would describe a program to transplant, salvage, cultivate, and reestablish the species at suitable sites (if feasible); means and methods to propagate affected special-status plants through vegetative or reproductive means (for example, harvesting of seed or seed bank through topsoil collection, salvaging and transplanting or collecting of cuttings), as appropriate, for the species, and transplant at suitable receiving sites as close to the existing population as possible. Propagation and transplantation shall occur prior to initiating the activity. The receiving location shall be evaluated and chosen based on similarity to conditions at the transplant source location. Site conditions to consider when choosing a receiving site shall include aspect, substrate, hydrology, associated species, and canopy cover. The transplanted plants shall be monitored for at least 1 year following transplantation.
 - At a minimum, the species and habitat must be replaced at a 1:1 ratio (individuals or acreage of occupied habitat).
- **MM-BIO-05: Biological Monitoring and Worker Environmental Awareness Training.** A qualified biologist(s) shall monitor construction activities that could potentially cause significant impacts on sensitive biological resources. The amount and duration of monitoring would depend on the activity and would be determined by the qualified biologist. In addition, a qualified biologist shall be retained to conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the identified location of sensitive biological resources, including how to identify species (visual and auditory) most likely to be present, the need to avoid impacts on biological resources (e.g., plants, wildlife, sensitive natural communities, and aquatic resources), and to brief them on the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the project, the contractor will ensure that they receive the mandatory training before starting work.

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. **MM-BIO-03** through **MM-BIO-05** would be

required to document whether special-status plants are present; if present, determine the location and extent of special-status plant populations; and provide for biological oversight of construction activities to minimize incidental impacts that could occur during construction. As shown, if the Proposed Project is approved, implementing the aforementioned mitigation measures would reduce impacts on special-status plants to a less than significant level.

Vernal Pool Crustaceans

Vernal pools were mapped in the BSA and Proposed FERC Project boundary during a 2018 aquatic resources delineation (Figure 2.4-2). No other vernal pool habitats were delineated in the BSA boundary during 2013 surveys (Sycamore Environmental 2013a). Vernal pools in the BSA could provide suitable habitat for previously analyzed special-status plants and two vernal pool crustaceans: vernal pool tadpole shrimp and vernal pool fairy shrimp. Protocol-level surveys for vernal pool crustaceans have not been performed to date in the BSA; therefore, their presence is assumed due to the existence of suitable habitat and proximity of documented occurrences of vernal pool fairy shrimp (1.5 miles) and vernal pool tadpole shrimp (4 miles) (CDFW 2021a).

Construction associated with the Camp Far West Reservoir pool raise is not anticipated to result in significant impacts on vernal pool crustaceans, because no vernal pools are mapped within 250 feet of the existing spillway. As discussed under the above *Special-status Plant Species* section, no vernal pools are present in the area that would be inundated as a result of the pool raise; therefore, no impacts on vernal pool crustaceans would result from this Proposed Project component.

However, implementation of the recreation feature rehabilitation, replacement, and relocation component may result in significant impacts on the vernal pool crustaceans should ground disturbing and/or vegetation clearing activities be proposed within 250 feet of vernal pools. The location and design of the proposed recreational improvements will be refined based on further design and the related environmental impacts assessed through subsequent CEQA. For the purpose of this programmatic review, this impact is considered potentially significant.

To minimize the level of impact to a less than significant level, mitigation measures **MM-BIO-01** and **MM-BIO-03** would be implemented prior to initiating ground disturbing and vegetation clearing activities. Should the project-level review of the recreational rehabilitation and replacement determine that vernal pools are present within 250 feet of proposed ground disturbance and/or vegetation clearing footprint(s), then implementation of **MM-BIO-06** through **MM-BIO-09** is required.

Mitigation Measures:

- **MM-BIO-06 No Net Loss of Sensitive Natural Communities.** No net loss of sensitive natural communities, including aquatic resources, would be achieved through impact avoidance, minimization, and/or compensatory mitigation. Mitigation for permanent impacts on sensitive natural communities shall be provided at a minimum 1:1 ratio. Mitigation can be achieved through on-site restoration, in-lieu fee payment, or purchase of mitigation credits at a USACE-, USFWS-, and/or CDFW-approved mitigation bank. Mitigation, as required in regulatory permits issued through CDFW, USACE, USFWS, and/or the SWRCB or RWQCB, may be applied to satisfy this measure.
- **MM-BIO-07 Construction Best Management Practices (BMPs).** Prior to initiating ground disturbing activities associated with the proposed recreation feature rehabilitation, replacement, and relocation and spillway construction within 250 feet of vernal pools or 100 feet of other aquatic resources, construction BMPs would be employed on site to prevent degradation to on-site and off-site aquatic resources. Methods would include using

appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs would be in place prior to initiating any construction activities and shall remain until construction activities are completed. All erosion control methods would be maintained until all on-site soils are stabilized.

- **MM-BIO-08 Sensitive Community Fencing.** If sensitive communities occur within 100 feet (250 feet for vernal pools) of proposed ground disturbing activities associated with the proposed recreation feature rehabilitation, replacement, and relocation and spillway construction, protective fencing would be installed between habitats to be avoided and the construction limits to prevent accidental disturbance and to protect water quality during construction.
- **MM-BIO-09 Dry Work Areas.** Work would coincide with the driest time, if feasible. No work shall occur within 72 hours of a rain event. If rain is forecast within 72 hours of scheduled work, work would be postponed until 72 hours after a rain event.

Implementing **MM-BIO-01** and **MM-BIO-02** during proposed recreation feature rehabilitation, replacement, and relocation and spillway construction would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. If future project-level reviews of the recreational rehabilitation and replacement determine that vernal pools are present, implementing **MM-BIO-06** through **MM-BIO-09** would provide for biological oversight of construction activities, require mitigation for the permanent loss of vernal pool habitats, minimize adverse impacts resulting from sedimentation and erosion during construction, and demarcate vernal pools that need to be avoided by construction activities to minimize incidental impacts that could occur during construction. As shown, if the Proposed Project is approved, implementing the aforementioned mitigation measures would reduce impacts on vernal pool crustaceans to a less than significant level.

Valley Elderberry Longhorn Beetle

In 2017, as part of the relicensing process, SSWD completed the *ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle Study*. One elderberry shrub (*Sambucus* spp.) with two stems greater than 1 inch in diameter at ground height was identified during surveys in the area east of the dam face, on the shore of the reservoir during the relicensing studies (SSWD 2019). Additionally, two elderberry shrubs were observed around the section of the reservoir that would be inundated by the pool raise (Sycamore Environmental 2013b), which included the one elderberry shrub identified east of the dam during the relicensing study. Construction associated with the Camp Far West Reservoir pool raise is likely to result in direct or indirect impacts on the elderberry shrub identified east of the dam, and potentially valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) should they be using this shrub as a host plant.

The second elderberry shrub is located in an area where no existing or proposed infrastructure is located, so direct or indirect impacts on this shrub, and potentially valley elderberry longhorn beetle, from pool raise construction activities is not anticipated. However, the second elderberry shrub would experience increased inundation associated with the pool raise. While elderberry typically prefer drier floodplain inundation zones (5-year and 10-year), lower percentages (approximately 20 percent) of individuals and patches do occur in the 2-year floodplain inundation zone (Rayburn 2017). The 2-year floodplain inundation zone is correlated with the ordinary high-water mark of streams, creeks, and rivers, suggesting that elderberry can withstand some seasonal inundation;

however, this aspect of elderberry ecology is poorly studied and durations of inundation tolerance have not been clearly established. As a result, the increased inundation from the pool raise may result in indirect impacts on the second elderberry shrub, located away from the dam. Given the elderberry is the host plant of the federally-listed valley elderberry longhorn beetle, indirect impacts on elderberry would be potentially significant.

Additionally, protocol-level surveys for elderberry have not been conducted across the entire BSA; therefore, implementing the recreation feature rehabilitation, replacement, and relocation component could directly or indirectly impact valley elderberry longhorn beetle should elderberry shrubs be present within 165 feet of ground disturbance and/or vegetation clearing areas. Direct and indirect impacts on valley elderberry longhorn beetle could result in take of the species, thus resulting in a potentially significant impact.

To minimize potentially significant impacts on the valley elderberry longhorn beetle to a less than significant level, mitigation measures **MM-BIO-01** and **MM-BIO-03** would be implemented prior to initiating ground disturbing and vegetation clearing activities associated with the construction of the pool raise and recreation rehabilitation and replacement, should future project-level reviews determine that elderberry shrubs are present within 165 feet of proposed recreation features. Implementation of **MM-BIO-05** and **MM-BIO-10** through **MM-BIO-14** would be required for the pool raise construction and inundation; as well as the recreation feature rehabilitation, replacement, and relocation should future project-level reviews determine that elderberry shrubs are located within 165 feet of proposed recreation features to minimize impacts to a less than significant level.

Mitigation Measures:

- **MM-BIO-10: No Net Loss of Elderberry Shrubs.** Elderberry shrubs that would be directly impacted by the Proposed Project would be transplanted to a new location along the reservoir. Alternatively, credits would be purchased at a USFWS-approved bank for each shrub at a 2:1 ratio. Mitigation required in regulatory permits issued through USFWS related to elderberry shrubs may be applied to satisfy this measure.
- **MM-BIO-11: Elderberry Transplanting.** Elderberry shrubs would be transplanted between November through the first two weeks in February and follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (<http://www.tcia.org/>). Exit-hole surveys would be completed immediately before transplanting. The number of exit holes found, global positioning system (GPS) location of the plant to be relocated, and the GPS location of where the plant is transplanted would be reported to USFWS. A qualified biologist would be on site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures. The transplanted shrubs would be monitored by a qualified biologist during the growth season following transplant to determine whether the shrubs have survived. If the shrubs are deemed alive, no further monitoring or action would be necessary. If the shrub(s) are deemed dead, an additional one credit per shrub would be purchased from a USFWS-approved bank for valley elderberry longhorn beetle.
- **MM-BIO-12: Avoidance Area.** Activities that may indirectly damage or kill an elderberry shrub (trenching, paving, etc.) with one or more stems measuring 1.0 inch in diameter or greater (>1.0) at ground level would require an avoidance area of at least 20 feet from the drip line, as appropriate, depending on the type of activity. All activities that could occur within 165 feet of an elderberry shrub with one or more stems measuring 1.0 inch in diameter

or greater at ground level would be conducted outside of the flight season of the valley elderberry longhorn beetle (March to July).

- **MM-BIO-13: Chemical Use.** Herbicides would not be used within the drip line of the shrub. Insecticides would not be used within 98 feet of an elderberry shrub with one or more stems measuring >1.0 inch in diameter at ground level. All chemicals would be applied using a backpack sprayer or similar direct application method.
- **MM-BIO-14: Mowing.** Mechanical weed removal within the drip line of the shrub would be limited to the season when adults are not active (August to February) and would avoid damaging the elderberry.

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementation of **MM-BIO-05** and **MM-BIO-10** through **MM-BIO-14** would reduce impacts on valley elderberry longhorn beetle, which would result from the Camp Far West pool raise as well as the recreation rehabilitation and replacement should future project-level reviews determine that elderberry shrubs are present within 165 feet of proposed recreation features, through compensatory mitigation, transplanting of shrubs, and avoidance. As such, implementing the aforementioned mitigation measures would reduce impacts on valley elderberry longhorn beetle to a less than significant level.

Special-status Fishes

The following special-status fish species occur or have potential to occur in the BSA and were identified in the various special-status species queries: green sturgeon, Pacific lamprey, steelhead, and Chinook salmon (Table 2.4-2). Additionally, the following fish species were identified as having potential to occur in the BSA and are discussed in the Camp Far West Project FLA and, therefore, are included as part of this analysis: Central Valley fall-/late fall-run Chinook salmon evolutionarily significant unit (ESU) (state species of concern [SSC]); white sturgeon (*Acipenser transmontanus*) (state SSC), Sacramento-San Joaquin roach (*Hesperoleucus symmetricus*) (state SSC); hardhead (*Mylaphorodon conocephalus*) and Sacramento splittail (*Pogonichthys macrolepidotus*), both state SSC. For detailed descriptions of each of these species, including the nearest occurrence to the Proposed Project, refer to the FLA (SSWD 2019).

Implementation of the new flow regime would generally have a beneficial impact on fish species in the Lower Bear River (SSWD 2019). SSWD has developed a series of measures in collaboration with NMFS, CDFW, and other applicable resource agencies designed to benefit fish species in the Lower Bear River. Specifically, **Measure WR1**, Implement Water Year Types, was developed to better characterize water conditions in the lower Bear River based on overall hydrologic conditions including precipitation, snowmelt, and run off timing. **Measure AR1**, Implement Minimum Streamflows, is designed to benefit fall-run Chinook salmon by providing increased streamflows, when compared to existing conditions, during winter and spring, based on month and water year type. Minimum streamflows from June through October would be identical to existing conditions, or even slightly less than existing minimum streamflows, recognizing that the water is better used in the winter and spring and no amount of release would substantially improve aquatic habitat over existing conditions in summer and fall, primarily due to ambient warming and the subsequent warm water temperatures. Any reductions in minimum instream flows during the summer and fall were balanced against the positive impacts of higher flows during the winter and spring. **Measure AR2**, Implement Fall and Spring Pulse Flow, would provide a pulse flow in wet, above normal, and below normal water years to encourage fall-run Chinook salmon to enter the lower river and spawn, and a spring

pulse flow in below normal, dry, and critically dry water years to encourage any fall-run Chinook salmon in the river to outmigrate before conditions in the Lower Bear River become unfavorable due to water temperature. This measure provides a net benefit to Chinook salmon as well as other fish species in the Lower Bear River by providing attractant flows for increased spawning in the lower river during years with enough water to support spawning and juvenile rearing, while improving downstream migration conditions in the Lower Bear River during drier years, allowing fish to move downstream into the Feather River. **Measure AR3**, Implement Ramping Rates, would establish ramping rates to protect fall-run Chinook salmon spawning and minimize fish stranding. This measure would also benefit other fish species that may use the Lower Bear River by decreasing the potential for stranding due to sudden changes in flow. These measures are described in more detail in Appendix E2 of Exhibit E of the FLA (SSWD 2019) and were developed in coordination with natural resource agencies for the strict purpose of benefiting fish in the Lower Bear River.

Fish species in the BSA are not likely to be affected by implementing environmental commitments and plans, such as the *Bald Eagle Management Plan*, the great blue heron rookery environmental commitment, the *Recreation Facilities Plan*, and the HPMP. Most of these plans affect upland habitats only and would have no impact on fish or their habitat. Docks and other in-water structures would be repaired or replaced as a result of the *Recreation Facilities Plan* at Camp Far West Reservoir. However, no special-status fish species are anticipated to occur in the reservoir.

Similarly, no effect on special-status fish is anticipated to occur as a result of the Camp Far West Reservoir pool raise, including construction at the dam, as no special-status fish species are anticipated to occur in the reservoir.

No impacts on special-status fish species are anticipated to occur as a result of the recreation feature rehabilitation, replacement, and relocation. As with the implementation of environmental measures, most of this work would occur in upland habitats. The relocation of two boat launch features would affect aquatic habitat within Camp Far West Reservoir; however, no special-status fish species are anticipated to occur in the reservoir.

Mitigation Measures: None required

Special-status Amphibians and Reptiles

Special-status amphibians and reptiles that have the potential to occur in the BSA include California red-legged frog (*Rana draytonii*) and western (northwestern) pond turtle (*Emys marmorata*). Focused surveys conducted in association with the relicensing effort did not document either of these species, nor are there recent occurrence records in the vicinity of the BSA. The closest verified occurrence of California red-legged frog is approximately 24.5 miles to the northeast of the BSA, in Nevada County (SSWD 2019). An unverified observation was made in 2017 at a stock pond just to the north of the sewage treatment pond located in the NSRA (SSWD 2019). The closest verified occurrence of western pond turtle is located within the Spenceville Wildlife Area, approximately 4.2 miles from Camp Far West Dam (SSWD 2019).

Construction associated with the Camp Far West Reservoir pool raise is not anticipated to result in potentially significant impacts on California red-legged frog or western pond turtle, because the habitats surrounding the dam are not suitable for these species. The increased inundation resulting from the pool raise is also not anticipated to result in potentially significant impacts on California red-legged frog because this species, if present, would only use the uplands that would experience inundation for dispersal through the area during rain events. Western pond turtles could use the uplands in the inundation zone for nesting; however, there is adequate suitable upland habitat for

this species beyond the inundation zone and the increased aquatic habitat from the pool raise would provide a net benefit to the species. As a result, the Camp Far West Reservoir pool raise is not anticipated to result in significant impacts on California red-legged frog or western pond turtle.

Implementing the recreation feature rehabilitation, replacement, and relocation component, may result in potentially significant impacts on the California red-legged frog and/or western pond turtle, should future project-level reviews determine that suitable habitat is present in or adjacent to areas of proposed ground disturbing or vegetation clearing activities. For the purpose of this programmatic review, this impact is considered potentially significant. To minimize the level of impact from implementation of the recreation rehabilitation and replacement activities to a less than significant level, mitigation measures **MM-BIO-01** and **MM-BIO-02**, **MM-BIO-05**, **MM-BIO-07**, **MM-BIO-09**, and **MM-BIO-15** should be implemented prior to initiating ground disturbing and vegetation clearing activities.

Mitigation Measures:

- **MM-BIO-15 Western Pond Turtle Visual Encounter Surveys.** A preconstruction survey for western pond turtle would be conducted within 24 hours of the onset of any proposed ground disturbing activities associated with the proposed recreation feature rehabilitation, replacement, and relocation occurring within 350 feet of the Camp Far West Reservoir. The survey area would include all disturbance areas within 350 feet of the reservoir, all habitat between the disturbance areas and the reservoir, and the reservoir edge. If juvenile or adult turtles are found within the survey area, they would be moved by a qualified biologist at least 500 feet away from the proposed disturbance area to a location with similar habitat. If a turtle nest is found within the survey area, construction activities would not take place within 100 feet of the nest until the turtles have hatched or the eggs have been moved to an appropriate location. Any egg relocation would be conducted by a qualified biologist in coordination with CDFW.

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementing **MM-BIO-05**, **MM-BIO-07**, **MM-BIO-09**, and **MM-BIO-15** would provide for biological oversight of construction activities, implement construction BMPs to minimize adverse impacts resulting from sedimentation and erosion during construction, and protect western pond turtle nests, if found. As shown, if the Proposed Project is approved, implementation of the aforementioned mitigation measures would reduce impacts on special-status amphibians and reptiles to a less than significant level.

Special-status Birds

As a result of the queries and desktop review, the BSA may provide nesting, wintering, and/or foraging habitat for several special-status bird and raptor species, including grasshopper sparrow, golden eagle, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, bald eagle, and loggerhead shrike. The BSA may also provide nesting, wintering, and/or foraging habitat for other migratory birds and raptors not identified in Table 2.4-2. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under FGC 3503.

Burrowing owls were observed in the BSA during aquatic resources delineation surveys conducted in early February 2018 as part of the spillway expansion project. Burrowing owls likely only use the site for wintering, because the BSA is outside of the breeding range for this species (CDFW 2021b). Additionally, SSWD completed the *Special Status Wildlife – Raptors Study* in 2017 and 2018 as part

of the relicensing, which identified and mapped known nest sites for three special-status raptor species: bald eagle, golden eagle, and Swainson's hawk. Forty-seven bald eagle occurrences (including multiple at the same site) and two active bald eagle nests were found within the proposed FERC Project boundary in 2017. One historic nest, originally documented in 2013, was previously found on the Bear River arm of Camp Far West Reservoir, while a second active bald eagle nest was found on the Rock Creek arm of the reservoir, east of the NSRA boat ramp during the 2017 surveys. Other birds observed in the BSA during site surveys include various common resident and migratory birds as well as a soaring sub-adult bald eagle.

Implementing the *Bald Eagle Management Plan* would require nesting surveys, yearly monitoring, and establishing buffers and LOPs. Additionally, water barriers (e.g., buoys and signage) and land barriers (e.g., fencing and signage) around known occupied nests would be installed within the FERC Project boundary, as determined appropriate by the CDFW and USFWS, to delineate the buffers in order to restrict Proposed Project operation and maintenance and recreation activities in the vicinity of nests. Refer to the *Bald Eagle Management Plan* (Appendix A) for specific limited operating periods, buffers, and survey requirements. Implementing the *Bald Eagle Management Plan* would have a net benefit on bald eagles and would, therefore, have no impact on this species or other special-status birds.

As part of an environmental license commitment, SSWD is required to implement a LOP from March 15 to July 31 within a 500-foot buffer of the great blue heron rookery presently located at the SSRA, and other blue heron rookeries that may be identified on the Camp Far West Reservoir. Land barriers and appropriate signage shall be placed to designate the buffer zone during the limited operating period from the edge of the outside nest (SSWD 2019). Implementing the great blue heron rookery management measure would have a net benefit on the species and would, therefore, have no impact great blue herons or other special-status birds.

Construction associated with the Camp Far West Reservoir pool raise construction and, recreational feature rehabilitation, and/or recreational feature relocation could result in potentially significant impacts on special-status birds should active nests be present in or adjacent to (200 feet for passerines and 500 feet for raptors) proposed disturbance, vegetation clearing, access, and/or staging. However, the increased inundation from the pool raise is not anticipated to result in impacts on special-status birds because nesting habitat in this zone would be inundated prior to nesting season commencing, and there is adequate suitable upland habitat for these species beyond the inundation zone. To minimize the level of impact associated with ground disturbance and/or vegetation clearing to a less than significant level, mitigation measures **MM-BIO-01** and **MM-BIO-02**, **MM-BIO-05**, and **MM-BIO-16** through **MM-BIO-18** would be implemented prior to initiating ground disturbing and vegetation clearing activities.

Mitigation Measures:

- **MM-BIO-16 Pre-construction Special-status Bird Surveys.** If feasible, tree and vegetation clearing would be conducted outside the migratory bird nesting season (March 1 through August 31). However, if clearing and/or construction activities would occur during the migratory bird nesting season, then preconstruction surveys to identify active migratory bird and/or raptor nests and burrowing owl burrows would be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence or absence of active nest sites or burrowing owl burrows within the proposed impact area, including construction access routes and a 500-foot buffer, where feasible.

- **MM-BIO-17 Nest Avoidance.** If active nest sites are identified within the survey areas, a no disturbance buffer would be established for all active nest sites prior to commencing any Proposed Project construction activities to avoid construction or access-related disturbances to migratory bird nesting activities. A no-disturbance buffer constitutes a zone in which Proposed Project-related activities (that is, vegetation removal, earth moving, noise generation, and construction) cannot occur. The size of the no-disturbance buffers would be determined by a qualified biologist based on the species, activities proposed near the nest, and topographic and other visual barriers.
- **MM-BIO-18 Burrowing Owl Avoidance.** If no burrowing owls are detected during the special-status bird surveys, then no further mitigation is required. If burrowing owls are detected, the avoidance, minimization, and mitigation methodologies outlined in CDFW's *Staff Report on Burrowing Owl Mitigation (2012)* would be implemented prior to initiating Proposed Project-related activities that may impact burrowing owls.

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementing **MM-BIO-05** and **MM-BIO-16** through **MM-BIO-18** would provide for biological oversight of construction activities, document the location of active special-status bird nests, and provide for avoidance of active nests during construction. As shown, if the Proposed Project is approved implementing the aforementioned mitigation measures would reduce impacts on special-status birds to a less than significant level.

Special-status Bats

Bats roost in a wide variety of habitats, including buildings, mines, under bridges, rock crevices, caves, under tree bark, and in snags. The Townsend's big-eared bat, pallid bat, and western red bat may use a variety of habitats and structures throughout the BSA for roosting and foraging. The disturbance of active maternity roosts would affect the reproductive success of special-status bats because young do not fly from the maternity roost until they reach several months in age (CDFW 2021b). Construction associated with the Camp Far West Reservoir pool raise, recreational feature rehabilitation, and/or recreational feature relocation could result in potentially significant impacts on special-status bats should roost sites be present in proposed disturbance, vegetation clearing, access, and/or staging areas. However, the increased inundation from the pool raise is not anticipated to result in impacts on special-status bats because adequate suitable habitat for these species is present in the BSA beyond the inundation zone. To minimize the level of impact associated with ground disturbance and/or vegetation clearing to a less than significant level, mitigation measures **MM-BIO-01** and **MM-BIO-02**, **MM-BIO-05** and **MM-BIO-19** would be implemented prior to pool raise construction and recreation rehabilitation and relocation activities.

Mitigation Measures:

- **MM-BIO-19 Pre-construction Bat Surveys.** Prior to ground disturbance and/or vegetation clearing associated with the pool raise construction and recreation rehabilitation or relocation, a qualified biologist would conduct a daytime site reconnaissance of the area between May 1 and August 30. The biologist, focusing on rocky outcrops, trees or existing facilities proposed for rehabilitation or relocation, would look for bats and bat sign, including existing roost sites, bat guano deposits, and would listen for roosting bats. If potential roost sites are identified, an exit nighttime survey would be conducted to determine species of roosting bats, relative bat activity, and to estimate the number of individual bats. This nighttime survey may be an active or passive acoustic monitoring survey. If occupied bat

roost sites are identified, appropriate spatial and temporal buffers would be implemented to minimize impact on roosting bats during construction of the project. If the daytime survey does not identify the presence of potential bat roosts, no further mitigation is required.

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementing **MM-BIO-05** and **MM-BIO-19** would provide for biological oversight of construction activities, document the location of active special-status bat roosts, and provide for avoidance of active roosts during construction. As shown, if the Proposed Project is approved, implementing the aforementioned mitigation measures would reduce impacts on special-status bats to a less than significant level.

American Badger

Upland communities in the BSA may provide suitable foraging, movement, and denning habitat for American badger. Although there are no recorded occurrences near the BSA, American badger is known to occur across most of the state. Annual grasslands in the BSA provide suitable habitat for this species. Construction associated with the Camp Far West Reservoir pool raise construction, recreational feature rehabilitation, and/or recreational feature relocation could result in potentially significant impacts on American badger should denning sites be present in proposed disturbance, vegetation clearing, access, and/or staging areas. However, the increased inundation from the pool raise is not anticipated to result in impacts on American badger denning and foraging because denning habitat in this zone would be inundated prior to breeding season (April 15 – August 15) commencing, and there is adequate suitable upland habitat for these species beyond the inundation zone. To minimize the level of impact associated with ground disturbance and/or vegetation clearing to a less than significant level, mitigation measures **MM-BIO-01** and **MM-BIO-03**, **MM-BIO-05**, and **MM-BIO-20** would be implemented prior to initiating ground disturbing and vegetation clearing activities.

Mitigation Measures:

- **MM-BIO-20 Pre-construction American Badger Detection Surveys.** Prior to ground disturbance and/or vegetation clearing associated with the pool raise construction and recreation rehabilitation or relocation, a qualified biologist would be retained to perform focused surveys for the purposes of determining presence or absence of active den sites within the impact area, including construction access routes, and areas proposed for the relocation of recreational facilities, and a 250-foot buffer (if feasible). If active breeding sites are identified within 250 feet of ground disturbing and/or vegetation clearing activities, a no disturbance buffer would be established prior to commencing any project construction activities to avoid construction or access-related disturbances to breeding activities for American badger. Activities permitted within and the size of the no disturbance buffers may be adjusted based on an evaluation by the qualified biologist. The buffer would be imposed until a qualified biologist determines breeding activities have ended.

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementing **MM-BIO-05** and **MM-BIO-20** would provide for biological oversight of construction activities, document the location of active den sites, and provide for avoidance of active dens during construction. As shown, if the Proposed Project is approved, implementing the aforementioned mitigation measures would reduce impacts on American badger to a less than significant level.

b) 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?

Impact Conclusion: *Potentially significant unless mitigation incorporated.*

Sensitive communities include (1) areas of special concern to resource agencies, (2) areas protected under CEQA, (3) areas designated as sensitive natural communities by CDFW, (4) areas outlined in FGC Section 1600, (5) areas regulated under CWA Section 404, and (6) areas protected under local regulations and policies. The following CDFW-designated sensitive natural communities were mapped in the BSA: California buckeye; valley oak; red willow; cottonwood; interior live oak, and foothill pine. However, ground-truthed data on the presence, location, and/or extent of the aforementioned sensitive natural communities has not been performed to date. In addition, all aquatic resources documented in the BSA are considered sensitive natural communities.

Construction associated with the Camp Far West Reservoir pool raise, recreational feature rehabilitation, and/or recreational feature relocation could result in potentially significant impacts on sensitive natural communities should they be present in proposed disturbance, vegetation clearing, access, and/or staging areas. The increased inundation from the pool raise is not anticipated to result in significant impacts on these communities because the inundation zone is largely characterized by annual grasslands, which is not a sensitive natural community. The inundation zone also contains aquatic resources that may experience slight type conversion and expansion from an increased hydroperiod, so the pool raise inundation is likely to provide a net benefit for aquatic resources.

To minimize the level of impact to a less than significant level, mitigation measures **MM-BIO-01**, **MM-BIO-03**, and **MM-BIO-05** through **MM-BIO-09** would be implemented prior to initiating ground disturbing and vegetation clearing activities.

Mitigation Measures: *No additional mitigation required.*

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on sensitive natural communities through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementing **MM-BIO-05** through **MM-BIO-09** would provide for biological oversight of construction activities, require mitigation for the permanent loss of sensitive natural communities, minimize adverse impacts resulting from sedimentation and erosion during construction, and demarcate sensitive communities that need to be avoided by construction activities to minimize incidental impacts that could occur during construction. As shown, if the Proposed Project is approved, implementing the aforementioned mitigation measures would reduce impacts on sensitive natural communities to a less than significant level.

c) 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?

Impact Conclusion: *Less than significant with mitigation incorporated.*

As previously discussed, a variety and number of aquatic resources are present in the BSA. Construction associated with the Camp Far West Reservoir pool raise, recreational feature rehabilitation, and/or recreational feature relocation could result in potentially significant impacts on aquatic resources should they be present in proposed disturbance, vegetation clearing, access, and/or staging areas. The pool raise inundation zone also contains aquatic resources that may

experience slight type conversion and expansion from an increased hydroperiod, so the pool raise inundation is likely to provide a net benefit for aquatic resources.

To minimize the level of impact to a less than significant level, mitigation measures **MM-BIO-01**, **MM-BIO-03**, and **MM-BIO-05** through **MM-BIO-09** would be implemented prior to initiating ground disturbing and vegetation clearing activities.

Mitigation Measures: *No additional mitigation required.*

Implementing **MM-BIO-01** and **MM-BIO-02** would minimize impacts on sensitive natural communities through restriction of ground disturbance and vegetation clearing footprint and requiring restoration of temporarily disturbed areas to pre-project conditions. Implementing **MM-BIO-05** through **MM-BIO-09** would provide for biological oversight of construction activities, require mitigation for the permanent loss of aquatic resources, minimize adverse impacts resulting from sedimentation and erosion during construction, and demarcate aquatic resources that need to be avoided by construction activities to minimize incidental impacts that could occur during construction. As shown, if the Proposed Project is approved, implementing the aforementioned mitigation measures would reduce impacts on sensitive natural communities to a less than significant level.

d) 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?

Impact Conclusion: *No impact.*

A review of wildlife corridor data available on CDFW's BIOS 5 viewer (2021a) was performed for the Proposed Project to determine whether the BSA is located in an essential connectivity area. The review of these data indicated that one essential connectivity area overlaps the southern and eastern portions of the BSA, crossing the Bear River at the upper end of Camp Far West Reservoir (Figure 2.4-3). A linkage for small grassland mammals was also identified in the missing linkages layer that runs north-south through the BSA (Figure 2.4-3). Additionally, the Bear River and Rock Creek, and their associated riparian corridors, facilitate aquatic and terrestrial wildlife movement through the action area.

The Proposed Project would not impact fish passage, because Camp Far West Dam is currently a barrier for dispersal and anadromous fish are limited by a non-Project diversion dam approximately 1 mile downstream of Camp Far West Dam. Further, none of the Proposed Project components would impede the use of wildlife nursery sites. Implementation of new flow regime would not affect fish or wildlife migration corridors as the flows are designed to allow for improved fish passage, when compared to existing conditions. These flows are not large enough to impede wildlife movement through the Lower Bear River, and they would not affect portions of the Proposed Project located upstream of Camp Far West Reservoir. Implementing environmental measures, including the *Recreation Facilities Plan*, would not affect wildlife or fish movement in the Proposed Project. These activities would occur at existing recreation facilities and would not impede wildlife or fish movement when compared to existing conditions. The *Bald Eagle Management Plan* and the great blue heron rookery management measure are designed to improve conditions for these species, including nesting habitat. The Camp Far West Reservoir pool raise, including the construction activities associated with it, would not affect fish or wildlife movement corridors. Construction is limited to an area near the auxiliary spillway and existing dam that do not currently provide high quality wildlife movement corridors. Some aquatic movement corridors in the BSA, such as the upper reaches of the Bear River, Rock Creek, and their tributaries, would be affected by the Camp Far West Reservoir pool raise, which would result in increased inundation to the portions of these channels within the

Proposed Project area. However, inundation of these areas would not affect the ability of aquatic species to move through these aquatic corridors. The recreation feature rehabilitation, replacement, and relocation would not affect migration and nursery habitat for native aquatic species as these features would not be placed in aquatic resources. In addition, the recreation feature rehabilitation, replacement, and relocation is not anticipated to result in significant alterations to the permeability for terrestrial species moving through the area over baseline conditions.

Mitigation Measures: **None required.**

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Conclusion: *Less than significant impact.*

The Proposed Project is consistent with the *Nevada County General Plan* (Nevada County 1996), *Placer County General Plan* (Placer County 2013a) and the *Yuba County General Plan* (Yuba County 2011a). 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, each plan includes specific measures to preserve and protect oak trees and oak woodlands. A review of the policies included in the *Nevada County General Plan*, *Placer County General Plan*, and the *Yuba County General Plan* resulted in the determination that Proposed Project activities are consistent with these policies. A best-faith effort would be made to adhere to local policies and plans, and no conflict is anticipated. This impact is considered less than significant.

Mitigation Measures: *None required.*

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact Conclusion: *No impact.*

The Proposed Project would not conflict with the provisions of an adopted NCCP, HCP, or other approved local, regional, or state habitat conservation plan. The BSA is not within the bounds of the Yuba-Sutter NCCP/HCP, because the planning area only covers the western portion of Yuba County.

A portion of the BSA overlaps with the PCCP, including the Placer County HCP/ NCCP (Placer County 2020a) and the Placer County CARP (Placer County 2020b), which were adopted on September 1, 2020. SSWD is not a permittee or special participating entity. Species analyzed and discussed in this document that are covered species under the PCCP include vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Central Valley steelhead, Central Valley fall-/late fall-run Chinook salmon, California red-legged frog, western pond turtle, burrowing owl, and Swainson's hawk. Ground disturbing activities may be covered under the foothills conservation and rural development component of the PCCP, including construction activities associated with the Camp Far West Reservoir pool raise and the recreation feature rehabilitation, replacement, and relocation components of the Proposed Project. However, these activities do not conflict with the PCCP as they are in line with the goals for the foothills conservation and rural development component of the PCCP, and no impact is anticipated. No mitigation measures are required.

Mitigation Measures: *None required.*

2.5 Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Prehistoric, Ethnographic, and Historic Context Summary

The following sections are excerpted from the confidential *Cultural Resources Study* (Risse et al. 2019) and *Tribal Interests Study* (Tiley et al. 2019) reports completed for the Proposed Project.

Researchers have divided the prehistory of central California into a series of cultural periods, reflecting an increasing degree of cultural complexity through time. The Paleoindian Period includes the Pre-Clovis era (Unknown To 13,500 Cal B.P.¹⁰) during which a hypothesized coastal colonization route allowed people to enter California. In the subsequent Clovis era (13,500-10,500 Cal B.P.), human populations spread within California. The Archaic Period includes the Lower Archaic (10,500-7,500 Cal B.P.). At this time, Post-Pleistocene climatic changes caused lakes/wetlands to dry up. Milling technology became common and widespread, indicating a plant food emphasis. The basic social unit remained the extended family. During the Middle Archaic (7,500-2,500 Cal B.P.), climate, habitats, and resources were unstable. The economy became more diversified. The inception of more sedentary living along with population growth and expansion occurred. Technological and environmental factors were dominant themes. In the Upper Archaic (2,500-1,500 Cal B.P.), there was growth of sociopolitical complexity characterized by development of status distinctions based upon wealth.

During the Emergent Period, the Lower Emergent (1500-500 Cal B.P.) witnessed replacement of the dart and atlatl by the bow and arrow. Coastal maritime adaptations flourished. Territorial boundaries were well established. Distinctions in social status linked to wealth became more and more common.

¹⁰Before present (B.P.) is a time scale used in archaeology, geology, and other scientific disciplines to specify when events in the past occurred. Because the "present" time changes, standard practice is to use the year 1950 as the arbitrary origin of the age scale. "Cal" refers to calibrated. Uncorrected, or 'conventional' radiocarbon ages are calculated using an assumption that the concentration of naturally occurring radiocarbon in the atmosphere is constant. Calibration of these conventional ages to calendar years corrects for known minor variations over time in the concentration of atmospheric radiocarbon. This calibration also corrects for an error in the estimate of 'half-life,' or the rate at which radiocarbon decays. While the half-life of radiocarbon is now known to be slightly longer than was estimated when the technique was invented, laboratories continue to report radiocarbon dates using the older, less accurate value, hence the term 'conventional.' Because of this, uncalibrated dates earlier than about 2000 years B.P. tend to be substantially 'younger' than calibrated dates.

Regularized inter-group exchange included abundant, often diverse, materials. The Upper Emergent (500-150 Cal B.P.) is characterized by appearance of a “monetized” clam shell disk bead economy. More goods were moving farther in space. The growth of local specializations in production and exchange took place. There was an interpenetration of central and southern exchange systems.

Specific manifestations of local/regional prehistory are defined in the temporal sequence first developed in the Oroville Reservoir area, and subsequently applied to adjacent portions of Butte and Plumas counties. The earliest archaeological complex, the *Masilla Complex* (ca. 3,000-2,000 B.P.), emphasized the use of handstones and milling slabs for seed grinding. During the subsequent Bidwell Complex (ca. 2,000-1,200 B.P.), use of large slate and basalt dart points continued. At this time, people probably lived in relatively permanent villages.

The *Sweetwater Complex* (ca. 1,200-500 B.P.) witnessed the advent of the bow and arrow. Arrows were tipped with Rosegate and Gunther Series projectile points. The steatite industry was elaborated, with cups, platters, bowls, and tubular smoking pipes being produced. A large variety of bone artifacts, and an expanded inventory of shell artifact types occurred as well. Burial patterning shifted from flexed to extended or semi-extended interments.

The *Oroville Complex* (ca. 500-1500 B.P.) represents the protohistoric Maidu/Konkow. At this time, bedrock mortars became central to acorn processing. Hallmark artifacts included incised bird bone tubes, bone gorge hooks, gaming bones, and clamshell disk beads. Desert Series projectile points predominated. Steatite vessels were absent. Several kinds of structures, including large circular dance houses, were constructed. Burials were tightly flexed on their sides, and occasionally placed under stone cairns.

The Project is situated within the ethnographic territory of the Nisenan, also referred to as the Southern Maidu. Part of the Maidu Family of the Penutian Stock, the Nisenan spoke three dialects: Northern Hill Nisenan, Southern Hill Nisenan, and Valley Nisenan. Nisenan territory extended across the watersheds of the Yuba, Bear, and American rivers, and the lower watershed of the Feather River. The Valley Nisenan dialect of the Nisenan Language, one of four Maidu Languages, was spoken by Native peoples belonging to several tribelets. These, including those inhabiting the current Project area, were clustered along the Sacramento River, and lower portions of the Feather, Yuba, Bear, and American rivers.

Valley Nisenan communities consisted of permanent settlements located on low natural rises along streams and rivers, or on gentle, south-facing slopes. Each community was composed of a central village and several outlying satellite villages, having access to a territory generally encompassing 100 square miles (10 miles along each boundary). Village populations ranged from small extended families of 15 to 25 people to large villages with over 500 persons, composed of several families. Houses were dome-shaped, 10 to 15 feet across, and covered with earth, tule mats, or thatch. Brush shelters were occupied during summer, and on food-gathering rounds. Major villages had large semi-subterranean, earth covered structures that functioned as ceremonial lodges or dance houses to host community events. Other settlement elements included task camps, resource procurement locations, cemeteries, and ceremonial grounds.

Economic life was focused upon collecting plant foods, hunting, and fishing. The major vegetal food source was the acorn, usually gathered in the fall by extended families or whole villages. Pine nuts, buckeye nuts, a variety of grass seeds, manzanita berries, other fruits and berries, hazelnuts, geophytes, greens, and fungus were also gathered. Deer (*Cervidae*), tule elk (*Cervus canadensis nannodes*), pronghorn (*Antilocapra americana*), rabbits, and fish (especially salmon, with important contributions by native inland fishes) were important animal foods.

The tribelet was the primary political group, represented by a headman whose office usually was hereditary and assisted by extended families. The headman's role was primarily as advisor, and as director of group activities and ceremonies. He was supported by his community and often possessed great wealth. Each community or group of communities controlled its associated territory, including hunting and fishing localities. Families often controlled particular fishing sites, oak and pine groves, quail fences, gathering areas, hunting grounds, and some seed tracts.

Direct European contact with the Valley Nisenan and adjacent groups began during 1808 with Gabriel Moraga's Spanish exploration of the Sacramento Valley, which encountered Nisenan villages along the Cosumnes, American and Feather rivers. Hostilities between the two groups soon were commonplace and numerous violent incidents, raids, murders, rapes, and massacres occurred. By the 1860s, the superior numbers, technology, and organization of Euro-Americans had largely overwhelmed the Nisenan and neighboring groups. Those who were not killed by disease or violence were often forced off their lands into hiding and seclusion. Despite these tragedies, surviving Nisenan eventually found work in agriculture, ranching, logging, and domestic employment and remain a vibrant, thriving community today.

Following the discovery of gold in January 1848 at Sutter's Mill, large numbers of people quickly began coming to California, soon creating a real estate boom. In 1850, Claude Chana built a bridge across the Bear River at Johnson's Crossing and it became a busy waypoint along the stage route between Sacramento and Nevada City. Much of the importance of Johnson's Ranch and Crossing was due to its close association with the California Emigrant Trail. The California Emigrant Trail was the principal overland route to California. It began in 1841 as a single tenuous strand along Humboldt River and over the Sierras but subsequently branched into numerous cutoffs.

During summer 1849, a small detachment of federal troops was sent to Johnson's Ranch to provide a presence to prevent conflicts between Native Americans and Euro-American settlers at the mines on the Yuba and Feather rivers. The federal government established the temporary military post, Camp Far West, a mile above Johnson's Crossing in September 1849 under the command of Captain Hannibal Day. In his notes, Day regarded his military station as the "merest pretense of protection or aid of any kind" as he had not the force or ability to send ten bayonets a mile from camp on any duty whatsoever. The camp was abandoned on May 4, 1852. Today, Camp Far West is marked by a graveyard surrounded by a low stone fence. The Native Sons of the Gold West have commemorated the place with a plaque.

The sole use and occupancy of Camp Far West and surrounding lands was promised to the local Native American groups on July 18, 1851. The treaty (known as the Camp Union Treaty) signed by tribal representatives in exchange for their promise to recognize the sovereignty of the United States. However, this, as well as 17 other treaties made with Native peoples in California during 1851 to 1852, were never ratified by the U.S. Senate due to objections by the California legislature and California's U.S. senators.

In 1866, the California Pacific Railroad reached what became Wheatland, California. In 1877 a bridge was built over the Bear River, directly linking Wheatland with Sheridan. This, plus the railroad link, soon made Wheatland a primary railroad and wagon shipping point for a variety of locally produced items, including wheat, hay, barley, hops, potatoes, lumber, and copper cement for refining. During the 1920s, Russian immigrants fleeing the Russian Revolution settled in the Wheatland-Sheridan area. They were followed by Dust Bowl migrants during the 1930s. The use of Camp Beale as a large U.S. Army Base from 1942 to 1946, and its subsequent development as Beale Air Force Base beginning in 1948, brought more people to Wheatland. Beginning in the 1920s

and 1930s, hops gave way to deciduous fruit. After World War II, nut crops became increasingly important.

Identification of Historical Resources

The *Cultural Resources Study* identified 188 archaeological and built environment resources within the area of potential effect (APE), of which 152 were previously determined or newly evaluated as ineligible for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) during the study, 30 remain unevaluated, and 6 have been evaluated as eligible (Table 2.5-1)¹¹. For the purposes of the *Cultural Resources Study*, the APE is the same as the proposed FERC Project boundary.

Table 2.5-1. Summary of NRHP and CRHR Evaluations for Resources Identified within the APE

Resource Type	Ineligible	Unevaluated	Eligible ¹	Totals
Isolated Find	86	0	0	86
Archaeological Site	55	30	5	90
Archaeological District	0	0	1	1
Built Environment Resource	11	0	0	11
Totals	152	30	6	188

Notes: ¹One of the eligible archaeological sites is the California Emigrant Trail, the portion of which within the APE has been evaluated as a non-contributing element of the larger eligible site.

Isolates

A total of 86 isolated finds were located and documented within the APE. Of the 86 isolated finds, 52 are prehistoric in age and 34 are historical isolates. All 86 isolated finds have been evaluated as ineligible for inclusion in the NRHP and CRHR.

Archaeological Sites

A total of 90 archaeological sites were documented within the APE (Table 2.5-2). Of these 90 sites, 56 were newly recorded during the study and 34 were previously recorded. These 90 sites include 39 historical sites, 33 prehistoric sites, and 18 multi-component sites that are comprised of both historical and prehistoric components. Of the archaeological sites identified within the APE, 55 were previously determined (i.e., with SHPO concurrence) or were newly evaluated in the study as ineligible for the NRHP and CRHR, 30 remain unevaluated with regards to their eligibility for inclusion in the NRHP and CRHR, and five have been determined or were newly evaluated in the study as eligible for the NRHP and CRHR, though the portion of one of these eligible sites within the APE has been evaluated as a non-contributing element.

¹¹ SHPO provided concurrence with these determinations of eligibility in a letter dated July 26, 2018 (SHPO Reference #: FERC_2016_0531_001) and in letters dated May 24, 2019 and June 4, 2019 (OHP Reference # FERC_2016_0701_001).

Table 2.5-2. Archaeological Sites within the APE and NRHP/CRHR Eligibility

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
1	P-29-0543/ CA-NEV-485H	H	Mining	Y	Unevaluated
2	P-29-2915/ CA-NEV-2291H	H	Mining	Y	Ineligible
3	P-29-2917/ CA-NEV-2290H	H	Mining	Y	Ineligible
4	P-29-4459/ CA-NEV-2190/ SRI-CFW-2	P	Long-Term Habitation	Y	Unevaluated
5	P-29-4460/ CA-NEV-2191/ SRI-CFW-24	P	Short-Term Habitation	Y	Ineligible
6	P-29-4461/ CA-NEV-2192/ SRI-CFW-25	P	Lithic Scatter	Y	Ineligible
7	P-29-4784/ P-58-3155/ CA-NEV-2292H/ CA-YUB-1961H/ HDR-CFWH-24	H	Transportation	N	Ineligible
8	P-29-4785/ CA-NEV-2293H/ HDR-CFWH-37	H	Mining	N	Ineligible
9	P-29-4786/ CA-NEV-2294H/ HDR-CFWH-68	H	Mining	N	Ineligible
10	P-31-5744/ CA-PLA-1179H/ SRI-CFW-3	M	P: Short-term Habitation H: Mining	Y	Eligible (Criterion D)
11	P-31-5745/ CA-PLA-1180H/ SRI-CFW-4	M	P: Lithic Scatter H: Mining	Y	Ineligible
12	P-31-5746/ CA-PLA-1876H/ SRI-CFW-5	M	P: Short-Term Habitation H: Trash Scatter	Y	Ineligible
13	P-31-5747/ CA-PLA-1886H/ SRI-CFW-6	M	P: Lithic Scatter H: Trash Scatter	Y	Ineligible
14	P-31-5748/ CA-PLA-1887/ SRI-CFW-7	P	Milling Feature	Y	Ineligible

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
15	P-31-5749/ CA-PLA-1888/H/ SRI-CFW-8	M	P: Short-Term Habitation H: Habitation	Y	Unevaluated
16	P-31-6297/ CA-PLA-2705H/ HDR-CFWH-06	H	Other	N	Ineligible
17	P-31-6301/ CA-PLA-2708H/ HDR-CFWH-08	H	Trash Scatter	N	Ineligible
18	P-31-6303/ CA-PLA-2709H/ HDR-CFWH-10	M	P: Lithic Scatter H: Trash Scatter	N	Ineligible
19	P-31-6304/ CA-PLA-2710/ HDR-CFWH-12	P	Short-Term Habitation	N	Eligible (Criterion D)
20	P-31-6305/ P-58-3157/ CA-PLA-2711H/ CA-YUB-1963H/ HDR-CFWH-26	H	Transportation	N	Ineligible
21	P-31-6306/ CA-PLA-2712/H/ HDR-CFWH-36	M	P: Lithic Scatter H: Trash Scatter	N	P: Unevaluated H: Ineligible
22	P-31-6307/ CA-PLA-2713H/ HDR-CFWH-38	H	Transportation	N	Ineligible
23	P-31-6308/ CA-PLA-2714/ HDR-CFWH-40	P	Milling Feature	N	Unevaluated
24	P-31-6309/ CA-PLA-2715/H/ HDR-CFWH-42	M	P: Short-Term Habitation H: Trash Scatter	N	Unevaluated
25	P-31-6310/ CA-PLA-2716/ HDR-CFWH-43	P	Milling Feature	N	Unevaluated
26	P-31-6311/ CA-PLA-2717/ HDR-CFWH-46	P	Lithic Scatter	N	Ineligible
27	P-31-6312/ CA-PLA-2718/ HDR-CFWH-48	P	Milling Feature	N	Unevaluated
28	P-31-6313/ CA-PLA-2719H/ HDR-CFWH-51	H	Transportation	N	Ineligible

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
29	P-31-6314/ CA-PLA-2720H/ HDR-CFWH-53	H	Transportation	N	Ineligible
30	P-31-6315/ CA-PLA-2721/ HDR-CFWH-55	P	Lithic Scatter	N	Unevaluated
31	P-31-6316/ CA-PLA-2722/ HDR-CFWH-59	P	Milling Feature	N	Ineligible
32	P-31-6317/ CA-PLA-2723/ HDR-CFWH-60	P	Short-term Habitation	N	Unevaluated
33	P-31-6318/ CA-PLA-2724H/ HDR-CFWH-65	H	Water Control	N	Ineligible
34	P-31-6319/ CA-PLA-2725/H/ HDR-CFWH-69	M	P: Milling Feature H: Mining	N	Ineligible
35	P-31-6320/ CA-PLA-2726/H/ HDR-CFWH-70	M	P: Milling Feature H: Habitation	N	Unevaluated
36	P-31-6321/ CA-PLA-2727H/ HDR-CFWH-71	H	Transportation	N	Ineligible
37	P-31-6322/ CA-PLA-2728H/ HDR-CFWH-73	H	Mining	N	Ineligible
38	P-31-6323/ CA-PLA-2729H/ HDR-CFWH-76	H	Mining	N	Ineligible
39	P-31-6324/ CA-PLA-2730/ HDR-CFWH-199	P	Milling Feature	N	Unevaluated
40	P-58-1024/ CA-YUB-1006H	H	Trash Scatter	Y	Unevaluated
41	P-58-1032/ CA-YUB-1014H	H	Mining	Y	Unevaluated
42	P-58-1235/ CA-YUB-1216	P	Long-Term Habitation	Y	Unevaluated
43	P-58-2570/ CA-YUB-1930H/ HDR-CFWH-03/ HDR-CFWH-22	H	Transportation	Y	Eligible (Criterion A; portion within APE is a non- contributing element)

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
44	P-58-2868/ CA-YUB-1812/H/ SRI-CFW-1	M	P: Lithic Scatter H: Trash Scatter	Y	Ineligible
45	P-58-2872/ CA-YUB-1813/ SRI-CFW-9	P	Short-Term Habitation	Y	Ineligible
46	P-58-2873/ CA-YUB-1814/H/ SRI-CFW-10	M	P: Short-Term Habitation H: Other	Y	Ineligible
47	P-58-2874/ CA-YUB-1815/ SRI-CFW-11	P	Lithic Scatter	Y	Ineligible
48	P-58-2875/ CA-YUB-1816/H/ SRI-CFW-12	M	P: Short-Term Habitation H: Trash Scatter	Y	Unevaluated
49	P-58-2876/ CA-YUB-1817/ SRI-CFW-13	P	Lithic Scatter	Y	Ineligible
50	P-58-2877/ CA-YUB-1818/ SRI-CFW-14	P	Lithic Scatter	Y	Ineligible
51	P-58-2878/ CA-YUB-1819/ SRI-CFW-15	P	Short-Term Habitation	Y	Ineligible
52	P-58-2879/ CA-YUB-1820H/ SRI-CFW-16	H	Mining	Y	Ineligible
53	P-58-2880/ CA-YUB-1821H/ SRI-CFW-17	H	Mining	Y	Ineligible
54	P-58-2881/ CA-YUB-1822/ SRI-CFW-18	P	Lithic Scatter	Y	Ineligible
55	P-58-2882/ CA-YUB-1823/ SRI-CFW-19	P	Lithic Scatter	Y	Ineligible
56	P-58- 2883/2884/2886/2887/2888/ 2889 CA-YUB- 1824/1825/1827/1828/1829/ 1830/H HDR-CFWH-33	M	P: Long-Term Habitation H: Trash Scatter	Y	P: Eligible (Criteria C and D) H: Ineligible

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
57	P-58-2885/ CA-YUB-1826/ SRI-CFW-22	P	Short-Term Habitation	Y	Unevaluated
58	P-58-2890/ CA-YUB-1831/ SRI-CFW-29	P	Lithic Scatter	Y	Ineligible
59	P-58-3069/ CA-YUB-1927H/ HDR-CFWH-58	H	Trash Scatter	Y	Ineligible
60	P-58-3070/ CA-YUB-1926H/ HDR-CFWH-13	H	Transportation	Y	Ineligible
61	P-58-3071/ CA-YUB-1925H/ HDR-CFWH-09	H	Transportation	Y	Ineligible
62	P-58-3142/ CA-YUB-1948/ HDR-CFWH-01	P	Short-Term Habitation	N	Ineligible
63	P-58-3143/ CA-YUB-1949H/ HDR-CFWH-02	H	Other	N	Ineligible
64	P-58-3144/ CA-YUB-1950/ HDR-CFWH-04	P	Milling Feature	N	Unevaluated
65	P-58-3145/ CA-YUB-1951H/ HDR-CFWH-05	H	Transportation	N	Ineligible
66	P-58-3146/ CA-YUB-1952/ HDR-CFWH-07	P	Milling Feature	N	Unevaluated
67	P-58-3147/ CA-YUB-1953H/ HDR-CFWH-11	H	Transportation	N	Ineligible
68	P-58-3148/ CA-YUB-1954H/ HDR-CFWH-14	H	Habitation	N	Unevaluated
69	P-58-3149/ CA-YUB-1955H/ HDR-CFWH-15	H	Transportation	N	Ineligible
70	P-58-3150/ CA-YUB-1956/ HDR-CFWH-16	P	Milling Feature	N	Unevaluated

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
71	P-58-3151/ CA-YUB-1957H/ HDR-CFWH-17	H	Transportation	N	Ineligible
72	P-58-3152/ CA-YUB-1958H/ HDR-CFWH-19	H	Trash Scatter	N	Ineligible
73	P-58-3153/ CA-YUB-1959/ HDR-CFWH-20	P	Short-Term Habitation	N	Unevaluated
74	P-58-3154/ CA-YUB-1960H/ HDR-CFWH-23	H	Transportation	N	Ineligible
75	P-58-3156/ CA-YUB-1962H/ HDR-CFWH-25	H	Habitation	N	Unevaluated
76	P-58-3158/ CA-YUB-1964H/ HDR-CFWH-27	H	Transportation	N	Ineligible
77	P-58-3159/ CA-YUB-1965/ HDR-CFWH-28	P	Short-term Habitation	N	Eligible (Criterion D)
78	P-58-3160/ CA-YUB-1966/ HDR-CFWH-29	P	Short-term Habitation	N	Unevaluated
79	P-58-3161/ CA-YUB-1967/ HDR-CFWH-30	P	Short-term Habitation	N	Unevaluated
80	P-58-3162/ CA-YUB-1968H/ HDR-CFWH-31	H	Habitation	N	Unevaluated
81	P-58-3163/ CA-YUB-1969/H/ HDR-CFWH-32	M	P: Short-term Habitation H: Habitation	N	Unevaluated
82	P-58-3164/ CA-YUB-1970/H/ HDR-CFWH-34	M	P: Short-Term Habitation H: Trash Scatter	N	P: Unevaluated H: Ineligible
83	P-58-3165/ CA-YUB-1971H/ HDR-CFWH-35	H	Transportation	N	Ineligible
84	P-58-3166/ CA-YUB-1972/ HDR-CFWH-44	P	Rock Art	N	Unevaluated

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age ¹	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
85	P-58-3167/ CA-YUB-1973/H/ HDR-CFWH-56	M	P: Lithic Scatter H: Trash Scatter	N	Ineligible
86	P-58-3168/ CA-YUB-1974/ HDR-CFWH-57	P	Milling Feature	N	Ineligible
87	P-58-3169/ CA-PLA-1975/H/ HDR-CFWH-64	M	P: Short-term Habitation H: Trash Scatter	N	Ineligible
88	P-58-3170/ CA-YUB-1976H/ HDR-CFWH-67	H	Habitation	N	Unevaluated
89	P-58-3171/ CA-YUB-1977H/ HDR-CFWH-72	H	Mining	N	Ineligible
90	P-58-3172/ CA-YUB-1978H/ HDR-CFWH-74	H	Mining	N	Ineligible

Notes: ¹ H = Historical; P = Prehistoric; M = Multi-component.

Archaeological District

One archaeological district, the Middle Bear River (Kumin Seyo) Prehistoric Archaeological District (P-31-6325/CA-PLA-2731, P-29-4878/CA-NEV-2295, P-58-3173/CA-YUB-1979), has been identified within the APE and is comprised of all the prehistoric sites and prehistoric components of the multi-component sites within the APE. The Middle Bear River (Kumin Seyo) Prehistoric Archaeological District is defined by prehistoric components located along the Middle Bear River and its tributaries. The local Native American community calls the Bear River “Kumin Seyo”, meaning Great River. The Middle Bear River is the reach of the river between Drum Afterbay, located below Lake Spaulding (located on the South Yuba River), and Camp Far West Dam. The Middle Bear River is in the ethnographic territory of the Nisenan, also referred to as the Southern Maidu. There is a total of 51 district elements that has been identified within the APE (Table 2.5-3). The district has been evaluated as eligible for inclusion in the NRHP under Criterion D only, and of the 51 district elements, 6 have been evaluated as contributing, 22 have been evaluated as non-contributing, and 23 remain unevaluated. Of the district’s 29 contributing and unevaluated elements, 4 have been evaluated as individually eligible for NRHP and CRHR listing, 2 have been evaluated as ineligible individually, and 23 remain unevaluated.

Table 2.5-3. Eligibility Summary of Archaeological District Elements

Unevaluated	Contributing Element	Non-Contributing Element
P-29-4459	P-31-5744	P-29-4460
P-31-5749	P-31-6304	P-29-4461
P-31-6306	P-58-2872	P-31-5745
P-31-6308	P-58-2873	P-31-5746
P-31-6309	P-58-2883	P-31-5747
P-31-6310	P-58-3159	P-31-5748
P-31-6312		P-31-6303
P-31-6315		P-31-6311
P-31-6317		P-31-6316
P-31-6320		P-31-6319
P-31-6324		P-58-2868
P-58-1235		P-58-2874
P-58-2875		P-58-2876
P-58-2885		P-58-2877
P-58-3144		P-58-2878
P-58-3146		P-58-2881
P-58-3150		P-58-2882
P-58-3153		P-58-2890
P-58-3160		P-58-3142
P-58-3161		P-58-3167
P-58-3163		P-58-3168
P-58-3164		P-58-3169
P-58-3166		

Built Environment Resources

A total of 11 built environment resources were identified and documented within the APE (Table 2.5-4). These 11 resources include dam and irrigation system resources, recreation resources, and a California Department of Water Resources (DWR) monitoring station. Of these 11 built environment resources, all 11 are evaluated as ineligible for inclusion in the NRHP/CRHR or have already been determined ineligible during previous work. Additionally, as a grouping of resources, the dam and irrigation resources lack a significant linkage to any specific events, people, or engineering feats, and do not represent a cohesive district and do not gain significance when grouped together. Accordingly, it was found that these resources do not represent a historic district that would require evaluation for listing in the NRHP or CRHR.

Table 2.5-4. Summary of All Built Environment Resources Identified within the APE

Building/Structure (Primary No.)	NRHP Eligibility ¹
Camp Far West Project Dam and Irrigation System Resources	
Camp Far West Dam (P-31-5743)	Not Eligible (SHPO has concurred)
Camp Far West North Wing Dam (P-58-3075)	Not Eligible (SHPO has concurred)
Camp Far West South Wing Dam (P-31-6145)	Not Eligible (SHPO has concurred)
Camp Far West North Dike (P-58-3074)	Not Eligible (SHPO has concurred)
Camp Far West Reservoir (P-29-4565/ P-31-6144/ P-58-3076)	Not Eligible (SHPO has concurred)
Bridge 16C0081 (P-58-2624)	Not Eligible (SHPO has concurred)
Camp Far West Irrigation Intake Structure (P-31-6143)	Not Eligible (SHPO has concurred)
Camp Far West Spillway (P-58-3078)	Not Eligible (SHPO has concurred)
Camp Far West Reservoir Recreation Resources	
Camp Far West Lake North Shore Recreation Facility (P-58-3073)	Not Eligible (SHPO has concurred)
Camp Far West Lake South Shore Recreation Facility (P-31-6155)	Not Eligible (SHPO has concurred)
Government Property in Project APE	
DWR Monitoring Station (P-31-6154)	Not Eligible (SHPO has concurred)
Total	0 Eligible, 11 Not Eligible

Note: ¹ SHPO concurred in a letter dated July 26, 2018 (SHPO Reference #: FERC_2016_0531_001) and in letters dated May 24, 2019 and June 4, 2019 (OHP Reference # FERC_2016_0701_001).

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows. The questions listed in the table at the beginning of this section include references to the CEQA Guidelines Section 15064.5 and terminology such as “historic resource” and “archaeological resource,” which include in their definition, “unique archaeological resources”.

National Historic Preservation Act

Section 106 of the NHPA requires federal undertakings to consider the effects of the action on historic properties. Historic properties are defined by the ACHP regulations (36 C.F.R. Part 800) and consist of any prehistoric or historical archaeological site, building, structure, historic district, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 C.F.R. Part 800.16[1]).

To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, and architectural properties) must be inventoried and evaluated for listing in the NRHP.

For projects involving a lead federal agency, cultural resource significance is evaluated in terms of eligibility for listing in the NRHP. For a property to be considered for inclusion in the NRHP, it must be at least 50 years old and meet the criteria for evaluation set forth in 36 C.F.R. Part 60.4.

The quality of significance in American history, architecture, archaeology, engineering, and culture must be present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association. They must also meet one or more of the four following criteria for inclusion on the NRHP.

- Criterion A, Association with events that have made a significant contribution to the broad patterns of history;
- Criterion B, Association with the lives of persons significant in the past;
- Criterion C, Embodiment of distinctive characteristics of a type, period, or method of construction, the work of a master, high artistic values, or a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D, History of yielding, or the potential to yield, information important in prehistory or history.

If a cultural resources professional meeting the Secretary of Interior's Qualification Standards determines a particular resource meets one of these criteria, it is considered as an eligible historic property for listing in the NRHP. Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met.

Native American Graves Protection and Repatriation Act of 1990 (PL 101-601; 25 U.S.C. 3001)

Under the Native American Graves Protection and Repatriation Act (NAGPRA) (25 United States Code [U.S.C.] 3001) and implementing regulations 43 C.F.R. Part 10, federal agencies are responsible for protecting Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on lands under the agencies jurisdiction. All human remains and potential human remains must be treated with respect and dignity at all times.

California Register of Historical Resources: Public Resources Code Section 5024

The term historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of Public Resources Code (PRC) (PRC Section 5020.1[j]).

Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1[k]);
2. A local survey conducted pursuant to PRC Section 5024.1(g); or
3. The property is listed in or eligible for listing in the NRHP (PRC Section 5024.1[d][1]).

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR, which states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria.

It is associated with events that have made a significant contribution to the broad patterns of the following.

1. California's history and cultural heritage;
2. It is associated with the lives of persons important in our past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or may be likely to yield, information important in prehistory or history (CCR 14 Section 4852).

To be considered a historical resource for the purpose of CEQA, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Therefore, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (CCR 14 Section 4852[c]).

Unique Archeological Resources

The PRC also requires the lead agency to determine whether or not a project would have a significant effect on unique archaeological resources (PRC Section 21083.2[a]).

The PRC defines a unique archaeological resource as follows.

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
 - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
 - Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
 - Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2).

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

California Health and Safety Code Section 7050.5

Regarding the discovery of human remains on non-federal lands, Section 7050.5 of the California Health and Safety Code (CHSC) states the following:

- a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the [PRC]. The provisions of this subdivision shall not apply to any person carrying out an agreement

developed pursuant to subdivision (l) of Section 5097.94 of the [PRC] or to any person authorized to implement Section 5097.98 of the [PRC].

- b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the California Government Code [CGC], that the remains are not subject to the provisions of Section 27491 of the CGC or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.
- c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) (CHSC Section 7050.5).

Of particular note to cultural resources is subsection (c). After notification, NAHC would follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants (MLD), if possible, and recommendations for treatment of the remains. The MLD would have 24 hours after notification by the NAHC to make their recommendation (PRC Section 5097.98). In addition, knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under State law (PRC Section 5097.99).

California Graves Protection and Repatriation Act of 2001

Section 8010 and 8011 of the CHSC also address the protection of Native American human remains and cultural items and state:

8010. This chapter shall be known, and may be cited as the California Native American Graves Protection and Repatriation Act (CALNAGPRA) of 2001.

8011. It is the intent of the Legislature to do all of the following:

- (a) Provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect.
- (b) Apply the state's repatriation policy consistently with the provisions of the NAGPRA (25 U.S.C. Sec. 3001 et seq.), which was enacted in 1990.
- (c) Facilitate the implementation of the provisions of NAGPRA with respect to publicly funded agencies and museums in California.
- (d) Encourage voluntary disclosure and return of remains and cultural items by an agency or museum.
- (e) Provide a mechanism whereby lineal descendants and culturally affiliated California Indian tribes that file repatriation claims for human remains and cultural items under the

NAGPRA (25 U.S.C. Sec. 3001 et seq.) or under this chapter with California state agencies and museums may request assistance from the commission in ensuring that state agencies and museums are responding to those claims in a timely manner and in facilitating the resolution of disputes regarding those claims.

(f) Provide a mechanism whereby California tribes that are not federally recognized may file claims with agencies and museums for repatriation of human remains and cultural items.

Nevada County General Plan

Chapter 19 of the *Nevada County General Plan* details three objectives (Objectives 19.1 – 19.3) aligning Nevada County’s efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations (Nevada County 1996). Implementation of these policies is codified through one Action Policy (19.1) and six Directive Policies (19.2 – 19.7) which detail the Nevada County mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above.

Placer County General Plan

Section 5 of the *Placer County General Plan* details 12 policies (Policies 5.D.1 – 5.D.12) aligning Placer County’s efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations (Placer County 2013a). Implementation of these policies is codified through four Implementation Programs (5.4 – 5.7) that detail the Placer County mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above. Additionally, Implementation Program 5.6 establishes a Placer County Register of Historical Properties to facilitate preservation of the locally significant historical properties that do not qualify for listing on the CRHR or NRHP.

Yuba County General Plan

Chapter 7 of the *Yuba County General Plan* details six policies (Policies NR6.1 – NR6.6) aligning Yuba County’s efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations (Yuba County 2011a). Implementation of these policies is codified through Action NR6.1 (Environmental Review and Mitigation) that acknowledges that new development projects could have a significant adverse impact on the environment. Action NR6.1 details the Yuba County mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above.

Impact Analysis

As described in Section 1, several environmental measures will be implemented as commitments of the Proposed Project, including the HPMP. The HPMP describes the actions and processes for considering and managing historic properties (and historical resources) within the APE under the terms of a new FERC license. The HPMP guides SSWD’s personnel when performing operation and maintenance activities and defines site treatments designed to address ongoing and future effects on historic properties. Importantly, because implementation of the HPMP (including its identification, avoidance, and treatment measures) is a commitment of the Proposed Project, the conclusions in the impact analysis are drawn *after* the inclusion of Proposed Project commitments.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Impact Conclusion: *Less than Significant Impact.*

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as 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. The significance of a historical resource would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the NRHP, the CRHR, or a local register of historic resources pursuant to Section 5020.1(k) of the PRC.

Proposed FERC Project Boundary Change

Section 1.5, *Description of the Proposed Project*, describes SSWD's proposed changes to the existing FERC Project boundary in order to more accurately define lands necessary for the Proposed Project's safe operation and maintenance and for other purposes, such as recreation, shoreline control, and protection of environmental resources. In total, 19.9 acres are proposed to be added and 209.6 acres are proposed to be removed. Real property transfers (i.e., reducing/increasing the area managed under the FERC license) are typically considered to be undertakings subject to the review process under Section 106 of the NHPA. The NHPA Section 106 regulations state that the transfer or sale of a historic property (i.e., a cultural resource eligible for listing on the NRHP) out of federal ownership or control constitutes an adverse effect when undertaken without adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of the property's historic significance. Decreasing the existing FERC Project boundary would exclude, or partially exclude, three unevaluated archaeological sites (Table 2.5-5). However, as further described below, only one of these three resources (P-58-3170) may be significantly impacted by the FERC Project boundary change and requires evaluation for NRHP/CRHR eligibility to appropriately assess impacts. None of the district elements fall within the areas to be removed from the FERC Project boundary.

Table 2.5-5. Archaeological Sites within Proposed FERC Project Boundary Change

Count	Site No. (Primary/Trinomial/ Temp. No.)	Age ¹	Type	Revisited (Yes/No)	If Not Revisited, Reason	Individual NRHP/CRHR Eligibility
1	P-58-1024/ CA-YUB-1006H	H	Trash Scatter	N	Not Relocated	Unevaluated
2	P-58-1032/ CA-YUB-1014H	H	Mining	N	Not Relocated	Unevaluated
3	P-58-3170/ CA-YUB-1976H/ HDR-CFWH-67	H	Habitation	Y	-	Unevaluated

Notes: ¹ H = Historical; P = Prehistoric; M = Multi-component.

Site P-58-1024 was previously recorded in 1979 as a possible homestead site dating to c. 1890-1910. It was previously described as containing a refuse scatter and possible canal segment. This site was not relocated during the inventory of the APE and is assumed to have been destroyed by either road improvements/maintenance for the adjacent Camp Far West Road or was simply mis-mapped and is not located within the APE. As this site appears to either no longer exist and/or not be within the APE, the removal of its previously mapped location from the FERC Project boundary would not have an adverse effect or significant impact on this archaeological site.

Site P-58-1032 was previously recorded in 1979 as a placer mining operation. It was previously described as containing numerous quartz waste rock piles and associated prospect pits along both sides of a small drainage. This site was not relocated during the inventory of the APE and is assumed to have been destroyed by either road improvements/maintenance for the adjacent Camp Far West Road or Camp Far West Reservoir and Dam or was simply mis-mapped and is not located within the APE. As this site appears to either no longer exist and/or not be within the APE, the removal of its previously mapped location from the FERC Project boundary would not have an adverse effect or significant impact on this archaeological site.

Site P-58-3170 was newly identified and recorded during the *Cultural Resources Study*. It is a historical site consisting of six features and a general scatter of historical refuse across the site. The six features are comprised of two rock foundations, two depressions, and two rock or dirt piles. Site may be related to "Grahams Hotel" or "Store," which appears on mid to late 1800s historical maps of the area. The boundary removal will only remove a small portion of this site from the FERC Project boundary. The portion that will remain within the FERC Project boundary contains most site features and artifacts.

As the site will still be within the FERC Project boundary it will still be under FERC's jurisdiction and managed under the new license to be issued by FERC. However, the transfer of property outside of federal control is a potential adverse effect under federal regulations (36 C.F.R. § 800.5(a)(2)(vii)); thus, this site will be evaluated for eligibility for inclusion in the NRHP and CRHR as detailed in Section 5.3.1 of the HPMP (*Program for Resource Evaluations*). If eligible, P-58-3170 will be included in SSWD's Program for Mitigating Adverse Effects as detailed in Section 5.6 of the HPMP. Because the evaluation and mitigation (if necessary) processes are required actions implemented

under the HPMP as environmental commitments of the Proposed Project, impacts associated with proposed FERC boundary changes are considered less than significant.

Implementation of New Flow Regime

The existing FERC license for the Proposed Project describes required minimum instream flows in the Bear River. During the relicensing and in collaboration with resource agencies and interested stakeholders, SSWD proposed new measures in its FLA related to flows. These include minimum streamflows (dictated by water year types), pulse flows, and ramping rates and are described in Section 1.5, *Description of the Proposed Project*. Implementation of the new flow regime will alter the amount, timing, and seasonality of streamflow within Bear River downstream of the Camp Far West Dam and will be subject to the water year type (i.e., wet, above normal, below normal, dry, or critically dry) as determined by DWR. Minor impacts associated with sedimentation and erosion may be associated with the adjusted flow rates, but these are not expected to exceed yearly norms and are consistent with baseline conditions. Accordingly, implementation of the new flow regime would have no impact on NRHP and/or CRHR eligible or unevaluated cultural resources.

Implementation of Environmental Measures

SSWD is proposing to implement four environmental measures as commitments of the Proposed Project. These measures are not currently in practice, but are fully developed and ready for implementation upon approval and adoption of this CEQA review by SSWD and issuance of a new license by FERC. In addition to the HPMP, these environmental measures include a *Bald Eagle Management Plan*, a *Recreation Facilities Plan*, and a seasonal LOP within 500 feet of the great blue heron rookery at the SSRA.

The *Bald Eagle Management Plan* will include surveys, establish buffers and LOP, and track incidental sightings to ensure that Proposed Project-related activities do not result in the take of bald eagles. Management of the great blue heron rookery will include a LOP, land barriers, and appropriate signage to designate the limited operating period buffer zone. Neither of these measures will have any impact on NRHP and/or CRHR eligible or unevaluated cultural resources.

Implementation of the *Recreation Facilities Plan* includes provisions for the for the annual maintenance, rehabilitation, and replacement of all the Project recreational facilities at the Camp Far West Reservoir recreation areas. The plan also includes procedures for operational maintenance activities, major rehabilitation, and replacement of existing facilities because of the Camp Far West Reservoir pool raise (discussed further below). The Camp Far West North Shore Recreation Facility (P-58-3073) and South Shore Recreation Facility (P-31-6155) were both evaluated for significance as part of the *Cultural Resources Study* and found not eligible for NRHP or CRHR listing with SHPO concurrence. Therefore, implementation of the *Recreation Facilities Plan* would have no impact to NRHP/CRHR eligible or unevaluated resources.

Finally, as described above, the HPMP details the actions and processes for considering and managing historic properties (and historical resources) within the APE under the terms of a new FERC license. The HPMP will serve to guide SSWD personnel when performing operation and maintenance activities and defines site treatments designed to address ongoing and future effects on historic properties.

Section 4.1 of the HPMP provides an assessment of impacts to historical resources caused by ongoing Project operations and maintenance activities. Impacts are primarily from erosion caused by the fluctuating water levels and wave action of the reservoir, which is washing away or otherwise

destroying portions of these resources, impacting their integrity of location, association, and materials. Recreation activities are also impacting some of these resources, generally in the form of looting and vandalism (i.e., the collection and/or physical displacement of site components). None of the other operations and maintenance activities (i.e., building and structure maintenance, vegetation management, road maintenance, or emergency repairs) were observed to be impacting historical resources or potential historical resources.

Of the eligible and unevaluated resources within the APE of the Proposed Project, 4 of the 5 NRHP/CRHR eligible historic properties/historical resources, the Middle Bear River (Kumin Seyo) Prehistoric Archaeological District, and 22 of the 30 unevaluated resources are being significantly impacted by on-going operations and maintenance activity. The remaining NRHP/CRHR eligible resource is the California Emigrant Trail, the portion of which within the APE has been evaluated as a non-contributing element of the larger eligible site and requires no further cultural resources management consideration. The remaining eight unevaluated archaeological sites consist of sites that are not impacted by Proposed Project-related activities (P-31-6320, P-31-6324, P-58-3146), sites that require further identification efforts to determine Proposed Project-related impacts (P-29-0543, P-29-4459, P-58-1235), or sites that appear to have been destroyed or are not located within the APE and require no further cultural resources management consideration (P-58-1024, P-58-1032). Section 5.5 of the HPMP includes avoidance, monitoring, protection, and other management measures for all eligible and unevaluated resources within the Proposed Project APE that are not affected by Proposed Project-related operations and maintenance or Proposed Project changes (*Avoidance and Other Management Measures for Known Resources*).

As an environmental commitment of the Proposed Project and per Section 5.3 of the HPMP (*Program for Resource Evaluations*), SSWD proposes to conduct further work to complete formal NRHP and CRHR evaluations at the 22 unevaluated sites impacted by Proposed Project-related operations and maintenance activities (Table 2.5-6).

Table 2.5-6. Unevaluated Sites to be Formally Evaluated for the NRHP and CRHR

Count	Site No. (Primary/ Trinomial/ Temp. No.)	Age ¹	Type	Description
1	P-31-5749/ CA-PLA-1888/H/ SRI-CFW-8	M	P: Short-Term Habitation H: Habitation	Previously recorded as a prehistoric lithic scatter with 37 flaked and ground stone artifacts. Revisited in 2016 and updated to reflect multi-component site. Historical component consists of historical trash scatter, walls and foundation of historical well, and two artifact concentrations. Prehistoric component updated to include a milling station with mortar cup, one milling slab, one biface fragment, and a pestle. Historical component may date to c. 1915, based on historical maps. Prehistoric age unknown.
2	P-31-6306/ CA-PLA-2712/H/ HDR-CFWH-36	M	P: Lithic Scatter H: Trash Scatter	Prehistoric component consists of seven possible petroglyph rock art panels and one biface. Historical component consists of two parts of the same lock. The historical lock dates to 1836-1869. Prehistoric age is unknown.
3	P-31-6308/ CA-PLA-2714/ HDR-CFWH-40	P	Milling Feature	Prehistoric bedrock mortar with one mortar cup. No other features or artifacts were observed in association with the site. Age is unknown.

Count	Site No. (Primary/ Trinomial/ Temp. No.)	Age ¹	Type	Description
4	P-31-6309/ CA-PLA-2715/H/ HDR-CFWH-42	M	P: Short-Term Habitation H: Trash Scatter	Multi-component site with 10 prehistoric features and a unifacial granite handstone. Prehistoric features consist of possible petroglyph rock art panels. Historical component includes two horseshoes, glass and stoneware fragments. Age unknown.
5	P-31-6310/ CA-PLA-2716/ HDR-CFWH-43	P	Milling Feature	Prehistoric milling station with five saucer mortars. No artifacts or other features were observed. Age unknown.
6	P-31-6312/ CA-PLA-2718/ HDR-CFWH-48	P	Milling Feature	Prehistoric milling site with three milling stations. No associated artifacts were observed. Age unknown.
7	P-31-6315/ CA-PLA-2721/ HDR-CFWH-55	P	Lithic Scatter	Prehistoric site containing 6 stones with possible petroglyph rock art, 1 hammerstone fragment, 1 tested basalt cobble, and 1 basalt flake. Age unknown.
8	P-31-6317/ CA-PLA-2723/ HDR-CFWH-60	P	Short-term Habitation	One large granite pestle, one cryptocrystalline silicate (CCS) contracted stem projectile point, and one CCS flake. Dates to between 5,000 and 500 B.P.
9	P-58-2875/ CA-YUB-1816/H/ SRI-CFW-12	M	P: Short-Term Habitation H: Trash Scatter	Previously recorded in 2013 as a lithic scatter with 25 flaked and battered stone artifacts in two concentrations. Site was revisited in 2016 and was updated to include the addition of six possible portable petroglyph rock art stones, four bifaces, one side notched and stemmed projectile point, one milling stone, and a basalt handstone. There are three fragments of historical refuse observed in the site: one clear bottle glass with bubbles, and two white ware ceramic fragments. Historical age is unknown. Prehistoric component dates between the Late Archaic and contact periods.
10	P-58-2885/ CA-YUB-1826/ SRI-CFW-22	P	Short-Term Habitation	Previously recorded in 2013 as a prehistoric lithic scatter with seven flaked stone artifacts. Site was revisited in 2016 and updated to include a milling station with 6 mortar cups. Age unknown.
11	P-58-3144/ CA-YUB-1950/ HDR-CFWH-04	P	Milling Feature	Bedrock milling station with three milling surfaces (Features 1-3) and two artifacts, a milling slab fragment and a handstone fragment. Age unknown.
12	P-58-3148/ CA-YUB-1954H/ HDR-CFWH-14	H	Habitation	Homestead site with structural remnants and an artifact scatter. An historical gravesite just outside the APE was noted. The site consists of 2 features (one structural depression and one rock alignment), one artifact concentration, and a sparse scatter of general site artifacts. Dates to c. 1860s -1880s.
13	P-58-3150/ CA-YUB-1956/ HDR-CFWH-16	P	Milling Feature	Two milling station features. Feature 1 has two conical mortars, Feature 2 has one conical mortar. Age unknown.

Count	Site No. (Primary/ Trinomial/ Temp. No.)	Age ¹	Type	Description
14	P-58-3153/ CA-YUB-1959/ HDR-CFWH-20	P	Short-Term Habitation	Prehistoric lithic scatter with 8 artifacts (flaked, ground, and battered stone) and 30+ debitage flakes. Age unknown.
15	P-58-3156/ CA-YUB-1962H/ HDR-CFWH-25	H	Habitation	Historical habitation site with three features: structural foundation, metal rod, and circular depression. Artifact 1 is a body fragment of an olive-green bottle. Dates to c. 1860s-1880s.
16	P-58-3160/ CA-YUB-1966/ HDR-CFWH-29	P	Short-term Habitation	Prehistoric lithic scatter with nine tools including one hammerstone, three granite handstones, two lithic cores, two bifaces, and one modified flake. Other cultural constituents include 50+ fire cracked rock, and up to 50 fragments of lithic debitage. Age is unknown.
17	P-58-3161/ CA-YUB-1967/ HDR-CFWH-30	P	Short-term Habitation	This prehistoric site is comprised of 30+ basalt and CCS flakes, 18 possible incised stones that are in two concentrations (Concentration 1 and Concentration 2), three handstones, two projectile points, one biface, one drill, and one milling stone. Additionally, two features were identified: a milling station (Feature 1) and a possible petroglyph rock art panel (Feature 2). Dates between 3,000 and 500 B.P.
18	P-58-3162/ CA-YUB-1968H/ HDR-CFWH-31	H	Habitation	Historical structural foundation and one olive green bottle base fragment. This structure does not appear on any historical aerials or topographic maps. Age is unknown.
19	P-58-3163/ CA-YUB-1969H/ HDR-CFWH-32	M	P: Short-term Habitation H: Habitation	Historical structural foundation with domestic debris consisting of approximately 100 red bricks, white ware fragments, terra cotta pipe fragments, historical glass fragments (amethyst, black, cobalt, aqua), square and wire nails, solder seam tin cans, porcelain, earthenware, a bicycle pedal, metal spikes, bolts, and notched hinges. Two prehistoric artifacts: one milling slab and one modified cobble. Historical component dates to c. 1860s-1910s. Prehistoric age is unknown.
20	P-58-3164/ CA-YUB-1970H/ HDR-CFWH-34	M	P: Short-Term Habitation H: Trash Scatter	Multi-component site. Prehistoric component consists of a milling station with 5 conical mortars, possible hunting blind, possible petroglyph rock art panel, handstone fragment, a tested cobble, and no more than 20 basalt flakes. Historical component consists of glass fragments. Age is unknown.
21	P-58-3166/ CA-YUB-1972/ HDR-CFWH-44	P	Rock Art	Possible prehistoric petroglyph rock art. No associated artifacts were observed. Age unknown.
22	P-58-3170/ CA-YUB-1976H/ HDR-CFWH-67	H	Habitation	Historical site consisting of six features and a general scatter of historical refuse across the site. The six features are comprised of two rock foundations, two depressions, and two rock or dirt piles. Site may be related to "Grahams Hotel" or "Store" which is on the 1861 Historic Yuba County map approximately at the site location. Dates between 1860s and 1880s.

Notes: ¹ P = prehistoric; H = historical; M = multi-component.

NRHP and CRHR evaluations of the archaeological sites listed in Table 2.5-6 will be completed by first drafting a resource-specific evaluation plan intended to develop measures appropriate for each resource, to identify those characteristics that could qualify each resource for the NRHP¹². Following consultation efforts, if the resource is determined NRHP and CRHR ineligible, no further cultural resources management consideration will be required for the resource. If a resource is determined eligible for the NRHP and/or CRHR, SSWD will implement the management measures pursuant to the mitigation process defined in Section 5.6 (*Program for Mitigating Adverse Effects*) in the HPMP.

Within the APE, there are four archaeological sites and one archaeological district that have been determined eligible for the NRHP and CRHR and will be significantly impacted by the Project under the new FERC license (Table 2.5-7).

Table 2.5-7. NRHP and CRHR Eligible Archaeological Resources to be Mitigated

Count	Resource No. (Primary/ Trinomial/ Temp. No.)	Age ¹	Type	Description
1	P-29-4878 P-31-6325 P-58-3173	P	District	The Middle Bear River (Kumin Seyo) Prehistoric Archaeological District. This discontinuous archaeological district consists of all prehistoric archaeological sites and components located along the foothill reach of the Bear River and its tributaries within the APE. This includes both prehistoric sites and the prehistoric components of the multi-component sites. There is a total of 51 district elements.
2	P-31-5744	M	P: Short-term Habitation H: Mining	Previously recorded in 2013 as a multicomponent site. Prehistoric component consisted of two bedrock mortars and a lithic scatter; historical component consisted of the historical hard rock Dairy Farm Mine, which included 12 mining features (prospect pits, tailings, mine shaft, rock retaining wall, concrete foundations, concrete pads, and concrete pedestals) and five historical artifact concentrations. Site was revisited November 2016 and was updated to include five historical features (prospect pit, two waste rock tailing, retention dam, and possible smelting building) and a prehistoric stage IV biface. Historical component dates from the 1900s to the 1940s. The prehistoric component dates to pre- and post-contact given the presence of glass trade beads. Both the historical and prehistoric components are eligible under Criterion D, except for historical Feature SRI-F53, which is a non-contributing component of the site.

¹² There may be cases in which a more expeditious approach to evaluation efforts may be deemed appropriate. In these cases, there may not be enough time to draft a formal evaluation plan. For example, if a resource is exposed by rare low water conditions in the reservoir, evaluation efforts must be implemented expeditiously before the resource becomes inundated once again. Other such time sensitive situations may occur during the life of the new FERC license. The SSWD, in consultation with FERC, tribes, and SHPO, may determine when a more expeditious approach for evaluation efforts is appropriate.

Count	Resource No. (Primary/ Trinomial/ Temp. No.)	Age ¹	Type	Description
3	P-31-6304	P	Short-term Habitation	This site is a prehistoric short-term habitation site comprised of five features, sixteen artifacts, and a prehistoric lithic scatter. The features include three milling stations (Features 1-3), and two panels of possible petroglyph rock art (Features 4-5). The artifacts include 11 handstones, two projectile points, one milling slab fragment, one complete stone bowl mortar, and one fragment of a stone bowl mortar. The lithic scatter includes seven flakes. Dates between 3,000 and 500 B.P.
4	P-58-2883/2884/2886/2887/2888/2889	M	P: Long-Term Habitation H: Trash Scatter	Multicomponent site with eight loci. Prehistoric component: consists of numerous milling stations (one milling station is cupule rock art), flakes stone tools, flakes, possible house pits, and several projectile points. Appears to represent a large prehistoric village site. Historical component consists of limited refuse, depressions. Historical age unknown. Prehistoric age 3,000 B.P. to contact. Historical component is ineligible and prehistoric component is eligible.
5	P-58-3159	P	Short-term Habitation	Sparse and dispersed prehistoric lithic scatter composed of one milling slab fragment, one unifacial cobble, two projectile points, and one possible portable petroglyph rock art stone. Lithic debitage observed in the site consists of six flakes. Age is Unknown.

Notes ¹ P = prehistoric; H = historical; M = multi-component.

Mitigation of significant impacts to archaeological resources is most often achieved through data recovery, which generally consist of large-scale excavations. For the mitigation of the five archaeological resources being significantly impacted within the APE (as well as any of the 22 unevaluated resources listed in Table 2.5-6 ultimately determined to be eligible to the NRHP/CRHR), the approach to mitigation will be two tiered and will include both data recovery and public education and interpretation efforts, and/or other efforts determined in consultation with FERC, tribes, and SHPO. Mitigation measures for roughly 50 percent of these sites will include traditional data recovery efforts comprised of the excavation, collection, and analysis of sufficient materials to provide a reasonable amount of information relevant to scientific research values. Mitigation measures for the remaining roughly 50 percent will include the implementation of a public education and interpretation effort to maximize the public benefit of the mitigation program and to address tribal concerns regarding excavation. Additional mitigation measures could be identified through consultation that will address the importance of these sites for their information potential related to stewardship and traditional knowledge. The public education and interpretation effort will promote the use and responsible dissemination of the data collected during data recovery efforts. This process is described in detail in Section 5.6 (*Program for Mitigating Adverse Effects*) in the HPMP.

Mitigation measures are means to prevent, reduce or control adverse environmental effects of a project, and include restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means. Because the evaluation and mitigation processes defined in the HPMP are enforceable, have definable objectives, a procedure for implementation, identify responsible parties, and a clear timeline for implementation, they meet the standard under CEQA to reduce impacts to a less than significant level. Therefore, as the required

actions will be implemented under the HPMP as an environmental commitment of the Proposed Project, impacts associated with implementing the environmental measures, under the CEQA analysis, are considered less than significant.

Camp Far West Reservoir Pool Raise

Aerial surveying and topographic mapping shows that the Camp Far West Reservoir stores 93,737 acre-feet of water at its existing Camp Far West Reservoir Maximum Reservoir Elevation of 300 feet. SSWD proposes to raise the Maximum Reservoir Elevation of Camp Far West Reservoir by 5 feet to an elevation of 305 feet. The pool raise would increase Camp Far West Reservoir storage by 9,836 acre-feet to a capacity of 103,573 acre-feet at Camp Far West Reservoir's new Maximum Reservoir Elevation of 305 feet.

The construction related to the Pool Raise has the potential to adversely affect historic properties and significantly impact historical resources. Additionally, the inundation and erosion of the additional 5 ft of elevation around the margin of the Camp Far West Reservoir that would result from the Pool Raise has the potential to adversely affect/significantly impact historic properties and historical resources, as described below for reservoir inundation and fluctuation effects.

Section 4.3 of the HPMP identified five archaeological sites (see Table 2.5-8) and the prehistoric archaeological district (the Middle Bear River [Kumin Seyo] Prehistoric Archaeological District) as significantly impacted by the Pool Raise. The effect would be a direct effect caused by erosion from fluctuating water levels once the reservoir pool level is raised, which would wash away or otherwise destroy portions of these sites, impacting their integrity of location, association, and materials.

Table 2.5-8. Eligible and Unevaluated Archaeological Sites Adversely Affected by Pool Raise¹³

Count	Site No. (Primary/Trinomial/Temp. No.)	Age ¹	Type	Individual NRHP/CRHR Eligibility
1	P-31-5744/ CA-PLA-1179/H/ SRI-CFW-3	M	P: Short-term Habitation H: Mining	Eligible
2	P-31-6312/ CA-PLA-2718/ HDR-CFWH-48	P	Milling Feature	Unevaluated
3	P-58-2875/ CA-YUB-1816/H/ SRI-CFW-12	M	P: Short-Term Habitation H: Trash Scatter	Unevaluated
4	P-58-2883/2884/2886/2887/2888/2889 CA-YUB-1824/1825/1827/1828/1829/1830/H/ HDR-CFWH-33	M	P: Long-Term Habitation H: Trash Scatter	P: Eligible H: Ineligible
5	P-58-2885/ CA-YUB-1826/ SRI-CFW-22	P	Short-Term Habitation	Unevaluated

Notes: ¹ H = Historical; P = Prehistoric; M = Multi-component.

¹³ All of these sites are contributing or unevaluated elements of the Middle Bear River (Kumin Seyo) Prehistoric Archaeological District.

As noted above in the Proposed Project operations and maintenance impact analysis, under the terms of the HPMP, the three unevaluated resources will be subject to the HPMP's *Program for Resource Evaluations* and, if eligible, also to the *Program for Mitigating Adverse Effects*. The two eligible resources will also be subject to the *Program for Mitigating Adverse Effects*. Therefore, as the required actions will be implemented under the HPMP as an environmental commitment of the Proposed Project, impacts associated with pool raise, under the CEQA analysis, are considered less than significant.

Recreation Feature Rehabilitation, Replacement, and Relocation

Although Project recreation areas can meet the current and future recreational demand, some of the recreation features need replacement or rehabilitation to maintain their proper functioning condition. Nearly all of the features will require replacement or rehabilitation during the term of the new license to maintain the features in proper functioning condition, particularly the restrooms, potable water system, and the circulation roads, which will need near-term rehabilitation to maintain a safe and proper functioning condition. In accordance with the Proposed Project's environmental commitments, detailed in the *Recreation Facilities Plan*, SSWD will obtain all necessary permits and approval for survey work, feature design, and on-site resource evaluations when replacing or rehabilitating Proposed Project recreation features. The Camp Far West North Shore Recreation Facility (P-58-3073) and South Shore Recreation Facility (P-31-6155) were both evaluated for significance as part of the *Cultural Resources Study* and found not eligible for NRHP or CRHR listing with SHPO concurrence. Therefore, recreation feature relocations and improvements would have no impact to NRHP/CRHR eligible or unevaluated resources.

Mitigation Measures: None required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Impact Conclusion: Less than Significant Impact.

Archaeological resources under CEQA may meet the definition of either a historical resource or unique archaeological resource. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as 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. The significance of a historical resource would be significantly impaired when a project demolishes or materially alters, in an adverse manner, those physical characteristics of a historical resource that convey its historical significance and justify its inclusion in, or eligibility for inclusion in, either the CRHR or a local register of historic resources pursuant to Section 5020.1(k) of the PRC. With regard to unique archaeological resources, CEQA states that when a project will cause damage to a unique archaeological resource, reasonable efforts must be made to preserve the resource in place or left in an undisturbed state.

Proposed FERC Project Boundary Change

Procedures for the evaluation and mitigation (if necessary) of an inadvertent discovery of an archaeological resource within the proposed FERC Project boundary change would follow the procedures summarized above for operations and maintenance and detailed in the HPMP.

Therefore, impacts associated with the proposed FERC Project boundary change with regards to archaeological resources, under the CEQA analysis, are considered less than significant.

Implementation of New Flow Regime

The existing FERC license for the Proposed Project describes required minimum instream flows in the Bear River. During the relicensing and in collaboration with resource agencies and interested stakeholders, SSWD proposed new measures in its FLA related to flows. Minor impacts associated with sedimentation and erosion may be associated with the adjusted flow rates, but these are not expected to exceed yearly norms and are consistent with baseline conditions. Accordingly, implementation of the new flow regime would have no impact on archaeological resources.

Implementation of Environmental Measures

SSWD is proposing to implement four environmental measures as commitments of the Proposed Project. In addition to the HPMP, these environmental measures include a *Bald Eagle Management Plan*, a *Recreation Facilities Plan*, and a seasonal LOP within 500 feet of the great blue heron rookery at the SSRA. Consistent with the impact analysis above, implementation of the *Bald Eagle Management Plan*, the *Recreation Facilities Plan*, and the great blue heron rookery management measure are not anticipated to have any impact on archaeological resources.

Implementation of the Proposed Project would not impact any known unique archaeological resources. However, there is the possibility that undocumented cultural resources would be discovered within the APE during operations and maintenance. Upon notification of such a find, SSWD would ensure that the find is adequately documented, mapped, and incorporated into the cultural resources database for the Project through the HPMP update procedure (Section 8.2.2). Appropriate management actions, if any, will be determined by SSWD in consultation with appropriate parties (e.g., FERC, tribes, and SHPO). Per Section 5.11.1 (*Procedures for Unanticipated Discoveries of Cultural Resources*) of the HPMP, if the discovery involves a resource that is at risk of imminent damage through construction-related activities the following procedures would be followed:

- (1) All work in the immediate area will cease and all artifacts left in place until a professional cultural resources specialist that meets the Secretary of the Interior's Professional Qualifications Standards, as set forth in 36 C.F.R. Part 61, in the appropriate discipline appropriate for the type of resource encountered is able to assess the find.
- (2) If the cultural materials constitute an "isolated find"¹⁴ or is determined to be of recent origin (i.e., less than 50 years old), the materials will be documented, and the construction activity may continue without any further consultation.
- (3) If the cultural materials constitute an archaeological resource that may be eligible for the NRHP and CRHR on its own merit, the material will be documented and, where feasible, measures will be taken to protect the newly discovered resource from further disturbance.

¹⁴ Prehistoric isolates are defined as three or less artifacts (flakes, groundstone, etc.) per 50 square meters. Prehistoric isolated features will not be treated as isolated finds but will be considered a prehistoric site. Historic isolates consist of three or less artifacts per 50 square meters (e.g., several fragments from a single glass bottle are one artifact) or two or less historic features per 50 square meters or placer mining features with no associated structural remains or archaeological deposits.

- (4) The SSWD will notify SHPO and the tribes within 48 hours of the new site discovery. The notification will describe any assessment of NRHP and CRHR eligibility (formal or informal) and the recommended actions to be undertaken to resolve potential adverse effects.
- (5) SHPO and the tribes will have 48 hours to respond to the notification of the new site discovery. Any response will be taken into consideration by SSWD. If no response is received within 48 hours, SSWD will proceed with implementing the proposed actions. Following completion of the actions, work in the vicinity of the find may continue.
- (6) Following completion of all construction activities, SSWD shall provide to SHPO, the North Central Information Center (NCIC), and the tribes a report of the actions that were undertaken during construction activities. This report will describe in detail isolated finds and potential historic properties/historical resources identified during construction activities, all measures undertaken to resolve potential adverse effects and significant impacts and copies of all consultation documents.

Under the terms of the HPMP previously unidentified archaeological sites will be subject to the HPMP's *Program for Resource Evaluations* and, if eligible, also to the *Program for Mitigating Adverse Effects*. The required actions to address a substantial adverse change in the significance of a previously unrecorded archaeological resource will be implemented under the HPMP as an environmental commitment of the Proposed Project. Therefore, impacts associated with implementing the environmental measures with regards to archaeological resources, under the CEQA analysis, are considered less than significant.

Camp Far West Reservoir Pool Raise

Procedures for the evaluation and mitigation (if necessary) of an inadvertent discovery of an archaeological resource within the proposed FERC Project boundary change would follow the procedures summarized above and detailed in the HPMP. Therefore, impacts associated with the proposed FERC Project boundary change with regards to archaeological resources, under the CEQA analysis, are considered less than significant.

Recreation Feature Rehabilitation, Replacement, and Relocation

The Camp Far West North Shore Recreation Facility (P-58-3073) and South Shore Recreation Facility (P-31-6155) were both evaluated for significance as part of the *Cultural Resources Study* and found not eligible for NRHP or CRHR listing with SHPO concurrence. Procedures for the evaluation and mitigation (if necessary) of an inadvertent discovery of an archaeological resource within the recreation feature relocations and improvements would follow the procedures summarized above and detailed in the HPMP. Therefore, impacts associated with the proposed recreation feature relocations and improvements with regards to archaeological resources, under the CEQA analysis, are considered less than significant.

Mitigation Measures: None required.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Conclusion: Less than Significant Impact.

Human remains, graves, and cemeteries that may be encountered during Project-related activities are protected by state law. On privately-owned lands, the (CHSC; 7050.5, 7051, 7054, 8011) and California Public Resources Code (CPRC; 5097) prohibit damage, defacement, or disinterment of human remains without legal authority, and establish civil and criminal penalties. These statutes also

are applicable to anyone who knowingly loots prehistoric or historical Native American or other graves.

Proposed FERC Project Boundary Change

No dedicated cemeteries or human burials have been identified within the proposed FERC Project boundary change. In the case of an unanticipated discovery of human remains within the proposed FERC Project boundary change, the process detailed in Section 5.11.1.1 of the HPMP (*Discovery of Human Remains*) as well as state law requirements under the CHSC and CPRC will be implemented. Because the required actions to address a discovery of human remains would be implemented under the HPMP as an environmental commitment of the Proposed Project, impacts associated with the proposed FERC Project boundary change, under the CEQA analysis, are considered less than significant.

Implementation of New Flow Regime

The existing FERC license for the Proposed Project describes required minimum instream flows in the Bear River. During the relicensing and in collaboration with resource agencies and interested stakeholders, SSWD proposed new measures in its FLA related to flows. Minor impacts associated with sedimentation and erosion may be associated with the adjusted flow rates, but these are not expected to exceed yearly norms and are consistent with baseline conditions. Accordingly, implementation of the new flow regime will have no impact on human remains.

Implementation of Environmental Measures

SSWD is proposing to implement four environmental measures as commitments of the Proposed Project. In addition to the HPMP, these environmental measures include a *Bald Eagle Management Plan*, a *Recreation Facilities Plan*, and a seasonal LOP within 500 feet of the great blue heron rookery at the SSRA. Consistent to the impact analysis presented above, implementation of the *Bald Eagle Management Plan*, the *Recreation Facilities Plan*, and the great blue heron rookery management measures are not anticipated to have any impact on human remains.

Based on the inventory results documented in the *Cultural Resources Study*, there are no dedicated cemeteries or known locations of human burials. However, SSWD recognizes that the potential for encountering human remains can never be eliminated. When human remains are discovered on privately owned land, other than a dedicated cemetery, during operations and maintenance, SSWD will immediately notify the county coroner and the tribes per Section 5.11.1.1 of the HPMP (*Discovery of Human Remains*). Any excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains will cease until the county coroner has determined that the circumstances, manner, and cause of death do not require further investigation (CHSC 7050.5(b)). If the coroner determines that the remains are Native American, the coroner must contact the NAHC, who will identify the MLD.

With the permission of the landowner, the descendants may inspect the site of the discovery and recommend means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants will have no less than 24 hours to complete their inspection and make their recommendation. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If the NAHC is unable to identify a descendant, or the identified descendant fails to make a recommendation, or the landowner rejects the recommendation of the descendant and mediation fails to provide measures acceptable to the landowner, the landowner will re-inter the human

remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance (CPRC 5097.98). Only after this process has been followed may activities resume in the location of the discovery.

Under the terms of the HPMP all human remains, including those interred outside of dedicated cemeteries, are subject to the process detailed in Section 5.11.1.1 (*Discovery of Human Remains*) as well as state law under the CHSC and CPRC. The required actions to address a discovery of human remains would be implemented under the HPMP as an environmental commitment of the Proposed Project. Therefore, impacts associated with implementing the environmental measures with regards to human remains, under the CEQA analysis, are considered less than significant.

Camp Far West Reservoir Pool Raise

In the case of an unanticipated discovery of human remains associated with the Camp Far West Reservoir pool raise, the process detailed in Section 5.11.1.1 of the HPMP (*Discovery of Human Remains*) as well as state law requirements under the CHSC and CPRC would be implemented. Therefore, impacts associated with the pool raise with regards to an unanticipated discovery of human remains, under the CEQA analysis, are considered less than significant.

Recreation Feature Rehabilitation, Replacement, and Relocation

No dedicated cemeteries or known human remains are associated with the Camp Far West North Shore Recreation Facility (P-58-3073) and South Shore Recreation Facility (P-31-6155). Both recreation areas were evaluated for significance as part of the *Cultural Resources Study* and found not eligible for NRHP or CRHR listing with SHPO concurrence. In the case of an unanticipated discovery of human remains associated with the recreation feature relocations and improvements, the process detailed in Section 5.11.1.1 of the HPMP (*Discovery of Human Remains*) as well as state law requirements under the CHSC and CPRC would be implemented. Therefore, impacts associated with the recreation area improvements with regards to an unanticipated discovery of human remains, under the CEQA analysis, are considered less than significant.

Mitigation Measures: None required.

2.6 Energy

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project is located along the Bear River, which is 6.5 miles east of the City of Wheatland, and is in Yuba, Nevada, and Placer counties. The existing FERC Project boundary primarily resides within Yuba County and extends eastward into both Placer and Nevada counties. PG&E provides the electric service in these counties, which encompasses the Proposed Project area (PG&E 2014). SSWD manages the Camp Far West Powerhouse and Switchyard and contracts the operational and maintenance work to the Sacramento Municipal Utility District. PG&E is also the electric provider for the City of Wheatland. The existing project facilities include the Camp Far West development, which includes one main dam, one powerhouse with an associated switchyard with a capacity of 6.8 MW, and recreation facilities. Power is produced at Camp Far West Powerhouse during the winter/early spring months when the reservoir is spilling and during the spring and summer months when releases are being made for irrigation and to meet instream flow requirements. Because of the Camp Far West Powerhouse generating unit's operating characteristics, power can only be generated when the Water Surface Elevation of the Camp Far West Reservoir is at or above 236 feet and when reservoir outflow is greater than 130 cfs. If these two criteria cannot be met, water is released through Camp Far West Dam's low-level outlet. This condition normally occurs each year in September and continues into winter when the reservoir refills and surplus inflows are available to be passed through the powerhouse.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

California Global Warming Solutions Act of 2016 (Senate Bill 32)

The California Global Warming Solutions Act of 2016 was established to expand upon Assembly Bill 32 in order to reduce GHG emissions. The Act would require the state board to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.

California Clean Energy and Pollution Reduction Act (Senate Bill 350)

The California Clean Energy and Pollution Reduction Act established clean air and energy, and GHG reduction goals by reducing GHG to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

Nevada County Energy Action Plan

The *Nevada County Energy Action Plan* (EAP) was approved by the Nevada County Board of Supervisors in 2019. The EAP's intent is to provide the county's unincorporated area's guidance for expanding energy-efficiency, water-efficiency, and renewable-energy. It also provides a guide for the entire county to accelerate energy-efficiency (Nevada County 2019). The following plan strategy is relevant to the Proposed Project:

- Strategy 1.3: Continue to increase the energy efficiency of County buildings, facilities, and operations.

Placer County General Plan

The *Placer County General Plan* is the county's constitution for land use and development (Placer County 2013a). The following plan and policies are relevant to the Proposed Project:

- Policy G-2: The County shall promote land use patterns that encourage energy efficiency, to the extent feasible, and encourage energy use in new development, including but not limited to access to non-auto transit, use of traffic demand management, and water-efficient landscaping.

Yuba County General Plan

The *Yuba County General Plan* was written in order to provide the necessary information and analysis to allow decisionmakers and the public to identify goals for the future (Yuba County 2011a). The plan identifies policies and actions in order to achieve such goals. The following plan policies are relevant to the Proposed Project –

- Policy NR 7.1: New developments shall address energy conservation in landscaping methods, materials, and design.
- Policy NR 7.10: The County and Yuba County Water Agency should explore opportunities related to future access to hydroelectric power, energy provision, strategic use of local energy resources for employment development, and other programs that have dual environmental-economic benefits.

Impact Analysis

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Conclusion: *Less Than Significant Impact.*

Proposed FERC Project Boundary Change

The goal of the proposed FERC Project boundary change is to add areas necessary for the Proposed Project's operation and maintenance, which includes the addition of an existing Primary Project Road, and to remove lands not necessary for operation of the Proposed Project. Change would not create any physical modification that would require construction activities. The change

would be only be an administrative change in the designations in the FERC license. Therefore, the proposed FERC Project boundary change would have no impact on energy resources, and no mitigation is required.

Implementation of New Flow Regime

The goal of the new flow regime is to define minimum streamflows, pulse flows, and ramping rates for the Proposed Project. SSWD would time the pulse flow releases to run concurrently through the powerhouse. Therefore, the pulse flow release would not have wasteful energy consumption. There would be no changes toward the functionality of Camp Far West Powerhouse. The newly defined flows were developed in consultation with SSWD and other cooperating agencies, including USFWS, CDFW and NMFS. Water rights and usage would not change with the implementation of the Proposed Project. Additionally, any temporary modification to streamflows, pulse flows, or ramping rates would require consultation and approval by all relevant agencies such as USFW and SWRCB. Therefore, the Proposed Project would have no impact on energy resources and no mitigation is required.

Implementation of Environmental Measures

The implementation of the *Bald Eagle Management Plan*, great blue heron rookery management measure, and HPMP would not require the consumption of energy resources because the plans only involve the establishment of buffers and surveys for the purposes of species and resource protection.

Camp Far West Reservoir Pool Raise

The Camp Far West Reservoir pool raise component is anticipated to take approximately 11 months for construction and site restoration. While the proposed pool raise would require the temporary consumption of energy during this time period, it would not be considered wasteful or unnecessary as it would only be consumed during the temporary construction period and for the Proposed Project activities. The Proposed Project would adhere to existing tiered emissions standards construction equipment established by USEPA and the California ARB and would implement required BMPs throughout the duration of construction (see Section 2.3, *Air Quality*, and Section 2.8, *Greenhouse Gas Emissions*, for additional information). Because of the temporary nature of energy consumed during construction, as well as the absence of substantial changes in operational or maintenance conditions as it relates to the pool raise, the Proposed Project would have less than significant impact on energy resources and no mitigation is required.

Recreation Feature Rehabilitation, Replacement, and Relocation

The recreation feature rehabilitation, replacement, and relocation component is intended to maintain the operational maintenance and rehabilitation of facilities and replacement of all existing facilities inundated due to the Camp Far West Reservoir pool raise. The *Recreation Facilities Plan* would only focus on the replacement of facilities that have lost functionality as a result of to the Proposed Project or facilities that need to be restored to their original functionality or capacity (Appendix B). SSWD would replace impacted recreation facilities in-kind, at a one-to-one replacement ratio. There is anticipated energy consumption from the replacement and rehabilitation efforts. However, energy consumption would be minimal, and construction is anticipated to be completed in one calendar year. Additionally, there would not be an increase in the number of recreation facilities in the area. Therefore, the Proposed Project would have less than significant impact on energy resources and no mitigation is required.

Mitigation Measures: None required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Conclusion: No Impact.

There would be no conflict or obstruction of a state or local plan for renewable energy or energy efficiency with the Proposed Project and respective project components. Therefore, the Proposed Project would have no impact, and no mitigation is required.

Mitigation Measures: None required.

2.7 Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project area is located in the Sierra Nevada geologic province. Paleozoic and Mesozoic accretion and subduction events along the western margin of the North American land mass built up the Sierra crest with surface volcanic rock and subsurface granitic plutons. These volcanic eruptions resulted in contact metamorphism and the creation of the Sierra gold deposits. Subsequent middle-Tertiary orogenic events extruded andesites, andesitic mud flows, and associated volcanic sedimentary rocks in the Bear River Basin. Late Quaternary glacial stages in the

northwestern Sierra Nevada and uplift along the eastern Sierra Nevada shaped the landscape that is seen today. The Proposed Project area is underlain by Jurassic volcanic rocks including pyroclastic rocks and flows (SSWD 2019).

The Spenceville Fault, of the Foothills Fault System, trends northwest-southeast and occurs just to the east of the Proposed Project area. The Spenceville Fault was active during the Late Quaternary period or past 700,000 years (California Department of Conservation 2015). The Proposed Project is located within an area with low potential for ground shaking during an earthquake (California Department of Conservation 2016). Hillslopes in the Proposed Project area are generally less than 25 percent (SSWD 2019). The Proposed Project area is not located within an Alquist-Priolo Earthquake Fault Zone, liquefaction zone, or landslide zone (California Department of Conservation 2019). Soils in the Proposed Project area are composed of the Auburn-Sobrante-Rock outcrop complex (SSWD 2019). The Auburn-Sobrante complex is shallow to moderately deep, well drained, and has a slope of 2-70 percent. The potential for expansive soils in the Proposed Project area is considered low (Yuba County 2011c).

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Earthquake Hazard Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. The act established the National Earthquake Hazard Reduction Program. The purpose of this program is to reduce the risks to life and property in the United States from earthquakes through the establishment and maintenance of an effective national earthquake risk reduction program. This program was significantly amended in November 1990 by the National Earthquake Hazards Reduction Program Act by refining the description of agency responsibilities, program goals, and objectives.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was enacted in 1972 to reduce the risk to life and property from surface fault rupture. The law prohibits the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The state geologist has established regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and published appropriate maps.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 directs the California Geological Survey to identify and map areas that are prone to liquefaction, landslides, and ground shaking resulting from seismic events. The state geologist established regulatory zones called Zones of Required Investigation and published Seismic Hazard Zone maps. The act requires a site-specific geotechnical investigation to identify potential seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy within the zones of required investigation.

National Pollutant Discharge Elimination System Permit

In California, the SWRCB administers regulations, mandated by USEPA, that require the permitting of stormwater-generated pollution under the NPDES. In turn, SWRCB's jurisdiction is administered through nine RWQCBs. An operator must obtain a General Permit through the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or more. The General Permit requires the implementation of BMPs to reduce sedimentation into surface waters and control site erosion. One element of compliance with the NPDES permit is preparation of a stormwater pollution prevention plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction.

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 CCR § 15064.5[a][3]), which is typically interpreted as including fossils and other paleontological resources. More specifically, 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. Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, data recovery excavation, and/or avoidance.

Grading Ordinances

Chapter 11.23 of the Yuba County Code of Ordinances (Yuba County 2018a) regulates grading, drainage, and other earthwork activities within the unincorporated areas of Yuba County to preserve and safeguard public welfare, life, health, and property. A grading permit is required for any grading and/or other construction activity with ground disturbance of more than one acre, or any grading/construction activity smaller than one acre but part of a greater plan involving over one acre.

Article 15.48, Grading, Erosion, and Sediment Control of the Placer County Code (Placer County 2021b) was enacted for the purpose of regulating grading on property within the unincorporated area of Placer County to safeguard life, limb, health, property, and public welfare. A grading permit is required for any grading and/or other construction activity with ground disturbance of one acre or more. Grading activities that contribute to the violation of provisions of any applicable NPDES permit are prohibited.

Article 13, Grading of the Nevada County Code (Nevada County 2021b) safeguards life, limb, property and the public welfare by regulating grading and construction activities that result in a land disturbance on private property. Grading in such a manner that quantities of dirt, soil, rock, debris, or other material substantially in excess of natural levels are washed, eroded, or otherwise moved from the site is prohibited, except as specifically provided for by a permit obtained from the Building Official.

Impact Analysis

a-i) *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: 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?

Impact Conclusion: *No Impact.*

The Proposed Project area is not located within an Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2015). No active faults have been mapped on the Proposed Project area. Therefore, the Proposed Project would not result in substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. As a result, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

a-ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Strong seismic ground shaking?

Impact Conclusion: *Less than Significant Impact.*

The Spenceville Fault, which occurs just to the east of the Proposed Project area, was active during the Late Quaternary period or past 700,000 years (California Department of Conservation 2015). The Proposed Project is located within an area with low potential for ground shaking during an earthquake (California Department of Conservation 2016). Therefore, the Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. As a result, a less than significant impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

a-iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Seismic-related ground failure, including liquefaction?

Impact Conclusion: *No Impact.*

Liquefaction can occur when earthquake motion turns loosely packed, water-saturated soil to liquid, which causes a loss in support for structures. The Proposed Project area is not located within a liquefaction zone (California Department of Conservation 2019). Therefore, the Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. As a result, a less than significant impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

a-iv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Landslides?

Impact Conclusion: *No Impact.*

Hillslopes in the Proposed Project area are generally less than 25 percent (SSWD 2019). The Proposed Project area is not located within a landslide zone (California Department of Conservation 2019). Therefore, the Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. As a result, no impact would occur, and no mitigation is required.

Mitigation Measures: *None required.*

b) Result in substantial soil erosion or the loss of topsoil?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regime, and , environmental measures do not include ground disturbance; therefore, these components would not result in soil erosion or loss of topsoil. As a result, no impact would occur, and no mitigation is required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

Ground disturbance, grading, and other construction activities during the Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, and relocation would remove ground cover and expose and disturb soil. Exposed and disturbed soils are vulnerable to erosion. This is a potentially significant impact. As part of the Proposed Project, coverage under the NPDES General Permit would be obtained from the SWRCB. The NPDES General Permit requires SWPPP implementation for projects with greater than one acre of disturbance to control stormwater runoff within the construction and staging areas, thus minimizing soil erosion to the extent possible. BMPs for erosion and runoff, as outlined in the SWPPP and General Permit, would be implemented during construction to minimize erosion and sediment migration from the construction and staging areas. The Proposed Project would also be subject to the applicable grading and erosion control requirements of Yuba, Nevada, and Placer counties. Therefore, the Proposed Project would not result in substantial soil erosion or topsoil loss. As a result, the impact would be less than significant, and no mitigation is required.

Mitigation Measures: *None required.*

c) 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?

Impact Conclusion: *No Impact.*

The Proposed Project area is not located within a liquefaction zone or landslide zone (California Department of Conservation 2019). The Proposed Project area is not located on an unstable geologic unit, and has a low potential for landslides, lateral spreading, subsidence, liquefaction, or collapse was noted based on current conditions at the Proposed Project area. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

d) 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?

Impact Conclusion: *Less than Significant Impact.*

Expansive soils are typically clayey soils that shrink and swell with changes in water content. Soils in the Proposed Project area are composed of the Auburn-Sobrante-rock-outcrop complex (SSWD 2019b), which includes silt loam layers, and is not typical of expansive soil types. The potential for expansive soils in the Proposed Project area is considered low (Yuba County 2011c). Furthermore, the Proposed Project does not include construction of structures or buildings for human use. Therefore, the Proposed Project would not create any new substantial direct or indirect risk to life or property because of expansive soils, resulting in a less than significant impact. No mitigation is required.

Mitigation Measures: None required.

e) 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?

Impact Conclusion: No Impact.

No septic tanks or alternative wastewater disposal systems are included as part of the Proposed Project. Therefore, the Proposed Project would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support. As a result, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Conclusion: No Impact.

The Proposed Project is located in an area with Jurassic volcanic rocks, which do not support fossils or paleontological resources. Volcanic rocks melt anything that they come in contact with, thereby destroying chances for fossil creation. No/minimal subsurface work would be conducted for the pool raise and recreation feature relocations and improvements, and therefore, there would be no ground disturbance that could affect paleontological resources or geologic features. As a result, no impact would occur, and no mitigation is required.

Mitigation Measures: None required.

2.8 Greenhouse Gas Emissions

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Human-produced GHG emissions are created primarily by the burning of fossil fuels for energy. These anthropogenic GHG emissions are widely accepted in the scientific community as contributing to climate change. Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system.

California's efforts devoted to GHG emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are concerned primarily with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1,1,1,2 tetrafluoroethane), and HFC-152a (difluoroethane). 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). Carbon dioxide is considered the baseline GHG in this index and has a global warming potential of one. Methane has a global warming potential of 21 times that of CO₂, and N₂O has a global warming potential of 310 times that of CO₂. The families of chlorofluorocarbons, 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.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows. The federal government has taken significant regulatory steps toward addressing climate change. The key federal regulatory actions include the Climate Change Action Plan, Mandatory Reporting of GHGs Rule, Corporate Average Fuel Economy Standards, and Clean Power Plan. Generally, California policy and regulations are as, or more, comprehensive and stringent than federal actions; therefore, this regulatory section focuses on the state regulatory actions.

Executive Order S-3-05

Former Governor Schwarzenegger issued Executive Order (EO) S-3-05 in June 2005, which established the following GHG emissions reduction targets: 1) reduce GHG emissions to 2000 levels by 2010, 2) reduce GHG emissions to 1990 levels by 2020, and 3) reduce GHG emissions to 80 percent below 1990 levels by 2050.

Assembly Bill 32 (Global Warming Solutions Act)

In September 2006, the Legislature enacted the California Global Warming Solutions Act of 2006, also known as Assembly Bill 32 in response to EO S-3-05. Assembly Bill 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. California met its 2020 reduction goal in 2018.

Executive Order B-30-15

On April 20, 2015, former Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. California's emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050.

Senate Bill 32

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

Climate Change Scoping Plan

In December 2008, the California ARB adopted the *Climate Change Scoping Plan* (ARB 2008) to achieve the goals outlined in Assembly Bill 32. The *First Update to the Climate Change Scoping Plan* (ARB 2014) was approved by the ARB in May 2014 and built upon the 2008 Scoping Plan with new strategies and recommendations. The ARB adopted *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan) in November 2017. The 2017 Scoping Plan represents a second update to the scoping plan to reflect the 2030 target as codified by Senate Bill 32. According to the 2017 Scoping Plan, the 2030 target of 260 million metric tons (MT) of CO₂e requires the reduction of 129 million MT of CO₂e, or approximately 33.2 percent, from the state's projected 2030 business-as-usual scenario emissions level of 389 million MT of CO₂e (ARB 2017).

Renewable Portfolio Standards

In September 2002, the Legislature enacted Senate Bill 1078, which established the Renewables Portfolio Standard program, requiring retail sellers of electricity to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. The Renewables Portfolio Standard applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. Senate Bill 1078 set a target by which 20 percent of the state's electricity would be generated by renewable sources. In September 2006, the Legislature enacted Senate Bill 107, which modified the Renewables Portfolio Standard to require that at least 20 percent of electricity retail sales be served by renewable energy resources by year 2010. In April 2011, the Legislature enacted Senate Bill X1-2, which set the requirement that 33 percent of the State's electricity come from renewables by 2020.

The Camp Far West Dam contributes 6.8 MW generating capacity toward these goals. The Proposed Project would not change generating capacity, but the license renewal will allow the operation of this power source for the next 50 years.

Senate Bill 350

Senate Bill 350 was signed into law in September 2015. Senate Bill 350 establishes tiered increases to the Renewables Portfolio Standard of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030.

Senate Bill 100

Senate Bill 100, signed into law on September 10, 2018, raises the Renewable Portfolio Standard requirement to a 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. Senate Bill 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030.

Executive Order B-55-18

In September 2018, former Governor Brown signed EO B-55-18, which directs the state to achieve carbon neutrality no later than 2045 and achieve and maintain net negative emissions thereafter.

Assembly Bill 1493 (Pavley Clean Car Standards)

Assembly Bill 1493 (Pavley Bill) required ARB to develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light duty truck and other vehicles whose primary use is non-commercial personal transportation in the state.” In September 2004, pursuant to this directive, the ARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created the Pavley standards. In September 2009, the ARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created the Pavley II standards.

Advanced Clean Cars Program

In January 2012, ARB approved a new emissions control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero emission vehicles into a single packet of standards called Advanced Clean Cars. The Advanced Clean Cars Program includes the Zero Emission Vehicle Program, which is designed to achieve California’s long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of zero-emission vehicles, which include battery electric, fuel cell, and plug-in hybrid electric vehicles.

With regards to the Proposed Project, this regulation is only applicable to the personal vehicles of construction workers.

Low Carbon Fuel Standards

In 2009, the ARB approved the Low Carbon Fuel Standards regulation to reduce the carbon intensity of transportation fuel used in California by at least 10 percent by 2020 from a 2010 baseline. In

2018, the ARB approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG target enacted through Senate Bill 32. The 2017 Scoping Plan, which reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by Senate B 32, increased stringency of the Low Carbon Fuel Standards by requiring an 18 percent reduction in carbon intensity by 2030, up from 10 percent in 2020.

Local GHG Plans

On January 28, 2020, the Placer County Board of Supervisors approved the first-ever *Placer County Sustainability Plan (PCSP)* (Placer County 2020c). The PCSP is a comprehensive program that outlines various programs and policies that will be undertaken by the community and Placer County as a whole, in order to reduce greenhouse gas emissions and enhance community resiliency to long-term changes associated with climate-related hazards. The PCSP includes an inventory of baseline (2005) and forecasted emissions in 2020, 2030, and 2050 and identifies reduction targets and strategies to reach those targets. The reduction strategies and measures included in the PCSP apply to both municipal operations and community activities in the unincorporated county. While many community-wide GHG reductions plans prepared throughout the state allow for discretionary projects to tier from the environmental analysis prepared for a community-wide GHG emissions reduction plan, the PCSP does not serve this function.

Thresholds of Significance

The FRAQMD has not yet established thresholds of significance specifically for GHG emissions, but recommends that local lead agencies use state and local-level resources from organizations, offices and agencies including, but not limited to, the California Air Pollution Control Officers Association, Office of the Attorney General, Lawrence Berkeley National Laboratory, California Energy Commission, CoolCalifornia.org, and California Natural Resources Agency when developing GHG evaluations through the CEQA process (FRAQMD 2010).

The NSAQMD has not yet established significance thresholds for GHG emissions from project operations or construction. However, the NSAQMD requires quantification of GHG emissions for decisions-makers and the public to consider (NSAQMD 2009).

The PCAPCD adopted a bright-line GHG threshold of 10,000 MT CO₂e per year for all construction projects and operations of stationary source projects (PCAPCD 2017). The bright-line threshold is the point at which a project would be deemed to have a cumulatively considerable contribution to global climate change.

No construction would occur in Nevada county, and therefore, the Project's construction emissions are evaluated against the significance criteria established by FRAQMD and PCAPCD.

Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Conclusion: *Less than Significant Impact.*

Proposed FERC Project Boundary Change

The existing land use and proposed FERC Project boundary change would have no differences, resulting in no change to vehicles traversing the area. Therefore, the proposed FERC Project

boundary change would not generate GHG emissions in the Proposed Project area, and no impact would occur. No mitigation would be required.

Implementation of New Flow Regime and Environmental Measures

Implementation of the new flow regime and environmental measures would generate GHG emissions from the use of worker vehicles for monitoring activities. However, the GHG emissions generated by implementing the new flow regime and environmental measures would be minimal and immeasurable due to the infrequency of these activities. As a result, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise

Construction of the Camp Far West Reservoir pool raise would generate short-term GHG emissions. Construction-related GHG emissions would be generated by operation of construction equipment, fueling activities, materials hauling, and daily trips by construction workers. Construction GHG emissions have been estimated based on the construction schedule presented in the project description and assumptions regarding labor and construction equipment. The construction GHG emissions from the proposed Camp Far West pool raise were calculated using CalEEMod version 2016.3.2. Table 2.8-1 presents an estimate of construction GHG emissions. The detailed CalEEMod output is included in Appendix D. GHG emissions generating activities associated with the pool raise would be located within Yuba and Placer counties. No construction work is anticipated in Nevada County. The FRAQMD has not established thresholds of significance for GHG emissions. Therefore, for the purposes of this analysis, the thresholds of significance established by the PCAPCD is the applicable threshold.

Table 2.8-1. Construction GHG Emissions in MT/Year

Construction Emissions	CO ₂ e
GHG Emissions	566
PCAPCD Thresholds of Significance	10,000
Exceeds PCAPCD Thresholds of Significance?	No

Notes: CO₂e = carbon dioxide equivalent, MT = metric tons.

As shown in Table 2.8-1, GHG emissions generated during the pool raise would not exceed the PCAPCD thresholds of significance. Therefore, impacts would be less than significant, and no mitigation would be required.

Recreation Feature Rehabilitation, Replacement, and Relocation

The recreation facilities requiring rehabilitation, replacement, or relocation would generate short-term construction GHG emissions. However, the specific rehabilitation/replacement, locations of relocation, schedule of construction, and approach to achieving these requirements require further design and feasibility assessment. The area of disturbance associated with the recreational features relocations and improvements is estimated to be approximately 15 acres. This is much smaller than the area to be disturbed by the Camp Far West Reservoir pool raise (less than 30 acres). Therefore, the recreational feature rehabilitations, replacements, and relocations are anticipated to have a smaller GHG impact than the pool raise. As a result, impacts would be less than significant, and no mitigation would be required.

Mitigation Measures: None required.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Conclusion: *No Impact.*

The existing land use and proposed FERC Project boundary change would have no differences, resulting in no change to vehicles traversing the area. Therefore, the proposed FERC Project boundary change would not generate GHG emissions in the Proposed Project area. As a result, there would be no conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and no impact would occur. No mitigation would be required.

Implementation of the new flow regime and environmental measures would generate GHG emissions from the use of worker vehicles for monitoring activities. However, the GHG emissions generated by implementing the new flow regime and environmental measures would be minimal and immeasurable due to the infrequency of these activities. Therefore, there would be no conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and no impact would occur. No mitigation would be required.

The Camp Far West Reservoir pool raise and recreation feature rehabilitations, replacements, and relocations would generate short-term GHG emissions during construction. As indicated under Impact GHG-1, the short-term construction GHG emissions would not exceed PCAPCD's significance thresholds. Therefore, the Camp Far West Reservoir pool raise and recreation feature relocations and improvements would not conflict with any state or regional GHG emission reduction goals. As a result, there would be no impact, and no mitigation would be required.

Mitigation Measures: *None required.*

2.9 Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

There are no schools or airports near the Proposed Project area. The nearest schools and airports are generally located either to the south of the Proposed Project area in the City of Lincoln, or to the west of the Proposed Project area in the City of Yuba City and County of Yuba.

EnviroStor is the Department of Toxic Substances Control's (DTSC) data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. A review

of the EnviroStor database indicated that there are no hazardous sites on or in the vicinity of the Proposed Project area (DTSC 2021). GeoTracker is the SWRCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank Sites, Department of Defense Sites, and Cleanup Program Sites. A review of the GeoTracker database found no sites on or in the vicinity of the Proposed Project area (SWRCB 2021b).

According to the California Department of Forestry and Fire Protection (CalFire) responsibility maps, the Proposed Project area is located in a moderate to very high fire hazard safety zone in a State Responsibility Area (California State Geoportal 2020).

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows. Hazardous materials and hazardous wastes are regulated at the federal, state, and local level.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 established the federal regulatory program for hazardous substances and gives USEPA the authority to regulate the generation, transport, treatment, and disposal of hazardous substances in a "cradle to grave" system. Under the RCRA, USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances

Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 created the federal Occupational Safety and Health Administration (OSHA), which is responsible for protecting the health of workers in events such as during the storage and handling of hazardous materials. OSHA has created regulations to set federal standards of workplace safety, including exposure limits, mandatory workplace training, accident and injury reporting, and safety procedures.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act. This act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes, such as RCRA.

Hazardous Waste Control Act

The Hazardous Waste Control Act created the state's hazardous waste management program. It is similar to, but more stringent than the RCRA. The act is implemented by regulations contained in Title 26 of the CCR, which describes the following required aspects for the proper management of hazardous waste: identification and classification; generation and transportation; design and permitting of recycling treatment, storage and disposal facilities; operation of facilities and staff training; and closure of facilities and liability requirements

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) was created to better coordinate state environmental programs, reduce administrative duplication, and address the greatest environmental and health risks. CalEPA unifies the California's environmental authority under a single Cabinet-level agency. The Secretary for Environmental Protection oversees the following agencies: Air Resources Board, Department of Resources Recycling and Recovery, Department of Pesticide Regulation, SWRCB, DTSC, and the Office of Environmental Health Hazard Assessment.

Within CalEPA, the DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for hazardous materials management and hazardous waste generation, transport, and disposal under the authority of the Hazardous Waste Control Law.

Cortese List

The Hazardous Waste and Substances Sites (Cortese) List was created through California Government Code section 65962.5, which was enacted in 1985 and amended in 1992. The Cortese List is a planning document used by the State, local agencies, and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the CalEPA to develop at least annually an updated Cortese List. The Cortese List is prepared through the combined efforts of the DTSC, California Department of Health Services, SWRCB, and local enforcement agencies. The list is consolidated by the Secretary for Environmental Protection and is distributed to each city and county in which sites on the list are located. The list can be found on the DTSC's EnviroStor data management system.

California Public Resources Code Sections 4201-4204

CPR Code Sections 4201-4204 were amended in 1992 and require CalFire to classify fire hazard severity zones within State Responsibility Areas. Lands within State Responsibility Areas are classified in accordance with the severity of fire hazard present to identify measures to be used to retard the rate of spreading and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property. CalFire designates fire hazard severity zones as moderate, high, and very high to indicate the severity of fire hazard in a particular geographical area.

Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would not involve the routine transport, use, or disposal of hazardous materials. As a result, no impact would occur, and no mitigation is required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

There are no hazardous sites on or in the vicinity of the Proposed Project area (DTSC 2021). Construction activities associated with the Camp Far West Reservoir pool raise and recreation feature rehabilitation, replacement, and relocation would employ limited quantities of miscellaneous

hazardous substances (such as petroleum-based products/fluids, solvents, and oils) in the Proposed Project area and staging area. The demolished concrete, rebar, and any other material from the spillway cap removal would be disposed of at an approved off-site facility that accepts construction waste, such as the Western Regional Sanitary Landfill in Placer County. Refer to Section 2.19, *Utilities and Service Systems*, for information regarding capacity of the Western Regional Sanitary Landfill. Location and disposal of hazardous waste materials is not expected to occur for the pool raise because the existing spillway consists of concrete, rebar, and other non-hazardous materials. The recreation feature relocations and improvements would include paving, which could involve use and transport of hazardous materials. The Proposed Project site would include spill kits (per SWPPP requirements) that would prevent the discharge of unpermitted hazardous pollutants into waterways (see Section 2.10, *Hydrology and Water Quality*, for a discussion of SWPPP). Additionally, the Proposed Project would comply with all relevant federal, state, and local statutes and regulations related to transport, use, and disposal of hazardous materials. Therefore, impacts related to transport, use, or disposal of hazardous materials during the pool raise and recreational features relocations and improvements would be less than significant. No mitigation would be required.

Mitigation Measures: *None required.*

b) 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?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would not release hazardous materials into the environment. As a result, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

Construction work associated with the Camp Far West Reservoir pool raise and recreation features rehabilitation, replacement, and relocation would involve the operation, storage, and fueling of construction equipment, which have the potential to result in accidental or inadvertent release of oil, grease, or fuel into adjacent waterways. Accidental releases of small quantities of these substances could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard. However, the handling and disposal of these hazardous materials would be governed according to regulations enforced by DTSC. In addition, regulations under the federal CWA require contractors to avoid allowing the release of materials into surface waters as part of their SWPPP and NPDES permit requirements (see Section 2.10, *Hydrology and Water Quality*, for a discussion of SWPPP). The Proposed Project site would include spill kits (per SWPPP requirements) that would prevent the discharge of unpermitted hazardous pollutants into waterways.

Therefore, impacts related to accidental release of hazardous materials into the environment during the pool raise and recreational features rehabilitation, replacement, and relocation would be less than significant. No mitigation would be required.

Mitigation Measures: *None required.*

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Conclusion: *No Impact.*

No schools are located within one-quarter mile of the Proposed Project area. Therefore, the Proposed Project would not emit hazardous emissions or handle hazardous materials within one-quarter mile of a school. As a result, no impact would occur, and no mitigation is required.

Mitigation Measures: None required.

d) 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?

Impact Conclusion: No Impact.

The Proposed Project is not located on a site that is included on the listing of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC 2021; SWRCB 2021b). Therefore, the Proposed Project would have no impact on hazards to the public or environment from hazardous sites, and no mitigation would be required.

Mitigation Measures: None required.

e) 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?

Impact Conclusion: No Impact.

The nearest airports to the Proposed Project area are the Yuba County Airport, located approximately 22 miles to the northwest of the Proposed Project area and the Lincoln Regional Airport, located approximately 20 miles to the south of the Proposed Project area. The Proposed Project area is not located within an airport land use plan or within 2 miles of a public or public use airport. Therefore, the Proposed Project would not result in airport-related safety hazards toward people residing or working in the Proposed Project area. As a result, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Conclusion: Less than Significant Impact.

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise

During construction of the Camp Far West Reservoir pool raise, the existing bridge over the spillway would likely be closed to through traffic and detours around the dam may be required. Local residents would use McCourtney Road and then Riosa Road to access Highway 65 for north-to-south travel to Wheatland and the Sacramento area. However, the closures and detours would be temporary as the bridge would be reopened following the completion of the pool raise. Additionally, the road closures and detours would be coordinated with Yuba County. Therefore, the Camp Far West Reservoir pool raise would have a less than significant impact on an emergency response plan or emergency evacuation plan, and no mitigation would be required.

Recreation Feature Rehabilitation, Replacement, and Relocation

There would be road closures during recreational road relocation work, however closures would not restrict emergency access. The rehabilitation, replacement, and relocation of recreation features would add trips to the local roads in the Proposed Project area. However, the construction work to relocate, reroute, or realign recreation features would be completed in one calendar year and would occur outside the peak recreation season (that is, Memorial Day through Labor Day holiday weekends). Therefore, recreation features rehabilitation, replacement, and relocation would not physically interfere with an adopted emergency response plan or emergency evacuation plan. As a result, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Impact Conclusion: *Less than Significant Impact.*

The Proposed Project area is located in a moderate to very high fire hazard safety zone in a State Responsibility Area (California State Geoportal 2020). The Proposed Project does not include activities that would create a greater fire risk than that currently exists to recreationists and operations workers. Fire suppression equipment, including fire extinguishers would be kept on site during construction in accordance with local fire codes and standards in the event of a spark from equipment or vehicle operation. Construction workers would be the only new people exposed to risks involving wildland fires. However, construction is short-term and temporary and would involve only a small number of workers. Furthermore, the construction workers would only be exposed during work hours. Therefore, the exposure of people or property to significant fire hazards would be less than significant and no mitigation would be required. See Section 2.20, *Wildfire*, for a detailed discussion of wildfire-related hazards.

Mitigation Measures: *None required.*

2.10 Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

General Hydrology

The Project operates primarily to provide irrigation water to growers in SSWD's and the CFWID's service areas. However, SSWD also operates the Project to meet Bear River streamflow requirements and to generate power. Camp Far West Reservoir does not have a dedicated flood control space or associated flood control rules, and the Project does not include in-basin or out-of-basin water diversions, open water conduits, or transmission lines.

In addition to providing power and downstream water supply, SSWD pumps water directly from the Camp Far West Reservoir to supply water to the Project recreation facilities' water treatment plant for Project recreation uses and to non-Project residences and buildings used by the concessionaire's year-round and seasonal staff. Pumping averages approximately 15.3 acre-feet per year. This relatively small volume of pumping does not affect current Project operations.

Camp Far West Reservoir

Camp Far West Reservoir has a current gross storage capacity of approximately 93,737 acre-feet (i.e., storage at the normal maximum water surface elevation of 300 feet) and no regulatory minimum pool. The reservoir's current usable storage capacity is approximately 91,237 acre-feet.

Releases from Camp Far West Reservoir are made through 1) the Camp Far West Power Intake to Camp Far West Powerhouse at the base of the dam; 2) the dam's Low-Level Intake to the 48-inch-diameter Howell-Bunger outlet valve at the base of the dam; and 3) through the ungated spillway.

Although the specific water availability can vary widely, normal Project operation is to fill Camp Far West Reservoir as early in the season as sufficient water becomes available and to then spill the excess flows over the Camp Far West Dam ungated spillway. Because the reservoir is fed primarily by rainfall-produced runoff and releases from upstream water projects, it is difficult to predict the amount of inflow anticipated before the end of the season; therefore, SSWD retains within the reservoir, all of the inflow except releases for requirements for fisheries until the beginning of the irrigation season. Since the reservoir is operated as a "fill-and-spill system," meaning that additional water is moved downstream through the spillway when the reservoir is full, its effect on downstream flood flows is erratic, as it may range from complete control to only minor surcharge regulation.

Generally, Camp Far West Reservoir fills in winter and spring by catching rainfall and snowmelt runoff and is drawn down in the summer and fall to meet minimum flow requirements and water delivery demands. Water is released from Camp Far West Reservoir from mid-April to mid-October for water supply deliveries.

The reservoir currently does not have rule curves for representative dry, normal and wet water years.

Camp Far West Powerhouse

Power is produced at Camp Far West Powerhouse during the winter/early spring months when the reservoir is spilling and during the spring and summer months when releases are being made for irrigation and to meet instream flow requirements. Because of the Camp Far West Powerhouse generating unit's operating characteristics, power can only be generated when the Water Surface Elevation of the Camp Far West Reservoir is at or above 236 feet and when reservoir outflow is greater than 130 cfs. If these two criteria cannot be met, water is released through Camp Far West Dam's low-level outlet. This condition normally occurs each year in September and continues into winter when the reservoir refills and surplus inflows are available to be passed through the powerhouse.

During the irrigation season, up to a maximum of approximately 535 cfs passes through the powerhouse in conformance with downstream irrigation and instream requirements. However, during the heavy runoff period, when spilling from the reservoir occurs, a greater quantity of water is routed through the powerhouse up to its maximum limit of 725 cfs.

Accordingly, flow requirements on the Bear River downstream of Camp Far West Dam and Powerhouse are met through a combination of releases from the Camp Far West Powerhouse and

Camp Far West Dam low-level outlet, seepage from the Camp Far West Dam, and spills through the Camp Far West Dam Spillway. No changes are proposed to operations of flows through the Camp Far West Dam Spillway.

Bear River Fish Release below Camp Far West Reservoir

The compliance point for the flow requirements in the existing FERC license is at the U.S. Geological Survey fish release gage (USGS 11423800), which is located at a structure off the non-Project diversion dam into the SSWD Conveyance Canal at the south edge of the non-Project diversion dam, approximately 1.2 mi downstream of Camp Far West Reservoir. The gage is a low-flow gage and does not measure spill or total release from the non-Project diversion dam.

Water Rights

Numerous water rights holders divert and store waters upstream of the Project area. The upstream projects with significant impacts on inflows to the Project include PG&E's Drum-Spaulding Project, The Nevada Irrigation District's (NID) Yuba-Bear Hydroelectric Project and NID's Lake Combie. NID also holds senior pre-1914 water rights to the Bear River.

SSWD holds post-1914 appropriative water rights for the purposes of operating the Project for hydroelectric power generation designating 725 cfs direct diversion from 1/1 to 12/31, and 103,100 acre feet storage from 10/1 to 6/30. For the protection of fish and wildlife, SSWD's Permit 18360 identifies a minimum required release of 25 cfs during April 1 through June 30 and 10 cfs from July 1 through March 31. No changes to water rights are part of the Proposed Project.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows. The thresholds against which this hydrology analysis is measured include water quality standards, waste discharge requirements, ground water management basins, stormwater runoff, water quality control plans, and sustainable groundwater management plans, much of which is governed by the CWA and state statutes and regulations, among others.

Clean Water Act

The CWA regulates discharges to and quality of waters of the United States. Section 401 of the CWA requires water quality certification from the California SWQCB when a project requires a CWA Section 404 permit to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Along with Section 401 of the CWA, Section 402 of the CWA establishes the NPDES permit program for the discharge of any pollutant into waters of the United States. NPDES compliance is implemented by the California RWQCBs. All projects that disturb greater than 1 acre of area are subject to the California general Permit for Discharges of Storm Water Associated with Construction Activity.

Porter-Cologne Water Quality Control Act of 1969

Through the Porter-Cologne Act, the SWRCB and nine RWQCBs have been entrusted with broad duties and powers to preserve and enhance all beneficial uses of waters in California. The Water Quality Division of the SWRCB develops statewide water protection plans, including the *Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan (Resolution No. 2015-0019, 2017-0027, 2018-0038, and 2019-0015)*, among others. The ISWEBE includes statewide water quality objectives for sediment, toxicity, mercury, trash provisions, bacteria, as well as definitions of State

wetlands and procedures for discharge of dredged or fill material to waters of the state. The RWQCBs develop basin plans for their natural geographic characteristics that affect the overland flow of water in their area, govern requirements for and issue waste discharge permits, take enforcement action against dischargers who violate permits or otherwise harm water quality in surface waters, and monitor water quality.

The Proposed Project is located within the Central Valley RWQCB and is covered by the *Water Quality Control Plan* for the Sacramento and San Joaquin River Basins, which sets forth water quality objectives for the basin (Central Valley RWQCB 2018).

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), signed into law on September 16, 2014, established a new structure for managing California's groundwater resources at the local level by local agencies. The SGMA assigns different roles to California DWR, the SWRCB, local agencies, and counties. Recognizing the important land-use and water-management role local agencies and governments have, a legislative intent of SGMA is to recognize and preserve the authority of local agencies and counties to manage groundwater according to their existing powers with the formation of Groundwater Sustainability Agencies (GSAs).

SGMA required GSAs to form in the state's high- and medium-priority basins and subbasins by June 30, 2017, but allows for flexibility in the formation and continued organizational modification of GSAs as the priorities and boundaries of some basins change. For basins that received a new high- or medium-priority designation in 2019, local agencies overlying those basins will have 2 years from the date of reprioritization to either establish a GSA or submit an Alternative plan. The Water Code states that a GSA shall have 5 years from the date of reprioritization to be managed under a groundwater sustainability plan (GSP). All GSA formation notifications are managed on DWR's SGMA Portal, which includes a State Water Board Compliance Map. There are no high- or medium-priority basins, GSAs, or GSPs in the Proposed Project area (DWR 2021).

Impact Analysis

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact Conclusion: *Less than Significant Impact.*

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change would more accurately define lands managed by SSWD under the proposed FERC license. This is a purely administrative change and would not have physical implications for water quality or waste discharge.

Implementation of New Flow Regime

SSWD proposes to implement a new flow regime, including water year types, minimum streamflows, fall and spring pulse flows, and ramping rates. SSWD's proposed flow regime was designed in coordination with regulating agencies to provide benefits to aquatic species and enhance water quality, and would not degrade surface or ground water quality.

Implementation of Environmental Measures

Environmental measures include the *Bald Eagle Management Plan*, great blue heron rookery management, and the HPMP. Each of these measures provide additional protections for wildlife and historic properties and would not violate any water quality standards or waste discharge requirements.

Camp Far West Reservoir Pool Raise

The proposed pool raise would provide additional storage in Camp Far West Reservoir to capture relatively cool runoff from winter storms, creating a small increase in usable cold water as a result. Considering that the pool raise would increase water-surface elevations and overall storage, some water quality parameters may decrease as constituents (e.g., metals and nutrients) are further diluted by the increase in water. Current dissolved oxygen concentrations are not expected to change as a result of the Proposed Project. The SWRCB identifies the Lower Bear River as CWA Section 303(d) state-impaired for mercury, citing fish tissue concentrations, water samples, and sediment samples to support their listing (SWRCB 2018). SSWD would not plan to perform any operation or maintenance activities associated with the release or mobilization of mercury. There would be little-to-no effect from the construction of the pool raise on water quantity. SSWD would obtain all necessary permits and approvals for the pool raise construction activities. Through permits and approvals such as a water quality certification, conditions for the protection and mitigation of any potential impacts to water quality would be implemented. Therefore, the pool raise construction and operation would have a less than significant impact on water quality. No changes in SSWD's existing water rights will be required in connection with the pool raise.

Recreation Feature Rehabilitation, Replacement, and Relocation

To maintain recreation areas at Camp Far West Reservoir, the *Recreation Facilities Plan* includes procedures for operational maintenance activities, major rehabilitation such as grading and repaving, and replacement of existing facilities due to the Camp Far West Reservoir pool raise. SSWD would obtain all necessary permits and approvals for major recreational rehabilitation, facilities relocation and replacement, and related activities. SSWD anticipates the permits and approvals would contain conditions for the protection and mitigation of any potential impacts to water quality. Further, rehabilitations, replacements, or relocations of any sanitary facilities such as bathrooms or waste receptacles would be done in kind, at a one-to-one replacement ratio such that there would be no new impacts to water quality due to waste. Therefore, future relocations of recreation features and the operations and maintenance of recreation features would have a less than significant impact on water quality.

Mitigation Measures: None required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact Conclusion: Less than Significant Impact.

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change would more accurately define land managed by SSWD under the proposed FERC license. This is a purely administrative change and would not have physical implications for groundwater supplies and recharge.

Implementation of New Regime Flow

SSWD's proposed new flow regime was designed in coordination with regulating agencies to increase benefits to aquatic resources. The new flow regime would provide flow increases to surface waters, which would in turn benefit impact groundwater supplies or recharge rates. Therefore, the Proposed Project's flow regime would have no impact on groundwater resources.

Implementation of Environmental Measures

The *Bald Eagle Management Plan*, great blue heron rookery management measure, and the HPMP are environmental measures to provide additional protections to wildlife and historic properties and would not impact groundwater supplies nor groundwater recharge.

Camp Far West Reservoir Pool Raise

Construction of the pool raise would have minor impacts to water quality due to temporary erosion and sedimentation during construction. However, a project SWPPP would implement BMPs designed to reduce erosion and sedimentation during construction to acceptable levels. No new water wells would be required for construction. Permits and approvals would be obtained, including a SWPPP, which would include provisions for management of spills so that groundwater resources are not impacted by accidental spills during construction. The amount of impervious surface created by construction would not greatly change compared to existing conditions and therefore would not alter groundwater recharge rates. Construction activities would not impact SSWD's ability to make dam releases from either the powerhouse or the low-level outlet. Therefore, the pool raise would have a less than significant impact on groundwater resources.

Recreation Feature Rehabilitation, Replacement, and Relocation

Future recreation feature rehabilitation, replacement, and relocation is not anticipated to impact groundwater resources. Two water hydrants would require relocation; however, these features would be replaced in kind at a one-to-one ratio and would not impact groundwater resources. No new wells would be required. Permits and approvals would be obtained, including a SWPPP, which would include provisions for management of spills so that groundwater resources are not impacted by accidental spills during relocation work. Impervious surface that is created by relocation work would not increase the total impervious surface at all because relocations would be done in kind at a one-to-one ratio. Thus impervious surface would not change compared to existing conditions and would not alter groundwater recharge rates. Therefore, future relocations and improvements to recreation features would have a less than significant impact on groundwater resources.

Mitigation Measures: *None required.*

c-i) 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: result in substantial erosion or siltation on- or off-site?

Impact Conclusion: *Less than Significant Impact.*

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change would more accurately define land managed by SSWD under the proposed FERC license. This is a purely administrative change and would not have physical implications on drainage patterns.

Implementation of New Regime Flow

SSWD's proposed new flow regime would alter flows in the Bear River, however alterations would be in areas already within the river channel. Therefore, the Proposed Project's flow regime would have no impact on drainage patterns.

Implementation of Environmental Measures

The *Bald Eagle Management Plan*, great blue heron rookery management measure, and the HPMP are environmental measures to provide additional protections to wildlife and historic properties and therefore would not alter existing drainage patterns.

Camp Far West Reservoir Pool Raise

As described in question b) above, the pool raise would not change the amount of impervious surface in the Proposed Project area compared to existing conditions and would not alter drainage patterns or result in erosion or siltation due to the addition of impervious surfaces. Construction activities would not impact SSWD's ability to make dam releases from either the powerhouse or the low-level outlet. After construction is complete, drainage patterns through the Camp Far West facilities would follow the same drainage courses into the Bear River as they did prior to the pool raise construction work. Therefore, the pool raise would have no impact on drainage patterns.

Recreation Feature Rehabilitation, Replacement, and Relocation

Future rehabilitations, replacements, and relocations to recreation features would be designed according to the *Recreation Facilities Plan* such that new features would not substantially alter drainage patterns. Permits and approvals would be obtained, including a SWPPP, which would include provisions for management of spills so that drainage at construction sites does not create siltation or erosion. Impervious surface that is created by relocation work would not increase the total impervious surface at all because relocations would be done in kind at a one-to-one ratio. Thus impervious surface would not change compared to existing conditions and would not alter drainage patterns. Therefore, future rehabilitations, replacements, and relocations to recreation features would have a less than significant impact on drainage patterns.

Mitigation Measures: None required.

c-ii) 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Impact Conclusion: Less than Significant Impact.

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change would more accurately define land managed by SSWD under the proposed FERC license. This is a purely administrative change and would not have physical implications on drainage patterns.

Implementation of New Regime Flow

SSWD's proposed new flow regime would alter flows in the Bear River; however, alterations would be in areas already within the river channel. Therefore, the Proposed Project's flow regime would have no impact on drainage patterns.

Implementation of Environmental Measures

The *Bald Eagle Management Plan*, great blue heron rookery management measure, and the HPMP are environmental measures to provide additional protections to wildlife and historic properties and therefore would not alter existing drainage patterns.

Camp Far West Reservoir Pool Raise

Construction activities associated with the pool raise work would not impact SSWD's ability to make dam releases from either the powerhouse or the low-level outlet and therefore would not result in flooding impacts. However, the Proposed Project would result in a larger area of inundation in the Camp Far West Reservoir, which would intentionally flood new areas along the reservoir shoreline. After construction is complete, the Camp Far West Reservoir would have restored capacity and have greater control for spill events which could result in downstream flooding. Therefore, the pool raise would have a less than significant impact on flooding.

Recreation Feature Rehabilitation, Replacement, and Relocation

Future rehabilitations, replacements, and relocations to recreation features would be designed according to the *Recreation Facilities Plan* such that new features would be located outside of flood zones. Drainage design for relocated recreation features would be consistent with existing drainage methods at the recreation facilities. Many of these features would rely on overland flow and infiltration and would not create flooding concerns. Therefore, future rehabilitations, replacements, and relocations to recreation features would have a less than significant impact on flooding.

Mitigation Measures: None required.

c-iii) 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: 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?

Impact Conclusion: Less than Significant Impact.

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change would more accurately define Project lands. This is a purely administrative change and would not have physical implications on drainage patterns.

Implementation of New Regime Flow

SSWD's proposed new flow regime would alter flows in the Bear River; however, alterations would be in areas already within the river channel. Therefore, the Proposed Project's flow regime would have no impact on drainage patterns.

Implementation of Environmental Measures

The *Bald Eagle Management Plan*, great blue heron rookery management measure, and the HPMP are environmental measures to provide additional protections to wildlife and historic properties and would not alter existing drainage patterns.

Camp Far West Reservoir Pool Raise

Construction activities associated with the pool raise work may include the installation of culverts for stormwater drainage. Stormwater resources would be protected during construction through the implementation of the Proposed Project SWPPP. This would include inlet protection at existing culverts on site as well as provisions to prevent polluted runoff from the construction site. Therefore, with the implementation of the Proposed Project SWPPP, the pool raise would have a less than significant impact on stormwater drainage systems or polluted runoff.

Recreation Feature Rehabilitation, Replacement, and Relocation

Future rehabilitations, replacements, and relocations to recreation features may include the installation of culverts for stormwater drainage. Stormwater resources would be protected during construction through the implementation of the Proposed Project SWPPP. This would include inlet protection at existing culverts on site as well as provisions to prevent polluted runoff from the construction site. Because recreation features would be replaced at a one-to-one ratio, there would be no anticipated change in polluted runoff from recreationists compared to existing conditions. Therefore, future rehabilitations, replacements, and relocations to recreation features would have a less than significant impact on stormwater drainage systems or polluted runoff.

Mitigation Measures: None required.

c-iv) 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: impede or redirect flood flows?

Impact Conclusion: Less than Significant Impact.

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change would more accurately define Project lands. This is a purely administrative change and therefore not have physical implications on drainage patterns.

Implementation of New Regime Flow

SSWD's proposed new flow regime would alter flows in the Bear River; however, alterations would be in areas already within the river channel. Therefore, the Proposed Project's flow regime would have no impact on drainage patterns.

Implementation of Environmental Measures

The *Bald Eagle Management Plan*, great blue heron rookery management measure, and the HPMP are environmental measures to provide additional protections to wildlife and historic properties and therefore, would not alter existing drainage patterns.

Construction activities associated with the pool raise work would not alter drainage patterns in the Proposed Project area and would not redirect flood flows. Therefore, the pool raise would have no impact on flood flows.

Future rehabilitations, replacements, and relocations to recreation features would be designed according to the *Recreation Facilities Plan* such that new features would be located outside of flood zones. Drainage design for relocated recreation features would be consistent with existing drainage methods at the recreation facilities. Many of these features would rely on overland flow and

infiltration and would not alter flood zones. Therefore, future relocations and improvements to recreation features would have a less than significant impact on flood flows.

Mitigation Measures: None required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Conclusion: No Impact.

The Proposed Project is not located in a coastal area subject to tsunamis or seiches. The Proposed Project is located in flood Zone A and X according to the Federal Emergency Management Agency (FEMA). Zone A is classified as areas where no base flood elevations are determined, and Zone X is classified as areas determined to be outside the 0.2 percent annual chance floodplain (FEMA 2021). Therefore, components of the Proposed Project, including the proposed FERC Project boundary change, implementation of a new flow regime, implementation of environmental measures, the Camp Far West Reservoir pool raise, and future recreation feature rehabilitations, replacements, and relocations would have no impacts due to tsunami, seiche, or flood hazard zones.

Mitigation Measures: None required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Conclusion: No Impact.

There are no GSAs or GSPs for the Proposed Project area. Activities associated with the Proposed Project are expected to enhance water quality objectives and beneficial uses in the Proposed Project area and would not conflict with the Central Valley Basin Plan (Central Valley RWQCB 2018). Therefore, the Proposed Project components, including the proposed FERC Project boundary change, new flow regime, environmental measures, Camp Far West Reservoir pool raise, and future recreation feature rehabilitations, replacements, and relocations would not conflict or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

Mitigation Measures: None required.

2.11 Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project is located along the Bear River, which is 6.5 miles east of the City of Wheatland, and is in Yuba, Nevada, and Placer counties. The FERC Project boundary primarily resides within Yuba County and extends eastward into both Placer and Nevada counties. The FERC Project boundary encompasses 2,863.63.7 acres of land, of which SSWD owns over 95 percent (2,710.5 acres of land). The remaining 5 percent (153.2 acres of land) is owned by private parties. There is no federal or state land that occurs within or adjacent to the FERC Project boundary or along the Bear River downstream of the Proposed Project.

In Yuba County, the Proposed Project is located in natural resource land use designation area (Yuba County 2011a) and is located within RPR and agricultural/residential (AR-20) zoning (Yuba County 2021). The RPR zoning is focused on the preservation of land for recreational use and the protection of natural resources and wildlife (Yuba County 2021a).

In Placer County, the Proposed Project is located in agriculture/timberland land use designation area (Placer County 2021a) and is located within agriculture and residential zoning. The agricultural zoning district identifies land for the production of food and fiber, including areas of prime agricultural soils, and other productive and potentially productive lands where commercial agricultural uses can exist without creating conflicts with other land uses, or where potential conflicts can be mitigated (Placer County 2013a).

In Nevada County, the Proposed Project is located in rural land use designation (Nevada County 1996) and is located within general agricultural (AG-40) zoning (Nevada County 2021a). The rural land use is aimed to provide for development of compatible uses within a rural setting. Such uses include agricultural operations and production, natural resource production and management, and low-intensity recreation (Nevada County 1996).

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

California State Planning and Zoning Law (Gov. Code 65000-66037)

The California State Planning and Zoning Law delegates most of state's local land use and development decisions to the respective city or county and describes the laws that pertain to the land use regulations set by the local government's general plan requirements, specific plans and zoning.

Nevada County General Plan

The *Nevada County General Plan* is a long-term policy guide for physical development of the county. The plan comprises of goals, policies, and implementation programs in order to achieve the county's development vision (Nevada County 1996). The following plan policies are relevant to the Proposed Project.

- Policy 1.1.2: Within Rural Regions, growth is limited to those types and densities of development which are consistent with the open, rural lifestyle, pastoral character and natural setting and surrounding land use patterns which exists in these areas.
- Policy 1.2.4 (f): Rural designations are intended to provide for development of compatible uses within a rural setting. Such uses may include rural residential at maximum densities ranging from 5 to 160 acres per dwelling (depending upon the specific development pattern and character of an area; availability of public facilities and services; and environmental constraints), agricultural operations and supporting agricultural production, natural resource production and management, and low-intensity recreation.
- Policy 1.3.1: Provide for a land use pattern compatible with preservation of character, environmental values and constraints, and the form and orderly development of Rural Places.
- Policy 1.3.2: Within the Rural Regions, growth is provided for only those types and densities of development which are consistent with the open, pastoral character which exists in these areas.
- Policy 1.3.11: Encourage future improvements of public and private facilities/services to that which will enhance the specific character and lifestyle of Rural Regions.

Placer County General Plan

The *Placer County General Plan* is the county's constitution for land use and development (Placer County 2013a). The following plan and policies are relevant to the Proposed Project.

- Policy 1.A.1: The County will promote the efficient use of land and natural resources.
- Policy 1.H.1: The County shall maintain agriculturally-designated areas for agricultural uses and direct urban uses to designated urban growth areas and/or cities.
- Policy 1.H.2: The County shall seek to ensure that new development and public works projects do not encourage expansion of urban uses into designated agricultural areas.

Yuba County General Plan

The *Yuba County General Plan* was written in order to provide the necessary information and analysis to allow decisionmakers and the public to identify goals for the future. The plan identifies policies and actions in order to achieve such goals (Yuba County 2011a).

Impact Analysis

a) *Physically divide an established community?*

Impact Conclusion: *No Impact.*

Proposed FERC Project Boundary Change

The Proposed Project would not physically divide established communities, and moreover, there are no established communities or residential areas in or within the immediate vicinity of the Proposed Project area. The Proposed Project area does not have a residential zoning designation and the Camp Far West Reservoir area is considered an unincorporated community in Yuba County (Yuba County 2011a). Because it is considered an unincorporated community in Yuba County, it cannot be considered as an established community.

The proposed boundary change would reduce the FERC Project boundary in certain locations and expand it in other locations. While most of the proposed boundary changes would be on SSWD-owned lands, there are some private-lands that would be affected. However, SSWD has notified all private land owners on the proposed boundary change. There would be no impact to established communities as a result of the proposed FERC Project boundary change, and no mitigation would be necessary.

Implementation of New Flow Regime and Environmental Measures

The proposed implementation of the new flow regime and environmental measures would have no change to land use or land designations and would not result in the physical division of an established community.

Camp Far West Reservoir Pool Raise

Construction of the proposed pool raise would not change land use or land designation nor conflict with existing zoning of the area. This project component is an elevation of the existing spillway and not a new dam or division. Therefore, no impact would occur, and no mitigation would be required.

Recreation Feature Rehabilitation, Replacement, and Relocation

The proposed recreation feature relocations and improvements would not result in the physical division of an established community. As discussed above, there are no established communities in the Proposed Project area and there would be no change to land use and zoning designations. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

b) *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?*

Impact Conclusion: *No Impact.*

The Proposed Project, including the FERC Project boundary change, implementation of the new flow regime, implementation of environmental measures, Camp Far West pool raise, and recreation feature rehabilitations, replacements, and relocations, would not 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 be consistent with local land use policies outlined in the Nevada, Placer, and Yuba County general plans, and SSWD would obtain all necessary permits and approvals for non-routine activities associated with the pool raise

work and recreation feature rehabilitations, replacements, and relocations. Most of the land within the Proposed Project area would be SSWD-owned. However, any use of private lands would be coordinated by SSWD. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

2.12 Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

California established guidelines for classification and designation of mineral lands per the requirement of the Surface Mining Control and Reclamation Act of 1977. Classification is designated into mineral resource zones (MRZs), which is based on both geologic and economic factors without regard to existing land use and ownership. The established guideline defines the following MRZs (California Department of Conservation 2021a):

- MRZ-1: Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2a: Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. More specifically, it contains discovered mineral deposits that are either measured or indicated by evidence and analysis.
- MRZ-2b: Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. More specifically, it contains discovered mineral deposits that are inferred and by limited evidence and analysis.
- MRZ-3a: Areas containing known mineral deposits that may qualify as mineral resources. More specifically, it is considered to have a moderate potential for the discovery of economic mineral deposits.
- MRZ-3b: Areas containing known mineral deposits that may qualify as mineral resources. More specifically, it is considered to have favorable environments for the occurrence of specific mineral deposits.
- MRZ-4: Areas where geologic information does not rule out either the presence or absence of mineral resources.

The mineral land classifications identified for the Proposed Project area within Placer County are MRZ-1 for Placer gold, MRZ-3a for lode gold, silver, copper, zinc, tungsten, MRZ-4 for sand, gravel, crushed stone, decomposed granite, clay, shale, quartz, and chromite (Loyd 1995). There are no mine and prospect locations within the Proposed Project area in Placer County (Loyd 1995). The mineral land classifications identified for the Proposed Project area within Nevada County are MRZ-

3a for hydrothermal deposits, MRZ-3b for construction aggregate deposits, MRZ-1 for industrial minerals and deposits formed by magmatic segregation, and Placer deposits (Loyd 1990, Clinkenbeard 1990). Mineral land classifications are not defined in Yuba County according to the Department of Conservation’s Mineral Land Classification Map (California Department of Conservation 2021b).

Table 2.12-1. Mineral Land Classifications for the Proposed Project Area by County

Geography	Mineral Resource Zone (MRZ)	Resource
Placer County	MRZ-1	Placer Gold
	MRZ-3a	Lode Gold, Silver, Copper, Zinc, Tungsten
	MRZ-4	Sand, Gravel, Crushed Stone, Decomposed Granite, Clay, Shale, Quartz, Chromite
Nevada County	MRZ-1	Industrial Minerals and Deposits Formed by Magmatic Segregation, Placer Deposits
	MRZ-3a	Hydrothermal Deposits
	MRZ-3b	Construction Aggregate Deposits

Source: California Department of Conservation 2021b

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

The Surface Mining Control and Reclamation Act of 1977

The Surface Mining Control and Reclamation Act of 1977 established the Office of Surface Mining Reclamation and Enforcement and ensured the regulation of surface coal mining operations and the acquisition and reclamation of abandoned mines, and for other purposes. The Act also ensured the designation by the state geologist of mineral land classification in order to better identify and protect mineral resources to urban expansion or other irreversible land uses which would require mineral extraction.

Nevada County General Plan

The *Nevada County General Plan* is a long-term policy guide for the county’s physical development (Nevada County 1996). The plan comprises of goals, policies, and implementation programs in order to achieve the county’s development vision. The following plan policies are relevant to the Proposed Project:

- Objective 17.1: Protect valuable mineral deposits from intrusion by incompatible land uses that will impede or preclude mineral extraction or processing. Promote the proper

management of all mineral resource activities in the County and minimize the impact of extraction and processing on neighboring activities and the environment in general.

- Policy 17.5: Nevada County hereby recognizes, accepts, and adopts by reference those State Classification Reports as found in the general plan providing information on the location of significant mineral deposits within the County.
- Policy 17.8: A reclamation plan, consistent with the State Surface Mining and Reclamation Act standards, is required for all mining operations. The Reclamation shall prevent, mitigate, or minimize adverse effects on the environment and encourage the production and conservation of minerals.

Placer County General Plan

The *Placer County General Plan* is the county's constitution for land use and development (Placer County 2013a). The following plan and policies are relevant to the Proposed Project:

- Policy 1.J.3: The County shall discourage the development of any uses that would be incompatible with adjacent mining operations or would restrict future extraction of significant mineral resources.
- Policy 1.J.4: The County shall discourage the development of incompatible land uses in areas that have been identified as having potentially significant mineral resources.
- Policy 1.J.5: The County shall require that all mining operations prepare and implement reclamation plans that mitigate environmental impacts and incorporate adequate security to guarantee proposed reclamation.

Yuba County General Plan

The *Yuba County General Plan* was written in order to provide the necessary information and analysis to allow decisionmakers and the public to identify goals for the future (Yuba County 2011a). The plan identifies policies and actions in order to achieve such goals. The following plan and policies are relevant to the Proposed Project:

- Policy NR 8.3: The County's zoning and development standards will be designed to protect Mineral Resource Zones and prevent introduction of incompatible land uses in areas with ongoing, viable mining operations.

Impact Analysis

a) 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?

Impact Conclusion: No Impact.

The objectives of each Proposed Project component would not create any impact or changes to current land uses. All inferred and known mineral resources in Nevada and Placer counties do not occur within the Proposed Project area. Mineral land classifications are not defined in Yuba County according to the Department of Conservation's Mineral Land Classification Map (California Department of Conservation 2021a).

Additionally, there are no active mines located near the Proposed Project area. There would be no sub-surface construction activities. Therefore, there would be no impact as it relates to any known mineral resources, and no mitigation is required.

Mitigation Measures: None required.

b) 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?

Impact Conclusion: No Impact.

Activities associated Proposed Project components would not take place in areas where there are active mines or locally important mineral resource recovery sites. Therefore, 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 and there would be no impact on mineral resource recovery sites. No mitigation is required.

Mitigation Measures: None required.

2.13 Noise

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Fundamentals of Noise and Vibration

Noise is defined for the purpose of this analysis as unwanted sound. Noise levels are presented on a logarithmic scale to account for the large pressure response range of the human ear and are expressed in units of decibels (dB). Because the human ear does not perceive every frequency with equal loudness, sounds are often adjusted with a weighting filter. The A-weighted filter is applied to compensate for the frequency response of the human auditory system, known as dBA.

Vibration is an oscillatory motion that can be described in terms of the displacement, velocity, or acceleration. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or man-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration is usually expressed in peak particle velocity (PPV) or root mean squared (RMS) velocity. PPV and RMS velocity are measured in inches per second. PPV is defined as the maximum instantaneous positive or negative peak of the vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the vibration signal, typically calculated over a 1 second period.

Existing Noise Environment

The Proposed Project is located in the Sierra Nevada foothills. Existing ambient noise levels in the Proposed Project area are relatively low due to its rural location. Existing sources of noise from the Proposed Project include environmental factors (that is, wind and water), existing electrical and hydroelectric facilities, transportation sources, and recreational activities.

Noise Sensitive Receptors

Certain land uses are considered more sensitive to noise than others. Examples of these types of land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The Proposed Project area is located generally in a remote area, away from residential or commercial development. The nearest sensitive receptor is a rural residence located along Hokan Lane, just north of the Camp Far West Road and Hokan Lane intersection, approximately 2,000 feet from the limits of the Project site.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Noise Control Act of 1972

The Noise Control Act of 1972 establishes a national policy to control the noise environment and protect the health and welfare of Americans from excessive noise.

California Noise Control Act

The California Noise Control Act of 1973 recognizes excessive noise as a serious hazard to public health and welfare. The act declares that the State of California has a responsibility to protect the health and welfare of its citizens through the control, prevention, and abatement of noise.

Noise Ordinances

Yuba, Nevada, and Placer counties have established policies and standards that aim to minimize the effects of noise on people through prescriptive construction standards, zoning restrictions, hours of operation, and suppression techniques. Table 2.13-1 summarizes the applicable noise standards and policies.

Table 2.13-1. Noise Ordinance Specifications

Jurisdiction	Noise Criteria
County of Yuba	Operation of pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device within a residential zone or within a radius of 500 feet of a residential zone is prohibited between the hours of 10:00 p.m. and 7:00 a.m.
County of Nevada	Construction activity is exempt from the County of Nevada’s noise standards. Projects with the potential for generating noise impacts should incorporate design controls that assist in minimizing the impacts through the use of increased setbacks, landscaped earthen berms, solid fencing, placement of structures or other effective means.
County of Placer	Construction (e.g., construction, alteration or repair activities) between the hours of 6:00 a.m. and 8:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. and 8:00 p. m. Saturday and Sunday are exempt from the County of Placer’s noise ordinance provided that all construction equipment is fitted with factory installed muffling devices and that all construction equipment is maintained in good working order.

Source: Yuba County 2018b, Nevada County 2021c, Placer County 2021c

Impact Analysis

a) 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?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change and environmental measures would not introduce new noise sources or result in a change over the baseline noise levels that could generate a temporary or permanent increase in ambient noise levels in the Proposed Project area. As a result, no impact would occur, and no mitigation would be required.

Implementation of New Flow Regime

The new flow regime would include minimum streamflows, pulse flows, and ramping rates (SSWD 2019). There would be no increase in ambient noise levels from minimum streamflows and ramping rates. The pulse flows would create a larger amount of water going through the Bear River, which could result in noise from the increased flow. However, pulse flows would only occur over a 6-day period, twice a year in spring and in fall. Therefore, short-term and occasional pulse flows would result in a less than significant impact on ambient noise levels. No mitigation would be required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

Activities associated with Camp Far West Reservoir pool raise and recreation feature rehabilitations, replacements, and relocations would introduce new sources of noise in the Proposed Project area in the form of construction equipment and construction traffic.

Table 2.3-6 in Section 2.3, *Air Quality*, lists the anticipated construction equipment for each construction activity. Construction equipment noise levels are usually measured at 50 feet from the source, and typical noise levels are listed in Table 2.13-2. Construction equipment noise levels decrease by about 6 dBA per doubling of distance from the source because of geometric divergence (that is, the spreading of noise from a source) alone, provided there is a clear line of sight to the equipment.

Table 2.13-2. Typical Construction Equipment Noise (dBA)

Type of Equipment	Typical Noise Levels at 50 Feet
Jackhammer	89
Grapple (on backhoe)	87
Compactor	83
Scraper	84
Drill Rig	84
Dozer	82
Crane	81
Concrete Pump Truck	81
Excavator	81

Type of Equipment	Typical Noise Levels at 50 Feet
Generator	81
Concrete Mixer Truck	79
Backhoe	78
Air Compressor	78
Paver	77
Dump Truck	76
Pickup Truck	75
Flat Bed Truck	74

Source: Federal Highway Administration 2006

As shown in Table 2.13-2, typical construction equipment would generate noise levels of up to 85 dBA at a distance of 50 feet. As previously noted, the nearest sensitive receptor is a rural residence located along Hokan Lane, just north of the Camp Far West Road and Hokan Lane intersection, approximately 2,000 feet from the limits of the Project site. At this distance, the nearest sensitive receptor would be exposed to minimal/no noise from construction equipment. Yuba and Placer county noise ordinances are the applicable local noise standards because the Camp Far West Reservoir pool raise and recreation feature relocations and improvements would be located only within Yuba and Placer counties. No construction would occur in Nevada County. Construction activities would be temporary and short-term and would occur outside of the noise restricted hours outlined in the Yuba and Placer county noise ordinances.

The Proposed Project area would see increases in noise during construction activities, but it would be temporary and limited to daylight hours.

Therefore, the Camp Far West Reservoir pool raise and recreation feature rehabilitations, replacements, and relocations would not generate a substantial permanent increase in ambient noise levels in the vicinity of the Proposed Project in excess of standards established in the Yuba and Placer county noise ordinances. As such, the impact would be less than significant, and no mitigation is required.

Mitigation Measures: *None required.*

b) Generation of excessive groundborne vibration or groundborne noise levels?

Impact Conclusion: *Less than Significant Impact.*

Implementing the proposed FERC Project boundary change, new flow regime, and environmental measures would not generate groundborne vibration or noise levels in the Proposed Project area. Therefore, no impact would occur, and no mitigation is required.

Camp Far West Reservoir Pool Raise

Use of heavy equipment during construction of the Camp Far West Reservoir pool raise has the potential to generate excessive groundborne noise and vibration. Construction-related vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as bulldozers and trucks. Groundborne vibrations generally attenuate rapidly with increasing distance from the vibration source. The distances involved depend primarily on the intensity of the vibrations generated by the source, and partly on

soil and geologic conditions. Detectable vibrations travel the greatest distance through solid rock and the least distance through loose, unconsolidated soils or saturated soils. For vibration sources such as construction activity and vehicle traffic, a conservative estimate based on generally accepted methods of analysis is that the region of influence is typically less than 1,000 feet from the vibration source. The nearest sensitive receptor is a rural residence located along Hokan Lane, just north of the Camp Far West Road and Hokan Lane intersection, approximately 2,000 feet from the limits of the Project site. At 2,000 feet, the groundborne noise and vibration from the onsite construction activities would be imperceptible. Therefore, the Camp Far West Reservoir pool raise would not result in the generation of excessive groundborne vibration or noise levels, resulting in a less than significant impact. No mitigation would be required.

Recreation Feature Rehabilitation, Replacement, and Relocation

Construction work to relocate, reroute, or realign recreation features is not anticipated to involve pile drivers and other heavy-duty construction equipment. Therefore, recreation feature rehabilitations, replacements, and relocations are not likely to generate groundborne vibration or noise levels in the Proposed Project area, and no impact would occur. No mitigation would be required.

Mitigation Measures: None required.

c) 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?

Impact Conclusion: No Impact.

The nearest airports to the Proposed Project area are the Yuba County Airport, located approximately 22 miles to the northwest of the Proposed Project area and the Lincoln Regional Airport, located approximately 20 miles to the south of the Proposed Project area. The Proposed Project area is not located in the vicinity of a private airstrip or within an airport land use plan or within 2 miles of a public or public use airport. Therefore, the Proposed Project would not expose people residing or working in the area to excessive noise levels. As a result, no impact would occur.

Mitigation Measures: None required.

2.14 Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project area is located along the Bear River, approximately 6.5 miles east of the City of Wheatland in Yuba, Nevada, and Placer counties. There are no residential zoning designations in the Proposed Project area. According to Yuba County’s Exhibit Community Development Land Use Map, there are no community designations within the Proposed Project area. This area is considered an unincorporated community in Yuba County (Yuba County 2011a). Populations of counties and cities in the vicinity of the Proposed Project are shown in Table 2.14-1.

Table 2.14-1. Total Population

Geography	Total Population
City of Wheatland	3,810
Nevada County	99,244
Placer County	385,512
Yuba County	76,360

Source: U.S. Census 2019a

The City of Wheatland has a total of 1,445 housing units with 66.9 percent owner-occupied units (US Census 2019b). Yuba County has a total of 28,586 housing units with 60.5 percent owner-occupied units, Placer County has a total of 164,176 housing units with 71.9 percent owner-occupied units, and Nevada County has a total of 53,989 housing units with 74.2 percent owner-occupied units (US Census 2019b).

Table 2.14-2. Total Housing Units and Owner-Occupied Units

Geography	Total Housing Units	Owner-Occupied Units (%)
City of Wheatland	1,445	66.9%
Yuba County	28,586	60.5%
Placer County	164,176	71.9%
Nevada County	53,989	74.2%

Source: U.S. Census 2019b

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Nevada County General Plan

The *Nevada County General Plan* is a long-term policy guide for the county's physical development (Nevada County 1996). The plan comprises of goals, policies, and implementation programs in order to achieve the county's development vision. The following plan policies are relevant to the Proposed Project:

- Objective 2.2: Achieve a positive balance between the job growth rate and the population growth rate through land use and related policies.

Placer County General Plan

The *Placer County General Plan* is the county's constitution for land use and development (Placer County 2013a). The following plan and policies are relevant to the Proposed Project:

- Policy A-2: The County shall maintain an adequate supply of appropriately zoned land with public services to accommodate housing needs of existing and future residents.

Yuba County General Plan

The *Yuba County General Plan* was written in order to provide the necessary information and analysis to allow decisionmakers and the public to identify goals for the future (Yuba County 2011a). The plan identifies policies and actions in order to achieve such goals. The following plan and policies are relevant to the Proposed Project:

- Policy H 1.1: Ensure that sufficient sites are appropriately zoned, with access to public services and facilities, between 2013 and 2021, and beyond, to accommodate the County's share of regional housing needs.

Impact Analysis

a) *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)?*

Impact Conclusion: No Impact.

The Proposed Project components, including the proposed FERC Project boundary change, implementation of new flow regime and environmental measures, Camp Far West pool raise, and recreation feature rehabilitation, replacement, and relocation, would not involve the construction of new homes or businesses or the extension of roads or other infrastructure that would induce unplanned population growth in the area. The objectives of the Proposed Project would not create or induce substantial population growth because no new housing units would be created. Construction activities, and associated jobs, would be short term and temporary and would not induce growth due to a need for worker housing. Construction workers are anticipated to commute to and from the Proposed Project area from nearby cities. The need for additional employees would not be needed for operations and maintenance of the Proposed Project. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact Conclusion: *No Impact.*

None of the Proposed Project components would affect existing residents or housing, cause displacements, or require the construction of new housing elsewhere. The newly inundated area created by the Camp Far West pool raise would not inundate any housing units and would not result in the displacement of residents. Rehabilitated or replaced recreation features would not be relocated to an area with existing housing units and would not result in the relocation of residences. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: **None required.**

2.15 Public Services

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Fire protection services for the Proposed Project area are provided by Placer County Fire Department and Higgins City Fire District in Nevada County (Nevada County 2020a). While Yuba County does not have a designated county fire department or consolidated fire services, Yuba County partners with many professional fire service organizations within county boundaries in order to respond to emergency incidents. One of these organizations includes CalFire. Police protection services for the Proposed Project area are provided by the Placer, Nevada, and Yuba county sheriffs' departments. There are no schools or city parks located within the Proposed Project area.

One of the primary project objectives is to maintain recreational opportunities. Within the Proposed Project area, the two recreation areas, NSRA and SSRA, provide public amenities such as campgrounds, day use areas, and swimming beaches. Access to the NSRA is via Camp Far West Road, and access to the SSRA is via McCourtney Road. The Camp Far West Reservoir itself provides the environment for recreational activities such as fishing and boating. There are no established recreation facilities along the Bear River downstream of the Camp Far West Dam. There is limited public access on public roads near the river itself. There are no other public service facilities located within the Proposed Project area.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Nevada County General Plan

The *Nevada County General Plan* is a long-term policy guide for the county’s physical development (Nevada County 1996). The plan comprises of goals, policies, and implementation programs in order to achieve the county’s development vision. The following plan policies are relevant to the Proposed Project:

- Objective 3.2: Ensure that the capacity, availability, financing, and capability of public services and facilities are sufficient to meet levels of service requirements for development.

Placer County General Plan

The *Placer County General Plan* is the county’s constitution for land use and development (Placer County 2013a). The following plan and policies are relevant to the Proposed Project:

- Goal 4.H.1: To provide adequate law enforcement services to deter crime and to meet the growing demand for services associated with increasing population and commercial/industrial development in the County.
- Goal 4.I: To protect residents of and visitors to Placer County from injury and loss of life and to protect property and watershed resources from fires.
- Goal 4.J: To provide for the educational needs of Placer County residents.
- Goal 5.A: To develop and maintain a system of conveniently located, properly designed parks and recreational facilities to serve the needs of present and future residents, employees, and visitors.

Yuba County General Plan

The *Yuba County General Plan* was written in order to provide the necessary information and analysis to allow decisionmakers and the public to identify goals for the future (Yuba County 2011a). The plan identifies policies and actions in order to achieve such goals. The following plan and policies are relevant to the Proposed Project:

- Goal CD12: Ensure high-quality public services, infrastructure, and facilities with adequate capacity to meet the needs of Yuba County’s existing and future residents, businesses, industries, and employers.

Impact Analysis

a-i) 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: Fire Protection?

a-ii) Police Protection?

Impact Conclusion: No Impact.

The Proposed Project components would not affect the response times or other performance objectives for fire or police protection services, nor would it skew acceptable fire or police protection service ratios. Construction activities associated with the Proposed Project would be short term and temporary and would not increase fire risks. Construction timeframes would be coordinated with the

local fire and police forces. Temporary road closures and detours due to construction would be coordinated with all counties and not impact evacuation routes. Additionally, most construction work related to the proposed pool raise would occur during outside peak recreation season and if necessary, be completed during the weekdays (considered low-use period). This would minimize any potential impacts to response times in the area. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

a-iii) 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: Schools?

a-iv) Parks?

Impact Conclusion: No Impact.

None of the Proposed Project components would result in substantial adverse physical impacts toward schools or parks because there are no schools or parks located in the Proposed Project area. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

a-v) 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: Other public facilities?

Impact Conclusion: Less than Significant Impact.

There would be no physical impacts due to implementing the proposed FERC Project boundary change, new flow regime, or environmental measures.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

Due to the proposed pool raise and the *Recreation Facilities Plan*, construction work and the pool raise would require the rehabilitation or replacement of recreational features (Appendix B). Construction-related traffic would occur during the Proposed Project work, which would require temporary road detours. However, SSWD would replace all recreation features that require relocation due to the pool raise within 1 year of the pool raise work completion. More specifically, SSWD would replace all existing fire rings, grills, picnic tables, and restrooms, as needed, in order to retain functionality and usefulness. Each restroom building shall maintain the same general footprint and number of toilets, sinks, and stalls (Appendix B). Replacement of recreational features would be considered a one-to-one replacement within both the NSRA and SSRA. Additionally, all temporary road closures and detours would be coordinated with all counties and evacuation routes would not be impacted. Most construction would occur outside peak recreation season and if necessary, would occur during the weekdays (considered low-use period). This would minimize the potential for impact

toward recreation features and visitor experiences. Therefore, the impact would be less than significant, and no mitigation would be required.

Mitigation Measures: *None required.*

2.16 Recreation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

SSWD owns and maintains two developed recreation areas at Camp Far West Reservoir – NSRA and SSRA. Recreation activities at the two recreation areas are numerous and varied and include, but are not limited to, camping, fishing, boating, swimming, hiking, biking, picnicking, sightseeing, horseback riding, and wildlife viewing (SSWD 2019).

The NSRA is located on the north shoreline of the reservoir on a large peninsula. The NSRA is accessible by vehicle from the west and north via Camp Far West Road and Spenceville Road. The SSRA is located on the southwest shoreline of the reservoir on a long narrow peninsula. The SSRA is accessible by vehicle from the north and south via McCourtney Road. Both NSRA and SSRA provide family campgrounds, group campsites, day use areas, dispersed use areas, swimming beaches, boat ramps, and general stores for use by the public located at the entrances. The NSRA is open year-round, while the SSRA is open seasonally from April through October (SSWD 2019).

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Federal Power Act

The Federal Power Act is the primary federal statute governing the wholesale transmission and sale of electric power, as well as the regulation of hydroelectric power. Sections 4(e) and 10(a) of the Federal Power Act require FERC to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality.

California Public Park Preservation Act

The California Public Park Preservation Act (CPRC 5400 to 5409) ensures that any public agency that acquires public park areas for non-park or recreational use must either pay compensation that is equivalent to the park area value or provide another park area of the same value and characteristics.

Impact Analysis

a) *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?*

Impact Conclusion: *Less than Significant Impact.*

The proposed FERC Project boundary change is an administrative change that would not increase the use of existing recreational facilities or accelerate the physical deterioration of recreational facilities in the Proposed Project area. The new flow regime would not increase the use of existing recreational facilities or accelerate the physical deterioration of recreational facilities in the Proposed Project area. Therefore, no impact would occur, and no mitigation would be required.

Implementation of Environmental Measures

The *Recreation Facilities Plan*, included in Appendix B (SSWD 2019), includes procedures for operational maintenance activities, major rehabilitation, and replacement of existing facilities due to the Camp Far West Reservoir pool raise. Implementation of environmental measures, including the *Recreation Facilities Plan*, would not increase the use of existing recreational facilities or accelerate the physical deterioration of recreational facilities in the Proposed Project area. Therefore, no impact would occur, and no mitigation would be required.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

Construction of the Camp Far West Reservoir pool raise from 300 feet to 305 feet would inundate or impact the function of select recreational facilities along the shoreline at both the NSRA and SSRA. As a result of the proposed pool raise, approximately 104 recreational site features would require relocation at the NSRA and SSRA. The relocated recreation features at the NSRA and SSRA are anticipated to be similar to the existing recreational features. The construction work to relocate the affected features would be completed in one calendar year. Most of the construction would occur during low use periods outside the peak recreation season (considered to be Memorial Day through Labor Day holiday weekends). In instances where construction would be necessary during the peak season, the work would be restricted to select areas and conducted during low-use periods (i.e., weekdays) to minimize any impacts to the recreation facilities and visitor experiences. The remaining existing recreation area capacities at NSRA and SSRA would account for any reduced capacity at the affected sites and facilities. Notably, the SSRA is only open during peak use periods and has substantial additional capacity/site availability. Construction of the Camp Far West Reservoir pool raise would not increase the use of existing recreational facilities such that the physical deterioration of recreational facilities in the Proposed Project area is accelerated. Therefore, no impact would occur, and no mitigation would be required.

Nearly all of the features within the NSRA and SSRA would require rehabilitation during the term of the new license to maintain the features in proper functioning condition, particularly the restrooms, potable water system, and the circulation roads. A detailed list of rehabilitation activities is provided

in the *Recreation Facilities Plan* in Appendix B. The rehabilitated recreation features at the NSRA and SSRA are anticipated to be similar to the existing recreational features and would likely meet the current and future recreational demand. As noted above, the SSRA has ample capacity to meet future recreational demand. Therefore, the recreation feature rehabilitation would not increase the use of existing recreational facilities such that the physical deterioration of recreational facilities would be accelerated. As a result, a less than significant impact would occur, and no mitigation would be required.

Mitigation Measures: None required.

b) 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?

Impact Conclusion: Potentially Significant Unless Mitigation Incorporated.

The proposed FERC Project boundary change is an administrative change that would not require construction or expansion of recreational facilities. The new flow regime would not require construction or expansion of recreational facilities. Therefore, no impact would occur, and no mitigation is required.

Implementation of Environmental Measures, Camp Far West Reservoir Pool Raise, and Recreation Feature Rehabilitation, Replacement, and Relocation

Implementing environmental measures, specifically the *Recreation Facilities Plan*, included in Appendix B (SSWD 2019), will include procedures for operational maintenance activities, major rehabilitation, and replacement of existing facilities to maintain the facilities in proper functioning condition. In addition, the *Recreation Facilities Plan* requires the relocation of existing recreation facilities due to the Camp Far West Reservoir pool raise. A detailed list of relocation and rehabilitation activities is provided in the *Recreation Facilities Plan* in Appendix B (SSWD 2019). The maintenance, rehabilitation, and relocation construction activities would generally occur within the existing footprint and existing disturbed areas and would not require construction of new facilities or the expansion of existing recreation facilities. Construction work associated with relocation or improvements of the recreational features has the potential to affect biological resources in the Proposed Project area. Analysis of these impacts and required mitigation measures are discussed in Section 2.4, *Biological Resources*.

Further, as required by the *Recreation Facilities Plan*, when major rehabilitation and relocation work is planned, the work and placement will not occur in sensitive resource areas (e.g., wetlands, culturally sensitive sites, critical wildlife habitats, sensitive botanical sites). In addition, for any ground disturbing work related to minor rehabilitation, major rehabilitation, or relocation, the *Recreation Facilities Plan* requires that invasive weed prevention and vegetation management practices are followed (e.g., following all applicable measures related to invasive weed and aquatic invasive species prevention, revegetation of recreation facility lands, and sensitive resource buffers and/or limited operating periods). With the implementation of biological resources mitigation measures, along with the *Recreation Facilities Plan*, impacts from the recreation feature relocations and improvements on the physical environment would be less than significant. Besides recreation features requiring relocation due to inundation, work in the construction footprint for the Camp Far West Reservoir pool raise would not impact recreational facilities. Therefore, no impact would occur, and no mitigation is required.

Mitigation Measures: See mitigation for Section 2.4, *Biological Resources*.

2.17 Transportation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Camp Far West Reservoir is located between Yuba, Placer, and Nevada counties. The primary regional access to the Project site is by Highway 65, while the local access is by Spenceville Road and Camp Far West Road in Yuba County and Riosa Road and McCourtney Road in Placer County. There are no access routes located in Nevada County. Figure 2.17-1 shows the primary regional access to the Project site.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows. Highway 65 fall under the jurisdiction of Caltrans while the other roads within the study area are under the jurisdiction of Yuba and Placer counties.

Travel conditions under vehicle miles traveled (VMT), State Bill 743 (Steinberg 2013), which added PRC Section 21099 to CEQA, proposed a change in how transportation impacts are analyzed in transit priority areas to better align local environmental review with statewide objectives. These alignment considerations include reducing GHG emissions, encouraging infill mixed-use development in designated priority development areas, reducing regional sprawl land development, and reducing mobile source VMT. As it relates to regional sprawl, State Bill 743 suggests that the traditional level of service (LOS) analysis methods do not reflect the true traffic operations condition and encourage sprawl. Thus, State Bill 743 recommends VMT as a more adequate measure of effectiveness to support higher urban density. In addition, State Bill 743 supports and complements the following state bills and executive orders relevant to this Proposed Project:

- Assembly Bill 32 requires statewide GHG emission reductions to be below 1990 levels by 2035 according to State Bill 375 and ARB established GHG emission reduction targets for metropolitan planning organizations to achieve in regional transportation plans and

sustainable community strategies, including targets for the largest metropolitan planning organizations ranging from 13 percent to 16 percent reductions.

- State Bill 391 requires that the *California Transportation Plan* support an 80 percent reduction in GHG emissions below 1990 levels by 2050.
- EO B-30-15 sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
- EO S-3-05 sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.
- EO B-16-12 specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

In November 2017, California Governor’s Office of Planning and Research released the final proposed update to CEQA Guidelines consistent with State Bill 743, recommending VMT, both within and outside of transit priority areas, as the most appropriate metric of transportation impact. This metric will align with local environmental review under CEQA and with California’s long-term GHG emissions reduction goals.

Placer County General Plan

The *Placer County General Plan*, updated in 2013, classifies Riosa Road (between Highway 65 and McCourtney Road) as rural collector. McCourtney Road (between Riosa Road and Camp Far West Road) is classified as a rural arterial (Placer County 2013a). The general plan specifies LOS C or better as an acceptable LOS. The roadways in Placer County will be compared to the maximum acceptable volume thresholds from the *Yuba County General Plan* as the *Placer County General Plan* does not specify maximum acceptable volume thresholds.

Yuba County General Plan

The *Yuba County General Plan* presents daily service volumes as acceptable measures of roadway segment operations. Based on the general plan, the latest version available updated in 2011, Highway 65 (between Riosa Road and Spenceville Road) is classified as a Conventional 2 Lane Highway-Level Terrain. Spenceville Road is classified as a Rural Major Collector and Camp Far West Road is classified as Minor Collector-Rolling Terrain (Yuba County 2011a). Table 2.17-1 summarizes the daily service volume thresholds of LOS C, D, and E for a Conventional 2 Lane Highway – Level Terrain and Rural Major Collector presented in the *Yuba County General Plan*. The general plan specifies LOS D or better as an acceptable LOS. The daily volumes shown are the maximum volumes for LOS. Therefore, if a roadway had 20,000 vehicles per day, it would result in an LOS E.

Table 2.17-1. Yuba County Maximum Acceptable Volume Thresholds

Traffic Volume Type	Conventional 2 Lane Highways – Level Terrain LOS			Rural Major Collector LOS		
	LOS C	LOS D	LOS E	LOS C	LOS D	LOS E
Daily Service Volume	7,900	13,500	22,900	7,000	10,000	13,000

* All threshold volumes as specified in Yuba County 2030 General Plan

Impact Analysis

a) **Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Impact Conclusion: *Less than Significant Impact.*

Implementation of the proposed FERC Project boundary change, new flow regime, and environmental measures would not conflict with Yuba or Placer county plans, ordinance, or policy addressing circulation system as there are no circulation changes expected.

Camp Far West Reservoir Pool Raise

While the construction activity for the Camp Far West Reservoir pool raise would only be temporary, an analysis was conducted to evaluate the magnitude of temporary traffic impacts. The following three specific roadways that would be used to provide key access are shown on Figure 2.17-1.

- Highway 65
- Spenceville Road
- Riosa Road

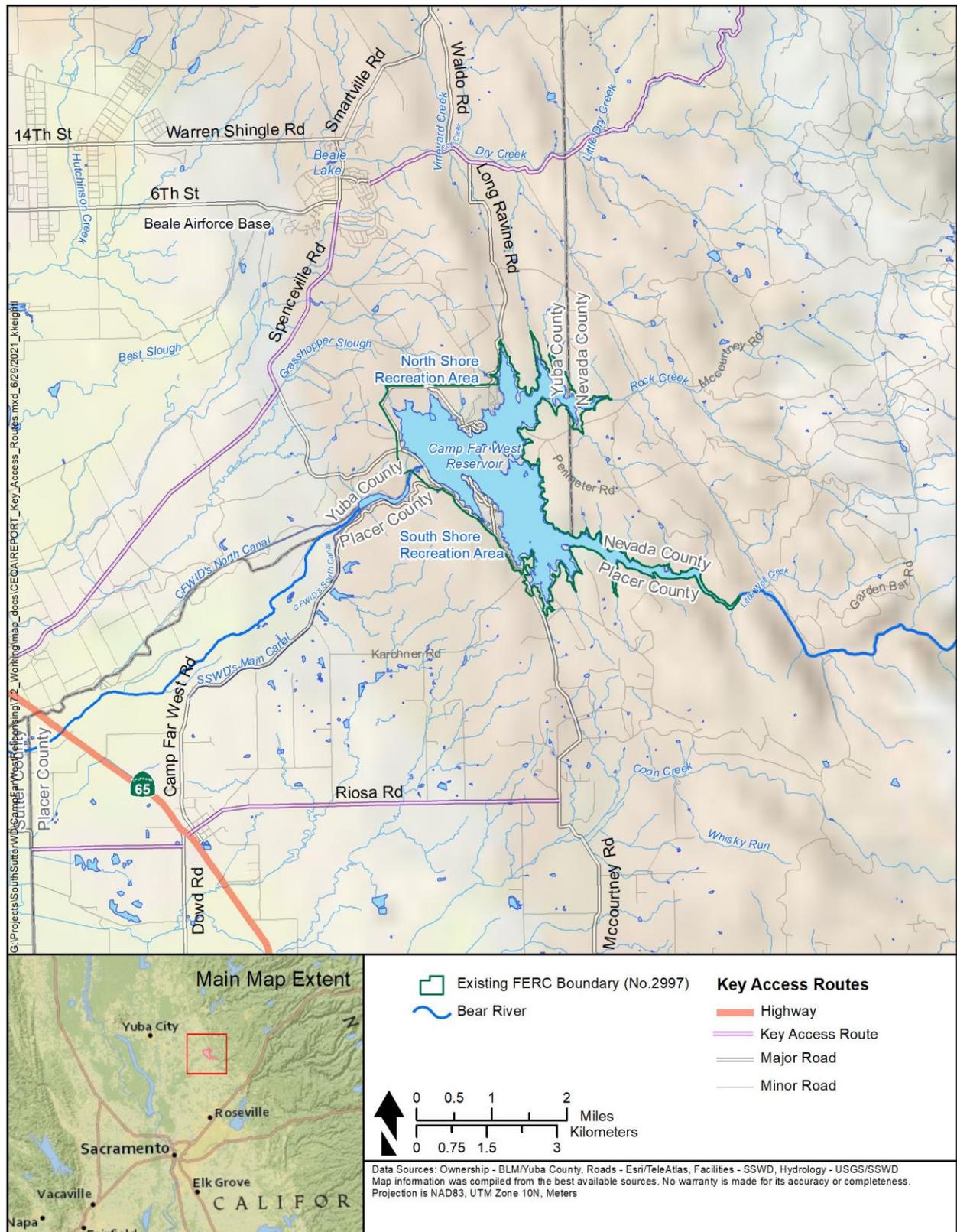
All construction vehicles would use Highway 65 then turn to Spenceville Road or Riosa Road to access the construction site depending on the location of the construction activity. As a conservative estimate, traffic operations during the 2026 construction year were analyzed for peak construction activity. The existing roadway volumes for Highway 65 were found using the Caltrans Traffic Census Program (Caltrans 2017). The Spenceville Road volume was from a 2007 count from the *Yuba County General Plan* (Yuba County 2011a). The Riosa Road volume was from the Placer County GIS from 2017 (Placer County 2017). The *Yuba County General Plan* developed future volumes using demographic and economic factors and trends that would then be used to calculate the future volume growth in the report. The existing 2021 roadway volumes were generated using a growth rate of 2.5 percent from the future 2030 volumes in the *Yuba County General Plan*. A 2.5 percent growth rate was also applied to generate volumes for 2026 future year analysis. Table 2.17-2 summarizes the 2021 existing and 2026 future traffic volumes.

Table 2.17-2. Existing and Future Daily Traffic Volume

Roadway Segment	Existing	No Construction (2026)
Highway 65	26,100	29,500
Spenceville Road	4,100	4,600
Riosa Road	1,000	1,100

The Camp Far West Reservoir pool raise is assumed to not have construction schedules that coincide with other construction activities and the length of construction would be one year. The construction labor force would be from the local labor force pool and average 15 workers per day over the construction period. A 10 cubic yard-capacity dump truck would be used to transport excavated material to and from the construction site. Based on the construction equipment estimates presented in Section 1.5, *Description of the Proposed Project*, a conservative assumption of a peak of 100 truck trips a day was used for this analysis. Most construction trips to and from the construction site would occur throughout the day and limit the number of deliveries during morning and afternoon peak times.

Figure 2.17-1. Key Access Routes



The construction trips are assumed to use Highway 65 and Spenceville Road to access the site. Table 2.17-3 summarizes the daily volume results for the no construction and construction conditions for the study road segments. As shown, Highway 65 currently operates at a LOS of F, which indicates the roadway segment is at or near capacity in the 2026 future conditions. The additional 115 construction trips would increase the daily volume by 0.4 percent, which is minimal compared to the average daily volume. Both county’s general plans discussed above do not have specific standards for roadway segments operating at non-acceptable LOS. The increase in volume due to construction trips is minimal and within typical daily variations in traffic volumes. The Spenceville Road and Riosa Road segments operate below the LOS D and LOS C threshold, respectively, and the construction trips are not expected to lead to larger delays. The construction trips do not cause a degradation of roadway LOS used to access the construction site.

The construction activities for the Camp Far West Reservoir pool raise would be expected to cause temporary traffic impacts. The construction activities would be for only one year and most of the construction trips would occur outside of the morning and afternoon peaks. The construction activities do not degrade LOS, which is the main policy of the *Yuba County General Plan* and *Placer County General Plan*. Therefore, the Proposed Project would result in a less than significant short-term traffic impact.

Table 2.17-3. 2026 No Construction and Construction Traffic Volumes

Roadway Segment	Daily Volume (vehicles)					
	LOS C Threshold	LOS D Threshold	LOS E Threshold	No Construction	Construction Trips	Construction
Highway 65	7,900	13,500	22,900	29,500	115	29,615
Spenceville Road	7,000	10,000	13,000	4,600	115	4,715
Riosa Road	7,000	10,000	13,000	1,100	115	1,215

Recreation Feature Rehabilitation, Replacement, and Relocation

The recreation feature rehabilitation, replacements, and relocations are evaluated at a program level for transportation impacts. The future recreation improvements do not conflict with any plan, ordinance, or policy. The construction activities for the future recreation improvements would use the same roadways as discussed in the Camp Far West Reservoir pool raise construction analysis. The future recreation improvements would require fewer construction trips than the pool raise because construction activities are smaller in scope. The pool raise was determined to result in less than significant impact due to the construction trips not degrading LOS and being temporary as the construction activities would only be for one year. The future recreation improvements would create fewer construction impacts on traffic than the pool raise construction; therefore, they would result in a less than significant short-term traffic impact.

Mitigation Measures: *None required.*

b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Impact Conclusion: *Less than Significant Impact.*

Implementation of the proposed FERC Project boundary change, new flow regime, and environmental measures would not conflict with CEQA Guidelines section 15064.3, subdivision (b) because these actions would not create an increase in traffic volumes.

Camp Far West Reservoir Pool Raise

The Proposed Project would not cause a long-term increase in VMT. The construction activities associated with the pool raise would temporarily increase the labor force and dump truck trips during construction. The labor force is assumed to have a 15-mile average trip, while the dump trucks are assumed to have a 50-mile average trip. The Sacramento Area Council Governments 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy* provides VMT data for 2012 and projection growth rates for future years. A 1.2 percent annual growth rate was used to extrapolate the VMT for the 2026 construction year. Table 2.17-4 presents the Sacramento Area Council Governments 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy* VMT projections from 2012 to 2026 and the increase attributed to the construction trips. The increase due to the construction trips is 0.3 percent of Yuba County's VMT. While the construction traffic would cause an increase in VMT, the increase would be temporary and short-term. Therefore, the proposed project would cause a less than significant impact and would not conflict with CEQA Guidelines section 15064.3, subdivision (b).

Table 2.17-4. Yuba County VMT

	2012	2026 No Construction	2026 Construction	Increase
Vehicle-miles travelled (VMT)	1,732,000	2,046,800	2,215,000	0.3%

Recreation Feature Rehabilitation, Replacement, and Relocation

The recreation rehabilitation, replacement, and relocation component is evaluated at a program level for transportation impacts. The future recreation improvements would not cause a long-term increase in the VMT and construction activity would require fewer construction trips than the pool raise because construction activities are smaller in scope. Therefore, the future recreation improvements would cause a less than significant impact and would not conflict with CEQA Guidelines section 15064.3, subdivision (b).

Mitigation Measures: None required.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Conclusion: No Impact.

The Proposed Project components would not change geometric design features or require incompatible uses. Neither permanent nor temporary geometric design changes are anticipated as all street legal trucks and labor force would use the existing roadways to enter and exit the Project site. Thus, the Proposed Project would have no impact on hazards due to a geometric design feature or incompatible uses.

Mitigation Measures: None required.

d) Result in inadequate emergency access?

Impact Conclusion: No Impact.

The Proposed Project components would not result in inadequate emergency access. The construction and truck deliveries would not cause any roadway closures, or degradation of LOS as specified by the *Yuba County General Plan (2011a)* and *Placer County General Plan (2013a)* impacting the existing emergency access. Additionally, all temporary road closures and detours

would be coordinated with all counties and evacuation routes would not be impacted. Thus, the Proposed Project would have no impact on emergency access.

Mitigation Measures: None required.

2.18 Tribal Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 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>				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Knowledge of current environmental conditions is critical to the assessment of potential project-related impacts to tribal cultural resources (TCRs) as they may include components of the environment that comprise sites, features, places, cultural landscapes, or sacred places with cultural value to California Native American tribes. See Section 2.5, *Cultural Resources*, for a brief summary of the pre-contact, ethnographic, and historic-era context excerpted from the from the cultural and tribal study reports completed for the relicensing (Risse et al. 2019; Tiley et al. 2019).

Geography and Demography

The Proposed Project is located between the Sierra Nevada foothills and the City of Wheatland, along the Bear River, reaching into Nevada, Placer, and Yuba counties in California, placing it entirely within the Nisenan traditional and cultural territory of the Bear River drainage. The Proposed Project is situated within the highly sensitive transition area between the Sacramento Valley and the Sierra Nevada foothills – an important seasonal procurement area and connector of a larger trade network between the east and west of the Bear River Nisenan. The Bear River drainage has unique material culture assemblages (UAIC 2016).

Preceding earliest contact with European and Euro-American people, Nisenan territory comprises a portion of northeastern California bordering the Sacramento River to the west and the Sierra Nevada to the east. The region centers around the modern cities of Auburn, Folsom, and Nevada City and includes parts of the modern counties of El Dorado, Nevada, Placer, Sacramento, and Yuba. From north to south, Nisenan territory has encompassed an area from either the North Yuba River or the southern fork of the Feather River down to the Cosumnes River (Wilson and Towne 1978:388;

Littlejohn 1928:23). Early twentieth century ethnographic accounts estimated Nisenan territory to include 5,340 square miles or over 3 million acres of land (Beals 1933:359). Ecologically, Nisenan territory is characterized by flat river bottomland along the Sacramento River to the 10,000 and 12,000 foot elevation Sierra Nevada divide. Between these two extremes are the gradually ascending Sierra foothills, an environment consisting of, among others, scattered oaks (especially interior live oak, blue oak), and California buckeye. These species are eventually superseded by gray pine (*Pinus sabiniana*) and California lilac (*Ceanothus sp.*) in the higher elevations. At even higher elevations, sugar pines (*Pinus lambertiana*) and yellow pine (*Pinus ponderosa*) are the dominant hardwood species. This region experiences dramatic fluctuations in climate and temperature. Summer months along the Sacramento River, for example, routinely reach into the high 90s and even 100s (degrees Fahrenheit), while the winter months in the high elevations experience snow, frost, and below-freezing temperatures.

Estimates of pre-contact Nisenan population size have been notoriously difficult to define (Beals 1933; Kroeber 1925), as much of the Nisenan population was decimated prior to the twentieth century. Kroeber (1925) estimates a total pre-contact Maidu population of 9,000, while Cook estimates a population of 76,100 (Cook 1976). By the early twentieth century, the population was estimated to be 1,100 (Beals 1933:335). The dramatic decline in Nisenan population can be traced to the cholera epidemic of 1833 along with subsequent outbreaks of cholera, malaria, influenza and smallpox that greatly impacted Nisenan population, as well as the discovery of gold and other minerals in the lands of the Nisenan, which influenced the violent nature of interactions between whites and Native Americans (Peterson 1977:6; Cook 1955:308).

The Proposed Project area played a key role in Nisenan resistance to colonization and assimilation efforts of the federal and state governments and settlers to displace, remove, or sever relationships of the Nisenan with their traditional landscape during the nineteenth and twentieth centuries (discussed in Section 2.5, *Cultural Resources*), and Nisenan communities continue to maintain traditional, religious, and cultural connection to the Bear River drainage landscape. Three modern tribal entities within the Proposed Project area include Nevada City Rancheria, Colfax-Todds Valley Consolidated Tribe, and United Auburn Indian Community of the Auburn Rancheria (UAIC). Each of these entities is actively involved in cultural preservation and stewardship of the Bear River drainage landscape. Nevada City Rancheria has been continuously active in preserving Nisenan cultural through oral histories, a tribal library, and language classes, maintaining important cultural events, and forming a 501(c)(3) non-profit to further their goals of cultural preservation, protection for lost ancestral lands, and reinstatement of federal status. The Colfax-Todds Valley Consolidated Tribe also continues to seek federal recognition and actively interfaces with state and federal agencies to protect their ancestral lands and cultural resources. The UAIC maintains federal recognition through the Auburn Indian Restoration Act of 1994, which ascribes government-to-government relations with federal, state, and local governments. The Proposed Project area continues to be highly significant to the UAIC for traditional, cultural, religious, recreational, and economic reasons.

Identification of Tribal Cultural Resources

There is a necessity under Section 106 of the NHPA of 1966 to seek out tribal input prior to a determination regarding identification and evaluation of historic properties, including those that may have traditional cultural landscape and traditional cultural property significance. For the Proposed Project, the evaluation of cultural sites identified during relicensing study efforts focused on the consideration of archaeological significance of said resources. Consideration of significance by the communities for which the resources hold value is especially critical when historic properties are evaluated under Criterion D, as mainstream archaeological notions of “information potential” do not

account for tribal perspectives, values, and practices associated with traditional knowledge and their indelible connections to historic properties and heritage and cultural resources. National Register Bulletin 38 states that “[p]roperties that have traditional cultural significance often have already yielded, or have the potential to yield, important information through ethnographic, archeological, sociological, folkloric, or other studies” (Parker and King 1998:14). While information potential may align with and/or be supported by Western scientific methods and criteria, such as those applied and pursued by archaeology, ethnography, folk studies, history/ethnohistory, geography, or other cognate disciplines, for Indigenous communities, Criterion D information potential eligibility must include the events, lessons, figures, and processes associated with the cosmology and tribally defined protocols, standards, and approaches to information and knowledge production.

As part of relicensing efforts, SSWD conducted a *Cultural Resources Study* and a *Tribal Interests Study* from 2016 to 2019 (Risse et al. 2019; Tiley et al. 2019). Of note, the *Cultural Resources Study* identified 188 archaeological and built environment resources, of which 152 were previously determined or newly evaluated as ineligible for inclusion in the NRHP during the study, 30 remain unevaluated, and 6 have been evaluated as eligible. Significantly, the *Cultural Resources Study* identified one archaeological district, the “Middle Bear River (Kumin Seyo) Prehistoric Archaeological District” – comprised of all 51 “prehistoric” archaeological sites and “prehistoric” components of the multi-component archaeological sites within the relicensing Project APE – and determined it eligible for the NRHP under Criterion D only.¹⁵ It must be noted that “prehistoric” is an archaeologically categorical term often used to identify material culture of Indigenous peoples; in this section it is used only to refer to specific cultural resources identified during the relicensing studies where “prehistoric” is an archaeological identifier. The use of the term “prehistoric” in relation to TCRs is not appropriate as it dismisses Indigenous knowledge sharing practices since time immemorial; the dialectic relationships of Indigenous peoples with European, Euro-American, and American explorers and settlers of the contact- and post-contact periods; as well as the continuity of Indigenous culture. It is important to note that the UAIC participated in both the *Cultural Resources Study* and *Tribal Interests Study* as well as consultation during relicensing, repeatedly identifying the traditional and cultural importance of the Bear River drainage landscape, inclusive of significant cultural resources, sacred sites, petroglyphs, trails, resource procurement sites and traditional cultural properties (TCPs).

Section 2.5, *Cultural Resources*, provides a detailed discussion of the *Cultural Resources Study*, which focused on archaeological and built environment resources. The *Tribal Interests Study* focused on the identification of tribal interests, including Indian Trust Assets (ITAs), TCPs, and agreements that may exist between tribes and other entities within the Project’s APE and the potential for Project-related activities to affect those resources. Implementation of the *Tribal Interests Study* included archival research and tribal consultation, including meetings, interviews, emails and phone calls. The *Tribal Interests Study* concluded that no tribal interests, including TCPs, ITAs, or tribal agreements were identified. Therefore, no properties were evaluated for their eligibility for listing in the NRHP during the study and no NRHP-eligible properties were assessed for potential Proposed Project effects.

The *Tribal Interests Study* report was filed with FERC on June 7, 2019. UAIC submitted a letter, dated June 27, 2019, to SSWD stating the findings of the *Tribal Interests Study* are incorrect, that the archaeological sites and components of archaeological sites comprising the archaeological

¹⁵ SHPO provided concurrence with these determinations of eligibility in a letter dated July 26, 2018 (SHPO Reference #: FERC_2016_0531_001) and in letters dated May 24, 2019 and June 4, 2019 (OHP Reference # FERC_2016_0701_001).

district identified in the *Cultural Resources Study* are in fact historic properties of religious and cultural significance to UAIC. UAIC has made clear that these properties are “Native American historic properties of religious and cultural significance that UAIC continues to actively steward according to traditional stewardship practices that have been in use for millennia.” Subsequently, UAIC requested the “*Traditional Cultural Property of Kumin Seyo*” and the 51 ancestral sites that are associated with it be identified, evaluated, treated, and managed based on religious and cultural significance to UAIC and not solely based on archaeological significance.¹⁶

FERC issued an additional information request to SSWD directing SSWD to consider UAIC’s comments in the HPMP and to resubmit the HPMP to tribes and SHPO for review. SSWD subsequently considered the “Middle Bear River (Kumin Seyo) Prehistoric Archaeological District” under NRHP criteria A, B, C, and D, and its potential to qualify as a TCP. SSWD concluded that the district and each of its 51 sites do not meet the qualifying characteristics of a TCP. SSWD did not make any additional formal NRHP eligibility evaluations for the district and determined that the additional information provided by UAIC did not constitute a need to re-evaluate the district regarding its eligibility for inclusion in the NRHP under all four criteria (SSWD 2019; Tiley 2019).¹⁷ As described in Section 5.6 of the HPMP, the mitigation strategy for adverse effects on historic properties – including the “Middle Bear River (Kumin Seyo) Prehistoric Archaeological District” – focuses on minimizing data recovery efforts and using alternative mitigation strategies. The mitigation approach will be two tiered, including both data recovery and public education and interpretation efforts, and/or other efforts determined in consultation with FERC, tribes, and SHPO. For the purpose of this analysis to distinguish from CEQA-prescribed mitigations needed to offset potentially significant impacts to TCR, these are referred to as HPMP measures. HPMP measures are assumed part of the project as they are part of the HPMP.

As discussed above, a TCR is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe, and is either: (1) on or eligible for the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR (PRC § 21074). Under CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR.

Based on consultation and study efforts made during relicensing efforts and consultation efforts under CEQA discussed below, the *Traditional Cultural Property of Kumin Seyo* and the 51 ancestral sites associated with it are considered potentially-eligible for listing in the CRHR as TCRs, and are recognized as TCRs by SSWD. Through CEQA consultation efforts, several additional TCRs have been identified within the Proposed Project area. All TCRs are considered in the impact analysis below and because none of the TCRs has been evaluated for their eligibility for inclusion in the CRHR, all are assumed potentially eligible.

¹⁶ The “*Traditional Cultural Property of Kumin Seyo*” and the 51 associated ancestral sites are discussed in Section 2.5 for their archaeological interpretation and significance as the Middle Bear River (Kumin Seyo) Prehistoric Archaeological District (P-29-4878/P-31-6325/P-58-3173), eligible only under Criterion D of the NRHP. For purposes of discussion relevant to TCRs, the name most appropriate is “*Traditional Cultural Property of Kumin Seyo*.”

¹⁷ Results of the additional assessment are included in the HPMP as Attachment F. A revised HPMP was provided to SHPO on November 26, 2019 for comment. SHPO responded on November 27, 2019 acknowledging that the FERC request had been addressed.

Tribal Consultation

Pursuant to PRC § 21080.3.1 and in support of Assembly Bill 52, consultation efforts with Native American tribal contacts have been incorporated in the cultural resources investigation of the Proposed Project area, as “California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources” (PRC § 21080.3.1[a]). Pursuant to PRC § 21080.3.1(b), lead agencies are required to send notifications of proposed projects to California Native American tribes that have requested in writing to be informed of proposed projects for consultation. To date, the UAIC and the Torres Martinez Desert Cahuilla Indians have requested consultation with SSWD on proposed projects pursuant to the PRC.

SSWD mailed courtesy letters on May 10, 2021, and August 24, 2021, to the following tribes who had not yet requested notification of proposed projects for consultation pursuant to PRC 21080.3.1(b)(1) in order to provide an opportunity to request such notification from SSWD: Colfax-Todds Valley Consolidated Tribe, Enterprise Rancheria Estom Yumeka Maidu, Greenville Rancheria of Maidu Indians, Mooretown Rancheria of Maidu Indians, Nevada City Rancheria, Pakan’yani Maidu of Strawberry Valley Rancheria, Todds Valley Miwok Maidu Cultural Foundation, and Tsi-Akim Maidu.¹⁸ As a result of these courtesy correspondence efforts, Mooretown Rancheria of Maidu Indians responded via letter dated May 20, 2021, indicating that the Proposed Project is out of their area of interest and deferred to neighboring tribes; however, Mooretown Rancheria of Maidu Indians request to be notified if any new information or human remains are found. No responses from any other tribes in this list have been received to date.

SSWD also mailed formal notification letters on May 10, 2021, with an invitation to consult on the Proposed Project to both UAIC and the Torres Martinez Desert Cahuilla Indians, pursuant to PRC 21080.3.1(d). SSWD also submitted the notification letter on May 10, 2021, to UAIC through their online notification form. The formal letters included a brief project description and maps of the Proposed Project vicinity and facilities. No response has been received to date from Torres Martinez Desert Cahuilla Indians. UAIC responded in writing via email on May 18, 2021, to consult on the Proposed Project and to discuss the avoidance and protection of TCRs that may be impacted by the Proposed Project. SSWD and its consultant, HDR, coordinated with UAIC via emails for an initial consultation meeting that was held via web meeting on July 22, 2021. At this meeting, an overview of the Proposed Project and its components were discussed, as well as a summary of the results of the relicensing studies. UAIC shared concerns for appropriate terminology to be used in this environmental assessment and requested additional information and a follow-up discussion to be held at a future date. SSWD and HDR continued correspondence with UAIC via email and phone calls after the initial consultation meeting to continue coordination on the development of this section. This section has been updated accordingly and provided to UAIC for review and comment. This section will be updated based on on-going consultation efforts.

¹⁸ This courtesy notification list was compiled from contacts known and made through relicensing efforts, which include coordination with the NAHC for lists of potentially interested tribes. In order to compile a thorough list of potentially interested tribal contacts for current consultation efforts, SSWD contacted the NAHC on April 12, 2021 to request a list of California Native American tribes and organizations that may have an interest in the Proposed Project pursuant to PRC 21080.3.1(c), as well as to request a search of the Sacred Lands File (SLF). The NAHC responded on May 15, 2021, after initial courtesy letters were mailed by SSWD to the tribes listed above, providing a list of tribes that have cultural and traditional affiliation to the Proposed Project area. The NAHC also reported that their search of the SLF yielded negative results, although that does not mean there are not significant resources within the Proposed Project area.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows. The questions listed in the table at the beginning of this section include terminology defined in PRC Sections (§§) 21074, 5020.1(k), and 5024.1(c).

Federal

National Historic Preservation Act

As discussed and defined in Section 2.5, *Cultural Resources*, Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. For purposes of the discussion regarding tribal cultural resources, it is important to underscore that historic properties include properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 C.F.R. § 800.16[I]).¹⁹

Traditional Cultural Properties and Traditional Cultural Landscapes

TCPs are properties associated with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of a community. TCPs can refer to properties of importance to any community, including Indigenous communities. The appropriate terminology for sites of importance to Indian tribes is 'historic property of religious and cultural significance to an Indian tribe [and Native Hawaiian organization]' (ACHP 2008:19; ACHP 2011:14). Traditional cultural landscape (TCL) encompasses the same meaning and utility, as well as inclusivity of Indigenous communities. The Secretary of the Interior's guidelines for the treatment of cultural landscapes define a cultural landscape as "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Birnbaum and Peters 1996:4). Historic vernacular landscapes "evolved through use by the people whose activities or occupancy shaped them" and ethnographic landscapes "contain a variety of natural and cultural resources that associated people define as heritage resource" (Birnbaum and Peter 1996:4; Ball et al. 2015:7).

National Register Bulletin 38 provides examples of TCPs – and TCLs – that fit the definition in the guidelines (Parker and King 1998:1):

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice

¹⁹ The terminology for NHPA is relative to federally recognized tribes. CEQA terminology, however, is inclusive of Native American tribes regardless of federal recognition.

- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity

TCPs and TCLs are eligible for inclusion on the NRHP if they meet the criteria set forth in 36 C.F.R. § 60.4, National Register Criteria for Evaluation. The steps in the identification and evaluation of TCPs are the following (abbreviated from Parker and King 1998:11-14):

1. Potential Traditional Cultural Properties must be identified through consultation with the affected community or Tribe
2. The investigation must consider the beliefs and practices associated with a potential Traditional Cultural Properties from the perspective of the community or Tribe
3. The potential Traditional Cultural Properties must be a property, that is, a tangible place on the landscape, rather than an intangible belief or practice
4. The property must retain integrity of relationship with the beliefs and practices that give it meaning to the community or Tribe
5. The property must retain integrity of condition, such that the elements of the property associated with the beliefs and practices that give it significance are present
6. The property must meet one or more of the four criteria for eligibility on the National Register (see Section 2.5.1.1 [Cultural Resources – Regulatory Setting – Federal]).

Cultural resources routinely not considered for eligibility for inclusion in the NRHP are religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. However, these resources, can be evaluated as eligible if they meet one or more of the NRHP eligibility criteria for evaluation, retain integrity, and meet special criteria requirements called criteria considerations. The most notable of the seven considerations (A through G) is Criteria Consideration G, which specifies that a property that has achieved significance within the last 50 years can qualify for the NRHP only if it is of exceptional importance. As noted by Parker and King (1998:17–18), “a significance ascribed to a property only in the past 50 years cannot be considered traditional.” However, they also note: “The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the [National] Register” (Parker and King 1998:14).

If a property is determined to be a TCP, it becomes the responsibility of the lead agency to assess whether the proposed project would have an effect on the property, and should the effect be adverse, would it alter or destroy the elements that make the property significant and eligible. If a proposed project is determined to have an adverse effect, the lead agency is responsible for seeking measures that would mitigate the adverse effects to TCPs.

Indian Trust Assets

ITAs are legal interests in property held in trust by the U.S. for Native American tribes or individuals. Examples of potential ITAs are lands, minerals, fishing rights, and water rights. Management of ITAs is based on the following orders, agreements, and regulations:

- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments 65 FR 67249

- Memorandum on Government-to-Government Relations With Native American Tribal Governments (FR Volume 59, Number 85, signed April 29, 1994)
- Secretarial Order No. 3175 – Departmental Responsibilities for Indian Trust Resources
- Secretarial Order No. 3206 – American Indian Tribal Rights, Federal -Tribal Trust Responsibilities, and the federal ESA
- Secretarial Order No. 3215 – Principles for the Discharge of the Secretary’s Trust Responsibility
- Secretarial Order No. 3342 – Identifying Opportunities for Cooperative and Collaborative Partnerships with Federally Recognized Indian Tribes in the Management of Federal Lands and Resources
- Secretarial Order No. 3335 – Reaffirmation of the Federal Trust Responsibility to Federally Recognized Tribes and Individual Indian Beneficiaries

Native American Graves Protection and Repatriation Act of 1990

The NAGPRA and implementing regulations at 43 C.F.R. Part 10, as mentioned in Section 2.5, *Cultural Resources*, provide a systematic process to determine rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony with which they are affiliated. Consultation is required when such items are inadvertently discovered or intentionally excavated on federal or tribal lands.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act of 1978 (42 U.S.C. § 1996) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Historic Sites Act of 1935

The Historic Sites Act of 1935 (54 U.S.C. 320101–320106, formerly 16 U.S.C. 461–467) declares "...that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance....," asserting historic preservation as a government duty under jurisdiction of the United States Secretary of the Interior.

National Environmental Policy Act of 1969

The NEPA requires federal agencies to take measures that allow the US to “preserve important historic, cultural and natural aspects of our national heritage, and maintain, whenever possible, an environment which supports diversity, and variety of individual choice.” The NEPA includes provisions for meaningful consultation with Tribal entities for coordinated analysis of a proposed action’s potential effect on Tribal lands, resources, or areas of historic significance as a means of Federal agency decision making.

Executive Order 12898 of 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Under EO 12898, federal agencies have the responsibility to develop a strategy to identify and address “disproportionately high and adverse human health or environmental effects of its programs,

policies, and activities on minority populations and low-income populations.” Section 6-606 of EO 12898 in particular directs federal agencies to apply these responsibilities equally to Native American programs, and “after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address federally recognized Indian tribes.”

Executive Order 11593 of 1971, Protection and Enhancement of the Cultural Environment

As established with EO 11593, in consultation with the ACHP (16 U.S.C. 470i), it is the responsibility of federal agencies to “institute procedures to assure that Federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures and objects of historical, architectural or archaeological significance” (36 FR 8921, 3 C.F.R., 1971-1975 Comp.).

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

EO 13175 establishes regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, to strengthen government-to-government relationships with Indian tribes and the United States, and to reduce the imposition of unfunded mandates upon Indian tribes.

Council on Environmental Quality Memorandum for Heads of Federal Agencies

The Council on Environmental Quality memo, “Designation of Non-Federal Agencies to be Cooperating Agencies in Implementing the Procedural Requirements of NEPA,” urges federal agencies to actively solicit participation of state, tribal, and local governments as “cooperating agencies.” The explicit benefit of granting cooperating agency status includes “disclosure of relevant information early in the analytical process, receipt of technical expertise and staff support, avoidance of duplication with state, tribal, and local procedures, and establishment of a mechanism for addressing intergovernmental issues” (Frampton 1999).

State

Tribal Cultural Resources

As defined at PRC § 21074, a TCR is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe, and is either: (1) on or eligible for the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR. TCRs are similar to TCPs in terms of their characteristics, identification, and treatment, and may include a cultural landscape to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Additionally, as defined at PRC § 21074(c), a historical resource, a unique archaeological resource, or a non-unique archaeological resource may also be a TCR if it conforms to the criteria of a TCR in PRC § 21074(a). CEQA mandates that lead agencies determine whether a project would have a significant impact on TCRs that are eligible for listing on the CRHR (i.e., a historical resource), or are determined to be significant by the lead agency in order to appropriately mitigate any such impacts.

Under the CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. A resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage (Criterion 1)
- Is associated with the lives of persons important in our past (Criterion 2)
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values (Criterion 3)
- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4)

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR §15064.5). The following steps are routinely implemented in a cultural resources investigation for CEQA compliance:

1. Identify cultural resources in the Proposed Project area
2. Evaluate against the CRHR criteria of significance (listed below)
3. Evaluate the impacts of the proposed project on all cultural/tribal resources
4. Develop and implement measures to mitigate proposed project impacts on historical resources or resources deemed significant by the lead agency

As TCRs hold cultural value to a California Native American tribe, consultation with local Native American tribes is an integral component of each of the cultural resources investigation steps described above.

Assembly Bill 52 and Consultation

The lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to Assembly Bill 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). Assembly Bill 52 recognizes that “...tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated...” and that consultation will occur between a lead agency and Native American tribes for covered projects.

PRC §21080.3.1 (a) and Government Code §65352.4 define consultation as “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.”

As described in Section 2.5, *Cultural Resources*, a proposed project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC §§ 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC § 21084.2). A lead agency shall establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

As such, SSWD is committed to working together with tribes and consultation efforts with California Native American tribes as described.

Native American Historical, Cultural, and Sacred Sites

Pursuant to PRC 5097.94, the NAHC has authority and duty to “identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands” and has the power and duty to make recommendations for acquisition by the state or other public agencies regarding Native American sacred places that are located on private lands, are inaccessible to Native Americans, and have cultural significance to Native Americans.

California Native American Graves Protection and Repatriation Act of 2001

CalNAGPRA requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items to provide a process for the identification and repatriation of these items to the appropriate tribes. At this time, SSWD has possession of cultural items belonging to Native American tribes and is in the process of appropriate repatriation.

Local

Nevada County General Plan

Chapter 19 of the *Nevada County General Plan* details three objectives (Objectives 19.1 – 19.3) aligning Nevada County’s efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations (Nevada County 1996). Implementation of these policies is codified through one Action Policy (19.1) and six Directive Policies (19.2 – 19.7) which detail the Nevada County mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above.

Placer County General Plan

Section 5 of the *Placer County General Plan* details 12 policies (Policies 5.D.1 – 5.D.12) aligning Placer County’s efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations (Placer County 2013). Implementation of these policies is codified through four Implementation Programs (5.4 – 5.7) which details the Placer County mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above. Additionally, Implementation Program 5.6 establishes a Placer County Register of Historical Properties to facilitate preservation of the locally significant historical properties that do not qualify for listing on the CRHR or NRHP.

Yuba County General Plan

Chapter 7 of the *Yuba County General Plan* details six policies (Policies NR6.1 – NR6.6) aligning Yuba County’s efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations (Yuba County 2011a). Implementation of these policies is codified through Action NR6.1 (Environmental Review and Mitigation), which acknowledges that new development projects could have a significant adverse impact on the environment. Action NR6.1 details the Yuba County mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above.

Impact Analysis

Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 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:

- a) 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)?***
- b) 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?***

Impact Conclusion: *Less than significant.*

Under CEQA, a project with an impact that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a TCR is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a TCR would be materially impaired. The significance of a TCR would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a TCR that convey its significance and justify its eligibility for inclusion in the NRHP, the CRHR, a local register of historical resources pursuant to PRC § 5020.1(k), or historical resources surveys meeting the requirements of PRC § 5024.1(g).

As discussed in Section 1.5, *Description of the Proposed Project*, SSWD will implement the provisions of the HPMP as an environmental commitment of the Proposed Project as a well as a condition of the new FERC operating license; therefore, it is included as part of the baseline analysis. The HPMP includes processes and procedures to protect historic properties, inclusive of TCP, TCL, and tribal interests. Although no TCP, TCL, or tribal interests were identified during relicensing efforts, the HPMP does include management of “as yet not identified TCP or other tribal interest that is determined to be a historic property” [e.g., TCR]. The TCR identified during CEQA consultation are considered tribal interests and are included in the HPMP approach to managing the Proposed Project-related effects (HPMP sections 5.1 - 5.6), proposed future actions (HPMP section 5.7 and 5.8), and the proactive stewardship of historic properties (HPMP sections 5.9 through 5.10) within the APE. Per Section 5.6.3 of the HPMP, treatment of Proposed Project-related adverse effects will be negotiated and agreed upon between the tribes, SHPO, SSWD, and FERC on a case-by-case basis, in compliance with the Section 106 regulations found at 36 C.F.R. 800 and the guidelines provided in National Register Bulletin 38 (Parker and King 1998).

Proposed FERC Project Boundary Change

Removing historic properties/historical resources or potential historic properties/historical resources (e.g., TCRs) from federal jurisdiction, and therefore, from federal oversight, can be considered a potential adverse effect. As such, removing lands from the FERC Project boundary, and thus, from FERC oversight, has the potential to adversely affect any historic properties/historical resources or potential historic properties/historical resources located within the areas to be removed. Based on consultation and study efforts during relicensing efforts and the CEQA process, there are several

known TCRs within the Proposed Project area, but the proposed FERC Project boundary change will not cause a substantial adverse change in significance for these TCRs because none will be removed from FERC oversight.

Implementation of New Flow Regime

The goal of implementing a new flow regime is to protect and enhance the fishery resources in Bear Creek. Fish and fishing are associated with cultural practices or beliefs of Nisenan living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity. Cultural resources within a reservoir basin may be consistently inundated by water or subject to wet and dry cycles and wave action associated with annual fluctuations in reservoir water level. Research indicates that the effects of these actions may include erosion, deflation, hydrologic sorting or displacement of artifacts, and are primarily dependent on where within the reservoir basin a site is located, but these are not expected to exceed yearly norms and are consistent with baseline conditions (Lenihan et al. 1981). Accordingly, implementing the new flow regime would have no additional impact on CRHR-eligible or unevaluated TCRs.

Implementation of Environmental Measures

SSWD is proposing to implement four environmental measures as commitments of the Proposed Project. Implementation of environmental measures, including the HPMP, for the Proposed Project may have direct and indirect impacts to TCR as protection of various other resources may increase different types of traffic and awareness of areas that are connected to the significant aspects of TCR.

The HPMP details the actions and processes for considering and managing historic properties (and historical resources) within the APE under the terms of a new FERC license, including a program for identifying, evaluating, and assessing project-related effects on any newly discovered resource, which would include tribal resources newly identified during CEQA consultation. Per HPMP Section 5.3.4, evaluating potential TCPs or other tribal interests [e.g., TCRs] includes documenting and evaluating resources for their eligibility for inclusion in the NRHP when and if Proposed Project activities are planned that could potentially affect them. Depending on the eligibility determination, these resources may require further cultural resources management consideration, which will follow the process defined in the management approach presented as Figure 5.1-1 and the treatment decision diagram presented as Figure 5.2-1 of the HPMP. As an environmental commitment of the Proposed Project, and per HPMP Section 5.3 (*Program for Resource Evaluations*), SSWD will conduct further work to complete formal NRHP and CRHR evaluations of the TCR identified through CEQA consultation, in coordination with UAIC.

NRHP and CRHR evaluations of the TCR will be completed by first drafting a TCR evaluation plan intended to develop measures appropriate for each resource, as determined in coordination with UAIC, to identify those characteristics that could qualify each resource for the NRHP and CRHR according to tribal values.²⁰ Following consultation efforts, if the resource is determined not eligible for listing in the NRHP and CRHR, no further cultural resources management consideration will be required for the resource. If a resource is determined eligible for the NRHP and/or CRHR, SSWD will

²⁰ There may be cases in which a more expeditious approach to evaluation efforts may be deemed appropriate. In these cases, there may not be enough time to draft a formal evaluation plan. For example, if a resource is exposed by rare low water conditions in the reservoir, evaluation efforts must be implemented expeditiously before the resource becomes inundated once again. Other such time sensitive situations may occur during the life of the new FERC license. SSWD, in consultation with FERC, tribes, and SHPO, may determine when a more expeditious approach for evaluation efforts is appropriate.

implement the management measures pursuant to the mitigation process defined in HPMP Section 5.6 (*Program for Mitigating Adverse Effects*).

The HPMP does not currently prescribe mitigation of significant impacts to TCRs as no TCPs or other tribal interests were identified during relicensing efforts. However, as unevaluated TCRs have been identified through CEQA consultation, the HPMP prescribes that treatment is to be negotiated and agreed upon between the tribes, SHPO, SSWD, and FERC on a case-by-case basis, in compliance with the Section 106 regulations found at 36 C.F.R. 800 and the guidelines provided in National Register Bulletin 38 (Parker and King 1998).

Mitigation measures are means to prevent, reduce, or control adverse environmental effects of a project, and include restitution for any damage to the environment caused by those effects through replacement, restoration, compensation, or any other means. Because the evaluation and mitigation processes defined in the HPMP are enforceable, have definable objectives, a procedure for implementation, identify responsible parties, and present a clear timeline for implementation, they meet the standard under CEQA to reduce impacts to a less than significant level. Therefore, as the required actions will be implemented under the HPMP as an environmental commitment of the Proposed Project, impacts associated with implementing the environmental measures, under the CEQA analysis, are considered less than significant.

In addition to the HPMP, proposed environmental measures include a *Bald Eagle Management Plan*, a *Recreation Facilities Plan*, and a seasonal LOP within 500 feet of the great blue heron rookery at the SSRA. The *Bald Eagle Management Plan* will include surveys, establish buffer areas on maps and an LOP, and track incidental sightings to ensure that Proposed Project-related activities do not result in the take of bald eagles. Management of the great blue heron rookery will include an LOP, land barriers, and appropriate signage to designate the limited operating period buffer zone. Implementation of the *Bald Eagle Management Plan* and management of the great blue heron rookery will not cause a substantial adverse change in the significance of TCRs identified to date.

Implementing the *Recreation Facilities Plan* includes provisions for annual maintenance, rehabilitation, and replacement of all the Proposed Project recreational facilities at the Camp Far West Reservoir recreation areas. The plan also includes procedures for operational maintenance activities, major rehabilitation, and replacement of existing features because of the Camp Far West Reservoir pool raise (discussed further below). Of the known TCRs within the Proposed Project area, none will be directly affected by the *Recreation Facilities Plan*, but these activities can expose TCR to public use and can lead to disturbance of intact cultural deposits, increased erosion or deterioration of sites, unauthorized artifact collection, or more severe vandalism and looting. Through implementation of the HPMP, unevaluated TCRs will be evaluated and a treatment plan developed, as appropriate, to avoid or mitigate adverse effects to eligible TCRs, including potential effects of the *Recreation Facilities Plan* as a “Future Action/Activity” (see HPMP Section 5.7). Therefore, implementation of the *Recreation Facilities Plan* would have a less than significant impact to TCRs.

Camp Far West Reservoir Pool Raise

As identified in the *Cultural Resources Study* and the HPMP, the physical characteristics of the “Middle Bear River (Kumin Seyo) Prehistoric Archaeological District” would be adversely affected by the pool raise. As the *Traditional Cultural Property of Kumin Seyo* and each of its associated ancestral sites comprise the archaeological district based on religious and cultural significance to UAIC, they also would be adversely affected by the pool raise. The pool raise would cause the direct

effects of erosion from fluctuating water levels once the reservoir pool level is raised, which would wash away or otherwise destroy portions of these sites, impacting their integrity of location, association, and materials. Management of such effects to the archaeological district and its components is included in the HPMP, meaning the Proposed Project would result in a less than significant impact related to the archaeological component of the district and its elements.

SSWD proposes to conduct further work to complete formal NRHP and CRHR evaluations of the TCR identified through CEQA consultation, through tribal values, starting with developing an evaluation plan and including any subsequent necessary mitigation plan in coordination with UAIC. Therefore, as the required actions will be implemented under the HPMP as an environmental commitment of the Proposed Project, impacts associated with pool raise, under the CEQA analysis, are considered less than significant.

Recreation Feature Rehabilitation, Replacement, and Relocation:

By implementing the HPMP, unevaluated TCRs will be evaluated using tribal values and a treatment plan developed, as appropriate, to avoid or mitigate adverse effects to TCR eligible for listing in the CRHR/NRHP, including potential effects of recreation feature relocations and improvements. Therefore, recreation feature rehabilitation, replacement, and relocation would have a less than significant impact to TCRs.

Previously unidentified TCRs may be inadvertently discovered during proposed ground-disturbing activities associated with the proposed pool raise and/or recreation feature relocations and improvements. If these resources were to represent a TCR as defined by CEQA, an impact could occur if avoiding such impacts was not feasible. The current general assessment and avoidance measures outlined in Section 5.11.1 of the HPMP (*Procedures for Unanticipated Discoveries of Cultural Resources*) include provisions for addressing unanticipated discoveries of cultural resources. These measures would not change under the Proposed Project; therefore, the potential impact to inadvertently discovered TCRs is considered less than significant.

As a standard practice, SSWD implements general assessment and avoidance measures for ground disturbing activities and, thus, in combination with the findings of this impact analysis, the addition of the HPMP is not required to reduce a potential historical resource impact to less than significant. Although not necessary as mitigation given existing cultural resource protection practices, the HPMP further codifies comprehensive site protections and a mitigation strategy program that will be in place throughout the life of the new FERC license, as well as incorporates consultation with Native American tribes and agencies. Specifically, the HPMP contains specific measures regarding (among others): (1) avoidance procedures, (2) ongoing review and analysis of the operations and maintenance activities under the Proposed Project, (3) the NRHP and CRHR evaluation of cultural resources, including TCRs, (4) the thresholds for when an activity becomes a new project or undertaking, and (5) procedures to be followed in the case of an inadvertent discovery of cultural resources, including TCP/TCRs, or exposure of human remains.

Mitigation Measures: None required.

2.19 Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Yuba County uses Olivehurst Public Utility District for its drinking water treatment and distribution, wastewater and sewer collection, treatment, and disposal (OPUD 2021). The county also uses Yuba Sutter Recycles and Recology Waste Management for its waste and recycling programs. The Yuba-Sutter Regional Waste Management Authority developed the Yuba Sutter Recycles program, which serves as the waste management service provider for residents and businesses in the area (Yuba Sutter Recycles 2021). The Authority also owns and operates the Yuba-Sutter Household Hazardous Waste Facility and serves all Yuba County residents. PG&E is the service provider for natural gas and electricity (PG&E 2007). Yuba County uses Recology for its garbage collection service. More specifically, the area encompassing the Proposed Project area is listed as Placer County Solid Waste Franchise Area 1, which is under Recology Auburn Placer garbage management jurisdiction (Placer County 2013b). The Western Placer Waste Management Authority and the Western Regional Sanitary Landfill provides Placer County with sanitary landfill operations. Liberty Utilities and Southwest Gas provides the other utilities for Placer County. Nevada County has a Department of Public Works (Nevada County 2021d), which manages the solid waste and wastewater treatment. The Department's responsibilities include the maintenance of wastewater treatment, water distribution, sewer collection, and storm drain systems.

Regulatory Setting

There are no identified laws, regulations, or orders that are relevant to this analysis of utilities and service systems.

Impact Analysis

- a) 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?**

Impact Conclusion: *Less than Significant Impact.*

According to the *Recreation Facilities Plan*, the Proposed Project, including all Proposed Project components, would not require the relocation or construction of water systems, wastewater treatment systems, telecommunications facilities, electric power, and natural gas (Appendix B). The Camp Far West Reservoir pool raise and recreation feature relocation work may require the installation of culverts for storm water drainage; however, these systems would be installed to replace existing features that would be inundated by the pool raise and would not expand existing stormwater drainage systems. Therefore, while new utility infrastructure would be required, the impact would be considered less than significant, and no mitigation would be required.

Mitigation Measures: *None required.*

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

Impact Conclusion: *No Impact.*

The implementation of the new flow regime is designed to define minimum streamflows, pulse flows, and ramping rates. The newly defined rates were determined by SSWD in consultation with resource agencies such as USFWS and SWRCB. They were specifically designed to maintain necessary water supply taking into account of normal, dry, and multiple dry years. Additionally, the Proposed Project would create more storage space in the Camp Far West Reservoir through the pool raise work, which would allow the reservoir to compensate for the decrease in water supply caused by any anticipated inflow reduction. The other components of the Proposed Project would have no impact on water supplies. Therefore, no impact to water supply would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

- c) 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?**

Impact Conclusion: *Less than Significant Impact.*

There is potential for wastewater to be generated during construction of the Proposed Project. The Camp Far West Reservoir pool raise would generate construction waste, including wastewater in the form of wash water for equipment or from concrete operations. However, wastewater would be of minor quantity and all construction waste, including wastewater, would be disposed at an approved off-site facility that is permitted to receive construction waste in the quantities anticipated. No new wastewater would be generated to discharge to wastewater systems on site. Additionally, while pool

raise would require the relocation of recreation features, there would be no additional recreational features created, keeping the amount of wastewater produced the same as existing conditions. Therefore, less than significant impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

d) 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?

Impact Conclusion: *No Impact.*

The Proposed Project would generate approximately 550 cubic yards of demolished concrete, rebar, and any other material from the spillway cap removal of the pool raise that would be transported and disposed of at an approved off-site facility that accepts construction waste, which is permitted to receive construction waste in the quantities anticipated. The pool raise construction work is not expected to require the disposal of hazardous waste materials. Additionally, recreation features such as fire rings and picnic tables would be re-used, as possible, and any construction materials such as concrete would be disposed of properly. Any existing facilities that need to be replaced, such as restrooms, would maintain the same general footprint and operation. Therefore, less than significant impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Conclusion: *No Impact.*

There are no identified federal, state, and local laws, regulations, or orders that are relevant to this scope of analysis of utilities and service systems. The Proposed Project is not anticipated to generate significant amount of solid waste. All construction-generated solid waste would be transported and disposed of at an approved off-site facility, which is permitted to receive construction waste in the quantities. Recreation features would be re-used, if possible, and any facility replacements would maintain the same general footprint and operation. Therefore, no impact would occur, and no mitigation would be required.

Mitigation Measures: *None required.*

2.20 Wildfire

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project area is in State Responsibility Area and is within fire hazard severity zones ranging from moderate to very high (CalFire FHSZ Viewer 2020). The Proposed Project area is located at the junction of Placer, Nevada, and Yuba counties. SSWD itself does not have a formal policy regarding wildfire prevention and suppression nor is its staff trained in wildfire suppression. However, SSWD will notify all appropriate response agencies in the event of emergency. SSWD adheres to local, state, and federal rules and regulations and BMPs during work.

Nevada County prepared a *Wildfire Evacuation Preparedness Action Plan*, which outlines several key initiatives in order to better prepare for a wildfire event. These initiatives include creating safer evacuation routes and enhancing critical infrastructure needed to respond to wildfires. While construction and maintenance workers would not permanently occupy the Proposed Project area, they will be considered occupants for the purpose of this analysis (Nevada County 2020b).

Placer County prepared a *Community Wildfire Protection Plan*, which provides a comprehensive analysis of wildfire-related hazards and risks as well as recommendations to prevent and reduce the threat of wildfires (Placer County 2012). Additionally, Placer County has a Wildfire Residents Preparedness program designed to help residents stay safe and prepared during a wildfire occurrence.

Yuba County has a multi-faceted approach to preventing wildfires. In addition to maintaining adequate emergency access, evacuation routes, water supply, and avoiding development in high wildfire risk areas, Yuba County maintains stringent fire standards to be compliant with relevant fire codes maintained by CalFire. Additionally, Yuba County plans to prepare and adopt a comprehensive wildfire safety plan for foothills portions of the county with high and very high wildfire risk (Yuba County 2011a). The wildfire safety plan is intended facilitate collaboration with other public agencies and nonprofits to decisions regarding wildfires.

Regulatory Setting

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

Nevada County Wildfire Evacuation Preparedness Action Plan

Nevada County's Office of Emergency Services prepared the *Wildfire Evacuation Preparedness Action Plan* (Nevada County 2020b) in coordination with local fire districts, CalFire, and other stakeholders. The plan lists the following five initiatives that the county will undertake, along with milestones for each initiative.

- Create safer evacuation routes countywide to save lives.
- Improve early warning systems and emergency communications to reach everyone.
- Establish defensible space around our homes and neighborhoods by reducing hazardous vegetation and encouraging voluntary compliance with defensible space standards.
- Provide a coordinated approach to wildfire response preparedness through planning, community engagement, and project implementation.
- Enhance critical infrastructure needed to respond to wildfires such as evacuation route improvements, water storage, fire hydrants, communication systems, and green waste facilities.

Placer County Community Wildfire Protection Plan

The Placer County *Community Wildfire Protection Plan* provides comprehensive analysis of wildfire-related hazards and risks in the Placer County area. The plan recommends wildfire prevention such as preparedness planning, public education, and general defensible space guidelines. The plan complements all other existing wildfire protection plans in order to provide a coordinate effort in fire management actions in the County (Placer County 2012).

Yuba County Comprehensive Wildfire Safety Plan

The Yuba County comprehensive wildfire safety plan will be created to reduce fuel loads, ensure emergency access and evacuation routes, and provide incentives for property owners to improve properties in order to reduce wildfire risks and improve fire resiliency for existing developed areas.

Nevada County General Plan

The *Nevada County General Plan* is a long-term policy guide for county's physical development. The plan comprises of goals, policies, and implementation programs in order to achieve the County's development vision (Nevada County 1996).

- Nevada County Land Use and Development Code Chapter XVI: Requires new projects and construction to meet fire safety standards described in PRC 4290, and establishes requirements for fuel modification and emergency water supply, as well as minimum fire safe driveway and road standards.
- The Local Hazards Mitigation Plan, which includes wildfire history in Nevada County and provides information pertaining to the specific hazards and vulnerabilities in Nevada County that wildfire poses.
- The Community Wildfire Protection Plan, which provides wildfire education and discussion for the public

Placer County General Plan

The *Placer County General Plan* (2013a) is the county's constitution for land use and development. The following plan and policies are relevant to the Proposed Project.

- Policy 8.C.1: The County shall ensure that development in high-fire-hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable state and County fire standards.
- Policy 8.C.2: The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for fire-resistant vegetation, cleared fire breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas.
- Policy 8.C.3: The County shall require that new development meets state, County, and local fire district standards for fire protection.

Yuba County General Plan

The *Yuba County General Plan* (2011a) was written in order to provide the necessary information and analysis to allow decisionmakers and the public to identify goals for the future. The plan identifies policies and actions in order to achieve such goals. The following plan and policies are relevant to the Proposed Project.

- Policy HS 2.1: Prior to approval, new developments proposed in areas of very high, high, or moderate fire hazard, as designated on maps maintained by CalFire, shall demonstrate compliance with Fire Safety Regulations and local regulations for defensible space, ignition-resistant construction materials, property maintenance to reduce fuels, natural hazards disclosure requirements, emergency access and multiple access points, availability of water for fire suppression, and other relevant building and development standards.
- Policy HS 2.10: New developments shall provide access that will allow safe evacuation and movement of firefighting equipment during a wildfire. Evacuation routes shall have the capacity to accommodate traffic in relation to the population served.
- Policy HS 2.11: New developments in moderate, high, or very high fire hazard areas cannot propose limited access roads unless such access limitations do not adversely affect fire response and suppression.

Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact Conclusion: *No Impact.*

Because there would be no physical change or activity associated with implementing the proposed FERC Project boundary change, new flow regime, or environmental measures, there would be no potential to impair an adopted response pan or emergency evacuation plan. Furthermore, these activities would not affect response procedures or access.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

The Proposed Project would involve construction activities associated with the pool raise and recreation feature rehabilitation, replacement, and relocation. These activities would incur potential construction-related traffic due to temporary road closures. However, this potential impact would not substantially impair any emergency plan as SSWD would coordinate with the respective counties in advance and during specific construction activities, including temporary road closures and detours. Moreover, these activities would be implemented in accordance with local laws, regulations, and orders. Yuba County's future comprehensive wildfire safety plan, Placer County's *Community Wildfire Protection Plan* (Placer County 2012), and Nevada County's *Wildfire Evacuation Preparedness Action Plan* (Nevada County 2020b) each make wildfire prevention recommendations and provide wildfire protection for each county's respective residents. Most construction activities would occur outside peak recreation season or during the weekdays to avoid higher crowds or travel periods. As stated, temporary construction and routine maintenance could result in temporary and minor impacts to local traffic. However, these would not impair emergency response plans or routes (see Section 17, *Transportation*). Therefore, no impact would occur, and no mitigation is required.

Mitigation Measures: *None required.*

b) 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?

Impact Conclusion: *Less than Significant Impact.*

Because there would be no physical change or activity associated with implementing the proposed FERC Project boundary change, new flow regime, or environmental measures, there would be no potential to exacerbate wildfire risk.

Camp Far West Reservoir Pool Raise and Recreation Feature Rehabilitation, Replacement, and Relocation

The use of construction equipment during the proposed pool raise and recreational feature rehabilitation and replacement work would have the potential to exacerbate fire risk and could expose workers to pollutant concentrations from a wildlife or uncontrolled spread of wildfire. However, the Proposed Project construction would be short term and temporary, and there would be local coordination with each counties' respective fire protection agencies in advance of construction work. Each counties' wildfire protection and safety plan would be followed. The Proposed Project also includes invasive weed prevention and vegetation management practices that would reduce

wildfire risks by reducing overgrown vegetation in the Proposed Project area (see Appendix B). Therefore, impact would be less than significant and no mitigation is required.

Mitigation Measures: *None required.*

c) 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?

Impact Conclusion: *No Impact.*

The proposed recreational feature rehabilitation and replacement would include relocation of roads. This would require invasive weed prevention and vegetation management practices. Fuel breaks would be maintained during construction and for the Proposed Project operations. A total of one water hydrant would need to be relocated due to the proposed pool raise. While there would be no powerline or other utility line replacement, there is anticipated vegetation management around the powerlines. However, the installation of new roads, replacement of the water hydrant, and associated maintenance would be a one-to-one replacement and sequencing of those proposed activities would be such that fire prevention and maintenance are retained through construction and into operational perpetuity. Therefore, no impact would occur, and no mitigation is required.

Mitigation Measures: *None required.*

d) 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?

Impact Conclusion: *No Impact.*

The Proposed Project components would not expose people or structures to significant risks as result of runoff, post-fire slope instability, or drainage changes. The pool raise and rehabilitation and replacement of recreational features would generally be located in areas already being used as dam facilities or recreation areas and not cause physical environmental changes that would expose people or structures to risks. The spillway design of the pool raise would not change from its existing reinforced weir and 300-foot crest. Further, slope stabilization measures would be implemented during construction with a SWPPP. According to the *Recreation Facilities Plan*, no relocated recreational features would be in locations susceptible to flooding or at slopes that could slide or become unstable during an event of a fire (Appendix B). The Proposed Project would not create new structures or induce growth in the number of workers or recreational users. Therefore, no impact would occur, and no mitigation is required.

Mitigation Measures: *None required.*

2.21 Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis

a) 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?

Impact Conclusion: *Potentially Significant Unless Mitigation Incorporated.*

The proposed FERC Project boundary change is purely administrative and would have no impact on the environment or species. The implementation of the new flow regime and environmental measures were designed in consultation with resource agencies and are intended to benefit plant and animal communities in the Proposed Project area during operation of the Camp Far West Hydroelectric Project. Implementation of the new flow regime would generally have a beneficial impact on fish species in the Lower Bear River (SSWD 2019). SSWD has developed a series of measures in collaboration with NMFS, CDFW, and other applicable resource agencies designed to benefit fish species in the Lower Bear River. Specifically, measures would better characterize water conditions in the lower Bear River, provide benefit fall-run Chinook salmon by providing increased

streamflows, provide a pulse flow to encourage fall-run Chinook salmon to enter and outmigrate, and establish ramping rates to protect fall-run Chinook salmon spawning and minimize fish stranding.

The Camp Far West Reservoir pool raise and future recreation improvements would involve construction and ongoing maintenance of facilities. Biological resources were found to have the potential to be affected by construction activities (see Section 2.4, *Biological Resources*); however, mitigation has been proposed as part of the Proposed Project to reduce these impacts to less than significant levels. Furthermore, because proposed recreation improvements are analyzed at a programmatic level in this CEQA document, these findings would be substantiated through a project-level review prior to implementation and mitigation measures developed to justifiably reduce those impacts to a less than significant level. Overall, as detailed in this analysis, although potentially significant impacts to protected wildlife, plant, and aquatic species and habitat would be expected as a result of the proposed physical improvements of the Camp Far West Reservoir pool raise and future recreation improvements, these impacts would not 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. Operation and maintenance of the Proposed Project would not greatly differ from existing operations and maintenance. Therefore, the Proposed Project would have potentially significant impacts to species and habitat, but with mitigation incorporated, impacts would be reduced to a less-than-significant level and there would be no substantial degradation to the natural conditions or cultural environment.

Mitigation Measures: See Section 2.4, *Biological Resources*.

b) 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)?

Impact Conclusion: *Less than Significant Impact.*

Proposed FERC Project Boundary Change

The proposed FERC Project boundary change is purely an administrative change to codify ongoing operational areas and update the license. This would have no impact on past, current, or future operations of the Proposed Project. While the majority of land in the FERC Project boundary is owned by SSWD, there are some parcels of privately owned land. These land owners are notified of the boundary change by FERC.

Implementation of New Flow Regime and Environmental Measures

The NID’s Yuba-Bear Project (FERC Project No. 2266) is also located in the vicinity of the Proposed Project and contains 5 dams upstream of the Camp Far West Hydroelectric Project. NID also operates Lake Combie as a mid-elevation storage reservoir upstream of the Camp Far West Reservoir. There could be cumulative impacts from activities associated with the Proposed Project and anticipated activities associated with the Yuba-Bear Project as it relates to operation of the facilities. Activities associated with the Yuba-Bear Relicensing Project and Lake Combie are expected to have similar types of routine maintenance and similar measures meant to protect the environment that were developed during the relicensing process for the Proposed Project (i.e., flow

regimes and implementation of environmental measures). PG&E also diverts water from the watershed at the Bear River Canal diversion.

As these projects are hydraulically linked in the Bear River watershed, modifications to flows could have cumulative impacts to fisheries and water quality in these rivers and streams. However, the Bear River watershed is already a highly impacted watershed by the NID and PG&E projects mentioned above. Further, because the Camp Far West Reservoir is downstream of these projects, impacts to the watershed from the Camp Far West Hydroelectric Project would be minimal in comparison to flows from projects upstream in the watershed. Further, the Yuba-Bear Project is in the relicensing process currently and is expected to have similar environmental protection measures to the Camp Far West Hydroelectric Project as part of their new licenses. Operation of the proposed projects would be generally consistent with current operations of the Camp Far West Hydroelectric Project. Therefore when considering the Proposed Project in concert with these adjacent FERC-licensed projects and related activities, the Proposed Project would have a less than significant cumulative impact.

Camp Far West Reservoir Pool Raise

Construction work for the Camp Far West Reservoir pool raise would be short term and temporary and would not cause significant impacts to resources, including air quality and water quality, that could not be mitigated. When viewed in combination with the Camp Far West Spillway Expansion construction work, or recreation feature rehabilitation, replacement, and relocation, the pool raise construction would work take place in a similar location; however, the construction timeline would not coincide with other known activities in the area and would be considered cumulatively less than significant.

Recreation Feature Rehabilitation, Replacement, and Relocation

The new license for the Proposed Project would include provisions for future recreation improvement projects. This future construction work may coincide either geographically or temporally with other projects in the watershed, including the Yuba-Bear Project and Lake Combie. However, construction work for the future recreation improvements would be short term, temporary, relatively small in footprint, and spread out over the large area. Recreation feature relocations and improvements at Camp Far West would be completed at a 1:1 ratio and would replace features in kind. There would be no impact on the recreation opportunities available to recreationists in the Proposed Project area or surrounding vicinity. Further, recreational uses at the Camp Far West Reservoir are different than the recreational activities and opportunities at Yuba-Bear Project facilities and therefore are not anticipated to cumulatively impact recreationists in the area. Additionally, there would be no increase in the quantity of recreational users adding additional use to transportation systems or generating additional greenhouse gas emissions due to vehicle trips. Therefore the future recreation improvements would have a less than significant cumulative impact. Once these proposed recreational improvements are further defined, the related project and cumulative activities will be further assessed in a subsequent project-level CEQA review.

Mitigation Measures: None Required.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Impact Conclusion: No Impact.

As described above, the FERC boundary change would not result in physical effects and the new flow regime was designed in consultation with resource agencies to be beneficial to habitat and species. Changes in flow regime and environmental measures implemented would not affect PG&E customers, recreationists, or have any other adverse impacts on humans. The Camp Far West Reservoir pool raise and future recreation improvements involve construction work and routine maintenance. Construction work would be short term and temporary and would not either directly or indirectly cause a substantial adverse impact on human beings. When construction work is complete, the upgraded recreation facilities and increase in impounded water would be a positive impact on people who use recreation facilities in the Proposed Project areas and on PG&E customers. Ongoing maintenance would not differ substantially from current operations. Therefore, the Proposed Projects would have no impact and no mitigation is required.

Mitigation Measures: None required.

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Appendix A. Bald Eagle Management Plan

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Application for New License
Major Project – Existing Dam

Bald Eagle Management Plan

Security Level: Public

Camp Far West Hydroelectric Project
FERC Project No. 2997



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Survey Form

GLOSSARY - DEFINITION OF TERMS, ACRONYMS AND ABBREVIATIONS

ac	acres
Application	Application for New License
BGEPA	Bald and Golden Eagle Protection Act
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
C.F.R.	Code of Federal Register
ESA	Endangered Species Act of 1973, as amended (16 U.S.C. 1531 <i>et seq.</i> and 50 CFR 402)
FERC or Commission	Federal Energy Regulatory Commission
F.G.C.	Fish and Game Code
FR	Federal Record
ft	foot/feet
LOP	Limited Operating Period; time period within which certain Project activities would NOT occur, within a pre-defined distance from a sensitive resource area.
MBTA	Migratory Bird Treaty Act
NMWSE	Normal Water Surface Elevation
O&M	operations and maintenance
Plan	Bald Eagle Management Plan
Project	Camp Far West Hydroelectric Project, FERC Project No. 2997
Project Vicinity	The area surrounding the proposed Project on the order of United States Geological Survey 1:24,000 quadrangles.
§	section
Special-Status	<p>Listed under the federal Endangered Species Act as Endangered, Threatened, Proposed or Candidate for listing.</p> <p>Designated by the California Department of Fish and Wildlife as a Species of Special Concern.</p> <p>Listed under the California Endangered Species Act as Threatened, Endangered or a Candidate for Listing.</p> <p>Classified as Fully Protected by the State of California.</p> <p>Protected under the Migratory Bird Treaty Act.</p> <p>Protected under the Bald and Golden Eagle Protection Act.</p>
SSWD	South Sutter Water District
take	For bald eagles, 'take' includes pursue, shoot, shoot at, poison, wound, kill, trap, collect, molest, or disturb.
USFWS	United States Fish and Wildlife Service
U.S.C	United States Code

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SECTION 1.0

INTRODUCTION

1.1 Background

In June 2019, the South Sutter Water District (SSWD), pursuant to Sections (§§) 5.17 and 5.18 of Title 18 of the Code of Federal Regulations (C.F.R.), file with the Federal Energy Regulatory Commission (FERC or Commission) an Application for New License for Major Project – Existing Dam for SSWD’s 6.8 megawatt Camp Far West Hydroelectric Project (Project), FERC Project No. 2997. The initial license for the Project was issued by FERC to SSWD on July 2, 1981, effective on July 1, 1981. In its Application for New License (Application), SSWD proposes to continue operating the Project for the next 40 years with one modification to the spillway, a reservoir pool raise of 5 feet (ft) (from 300.0 ft Normal Maximum Water Surface Elevation [NMWSE) to 305.0 ft NMWSE), and the adoption of the resource management measures proposed in its license application.

The proposed FERC Project Boundary¹ encompasses 2,674.0 acres (ac) of land in Nevada, Placer, and Yuba Counties, California. Within the boundary, SSWD is the major landholder with 2,515.2 ac (94.8% of the area within the FERC Project Boundary). The remaining lands (146.7 ac) are privately-owned lands. Neither the existing FERC Project Boundary nor the proposed FERC Project Boundary includes federal lands. Figure 1.1-1 shows the Project Vicinity² and the proposed FERC Project Boundary.

¹ The Federal Energy Regulatory Commission Project Boundary encompasses all Project facilities and features as well as all land needed by SSWD for the normal operation and maintenance of the Project. The boundary is shown in Exhibit G of SSWD’s Application for New License.

² In this Plan, “Project Vicinity” refers to the area surrounding the Project on the order of United States Geological Survey 1:24,000 scale topographic quadrangle.

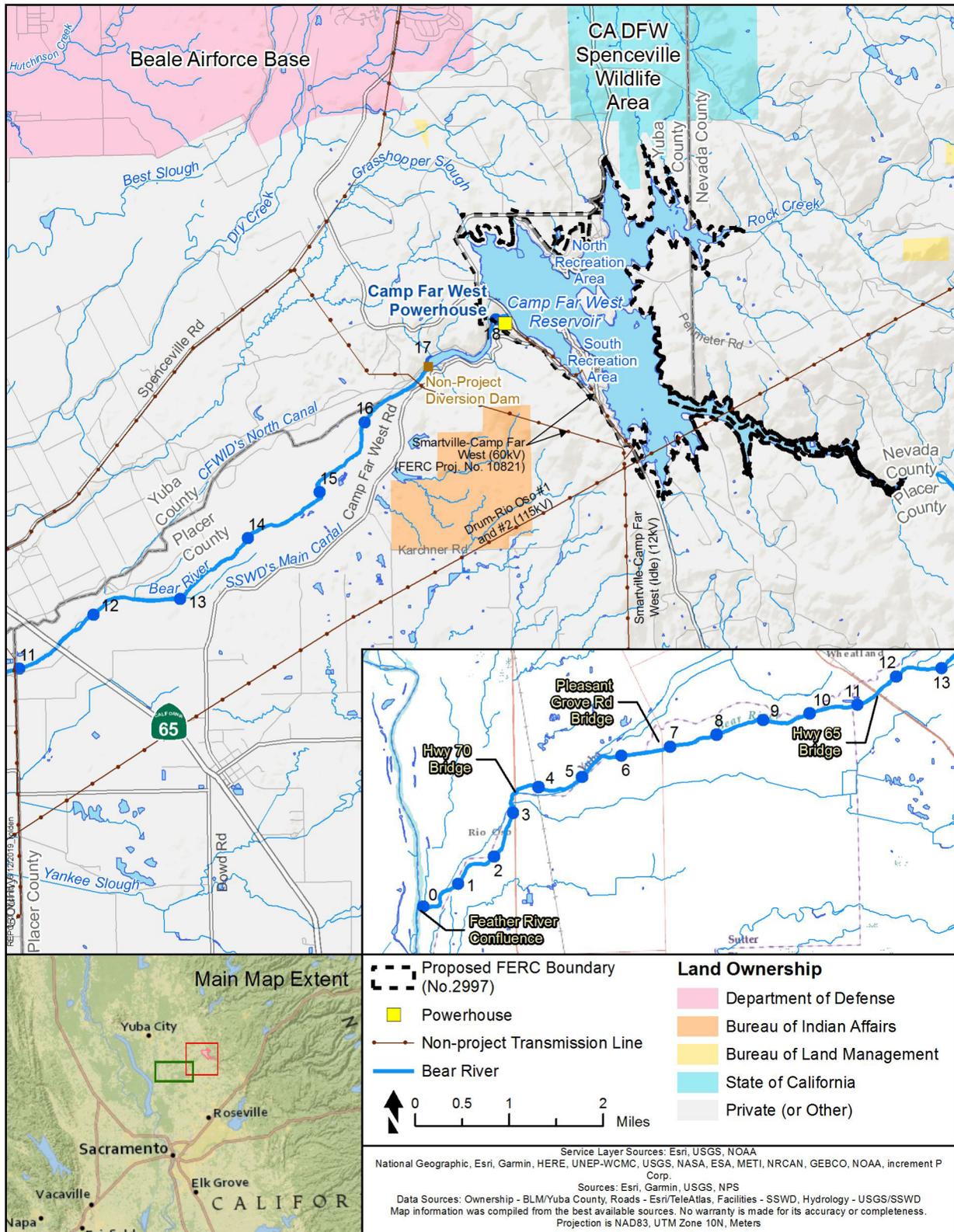


Figure 1.1-1. Camp Far West Hydroelectric Project and Project Vicinity.

1.2 Purpose of the Bald Eagle Management Plan

This Bald Eagle Management Plan (Plan) is intended to provide guidance for the protection of bald eagles (*Haliaeetus leucocephalus*) in all areas within the FERC Project Boundary where bald eagles are affected or have the potential to be affected by the Project.

SSWD will coordinate, to the extent appropriate, the efforts required under this Plan with other Project resource efforts, including implementation of other resource management plans and measures included in the new license.

1.3 Goals and Objectives of the Bald Eagle Management Plan

The goal of the Plan is to ensure that Project operations and maintenance (O&M), as well as Project-related recreation activities, do not result in “take” of bald eagles and their eggs or nests by implementing measures that are consistent with federal and State of California laws and regulations (see Section 2.1.1 for the definition of “take” under various applicable laws and regulations).

The objective of the Plan is to provide necessary guidelines to meet Plan goals.

1.4 Contents of the Bald Eagle Management Plan

This Plan includes the following major sections:

- Section 1.0. Introduction. This section includes introductory information, including the purpose and goals of the Plan.
- Section 2.0. Bald Eagle Distribution and Life History. This section provides a description and life history of bald eagles, as well as occurrences known in the Project vicinity.
- Section 3.0. Bald Eagle Protection. This section describes bald eagle protection measures for the Project.
- Section 4.0. Reporting, Consultation and Plan Revisions. This section details reporting and consultation commitments under the Plan between SSWD and appropriate state and federal agencies.
- Section 5.0. References Cited. This section provides a list of the references cited in the Plan.

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SECTION 2.0

BALD EAGLE DISTRIBUTION AND LIFE HISTORY

2.1 Bald Eagle

2.1.1 Bald Eagle Status



On March 11, 1967, the southern bald eagle was listed as endangered under the Endangered Species Act (ESA) of 1966³ (32 Federal Record [FR] 4001). This endangered status resulted from a population decline caused primarily by high levels of dichloro-diphenyl-trichloroethane in the food chain that increased egg shell thinning and drastically impaired productivity. On February 14, 1978, the United States Department of the Interior, Fish and Wildlife Service (USFWS) ruled to delete the subspecific names for the southern and northern subspecies, which resulted in the designation of a single species *Haliaeetus leucocephalus* (43 FR 6230). The February 14, 1978 ruling also listed bald eagle as endangered in 43 of the 48 contiguous United States. Bald eagle in the remaining five States (i.e., Washington, Oregon, Minnesota, Wisconsin, and Michigan) was listed as threatened (43 FR 6230). On July 12, 1995, all bald eagles listed as endangered in the 43 States were reclassified as threatened, while the status of threatened remained in effect for the five other States (60 FR 36000). On August 8, 2007, the USFWS ruled to delist the bald eagle (72 FR 37346). In the ruling, USFWS indicated that a reduction or elimination of threats, as well as habitat protection led to an increase in breeding pairs from an estimated 487 in 1963 to approximately 9,789 in 2007 in the 48 contiguous States (72 FR 37346).

Within California, the bald eagle was listed under the California Endangered Species Act (CESA) as endangered on June 27, 1971.

Section 86 of the California Fish and Game Code (F.G.C.) defines “take” to mean “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

In 1971, the State of California also assigned the status of Fully Protected Birds to bald eagle (F.G.C. § 3511). Section 3511 of the F.G.C. states:

Except as provided in Section 2081.7 or 2835, fully protected birds or parts thereof may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected bird, and no permits or licenses heretofore issued shall have any force or effect for that purpose. However, the department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and

³ Endangered Species Preservation Act of 1966 was amended in 1969 by the Endangered Species Conservation Act of December 5, 1969 (P.L. 91-135, 83 Stat. 275), which was repealed by the ESA of 1973 (16 U.S.C. 1531-1544).

relocation of those species pursuant to a permit for the protection of livestock.

Additional protections for bald eagle in California exist under F.G.C. Sections 3503, 3503.5, and 3513, which make it unlawful to take, possess, or needlessly destroy birds' nests or eggs; take possess, or destroy raptors and their eggs and nests; and take or possess any migratory non-game bird or part thereof, designated in the Migratory Bird Treaty Act of 1918 (MBTA) (16 United States Code [U.S.C.] 703-712; Ch. 128; July 13, 1918; 40 Stat 755) as amended).⁴

Since delisting, federal protection of the bald eagle has continued under the MBTA, and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d), as amended.

The MBTA provides protection to migratory birds and includes agreements between the United States, Great Britain on behalf of Canada, Mexico, Japan and Russia for the protection of such birds. The MBTA and its implementing regulations provide authority for the conservation of bald eagles and protect against take if the ESA protections are removed. The MBTA protects most native species of birds in the United States, including those likely to occur in the Project Vicinity (50 C.F.R. 10.13). In short, the MBTA, unless permitted by regulation, prohibits:

... taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests except as authorized under a valid permit (50 C.F.R. 21.11)

...pursuit, hunt, capture, take, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation of carriage, or export at any time, or in any manner, any migratory bird, included in the terms of the convention...for the protection of migratory birds...or any part, nest, or egg of such bird.” (16 U.S.C. 703).

The MBTA language is clear that actions resulting in a “taking” of a protected species are violations of the MBTA. The MBTA does not specifically authorize the incidental take of migratory birds, and the USFWS does not issue permits authorizing the incidental take of migratory birds⁵. In the absence of a permit from USFWS, the temporary or permanent possession of protected migratory birds and their carcasses is also a violation of the MBTA.

The BGEPA protects bald and golden eagles (*Aquila chrysaetos*),⁶ except under specific conditions, from take and includes their parts (feathers), nests or eggs. Under BGEPA, “take” is

⁴ Take under F.G.C. Section 3513 defers to the “rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.”

⁵ On December 22, 2017 the Department of the Interior issued a legal memorandum that declared that the MBTA applies only to the purposeful actions that kill migratory birds, not to “incidental take” (U.S. DOI 2017). This memorandum is currently under litigation.

⁶ Bald Eagle Protection Act of 1940 was amended in 1978 (P.L. 95-616 [92 Stat. 3114]) to include golden eagles.

defined as “*pursue, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.*” Furthermore, disturb is defined as:

...to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding or sheltering behavior.

The BGEPA authorizes the USFWS to permit the take of eagles for certain purposes and under certain circumstances, including scientific or exhibition purposes, religious purposes of Native American tribes, and the protection of wildlife, agricultural, or other interests, so long as that take is compatible with the preservation of eagles (16 U.S.C. 668a). On December 14, 2016, the USFWS announced a final rule revising the regulations for permits for incidental take of eagles and take of eagle nests. The USFWS analyzed various alternative management options and rule revisions, including the final rule revisions, in a programmatic environmental impact statement (PEIS).

Among other revisions, the final rule addresses criteria for permit issuance, compensatory mitigation requirements, permit duration, and data standards for submitting permit applications. See <https://www.fws.gov/birds/management/managed-species/eagle-management.php>

The USFWS carries out its mission to protect wildlife and plant resources by fostering relationships with entities that have taken effective steps to avoid take, by encouraging others to implement measures to avoid take, and through investigations and enforcement when appropriate. The USFWS encourages companies to work closely with the USFWS to identify available protective measures when developing project plans to safeguard wildlife and to implement those measures where applicable. In addition, USFWS strongly encourages companies to apply for permits authorizing otherwise prohibited activity, including eagle programmatic take permits where eagle take is possible.

The development and implementation of an avian plan to avoid take of migratory birds, including bald and golden eagles, does not limit or preclude the USFWS from exercising its authority under any law, statute, or regulation. However, the USFWS Office of Law Enforcement focuses its resources on investigating and prosecuting those individuals and companies that do not identify and implement all reasonable, prudent and effective measures to avoid the take of migratory birds (including eagles) and then subsequently take individuals of such species.

Ideally, a high quality, scientifically valid, and robust avian protection plan that is implemented in a timely and effective manner, and regularly reviewed and revised as needed, will maximize avoidance of species protected under various federal laws while allowing for project development in the most environmentally conscientious ways practicable.

Ultimately, it is the responsibility of those involved with the planning, design, construction, operation, maintenance, and decommissioning of projects to conduct relevant wildlife and habitat evaluation and determine, which, if any, species may be affected, and to seek and obtain necessary permits to avoid liability.

Violation of the BGEPA can result in criminal penalties that can result in a fine of \$100,000 for an individual (\$200,000 for organizations), imprisonment for 1 year, or both, for a first offense. Penalties increase for additional offenses, and a second offense is a felony.

2.1.2 Physical Characteristics

The bald eagle is a large raptor with a wingspan between 6 and 8 ft, and can weigh up to 14 pounds. According to McCollough (1989), bald eagles molt through five plumage phases. These five phases are important for establishing the age of an individual as well as distinguishing them from golden eagles. The five plumage phases are:

- Juvenile (first year) – mostly dark including head and beak.
- Basic I (second year) – mottled with white belly and inverted triangle on back and head crown is tan.
- Basic II (third year) – body is mottled and variable with the head having a light crown and throat and dark eye stripe similar to an osprey's (*Pandion haliaetus*) head.
- Basic III (fourth year) – plumage is mostly adult like with brown flecking on head and fading eye stripe, mostly yellow beak, some white flecking on belly and chest, and a brown terminal band on an otherwise white tail.
- Basic IV (fifth year) – often indistinguishable from adult plumage, but does contain some brown flecking on the head and tail.

In addition to the plumage phases listed above, bald eagles may be further distinguished from golden eagles by their proportionately larger head and bill.

2.1.3 Life History

2.1.3.1 Nesting and Breeding

Bald eagles typically nest within 1 mile of water bodies. Their nests are large structures (i.e., approximately 6 ft in diameter), and are constructed with sticks. Nests are often found in the upper third of live, dominant or co-dominant trees, with some canopy above the nest that provides shade.⁷ Most nest trees exceed 100 ft in height. A single pair will use the same nest each year, and will often have alternate nests within their breeding territory (USFWS 2011).

Bald eagles can breed as early as 4 to 5 years of age, but in healthy populations may not breed until much older (USFWS 2011). The breeding period for bald eagles varies throughout their

⁷ Dominant or co-dominant trees are the most significant trees, in terms of size, within a stand of timber.

range and can often be influenced by weather but typically begins between January and mid-March with courtship and nest initiation, and ends when young fledge sometime in June or July (Jackman and Jenkins 2004). Table 2.2-1 outlines breeding chronology in northern California.

Table 2.2-1. Bald eagle breeding chronology in Northern California.

Breeding Activity	Dec/Jan	Feb	Mar	Apr	May	June	July	Aug
Courtship, Nest Initiation	X ¹	X	X	--	--	--	--	--
Egg Laying	--	X	X	--	--	--	--	--
Incubation	--	X	X	X	--	--	--	--
Hatching	--	--	X	X	X	--	--	--
Nestlings	--	--	X	X	X	X	X	--
Fledging	--	--	--	--	--	X	X	--
Post Fledging	--	--	--	--	--	X	X	X
Migration	--	--	--	--	--	--	X	X

Source: Jackman and Jenkins 2004

¹ X indicates the month in which breeding, nesting or rearing activities generally occur.

According to Stalmaster (1987), bald eagles lay one to three eggs asynchronously, 2 to 4 days apart. Eggs typically require 35 days of incubation and nestlings remain in the nest for about 12 weeks until they are fledged. After they are fully fledged juvenile birds remain in the vicinity of the nest for about 1 month.

2.1.3.2 Foraging

Bald eagles are opportunistic feeders and will forage on fish, waterfowl, small mammals, and carrion. Generally, foraging occurs in the morning and evening hours. Hunting perches are used and have the following attributes: close proximity to potential prey; isolation from disturbance; good visibility of surrounding terrain; and accessibility for landing and departing (Stalmaster 1987). Caton et al. (1992) believed that the location of a hunting perch relative to shallow water was very important at deep water lakes because shallow water tends to concentrate fish and makes them more visible and accessible to bald eagles.

2.1.3.3 Wintering

Prior to the onset of winter, many bald eagles will migrate from colder northern climates to warmer southern climates or from higher elevations that experience complete ice coverage of water bodies to lower elevations where water bodies remain ice free. During the winter bald eagles spend the night in a roost. Paired adults will night roost within their nesting territory, and have been observed roosting in the tree containing their nest (Jackman and Jenkins 2004, Merced Irrigation District 2010).⁸ According to the USFWS (2011) and Keister et al. (1987), communal roosts: 1) are areas where bald eagles gather and perch overnight, and sometimes during the day during inclement weather; 2) are in stands of trees that contain the largest, oldest, and most open-structured trees available; 3) are as close as possible to food; 4) may be used year after year; and 5) may be occupied by non-breeding migrant birds, both adult and subadult.

⁸ A nest stand is a patch of timber that includes the tree on which a bald eagle nest was constructed.

2.1.4 Distribution

2.1.4.1 California

Bald eagles range throughout California and can be found at most lakes, reservoirs, rivers, and some rangelands and coastal wetlands. The largest concentration of wintering bald eagles has historically been in the Klamath Basin, located on the border of California and Oregon. A majority of breeding pairs are found in northern California, while a smaller number of pairs can be found in the central and southern Sierra Nevada mountains and foothills, the Central Coast range and inland southern California. Breeding pairs are also found on Santa Catalina Island. (CDFW 2016).

2.1.4.2 Camp Far West Hydroelectric Project

SSWD completed the *Special Status Wildlife – Raptors* study as part of the relicensing. Specifically, SSWD identified and mapped known nest sites for three special-status raptor species: bald eagle, golden eagle, and Swainson’s hawk (*Buteo swainsoni*) and conducted nesting surveys. Surveys included an area up to approximately 0.25-mile inland from the edge of the shoreline of Camp Far West Reservoir. Nesting bald eagle surveys were performed according to the *Bald Eagle Breeding Survey Instructions* (CDFW 2017) and *Protocol for Evaluating Bald Eagle Habitat and Populations in California* (Jackman and Jenkins 2004).

Bald eagle surveys were conducted on December 20-22, 2016; January 16-18; February 15, 23-24; March 16; April 6, 25; May 2; and June 16, 2017.

Forty-seven bald eagle occurrences (including multiple at the same site) were observed during surveys. Two active bald eagle nests were found within the proposed FERC Project Boundary in 2017. One nest is historic, previously found on the Bear River Arm of Camp Far West Reservoir in adjacent trees. It was previously documented in a 2013 report by Sycamore Associates. A second active bald eagle nest was found on the Rock Creek Arm of the reservoir, east of the North Shore Recreation Area boat ramp. Figure 2.2-1 shows recorded special-status raptor sightings on Camp Far West Reservoir during the 2017 surveys.

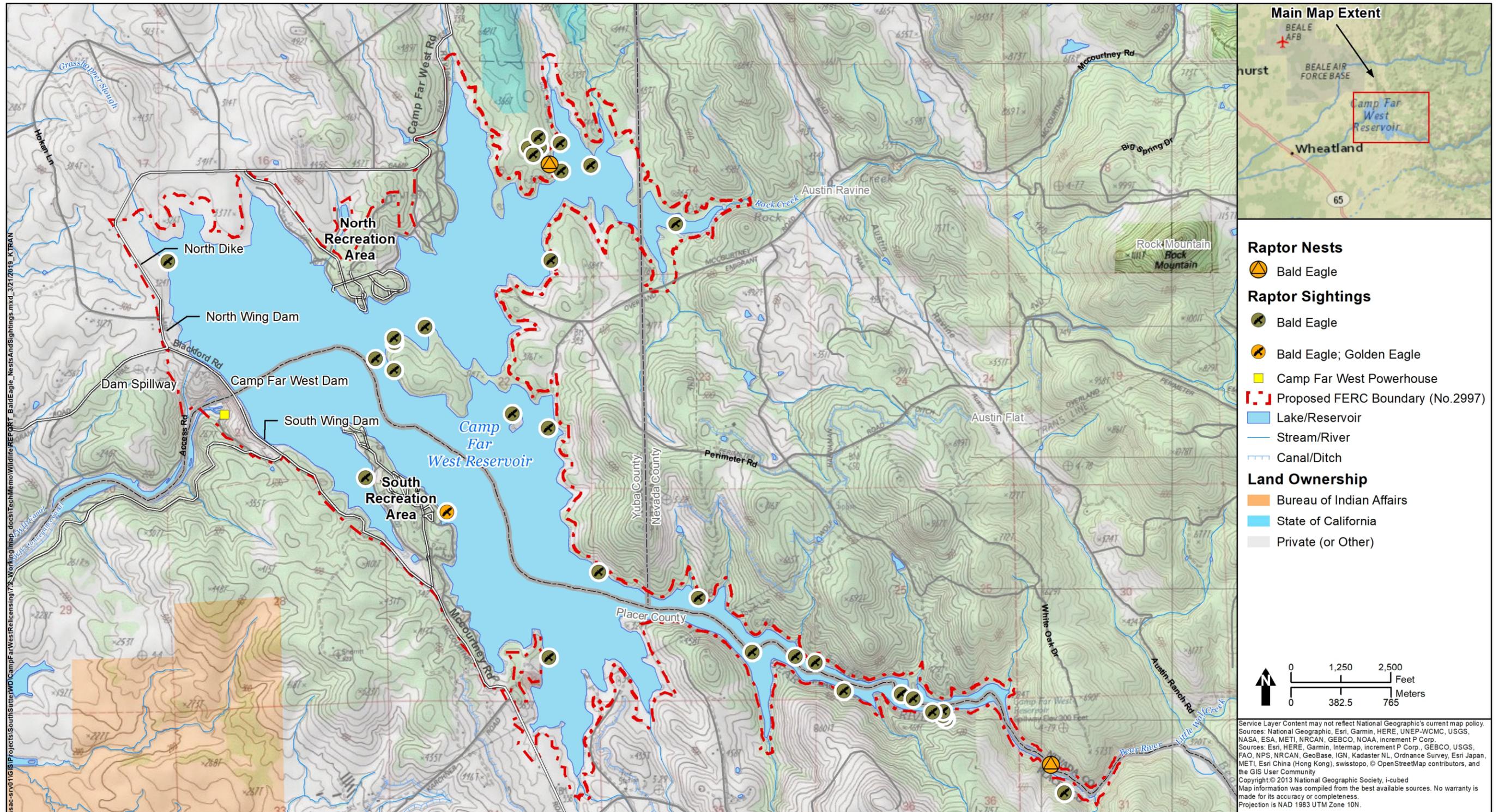


Figure 2.2-1. Bald Eagle Sightings and Nests Located During 2017 Surveys.

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SECTION 3.0

BALD EAGLE PROTECTION

3.1 Bald Eagle Protection Guidelines

SSWD will conduct surveys and implement protection guidelines described in this Plan to ensure that Project-related activities do not result in the take of bald eagles.

3.1.1 Surveys

SSWD will conduct nesting surveys via boat on Camp Far West Reservoir in the first calendar year after license issuance and in years 10, 20, 30⁹, and thereafter. Nesting surveys will be conducted in general accordance with the *Bald Eagle Breeding Survey Instructions* (CDFW 2017) and the *Protocol for Evaluating Bald Eagle Habitat and Populations in California* (Jackman and Jenkins 2004). The bald eagle nesting survey will occur in April or early May (as weather conditions allow) to ensure capturing the mid-point of a typical nesting season.

All data collected during nesting surveys will be recorded on the California Bald Eagle Nesting Territory Survey Form (CDFW 2017, Attachment A). Data collected at each site will include: 1) presence of adults; 2) courtship behavior; 3) evidence of nest repair or construction; 4) incubation; and 5) observation of old nests. Location data will be recorded, and photographs will be taken for all nests observed in a manner that does not disturb the breeding pair.

3.1.2 Establish Buffers and Limited Operating Periods

Upon completion of the nest survey, SSWD will develop a map showing a 0.25 mile buffer around all documented active bald eagle nests for implementation of buffers by SSWD operators/staff, except as noted or otherwise agreed to by SSWD, USFWS and CDFW. The buffer will encompass all SWWD-owned land and water that falls within the FERC Project Boundary in an approximate 0.25 mile radius of a documented nest or logical topographical boundary. SSWD will place markers along the shoreline (markers to be placed every 500 feet along the shoreline buffer area within the FERC Project Boundary, in a manner that would be expected to be durable) indicating that no watercraft are to be brought onto shore or anchored in the area, and pedestrians are not permitted on the shore.

The Bear River Arm nest will be protected from recreational uses and other Project activities with a 660 foot buffer within the FERC Project Boundary. SSWD will place permanent signage in the Camp Far West Reservoir approximately 660 feet downstream of the nest stating ‘no wake and quiet zone.’

In years when nesting surveys do not occur throughout the Project (e.g., License Years 2-9, 11-19, and 21-29), SSWD will visit each nest identified during the previous survey to establish if the nest is active for the given year. If it is active, SSWD will establish the buffers and limited

⁹ Surveys will continue every 10 years if SSWD receives a license for a term greater than 30 years.

operating periods (LOPs) described in this Plan. If it is inactive, SSWD will document that for the report.

Beginning January 1 through August 31 of each year where there is a nest(s) with an established buffer, SSWD will institute a LOP for all SSWD Project-related activities, as well as restrict public access, on SSWD land within the buffer areas in the FERC Project Boundary. If a new nest is documented, SSWD will institute a LOP and implement buffers for that nest as soon as practicable, but not more than 7 working days after the initial sighting. If more time is required, SSWD will consult with the CDFW and USFWS.

Additional water barriers (e.g., buoys and signage) and land barriers (e.g., fencing and signage) around known occupied bald eagle nests will be installed within the FERC Project Boundary reservoir and SSWD-owned land (i.e., not on private land without the approval of the landowner), as determined appropriate by the CDFW and USFWS, to delineate the buffers in order to restrict Project O&M and recreation activities in the vicinity of nests. The buffers may be expanded to 1 mile for Project-related activities requiring the use of helicopters or blasting. The 1 mile buffer may be adjusted (i.e., reduced) in consideration of logical topographical boundaries. It is recognized that SSWD cannot control the activities of other parties (i.e., SSWD does not have enforcement authority) within the buffer areas during the LOP period.

Nest buffers may be removed, adjusted or new buffers may be established if subsequent nesting surveys demonstrate that a nesting territory is no longer occupied or new nests are identified. Additionally, any information provided to SSWD by USFWS or CDFW regarding previously unidentified or existing nests will be used to inform the establishment of nest buffers. Requests to remove established nest buffers at any time will be submitted to USFWS and CDFW for approval. Requests to remove a nest buffer shall include a justification for the removal, including dates of eagle surveys/checks and results from that year.

SSWD O&M staff will be trained to recognize nesting bald eagles exhibiting signs of disturbance or distress and to be knowledgeable of bald eagle LOPs and associated buffers. If SSWD O&M staff incidentally observe signs of disturbance or distress to bald eagles in response to conducting routine Project O&M activities, staff will immediately cease the activities that are causing the disturbance/distress and contact SSWD Management. SSWD Management will send a qualified biologist to the area where the disturbed/distressed eagles were observed to determine if there is a nest in the area. If an active nest is detected, SSWD will establish a buffer and LOP around the nest. SSWD will contact the USFWS's FERC Coordinator or BGEPA Coordinator, as well as the CDFW's FERC Coordinator, within 1 business day after the biologist completes an assessment. The activities that disturbed/distressed the bald eagles may resume with USFWS and CDFW approval or in 1 week, whichever occurs first, if no active nest is observed.

If non-routine Project activities are scheduled on or near the Camp Far West Reservoir where an active nest is not known during the normal LOP, SSWD will survey for active nests within a 1 mi radius no more than a week prior to the start of Project activities. If an active nest is located, a buffer will be established for the remainder of the LOP.

SSWD shall annually review this Plan with Operations staff, focusing on: 1) the locations and purpose of bald eagle protection measures; 2) potential signs and identification of bald eagles; and 3) the reporting of any newly discovered individual sightings or nests.

3.2 Incidental Sightings

SSWD shall record incidental observations of other nesting raptors within and just outside (within 500 ft) the FERC Project Boundary area while conducting bald eagle nest surveys and performing O&M activities. An incidental sighting should include approximate coordinates (if possible) or a description of the location, any behavior observed, and a photograph (if possible). The purpose of this effort is to opportunistically gather data through incidental observations, not to expand the specific monitoring described in this Plan, or for SSWD staff to perform additional surveys. SSWD shall maintain a map of incidentally observed nesting raptors within the Project.

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SECTION 4.0

REPORTING, CONSULTATION AND PLAN REVISIONS

4.1 Reporting and Consultation

By December 31 of each year in which surveys were conducted or buffers and LOPs were implemented under this Plan, SSWD will provide to the USFWS and CDFW a draft annual report for that calendar year. The report will include five components. The first component will include the results of all surveys that occurred in that calendar year, including: 1) a description of the surveys and methods; 2) the results of those surveys, including maps with occurrence information for each species and their nests surveyed or incidentally observed including alternate, unused nests within the territory; and 3) if nesting is documented, a description of the proposed buffers and LOPs. The second component will be a summary of observed disturbance or distress to bald eagles recorded during that calendar year. The third component will be a brief summary of results from all previous surveys conducted. The fourth component will be any additional, relevant information regarding bald eagle and nesting within the FERC Project Boundary and adjacent areas that was provided to SSWD by the USFWS and CDFW at least 45 days in advance of the report preparation. This information is intended to inform potential changes to existing buffers and LOPs, if appropriate. The last component of the report will be a summary of specific protection measures that were applied to Project O&M and construction activities, as appropriate, during that calendar year and include a discussion of the effectiveness of those protection measures, including vandalism of signs and buoys, during the bald eagle nesting season. This will also contain a description of emergency activities undertaken, if any, within a nest buffer area during the LOP. The report will also include an appendix containing information regarding incidental sightings of special-status raptors.

In the event that an emergency activity is undertaken within an active nest buffer area, SSWD shall notify USFWS and CDFW as soon as practicable once the emergency has been identified, but not more than 48 hours after the emergency has been identified. Unless otherwise approved by CDFW and USFWS, an Avian biologist will be present during all emergency activities that take place within the buffer, or shall be present as soon as practicable after the emergency has begun. When reporting on the emergency activity during the end of year summary, SSWD shall include all observed behaviors of the nesting eagles and young during the activities, distance from the nest for any activities that occurred within the buffer, and number of young known to have fledged or likely to have fledged.

Sixty days will be allowed for the USFWS and CDFW to comment before SSWD files the final report with FERC. SSWD will include all relevant documentation of coordination/consultation with the report filed with FERC. If SSWD does not adopt a particular recommendation made by CDFW or USFWS, the filing would include the reasons for not doing so, based on Project-specific information.

4.2 Plan Revisions

SSWD, in consultation with CDFW and USFWS, will review, update, and/or revise the Plan, as needed, when significant changes in the existing conditions occur, which may include, but not be limited to: changes in the State or Federal listing status of bald eagle; changes in the occurrence of bald eagles within the Project vicinity; changes in accepted survey protocols for bald eagle; changes in State and/or Federal laws or management plans related to bald eagle; changes in Project O&M activities; and repairs to existing or new construction of Project facilities.

Sixty days will be allowed for CDFW and USFWS to comment and make recommendations before SSWD files the updated plan with FERC for FERC's approval. SSWD would include all relevant documentation of coordination/consultation with the updated Plan filed with FERC. If SSWD does not adopt a particular recommendation by CDFW and USFWS, the filing would include the reasons for not doing so, based on Project-specific information. SSWD will implement the Plan as approved by FERC.¹⁰

¹⁰ The Plan will not be considered revised until FERC issues its approval.

SECTION 5.0

REFERENCES CITED

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Attachment A

California Bald Eagle Breeding Survey Instructions and Nesting Territory Survey Form

STATE OF CALIFORNIA
THE RESOURCE AGENCY
DEPARTMENT OF FISH AND WILDLIFE

BALD EAGLE BREEDING SURVEY INSTRUCTIONS

BACKGROUND

The breeding season of Bald Eagles in California extends primarily from February through July. In past years, cooperating agencies, organizations, and private individuals participated in monitoring this species statewide to document nesting activities at each nesting territory. Though a coordinated monitoring is no longer occurring, the California Department of Fish and Wildlife continues to track nesting territory status based on reported data.

Breeding season surveys are an important part of the population recovery effort. Survey information is used by resource agencies to aid breeding territory management or protection activities. Additionally, population status and trends can be monitored to provide the data needed for assessing population recovery.

SURVEY TIMING AND INSTRUCTIONS

Territories should be checked at least three times during the nesting season, although more frequent checking is preferred. Emphasis should be placed on checking during incubation and early nesting periods.

1. **Early March (early incubation)** – Territories in northern California should be checked in the first half of March, if possible, or as soon thereafter as road or weather conditions allow. The purpose of the first check is to determine whether a territory is occupied (record presence of adults, courtship behavior, evidence of nest repair or construction, incubation).
2. **Late April or early May (early nesting period)** – This check is needed to confirm that a territory is unoccupied, or if occupied in March, to determine whether the breeding pair is still tending the nest (incubating eggs or tending young nestlings).
3. **Mid June (late nesting period)** – The main purpose of this check is to determine how many nestlings are approaching fledgling age.

Survey dates maybe modified from these recommended time periods if the territories can be checked more frequently or if particular breeding pairs are known to begin nesting especially early or late in the season.

We recommend that observers report the stage of development of nestlings in accordance with An Illustrated Guide for Identifying Developmental Stages of Bald Eagle Nestlings in the Field, by G.P. Carpenter (April 1990). This booklet is available from the San Francisco Zoological Society, Sloat Blvd. At the Pacific Ocean, San Francisco, CA 94132 (415-753-7080).

SUBMISSION OF SURVEY FORMS

Please report observations on the **CALIFORNIA BALD EALGE NESTING TERRITORY FORM (revised 4/2010)**. Electronic forms can be found at http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html. Forms will be maintained in Department files and annual survey results will be compiled on the basis of these reports.

Please email completed forms by September 1 of survey year to Carie.Battistone@wildlife.ca.gov, or mail them to:

California Department of Fish and Wildlife
Wildlife Branch
1812 Ninth Street
Sacramento, CA 95814
ATTN: Carie Battistone

In place of field forms, you may also submit data using the Department's Online Field Entry Form – found here: <http://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data>. This application allows users to submit data online to CNDDB. First time users will need to set up a free account. The application contains a mapping tool, allows users to generate reports of their data submissions, and saves all past and current submissions with your account. When entering data, if there are no field that exactly match to the data you wish to submit (e.g. # of young fledged, # of adults incubating, etc.), please include this information in the notes field.

If you have any questions please contact Carie Battistone at the above address or at Carie.Battistone@wildlife.ca.gov.

**California Department of Fish and Game
CALIFORNIA BALD EAGLE**

NESTING TERRITORY SURVEY FORM

Revised 9/2017

Territory Code: _____

County: _____ **Survey Year:** _____

Property Owner: _____ **If USFS:** _____ National Forest

Name (or general location of territory): _____

Name of nearest water body: _____

Location of Nest Site: LAT: _____ **LONG:** _____

Other location info: _____

No. of nests in territory - Intact: _____ **Remnant:** _____

Nest Tree: Species: _____ **Year last Used:** _____

Nest: Year last used _____

NOTE: Please attach a map showing the location of any newly documented nest tree.

Describe tree and nest condition and size, and add other remarks: _____

For each visit to a territory, note, in detail, the times, number and age of birds, behavior of birds (lying, perching, etc.), evidence of nesting (nest maintenance, courtship, incubation posture), disturbances, and other pertinent information:

Initials of Observer	Date of Visit	Observations

(Attach additional pages, if necessary)

Initials of Observer	Date of Visit	Observations

(Attach additional pages, if necessary)

General Remarks: _____

PLEASE SUMMARIZE:

A. Successful Nestings: No. of young known fledged _____ or probably fledged _____

B. If no fledglings were produced this season please answer the following:

How many adults were seen in the territory? _____
 Was there evidence of nest repair or construction? Yes No
 Were adults seen in the nest? Yes No
 Were adults in incubating posture? Yes No
 Number of nestlings observed? _____
 Failed during incubation: _____ or nestling stage: _____ .
 Other remarks: _____

Observer(s) name: _____

Affiliation: _____

Address: _____

Phone: () _____ **Fax:** () _____ **Email:** _____

Mail all completed forms by September 1 of survey year to: ATTN: Carie Battistone, California Department of Fish and Wildlife, Wildlife Branch, 1812 Ninth Street, Sacramento, CA 95814. Or email completed forms to Carie.Battistone@wildlife.ca.gov.



Appendix B. Recreation Facilities Plan

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Application for New License
Major Project – Existing Dam

Recreation Facilities Plan

Security Level: Public

Camp Far West Hydroelectric Project
FERC Project No. 2997



Prepared by:
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June 2019

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List of Attachments

None.

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GLOSSARY - DEFINITION OF TERMS, ACRONYMS AND ABBREVIATIONS

ac	acre
Application	Application for New License
Capital Improvement	The construction, installation, or assembly of a new fixed asset, or the significant alteration, expansion, or extension of an existing fixed asset to accommodate a change of purpose.
DBAW	California Department of Boating and Waterways
Design Narrative	Describes the management objectives, design criteria, and constraints associated with the development or major rehabilitation of a recreation facility. The Design Narrative should include: (a) management objectives; (b) design criteria, including criteria on type and color of materials and accessibility; (c) existing physical conditions; (d) any rehabilitation and new construction; (e) anticipated management problems that design may minimize; (f) site capacity, durability, and protection; (g) user safety; and (h) interpretive services.
FERC	Federal Energy Regulatory Commission
ft	feet or foot
Major Rehabilitation Replacement Recondition Reconstruction	Making capital improvements and reconditioning or replacing an existing fixed asset or any of its components in order to restore the functionality or life of the asset. Replacement is the substitution or exchange of an existing fixed asset or component with one having essentially the same capacity and purpose. The decision to replace or rehabilitate a fixed asset or component is usually reached when replacement is more cost effective or more environmentally sound. Replacement of an asset or component usually occurs when it nears or has exceeded its useful life.
SSWD	South Sutter Water District
mi	mile
Minor Rehabilitation	Minor rehabilitation includes repairs, and replacement of parts that result in fewer breakdowns and fewer premature replacements, and help achieve the expected life of the fixed asset. Minor rehabilitation does not include construction of new facilities or the replacement of an existing fixed asset. Minor rehabilitation activities will arrest deterioration and appreciably prolong the life of a property. Examples include: installing a new roof, new floor, or new siding, replacing electrical wiring or heating systems, repairing or replacing pipes, pumps and motors, and repairing the paths, walks, or walls of recreation facilities.
Non-Peak Season	Non-peak season extends from January up to the Memorial Day holiday weekend and after Labor Day through December.
NMWSE	Normal Maximum Water Surface Elevation
Operational Maintenance	Keeping fixed assets in acceptable condition, including repairs, painting, replacement of minor parts and minor structural components. Operation maintenance, or reconditioning, neither materially adds to the value of the property nor appreciably prolongs its life. Operational maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than those originally intended. The work serves only to keep the facility in an ordinary, efficient operation condition. Examples include: interior painting, repair of broken windows, light bulb replacement, cleaning, unplugging drains, greasing, servicing, inspecting, oiling, adjusting, tightening, aligning, sweeping, and general snow removal. Maintenance activities may include: work needed to meet laws, regulations, codes, and other legal direction (such as compliance with ADA) as long as the original intent or purpose of the fixed asset is not changed.
O&M	operation and maintenance
Peak Season	Peak season extends from the Memorial Day to Labor Day holiday weekends.
RA	Recreation Area
RD	Recreation Day: Each visit by a person to a development for recreation purposes during any portion of a 24-hour period.

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SECTION 1.0

INTRODUCTION

1.1 Background

In June 2019, the South Sutter Water District (SSWD), pursuant to Sections (§§) 5.17 and 5.18 of Title 18 of the Code of Federal Regulations (C.F.R.), plans to file with the Federal Energy Regulatory Commission (FERC) an Application for a New License for Major Project – Existing Dam for SSWD’s 6.8 megawatt Camp Far West Hydroelectric Project (Project), FERC Project No. 2997. The initial license for the Project was issued by FERC to SSWD on July 2, 1981, effective on July 1, 1981. In its Application for New License (Application), SSWD proposes to continue operating the Project for the next 40 years with one modification to the spillway, a reservoir pool raise of 5 feet (ft) (from 300.0 ft [Normal Maximum Water Surface Elevation] NMWSE to 305.0 ft NMWSE), and the adoption of the resource management measures proposed in its license application.

The existing and Proposed Project consists of one development - Camp Far West – that, in total, includes: one main dam; one powerhouse with an associated switchyard with a capacity of 6.8 megawatts; and appurtenant facilities and structures, including recreation facilities and gates. Table 1.1-1 summarize key information for the Project’s reservoir.

Table 1.1-1. Key information regarding Camp Far West Hydroelectric Project reservoirs.

Project Reservoir	NMWSE (ft)	Gross Storage ¹ (ac-ft)	Usable Storage ² (ac-ft)	Surface Area (ac)	Maximum Depth (ft)	Shoreline Length (mi)	Drainage Area At Dam (sq mi)
Camp Far West	300	93,737	92,430	1,886	155	29	284

The proposed FERC Project Boundary¹ encompasses 2.674.0 acres (ac) of land in Nevada, Yuba, and Placer counties in northern California. Within the boundary, SSWD is the major landholder with 2,515.2 ac (94.8% of the area within the FERC Project Boundary). The remaining lands (146.7 ac) are privately-owned lands. Neither the existing FERC Project Boundary nor the proposed FERC Project Boundary includes federal lands. Figure 1.1-1 shows the Project Vicinity,² Project facilities, and the proposed FERC Project Boundary.

¹ The Federal Energy Regulatory Commission (FERC) Project Boundary encompasses all Project facilities and features as well as all land needed by SSWD for the normal operation and maintenance (O&M) of the Project. The boundary is shown in Exhibit G of SSWD’s Application for New License.

² In this Plan, “Project Vicinity” refers to the area surrounding the Project on the order of United States Geological Survey (USGS) 1:24,000 scale topographic quadrangle.

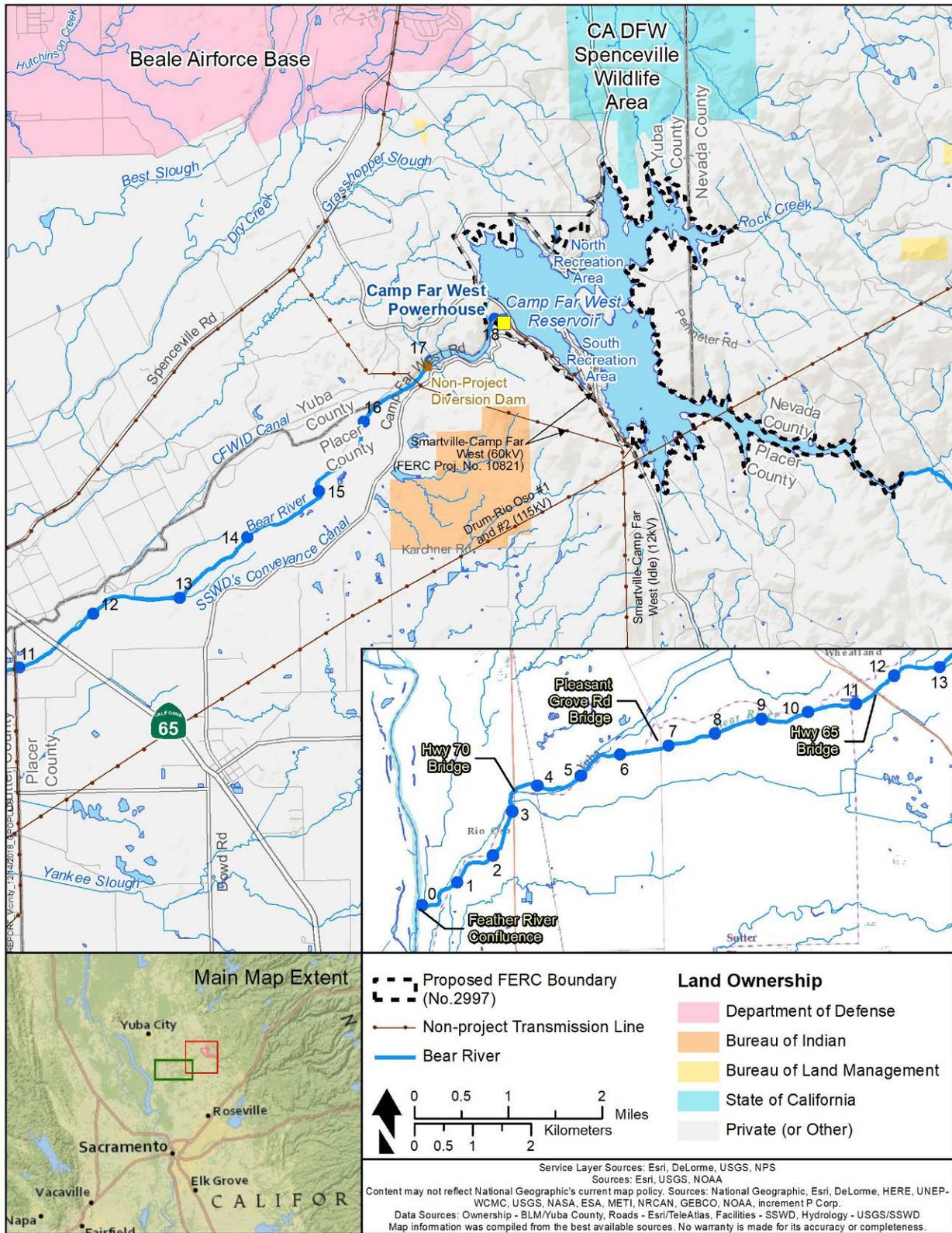


Figure 1.1-1. Camp Far West Hydroelectric Project and Project Vicinity.

1.2 Purpose of the Recreation Facilities Plan

As part of its Application, SSWD will continue to maintain and operate recreation facilities on the Project. Specifically, SSWD will include the following requirement in a new license for the Project: SSWD will implement this Recreation Facilities Plan (Plan), as outlined within to maintain, rehabilitate, and upgrade the existing Project recreation facilities over the course of the new license term. This Plan describes SSWD's responsibilities regarding recreation facilities under the new Project license.

1.3 Goals and Objectives of the Recreation Facilities Plan

The primary goal of the Plan is to guide public recreation use of the Project's recreation facilities over the term of the license, while minimizing recreation use impacts to natural, historic, and prehistoric resources within the Project Area. The Plan includes the following objectives to help achieve this goal:

1. To provide a description and plan for recreation facilities that meet the needs of Project recreation users and are designed to meet federal, state, and local legal requirements, as applicable.
2. To describe in detail SSWD's responsibilities regarding recreation facilities under the new license.

1.4 Contents of the Recreation Facilities Plan

- Section 1.0. Introduction. This section includes introductory information, including the purpose and goal of the Plan.
- Section 2.0. Existing Recreation Use and Facilities. This section describes the existing Project recreation facilities, including condition, land ownership, and 2017 use levels.
- Section 3.0. Facility Operation and Rehabilitation. This section describes the recreational facility annual operational maintenance and major rehabilitation guidelines.
- Section 4.0. Reporting and Plan Revisions. This section describes the Plan revision process.
- Section 5.0. References Cited. This section provides a bibliography of the references listed in this exhibit.

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SECTION 2.0

EXISTING RECREATION USE AND FACILITIES

The Project provides developed and undeveloped recreation opportunities at Camp Far West Reservoir. Water-related recreational opportunities include water skiing, wakeboarding, power boating, jet-skiing, wildlife viewing, non-motorized boating and warmwater fishing. Boating use and launching occurs year-round. Yuba County Ordinance 8.51.010 limits the speed of boats to 20 miles per hour on the reservoir (Yuba County 2010). Camp Far West Reservoir offers anglers shoreline and boat-based fishing opportunities for smallmouth bass, largemouth bass, striped bass, catfish and panfish (CDFW 2018a). The reservoir does not have any site-specific fishing regulations or limits (CDFW 2018b). Historically, Cal Fish and Wildlife stocked Camp Far West Reservoir with warmwater game fish species from 1964 to 1985 (CDFW 2015).

Land-based recreation opportunities provided in the Project Vicinity include camping, wildlife viewing, hiking, biking and horseback riding. Facilities developed to support camping and other land-based recreation activities are described below. While the recreation areas (RA) do not provide formal trails for hiking, biking and horseback riding, the dispersed use areas provide a network of unpaved roads that provide a trail experience for visitors. In addition, informal trails occur within the FERC Project Boundary, primarily near the NMWSE, which are a result of non-Project cattle and ranch trails as well as Project user-created trails and paths due to the gentle sloping terrain adjacent to the shoreline. Dispersed camping is allowed outside the developed RAs.

The concessionaire that operates the two developed RAs at Camp Far West Reservoir provides numerous and varied events at the RAs and reservoir, including bi-monthly fishing tournaments, boating and fishing club events, equestrian events and other group events.

As a condition of its FERC license, SSWD provides recreational opportunities and facilities within the FERC Project Boundary. Below is a description of the developed facilities and recreation opportunities at Camp Far West Reservoir. SSWD owns and maintains two developed recreation areas at Camp Far West Reservoir – the North Shore Recreation Area (NSRA) and South Shore Recreation Area (SSRA) (Table 2.0-1). The NSRA and SSRA are the only public vehicular access points to the reservoir for recreation due to private lands. Outside of the RAs, the remaining shoreline is only accessible by foot or boat. All of these facilities are located on SSWD-owned land and operated through a concessionaire. The recreation facilities were originally constructed using Davis-Grunsky Act funding and the NSRA boat ramp was reconstructed in 2005 using the California Division of Boating and Waterways (DBAW) boat launching facilities grant funding.

Table 2.0-1. Summary of the Camp Far West Hydroelectric Project recreation facilities.

Facility	Amenity	North Shore Recreation Area	South Shore Recreation Area
Family Campgrounds	No. Sites (standard)	70	67
	Sites (RV with hookups)	10	none
	Parking Spurs	1 spur per site	1 spur per site
	Overflow Parking Spaces	None	18 single

Table 2.0-1. (continued)

Facility	Amenity	North Shore Recreation Area	South Shore Recreation Area
Family Campgrounds	Restrooms	2 flush	1 flush, 2 vault
	Recreation Roads	0.8 mi, 20 ft wide, paved 0.3 mi, 12 ft wide, dirt	0.5 mi, 20 ft wide, paved 0.7 mi, 10 ft wide, paved
Group Campgrounds	Sites	2, 25-person group sites, 1, 50-person horse camp site	1, 50-person group site
	Parking Spaces	None ¹	10
	Restrooms	4 portable chemical toilets	None ²
	Recreation Roads	0.05 mi, 10 ft wide, paved	0.2 mi, 20 ft wide, paved
Day Use and Picnic Areas ³	Picnic Sites	20	33
	Swim Beaches	1	1
	Parking Spaces	None ⁴	44
	Restrooms	1 flush	None ⁵
	Recreation Roads	0.05 mi, 20 ft wide, paved	0.1 mi, 10 ft wide, paved (swim beach) 0.4 mi, 10 ft wide, dirt (picnic area)
Boat Ramps	Number	1, 4-lane concrete ramp	1, 2-lane concrete ramp
	Parking Spaces	82 single, 73 vehicle with trailer	52 vehicle with trailer
	Restrooms	1 flush	1 flush
	Recreation Roads	0.2 mi, 24 ft wide, paved	None (entrance road access facility)
Dispersed Use Areas ⁶	Sites	2	2
	Restrooms	6 portable chemical toilets	6 portable chemical toilets
	Recreation Roads	3.7 mi, 10 ft wide, dirt	1.7 mi, 10 ft wide, dirt
Recreational Water System Facilities	RV Dump Station & Sewage Pond	1	1
	Water Treatment Plant	1	None ⁷
	Water Storage Tank	1, 60,000-gallon tank	None ⁷
	Recreation Roads	0.8 mi, 10 ft wide, dirt	0.1 mi, 10 ft wide, dirt
Entrance Facilities	Entrance Station	1	1
	Store	1	1
	Recreation Roads	0.75 mi, 20 ft wide, paved	0.5 mi, 20 ft wide, paved
Other Facilities	Concessionaire Trailers	2	1
	Recreation Roads	0.4 mi, 10 ft wide, dirt	0.3 mi, 10 ft wide, dirt

¹ Parking is available in open areas adjacent to the group sites, but is not designated or defined.

² The group campsites use the adjoining family campground restroom building.

³ At NSRA, the picnic sites and swim beach are combined at one site; therefore, the site is categorized as a “day use area”. At SSRA, the picnic sites and swim beach are separate sites on opposite sides of the recreation area; therefore, each site is called a “picnic area” and a “swim beach”, respectively.

⁴ The day use area (picnic area and swim beach) uses the adjoining boat ramp parking area for parking.

⁵ The picnic area uses the adjoining boat ramp restroom building.

⁶ The dispersed use areas provide day use and overnight opportunities with minimal facilities (roads, portable chemical toilets and trash cans).

⁷ Water is piped under the reservoir to South Shore Recreation Area from the North Shore Recreation Area treatment plant and storage tank.

2.1 Existing Project Recreation Use Levels

All of the Project’s recreation facilities occur at the two Project RAs, and include overnight camping, picnicking, swimming and boating facilities. Recreation activities within the FERC Project Boundary are numerous and varied and include, but are not limited to, camping, fishing, boating, swimming, hiking, picnicking, sightseeing and wildlife viewing.

In 2017, the total Project recreation use was 78,641 Recreation Days (RDs) with the majority of that use occurring in the peak season (66.6% or 52,397 RDs) compared to the non-peak season (33.4% or 26,244 RDs) (Table 2.1-1). Day-use (70.6% or 55,518 RDs) accounted for the

majority of total use as compared to overnight use (29.4% or 23,123 RDs); and this day-use-to-overnight use ratio was similar during both the peak and non-peak season. When comparing use by day type overall, total use was highest on the weekends (39,599 RDs) as compared to weekdays (26,217 RDs) and holidays (12,825 RDs). When comparing overall use by recreation, NSRA accounted for the highest percentage of use (81.9% or 64,429 RDs) compared to the SSRA (18.1% or 14,212 RDs), which was open on a limited bases in 2017 on select weekdays, weekends and holidays during the peak season. The SSRA was closed during the non-peak season.

Table 2.1-1. Project recreation use estimate in Recreation Days by season and day type.

Recreation Area	Day Type	Use Estimate in Recreation Days (RDs)								
		Peak Season			Non-peak Season			Overall ¹		
		Overnight Use	Day Use	Total Use	Overnight Use	Day Use	Total Use	Overnight Use	Day Use	Total Use
North Shore Recreation Area	Overall	10,690	27,495	38,185	7,267	18,977	26,244	17,957	46,472	64,429
	Weekday	5,602	7,665	13,267	4,214	5,417	9,631	9,816	13,082	22,898
	Weekend	2,937	12,207	15,144	3,053	13,560	16,613	5,990	25,767	31,757
	Holiday	2,151	7,623	9,774	n/a	n/a	n/a	2,151	7,623	9,774
South Shore Recreation Area	Overall	5,166	9,046	14,212	closed	closed	closed	5,166	9,046	14,212
	Weekday	2,408	911	3,319	closed	closed	closed	2,408	911	3,319
	Weekend	1,820	6,022	7,842	closed	closed	closed	1,820	6,022	7,842
	Holiday	938	2,113	3,051	closed	closed	closed	938	2,113	3,051
Project Total	Overall	15,856	36,541	52,397	7,267	18,977	26,244	23,123	55,518	78,641
	Weekday	8,010	8,576	16,586	4,214	5,417	9,631	12,224	13,993	26,217
	Weekend	4,757	18,229	22,986	3,053	13,560	16,613	7,810	31,789	39,599
	Holiday	3,089	9,736	12,825	n/a	n/a	n/a	3,089	9,736	12,825

Source: Camp Far West Reservoir recreation concessionaire entrance gate records (SSWD 2016).

Legend: n/a = no holidays during non-peak season.

2.2 Existing Project Recreation Facilities at Project Reservoirs

The following section includes a description of the existing Project recreation facilities and opportunities at each recreation area. This section also provides a brief summary of each primary recreation facility’s (campground, picnic area, boat launch, etc.) condition based on a 2015 condition assessment by SSWD. Facilities and site elements (e.g., vehicle spurs, tables, fire rings, ramps) are in “good” condition if they are functional, well-maintained, showed no signs of deterioration and have the majority of their useful life remaining. Facilities and components are considered in “poor” condition if they are non-functional, had missing or broken parts and/or major structural damage is evident. A facility is considered to be in “fair” condition when it has some minor structural damage that could be repaired with ease or is functional, but shows signs of wear and tear (cracked wood, broken windows or door handles, etc.). Facilities in “fair” condition generally have a portion of their useful life remaining, but do not need immediate replacement.

2.2.1 North Shore Recreation Area

The NSRA is located on the north shoreline of the reservoir on a large peninsula. The NSRA is accessible by vehicle from the west and north via Camp Far West Road (Yuba Co. 42) and Spenceville Road. The access road is gated and an entrance station is located along the access road that regulates public access to the recreation area. The NSRA consists of a family campground, group campground, day use area with swimming beach, boat ramp and dispersed use areas (Figure 2.2-1). The NSRA also includes a general store at the entrance station for use by the public. The NSRA is open year-round for day use and overnight recreation opportunities. The NSRA is set in a partially wooded oak and grassland setting. The oak trees provide substantial shading throughout the recreation area, especially within the campgrounds. Due to the predominant grasses and lack of other ground-level vegetation, there is minimal screening between the individual sites with the campgrounds and day use areas.



Figure 2.2-1. Aerial site map of the North Shore Recreation Area.

2.2.1.1 Family Campground

The family campground is located in a semi-forested setting along the south shoreline of the NSRA. The facility consists of a total of 80 campsites including 70 standard sites and 10 recreational vehicle (RV) sites with hookups. Representative photographs are provided in Figure 2.2-2. Each of the standard campsites consists of a table (i.e., concrete or wood-metal construction), a rock fire ring, a parking spur (i.e., dirt or gravel), several tent pads and a trash can. Most of the sites also have a pedestal grill. Overall, the campsite amenities are in fair condition, with the exception of the remaining wood-metal construction tables and most pedestal grills that are aging and in poor condition. Potable water³ is provided at seven spigots dispersed throughout the campground. The facility includes two flush restroom buildings each with eight stalls (i.e., 7 toilets and 1 urinal) and four sinks; and both are in aging and in fair-to-poor condition. A typical campsite provides opportunities for tent or RV camping, but does not have hookups for water, electric or sewer. The circulation roads consist of one-way, 10-ft wide and two-way, 20-ft wide road segments; and are a combination of paved and dirt surfacing; and in fair condition overall (SSWD 2016).

The family campground also includes a loop with 10 RV sites each with full-service hookups including water, electric and sewer. In addition to the hookups, each site consists of a gravel spur, metal table, concrete fire ring, and a trash can. The RV campsites utilize a restroom facility at the adjacent standard campsite loop. The circulation roads consist of a one-way, 10-ft-wide dirt road (0.3 mi long) and a two-way, 20-ft-wide paved road (0.8 mi long). Overall, the RV camping facilities are new construction and in good condition (SSWD 2016).



Typical Family Campsite

³ Currently, temporary drinking restrictions are in place while SSWD completes water treatment infrastructure improvements.



Typical Family Campsite Amenities



Typical Restroom Building



Typical RV Campsite with Full Hookups

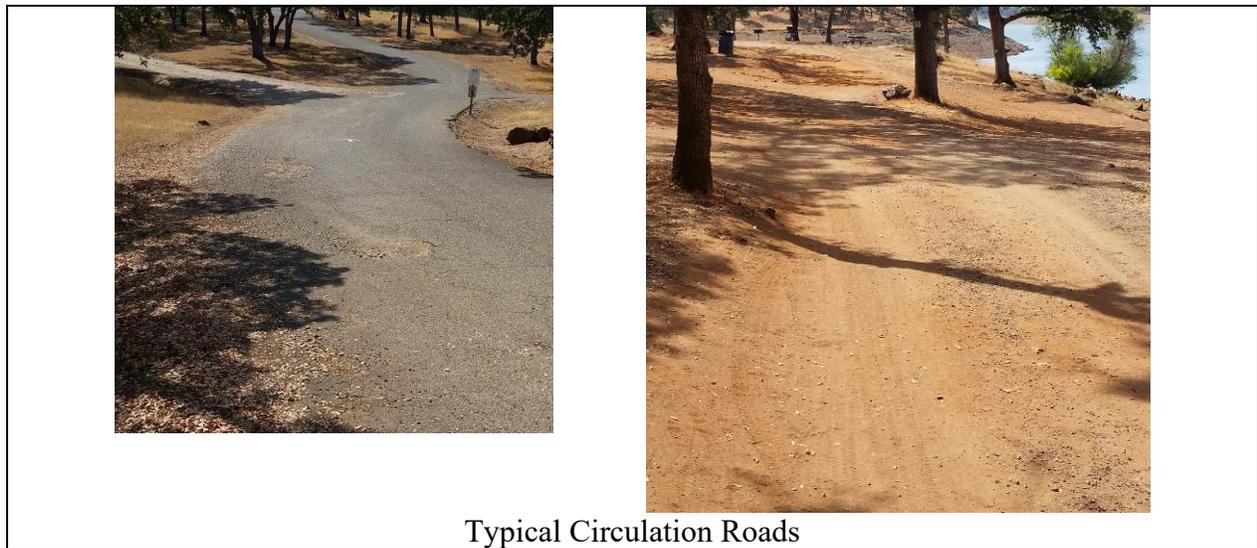


Figure 2.2-2. Photographs (dated 7/21/15) of the family campground at the North Shore Recreation Area.

2.2.1.2 Group Campground

The group campground is located in an open setting along the west shoreline of the NSRA to the north of the boat ramp and day use area. The facility consists of two group campsites (i.e., Tree and Point sites) serving 25 people-at-one-time. Each of the campsites consists of a concrete table, rock fire ring, water spigot, portable chemical toilet, and two trash cans. The Tree site also includes a cinder-block preparation/storage area that does not exist at the other group site. The access road to the sites is a 10-ft-wide, one way dirt surface road (0.05 mi long). Overall, the facilities are aging and in fair-to-poor condition (SSWD 2016). Representative photographs are provided in Figure 2.2-3.

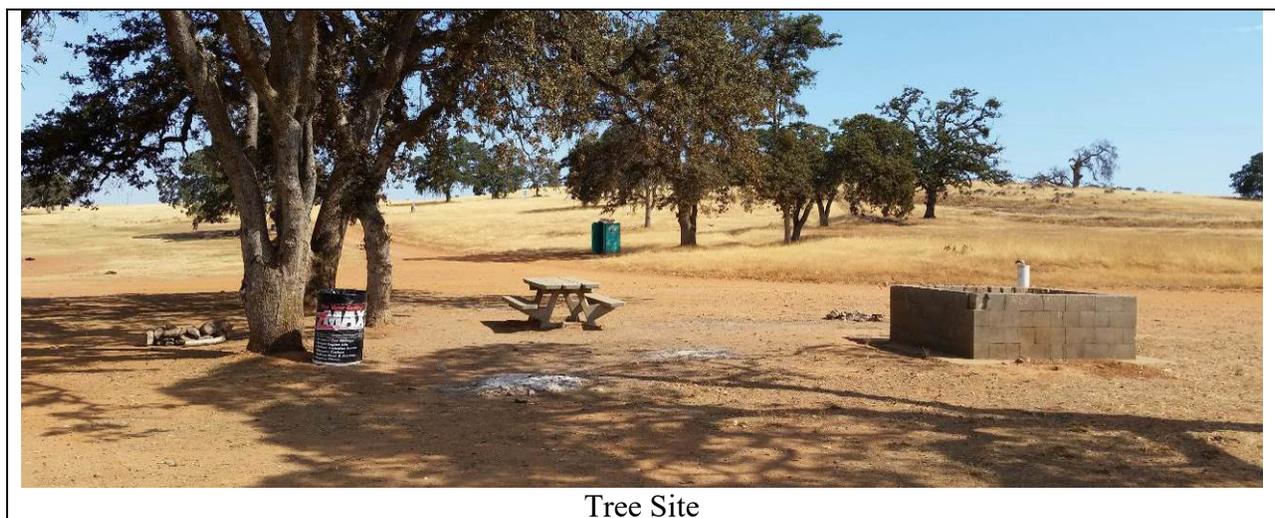


Figure 2.2-3. Photograph (dated 7/21/15) of the group campsites at the North Shore Recreation Area.

Horse Camp

The Horse Camp is located in the midst of the Boss Point dispersed use area and is tailored specifically for equestrian use with hitch-and-post facilities; as well as two portable chemical toilets, a large concrete fire ring, and trash cans. Overall, the facilities provided are in good condition. A representative photograph is provided in Figure 2.2-4.

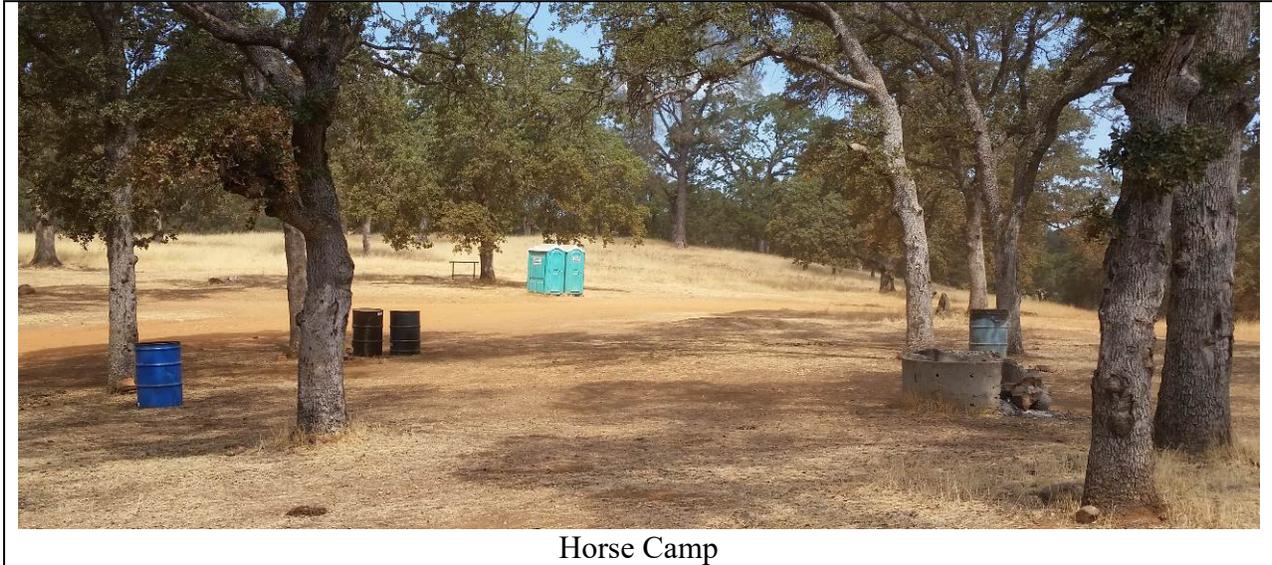


Figure 2.2-4. Photograph (dated 7/21/15) of the dispersed use areas at the North Shore Recreation Area.

2.2.1.3 Day Use Area

The day use area is located in a semi-forested setting along the west shoreline of the NSRA to the north of the boat ramp. The facility consists of 20 picnic sites, a swim beach and shares a parking area with the boat ramp. Each picnic site consists of a table and a trash can. Pedestal grills and water spigots are also dispersed throughout the area. The swim beach is located between the picnic sites and the reservoir. The facility includes one flush restroom building with eight stalls (i.e., 7 toilets and 1 urinal) and four sinks. The short access road is a 20-ft-wide, two-way paved road (0.05 mi long). Overall, the facilities are aging and in fair condition (SSWD 2016). A representative photograph is provided in Figure 2.2-5.



Typical Picnic Site



Typical Picnic Site Amenities



Typical Restroom Building

Figure 2.2-5. Photographs (dated 7/21/15) of the day use area at the North Shore Recreation Area.

2.2.1.4 Boat Ramp

The boat ramp is located on the south shoreline between the family campground and the day use area. The facility consists of a boat launching ramp, parking area, restroom building and picnic site. The boat ramp is a 4-lane concrete ramp with a floating courtesy dock and a 4-lane boat preparation area. The end of the concrete ramp is at 236.0 ft elevation; however, informal boat launching is still available down to 188.0 ft elevation. The parking area is divided into three separate lots, all of which are paved with striped spaces; and provides a total of 82 single vehicle spaces, including two accessible spaces, and 73 vehicle with trailer spaces, including three accessible spaces. At lower water levels, parking is allowed adjacent to the boat ramp in dirt parking areas. The facility includes one flush restroom building with four stalls, each with a toilet and sink. A water spigot, water fountain and trash receptacles are located at the restroom building. The accessible restroom building area includes an accessible picnic table connected by an accessible ramp. The access road is a 24-ft-wide, two-way paved road (0.2 mi long). This facility was reconstructed in 2005 using a DBAW Boat Launch Facilities grant. The facilities are in good condition (SSWD 2016). Representative photographs are provided in Figure 2.2-6.



Ramp



Parking Area



Restroom and Picnic Site

Figure 2.2-6. Photographs (dated 7/21/15) of the boat ramp facilities at the North Shore Recreation Area.

2.2.1.5 Dispersed Use Areas

The NSRA has two dispersed use areas within the recreation area, which are accessed by one-way and two-way dirt roads. Jet Ski Cove dispersed use area is located on the northwest portion of the recreation area. Facilities include two portable chemical toilets and trash cans dispersed throughout the area. In all, Jet Ski Cove dispersed use area encompasses 15 ac with approximately 0.5 mi of shoreline; all of which are accessed using a 12-ft-wide dirt road (0.6 mi in length). The second dispersed use area, Boss Point, is located in the northeast portion of the recreation area. Facilities include four portable chemical toilets and trash cans dispersed throughout the area. In all, Boss Point dispersed use area encompasses 55 ac with approximately 1.6 mi of shoreline; all of which are accessed using a network of 12-ft-wide dirt roads (3.1 mi in length). The dispersed use areas provide for largely undeveloped, dispersed day-use opportunities and overnight camping with minimal facilities and direct access to the reservoir shoreline. Overall, the few facilities provided are in good condition (SSWD 2016). Representative photographs are provided in Figure 2.2-7.



Typical View of the Jet Ski Cove Dispersed Use Area

Typical View of the Boss Point Area Dispersed Use Area

Figure 2.2-7. Photographs (dated 7/21/15) of the dispersed use areas at the North Shore Recreation Area.

2.2.1.6 Recreational Water System

A recreational water system provides water throughout the NSRA, excluding the dispersed use area. The water system source is the reservoir, where two pumps in the reservoir deliver water at 70 gallons/minute (5,000,000 gallons or 15.3 ac-ft per year) uphill via underground piping to the water treatment facility atop a hill within the NSRA. After being treated, the water is piped nearby to a 60,000-gallon storage tank constructed of belted steel and recently installed in 2011. From the storage tank, underground distribution piping sends the water throughout the NSRA, where water is accessible via water hydrants dispersed throughout the recreation area facilities. The system also includes a sewage pond with an aerator to handle the sanitary needs of the flush restroom buildings and the RV dump station. The sewage system uses a gravity-feed operation and is supplemented by a pump to get the sewage to the sewage pond. The recreational water system is accessed using 10-ft-wide dirt roads (0.8 mi in length). (Figure 2.2-8)

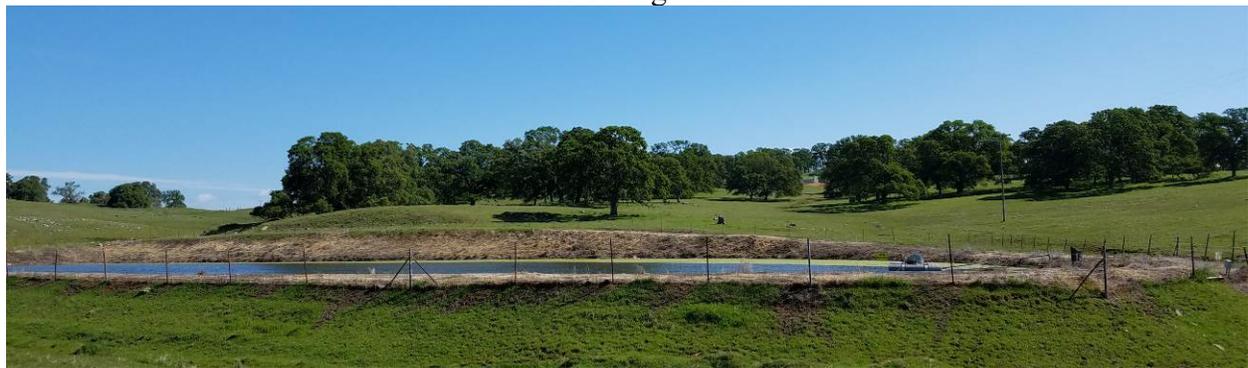
Overall, much of the major above-ground components (i.e., water treatment plants, water storage tank, sewage ponds and aeration facilities) are in good condition with the treatment plant and storage tank having been reconstructed or replaced recently (SSWD 2016). The below-ground components (i.e., distribution piping) are largely original construction are in fair condition; and the above-ground water hydrants and fountains are largely in poor condition (SSWD 2016).



Water Treatment Facility



Water Storage Tank



Sewage Pond

Figure 2.2-8. Photographs (dated 4/2/18) of the recreational water system components.

2.2.1.7 Other Facilities

The NSRA also includes a general store, RV dump station, private ranger residences and maintenance buildings. The store is located near the entrance to the NSRA facilities and also serves as the entrance station for the NSRA. The RV dump station is located near the family campground and boat ramp; and provides a 1-lane facility connected to a sewer system for disposing of RV holding tanks. Overall, these facilities are in good condition (SSWD 2016). Private concessionaire residences are also located between the entrance station and the boat ramp facilities that include residences and maintenance buildings. Photographs of these facilities are provided in Figure 2.2-9.



Figure 2.2-9. Photographs (dated 7/21/15) of the entrance station and RV dump station at the North Shore Recreation Area.

2.2.2 South Shore Recreation Area

The SSRA is located on the southwest shoreline of the reservoir on a long narrow peninsula. The SSRA is accessible by vehicle from the north and south via McCourtney Road (Placer Co. C6037). The access road is gated and an entrance station is located after the gate that regulates public access to the recreation area. The SSRA consists of a family campground, group campground, day use area, swim beach, boat ramp and dispersed use areas (Figure 2.2-10). The SSRA also includes a general store at the entrance station for use by the public located. The SSRA is generally open seasonally from April through October for day use and overnight recreation opportunities.⁴ Similar to the NSRA, the SSRA is set in a partially wooded oak and grassland setting. The oak trees provide substantial shading throughout the recreation area. Due to the predominant grasses and lack of other ground-level vegetation there is minimal screening between the individual sites with the campgrounds and day use areas.

⁴ The NSRA is open year-round for public use.



Figure 2.2-10. Aerial site map of the South Shore Recreation Area.

2.2.2.1 Family Campground

The family campground is located in a semi-forested setting on the north end of the recreation area. The facility consists of 67 standard campsites for either tent or RV camping, but the sites do not provide RV hookups. Each campsite consists of a table (i.e., concrete or wood-metal construction), a rock fire ring, a parking spur (i.e., dirt or gravel), several tent pads and a trash can. Most of the sites also have a pedestal grill. Six of the sites include a pull-through parking spur, whereas the remaining sites utilize back-in parking spurs. Water is provided at 12 spigots dispersed throughout the campground. Overall, the campsite amenities are in good condition, with the exception of the wood-metal construction tables that are aging and in fair-to-poor condition (SSWD 2016). The facility also includes one flush restroom buildings (i.e., 7 toilets, 1 urinal and 4 sinks) and two vault restroom buildings (i.e., each with 4 toilets), all of which are aging and in fair condition overall. The facility includes two overflow parking areas (paved) for a total of 18 single vehicles. The circulation roads consist of one-way, 12-ft-wide, and two-way, 20-ft-wide paved roads (1.2 mi in length). The parking areas and roads are in good condition (SSWD 2016). Representative photographs are provided in Figure 2.2-11.



Standard Campsite



Standard Campsite Table



Vault Restroom Building (4 stalls)

Figure 2.2-11. Photographs (dated 7/21/15) of the family campground at the South Shore Recreation Area.

2.2.2.2 Group Campground

The group campground consists of a single group campsite located in a forested setting on a bluff along the west shoreline of the SSRA. The facility consists of one group campsite serving 50 people-at-one-time. This site consists of a wood-metal table, large concrete fire ring, large food preparation table/area, a pedestal grill, trash cans and a gravel parking area for 10 vehicles. The access road to the sites is a two-way paved road. A water spigot is located at the start of the access road to the group campsite. Overall, the amenities are in good condition, with the exception of the wood-metal construction table that is in poor condition (SSWD 2016). A restroom building is available at the nearby family campground. The access road is a 20-ft-wide, two-way paved road (0.2 mi in length). A representative photograph of the facility is provided in Figure 2.2-12.



Group Campsite



Campsite Amenities



Parking Area

Figure 2.2-12. Photograph (dated 7/21/15) of the group campsite at the South Shore Recreation Area.

2.2.2.3 Picnic Area

The picnic area is located in a semi-forested setting along the east shoreline of the SSRA. The facility consists of 33 picnic sites, each with a table, and a parking area for 44 single vehicles. Pedestal grills, water spigots and trash cans are dispersed throughout the area for picnickers. The facility utilizes the boat ramp's flush restroom building (i.e., 7 toilets, 1 urinal and 4 sinks) located at the top of the boat ramp facility. The circulation road is a 10-ft-wide, one-way dirt and paved asphalt road (0.4 mi in length). Overall, the facilities are in good condition (SSWD 2016). Representative photographs of the facilities are provided in Figure 2.2-13.



Picnic Area



Picnic Site Amenities



Parking Area

Figure 2.2-13. Photographs (dated 7/21/15) of the picnic area at the South Shore Recreation Area.

2.2.2.4 Swim Beach

The swim beach is located in an open setting along the west shoreline of the SSRA in a cove commonly referred to as “Quarter Mile Cove” (Figure 2.2-14). The site provides direct water access for swimming and other water play activities for the campground visitors. Trash cans are dispersed throughout the area. The circulation road is a 10-ft-wide, one-way dirt road (0.1 mi in length). Overall, the few facilities provided (i.e., trash cans) are in good condition (SSWD 2016). The facility utilizes the family campground’s vault restroom buildings located near the swim beach area.



Figure 2.2-14. Photograph (dated 7/21/15) of the swim beach at the South Shore Recreation Area.

2.2.2.5 Boat Ramp

The boat ramp is located on the northeast shoreline between the family campground and the day use area. The facility consists of a boat launching ramp, parking area and restroom building. The boat ramp is a 2-lane concrete and asphalt ramp with a floating courtesy dock. The end of the concrete/asphalt ramp is at 220.0 ft elevation and boat launching below this level is not advisable. The concrete section of the ramp and the courtesy dock are in good condition; whereas the lower asphalt section of the ramp is in poor condition with eroding edges and extensive cracking (SSWD 2016). The parking area provides a total of 52 vehicles with trailer spaces in a gravel lot and paved lot paralleling the top of the ramp access road. The parking areas are in good condition (SSWD 2016). The facility includes one flush restroom building with seven toilets, one urinal and four sinks. The restroom building is in fair condition (SSWD 2016). The boat launch uses the main entrance access road is a 20-ft-wide, two-way paved road (0.5 mi in length), which is the main entrance road into the SSRA. Representative photographs of the facilities are provided in Figure 2.2-15.



Figure 2.2-15. Photographs (dated 7/21/15) of the boat ramp facility at the South Shore Recreation Area.

2.2.2.6 Dispersed Use Areas

The SSRA has two dispersed use areas located on the west shoreline (Quarter Mile Cove dispersed use area) and southeast shoreline adjacent to the entrance station (Entrance Gate dispersed use area). Both areas are accessed by 10-ft-wide dirt roads (1.7 mi in length). These

areas allow for dispersed day use and overnight camping, but provide minimal facilities – roads, trash cans and six portable chemical toilets. Overall, the facilities are good condition (SSWD 2016). Representative photographs of the facilities are provided in Figure 2.2-16.



Figure 2.2-16. Photographs (dated 7/21/15) of the dispersed use areas at the South Shore Recreation Area.

2.2.2.7 Recreational Water System

A recreational water system provides water throughout the SSRA, excluding the dispersed use area. The SSRA receives water from the NSRA water treatment plant and storage tank via two pipes under the reservoir. The water is dispersed throughout the SSRA via underground distribution piping, where water is accessible via water hydrants dispersed throughout the recreation area facilities. The SSRA system also includes a sewage pond with an aerator to handle the sanitary needs of the flush restroom buildings and the RV dump station. The SSRA sewage system is a gravity-fed system. The sewage pond is accessed using a 10-ft-wide dirt road (0.1 mi in length). Overall, these facilities are in good condition (SSWD 2016).

2.2.2.8 Other Facilities

The SSRA also includes an entrance station, general store, RV dump station, and private ranger residences and maintenance buildings. The store is located near the entrance to the SSRA facilities and also serves as the entrance station for the recreation area. A fuel station is also located at the general store. The RV dump station is located across from the general store and provides a 1-lane facility connected to a sewer system for RV holding tank disposal. The main entrance access road is a 20-ft-wide, two way asphalt road (0.5 mi long). Overall, these facilities are in good-to-very good condition. Private ranger residences are also located between the entrance station and the boat ramp facilities that include residences and maintenance buildings, which is accessed by a 10-ft-wide, one way dirt road (0.3 mi long). Photographs of these facilities are provided in Figure 2.2-17.



General Store/Entrance Station with Fuel Station (in background)

RV Dump Station

Figure 2.2-17. Photographs (dated 7/21/15) of the entrance station and RV dump station at the South Shore Recreation Area.

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SECTION 3.0

FACILITY OPERATION & REHABILITATION

This section describes the recreation facility measures that will be implemented by SSWD for the Project during the new license. This section is divided into two sub-sections, including: 1) recreational facility annual operational maintenance and activities; and 2) recreational facility major rehabilitation.

3.1 Recreational Facility Operational Maintenance

3.1.1 Operational Maintenance Responsibility

SSWD shall be responsible for the annual maintenance, rehabilitation, and replacement of all the Project recreational facilities at the Camp Far West Reservoir Recreation Areas (RAs). SSWD intends to use a concessionaire for the administration, O&M of the Project's recreation facilities.

3.1.2 Operational Maintenance Activities

Operational maintenance activities keep permanent assets in an acceptable condition and include repairs, painting, replacement of minor parts and minor structural components. Operational maintenance, or reconditioning, neither materially adds to the value of the property nor appreciably prolongs its life. Operational maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than those originally intended. The work serves only to keep the facility in an ordinary, efficient operating condition.

Examples of regular or routine operational maintenance activities include, but are not limited to interior painting, repair of broken windows, light bulb replacement, cleaning, unplugging drains, greasing, servicing, inspecting, oiling, adjusting, tightening, aligning, sweeping and general snow removal. Maintenance activities may include work needed to meet applicable laws, regulations, codes, and other legal direction (such as compliance with the Americans with Disabilities Act) as long as the original intent or purpose of the fixed asset is not changed.

Annual operational maintenance includes those activities that are expected to occur on an annual or semi-annual schedule, as conditions warrant. Annual maintenance activities include, but are not limited to: straightening all vehicle barriers and signs, rehabilitating picnic tables, pumping or servicing vault or portable toilets, and conducting state and local required water quality testing of the water supply system.

3.1.3 Recreation Area Campfire Policy

SSWD will allow wood burning campfires when contained within approved fire containment “fire-rings” and/or burn-barrels, and may restrict such use based on existing conditions and other local agency fire restriction policies.

3.2 Recreational Facility Major Rehabilitation

This section identifies what and how SSWD will rehabilitate and replace the existing Project recreation facilities – all located on SSWD land. Rehabilitation includes reconditioning or replacing an existing fixed asset or any of its components in order to restore the functionality or life of the asset. Replacement is the substitution or exchange of an existing fixed asset or component with one having essentially the same capacity and purpose. The decision to replace or rehabilitate a fixed asset or component is usually reached when replacement is more cost effective or more environmentally sound. Replacement of an asset or component usually occurs when it nears or has exceeded its useful life.

SSWD shall be responsible for the full cost for major rehabilitation or replacement of existing recreation facilities listed in Section 2.2. SSWD shall be responsible for performing all needed rehabilitation activities through the provision of necessary personnel, equipment, materials and management. SSWD shall be responsible to replace/rehabilitate recreation features which currently exist at their recreation facilities. All the facilities are located on SSWD land, and all new, rehabilitated, and reconstructed Project recreation facilities will meet applicable standards in place at the time of design and construction including any applicable Americans with Disabilities Act guidelines and any other applicable accessibility guidelines at the time of design.

SSWD shall rehabilitate facilities the individual facilities and components at each Project RA facility in accordance with the specifications in Table 3.2-1 when the facilities near the end of their useful life.

Table 3.2-1. Major rehabilitation guidelines for Project recreation facilities.

Type of Facility	Major Rehabilitation Guidelines
Roads, Parking Areas and Campground Vehicle Spurs	As needed, SSWD shall rehabilitate all existing roads and parking areas within the Project RAs. Specifically, SSWD shall: <ul style="list-style-type: none"> • Repave (asphalt) and re-stripe parking areas, including installing vehicle barriers at each parking area and accessible parking designation; • Repave/overlay existing asphalt circulation roads with asphalt; and install vehicle barriers, where necessary; • Grade all existing dirt circulation roads; and install vehicle barriers, where necessary. • Where unpaved, gravel or dirt parking areas exist, re-grade and clear the parking area and re-install vehicle barriers, as needed; and • Repave or overlay existing asphalt campsite spurs or grade existing dirt campsite spurs and install vehicle barriers at each new spur, as needed. Rehabilitation of roads, parking areas, and vehicle spurs shall occur on a site-by-site or facility-by-facility basis at all Project RAs. Roads, parking areas, and vehicle spurs shall be scheduled for rehabilitation near the end of their useful life based on the findings during regular or annual inspections.
Fire Rings, Grills, and Picnic Tables	SSWD will replace fire rings, grills, picnic tables, and other constructed features near the end of their useful life based on regular or annual inspections.
Signs	SSWD shall replace all existing entrance signs, directional signs, information/bulletin signs and trailhead signs, as needed, near the end of their useful life based on regular or annual inspections. SSWD shall replace signs with a sign of a similar design, and at least to the same construction as currently exist. Alternative materials may be used (i.e. recycled plastic, metal, etc.).

Table 3.2-1. (continued)

Restroom and Sewage Pond Facilities	SSWD shall replace the existing restroom facilities, as needed, near the end of their useful life. Each restroom facility shall maintain the same general current footprint and number of toilets, sinks, and stalls, unless SSWD determines that the location and layout of the restroom facility should be modified. The flush restroom facilities throughout the Project RAs discharge to a sewer collection system that routes sewage to the respective RA sewage ponds. The sewage ponds are permitted by the State and include operating, monitoring and reporting requirements. Sewage ponds will be maintained in acceptable condition to meet permit requirements and upgraded as needed depending on equipment life and regulatory requirements.
Recreation Area Water Systems	SSWD shall maintained the recreational water system (i.e., distribution piping, system connections, water hydrants, storage tanks and treatment facility) in condition to meet permit requirements and upgrade the facilities as needed depending on equipment life and regulatory requirements. SSWD will replace segments or portions of the underground distribution piping as condition warrants or leaks or inefficiencies in the system are identified, which will occur on a case-by-case basis. Overall, SSWD anticipates that all of the underground distribution system will be replaced or rehabilitated before the end of the new license term. SSWD will replace all the above-ground facilities (i.e., water hydrants and fountains) within the first 3 years of the new license based on the specific condition of each individual hydrant or fountain.
Boat Launch Floating Boat Docks and Boat Ramps	SSWD shall replace the floating boat docks and concrete launch ramps as each facility nears the end of its useful life. At the NSRA boat launch facility (reconstructed in 2005 with DBAW grant funding), SSWD shall include the replacement of the existing floating boat dock and concrete launch ramp with structures that meet the DBAW standards at the time of design. At the SSRA boat launch facility, SSWD shall include the replacement of the existing floating boat dock and launch ramp with structures that consider user demand, resource concerns, reservoir drawdown, and design standards of the time.
Trash Receptacles and Dumpsters	SSWD shall replace the existing trash receptacles and dumpsters, as needed, near the end of their useful life. For the existing trash receptacles, SSWD will install attached lids to each receptacle within the first 2 years of the new license.

Importantly, at any time during the new license when major rehabilitation is planned, the work and placement will not occur in sensitive resource areas (e.g. wetlands, culturally sensitive sites, critical wildlife habitats, sensitive botanical sites). In addition, for any ground disturbing work related to minor rehabilitation, major rehabilitation, or capital improvements, SSWD will follow the invasive weed prevention and vegetation management practices. Specifically, SSWD will follow all applicable measures related to invasive weed and aquatic invasive species prevention, revegetation of recreation facility lands, and sensitive resource buffers and/or limited operating periods.

3.3 Replacement of Existing Facilities Due to Camp Far West Reservoir Pool Raise

Construction of the Camp Far West Reservoir pool raise from 300 ft to 305 ft would inundate or impact the function of select recreational facilities along the shoreline at both the NSRA and SSRA. Overall, the pool raise would affect 104 recreational facilities or site features along the shoreline at the NSRA and SSRA. Most of the affected features would be directly affected by the pool raise by either partially or fully inundating the features (i.e., campsite living space and amenities, circulation road, etc.). Some of the features would be indirectly affected, whereby the pool raise would not inundate the feature, but would closely abut the feature likely resulting in flooding and/or erosion impacts to the features due to wind, wave or high flow events.

SSWD will replace all the impacted recreation facilities in-kind (i.e., one-to-one replacement) within each respective recreation area. SSWD anticipates that all of the affected facilities will be relocated within each existing respective recreation area boundary and FERC boundary. However, if necessary, SSWD would utilize lands outside the recreation area and FERC

boundary to replace all of the impacted facilities in-kind (and update the FERC boundary if necessary). The construction work to relocate, re-route or realign the affected features would be completed in one calendar year. Overall, the majority of the construction would occur outside the peak recreation season (i.e., Memorial Day through Labor Day holiday weekends). In instances where construction would be necessary during the peak season, the work would be restricted to select areas and conducted during low-use periods (i.e., weekdays) to minimize any impacts to the recreation facilities and visitor experiences. SSWD will comply with any pertinent sensitive resource buffers and/or limited operating periods (e.g., great blue heron rookery in the SSRA).

SECTION 4.0

PLAN REVISION

4.1 Plan Revision

SSWD will review, update, and/or revise the Plan if changes in recreation use or resources create the need to update the plan. A need may arise from day-to-day O&M of the Project, or, from other anticipated and unanticipated events that may arise during the license period. Examples of such events that may trigger a need to update the plan include unforeseen recreation needs, new recreation technologies, or significant changes in the amount and types of recreation uses.

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SECTION 5.0

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- Yuba County. 2010. Yuba County Code of Ordinances, Chapter 8.51 - Camp Far West Lake. Marysville, California. Adopted August 24, 2010.

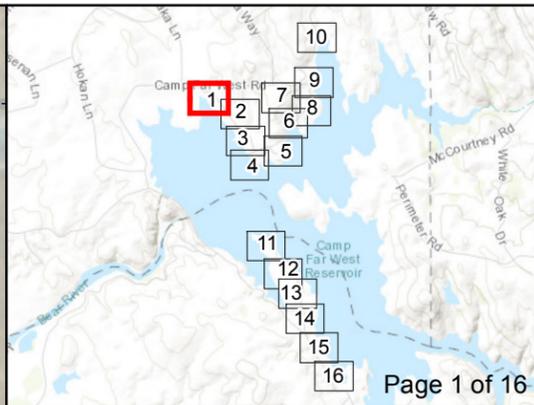
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Appendix C. Recreation Area Impacts Mapbook

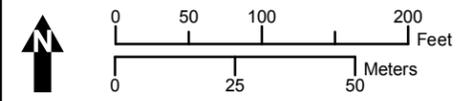
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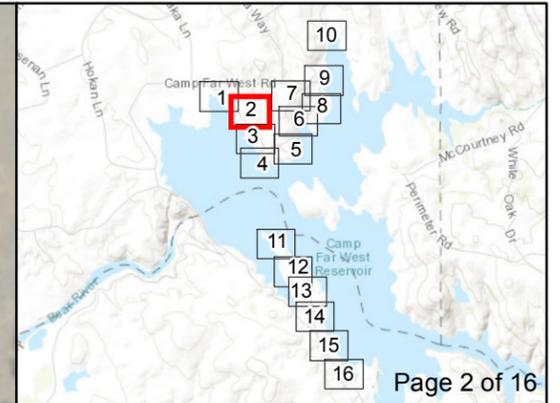
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- FERC Boundary 2997
- Normal Maximum Water Surface Elevation (300 ft)
- Pool Raise Elevation 305 ft
- Impacted area due to pool raise



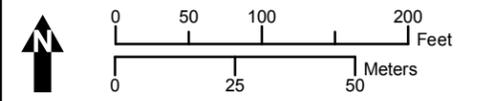
**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP:22 NAD83

Map Prepared by: HDR | © 2018 South Sutter Water District



- Legend**
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 - Unpaved Road (dirt)
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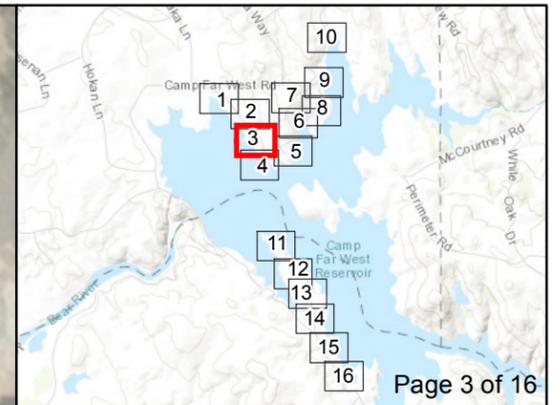


**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

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To Jet Ski Cove
Dispersed Use Area



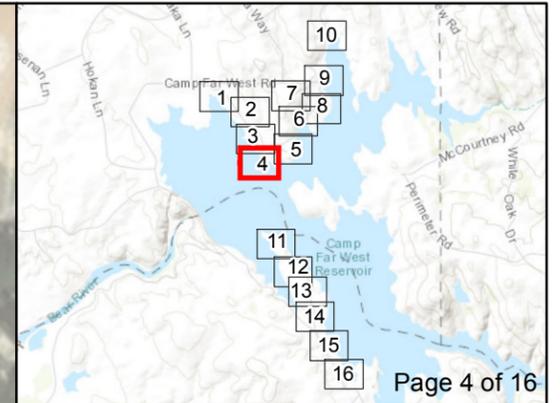
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- Boat Ramp
- Campsite-Group
- Campsite-RV
- Campsite-Standard
- Fire Ring
- Grill
- Manhole
- Picnic Site
- Restroom
- Sewage Pump
- Shack; Store
- Table
- Water-Hydrant
- Paved Road
- Unpaved Road (dirt)
- Parking Area (paved)
- Ranger
- Restroom
- Concession Stand; Store
- FERC Boundary 2997
- Normal Maximum Water Surface Elevation (300 ft)
- Pool Raise Elevation 305 ft
- Impacted area due to pool raise

0 50 100 200 Feet
0 25 50 Meters

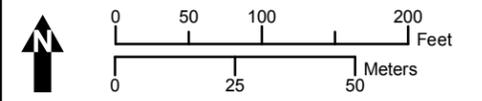
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SSWD Camp Far West Hydroelectric
Project No. 2997

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Legend

- Boat Ramp
- Campsite-Standard
- Grill
- Picnic Site
- Restroom
- Shack; Store
- Water-Hydrant
- Paved Road
- Unpaved Road (dirt)
- Boat Ramp
- Parking Area (paved)
- Restroom
- Concession Stand; Store
- FERC Boundary 2997
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**Recreation Area Impacts
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SSWD Camp Far West Hydroelectric
Project No. 2997

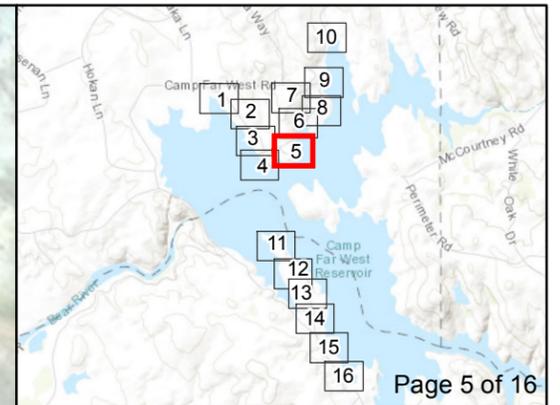
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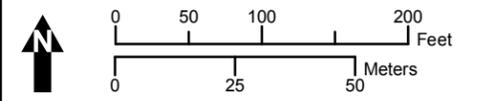


To Boss Point
Dispersed
Use Area

Family Campground



- Legend**
- Campsite-Standard
 - ⊕ Gate
 - RV Dump Station
 - Restroom
 - Water-Hydrant
 - ▬ Paved Road
 - ▬ Unpaved Road (dirt)
 - ▭ Parking Area
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 - ▭ Pool Raise Elevation 305 ft
 - ▭ Impacted area due to pool raise



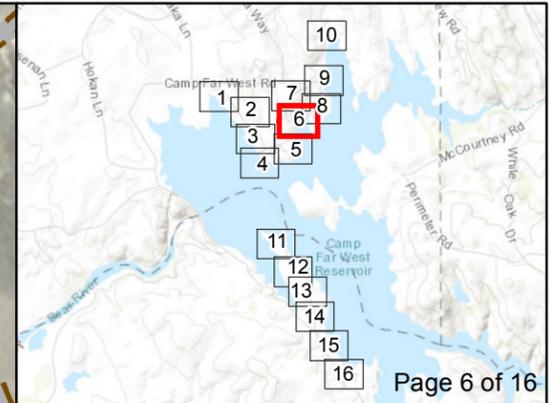
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SSWD Camp Far West Hydroelectric
Project No. 2997

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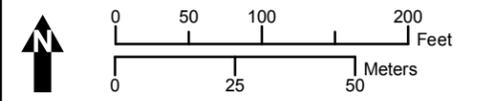
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**Boss Point
Dispersed
Use Area**



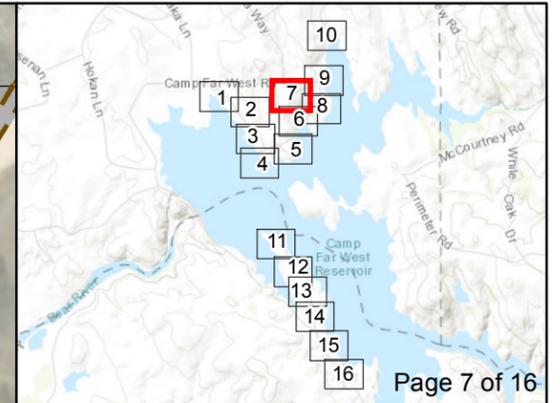
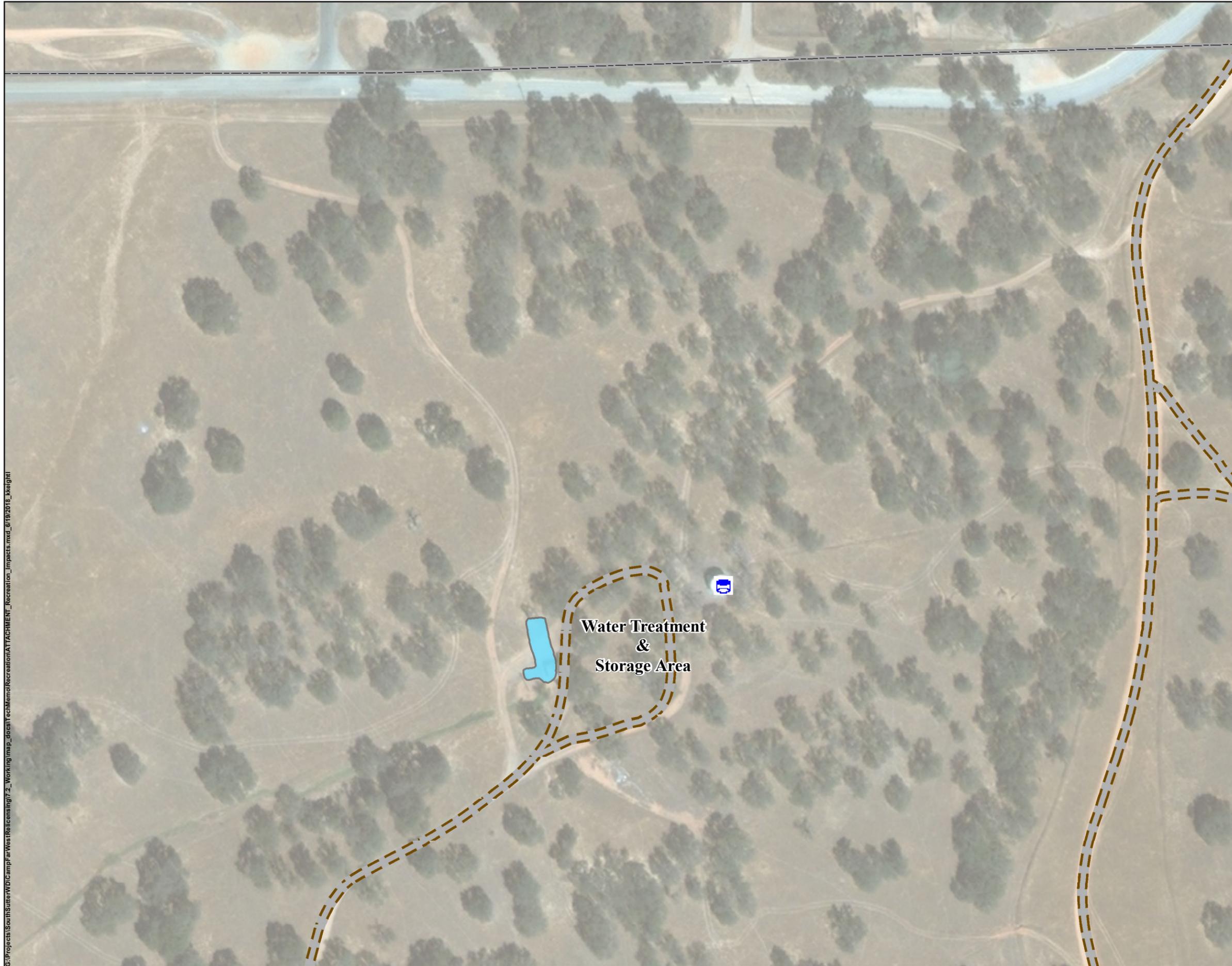
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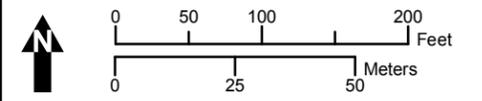
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Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

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Map Prepared by: HDR | © 2018 South Sutter Water District

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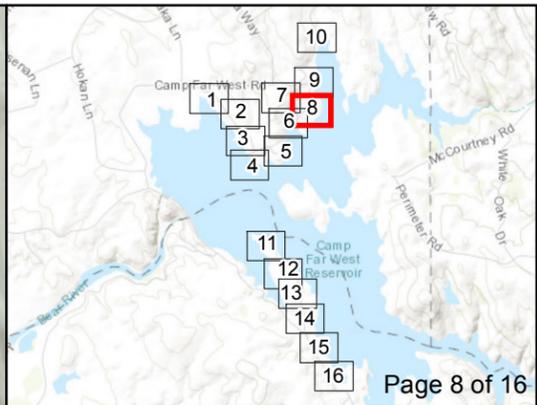
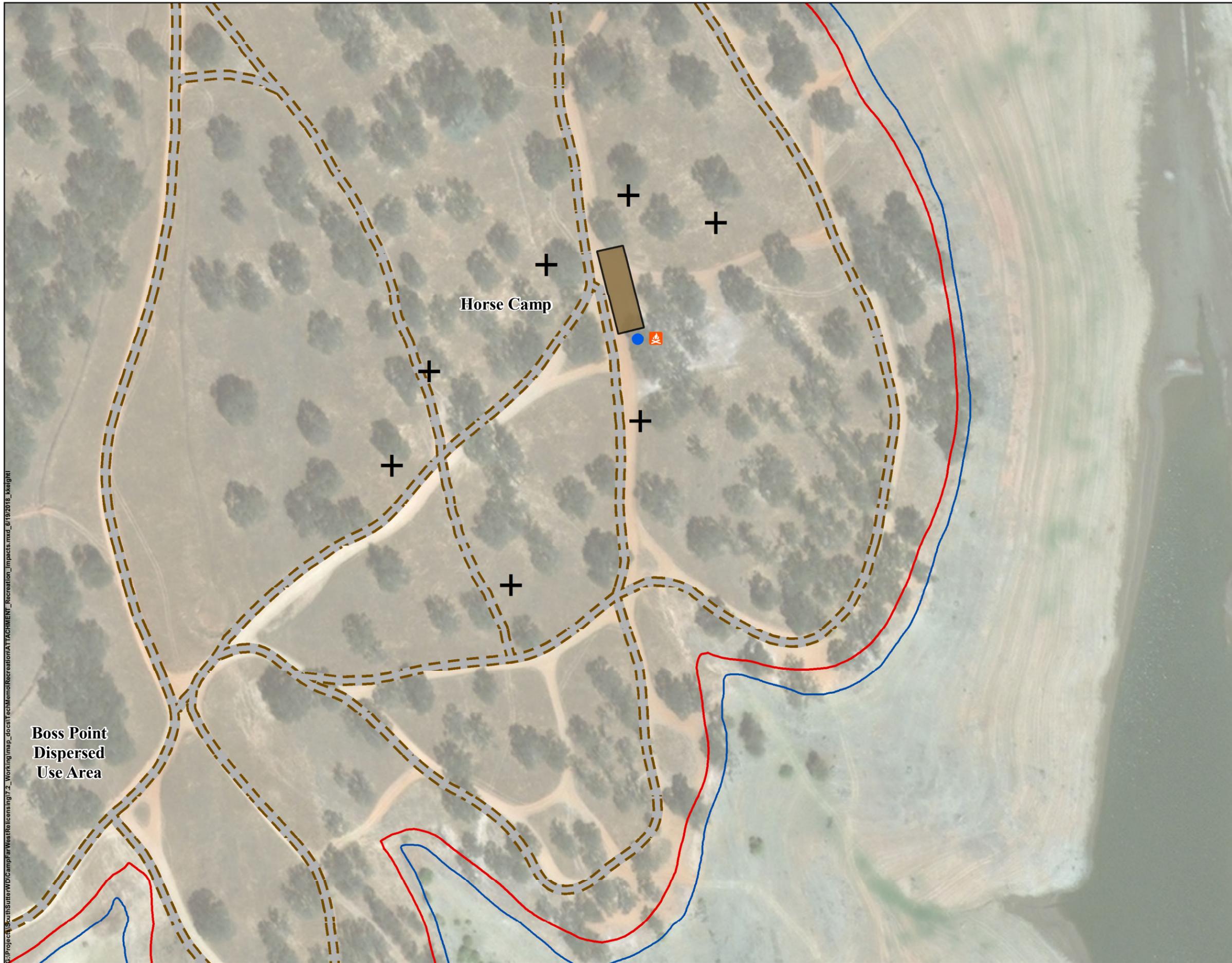
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**Recreation Area Impacts
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SSWD Camp Far West Hydroelectric
Project No. 2997

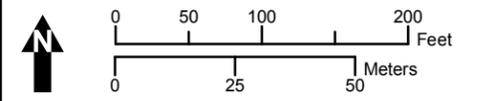
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- Legend**
-  Fire Ring
 -  Hitching Post
 -  Water-Hydrant
 -  Unpaved Road (dirt)
 -  Parking Area (dirt)
 -  FERC Boundary 2997
 -  Normal Maximum Water Surface Elevation (300 ft)
 -  Pool Raise Elevation 305 ft

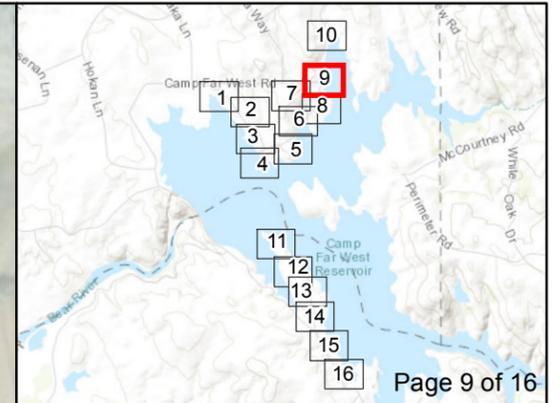
**Boss Point
Dispersed
Use Area**



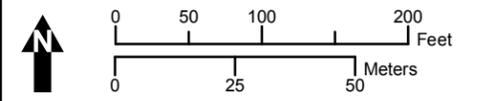
**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP22 NAD83

E:\Project\SouthSutter\WD\CampFarWest\Recreation\7_2_Working\map_docal\TechMemoRecreation\ATTACHMENT_Recreation_Impacts.mxd_01/19/2018_kknight



- Legend**
- Unpaved Road (dirt)
 - FERC Boundary 2997
 - Normal Maximum Water Surface Elevation (300 ft)
 - Pool Raise Elevation 305 ft
 - Impacted area due to pool raise



**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

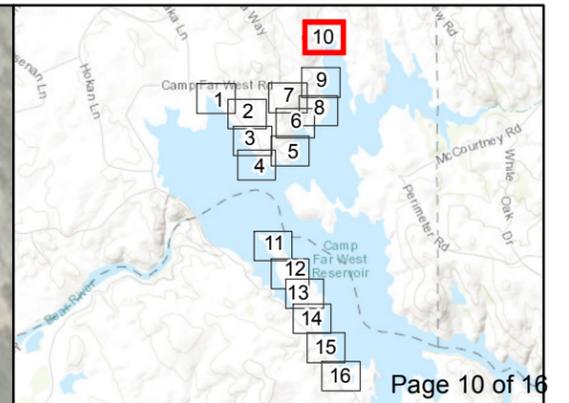
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP22 NAD83
Map Prepared by: HDR | © 2018 South Sutter Water District

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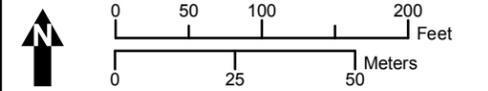


**Boss Point
Dispersed
Use Area**



Legend

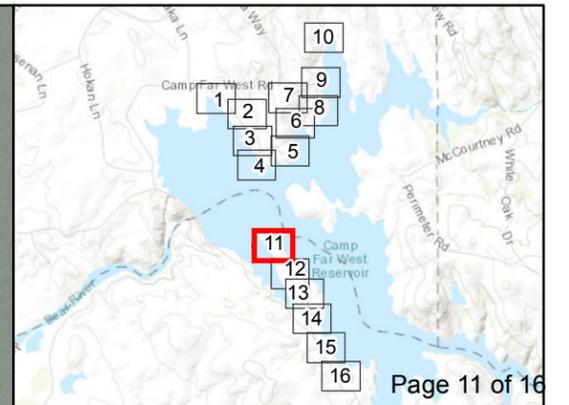
-  Gate
-  Unpaved Road (dirt)
-  FERC Boundary 2997
-  Normal Maximum Water Surface Elevation (300 ft)
-  Pool Raise Elevation 305 ft
-  Impacted area due to pool raise



**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

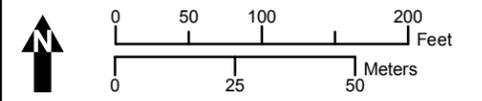
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP:22 NAD83

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Legend

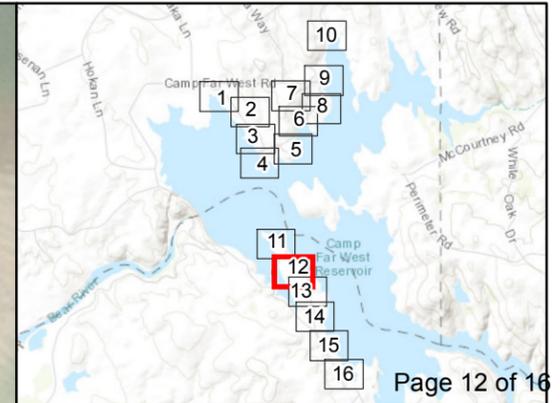
- Campsite-Standard
- 🚻 Restroom
- Ⓢ Stage
- Water-Hydrant
- ▬ Paved Road
- ▬ Unpaved Road (dirt)
- ▨ Parking Area (paved)
- Restroom
- Swim Beach
- ▭ FERC Boundary 2997
- ▭ Normal Maximum Water Surface Elevation (300 ft)
- ▭ Pool Raise Elevation 305 ft
- ▨ Impacted area due to pool raise



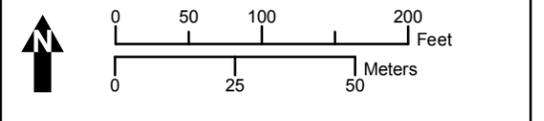
**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP:22 NAD83

Map Prepared by: HDR | © 2018 South Sutter Water District



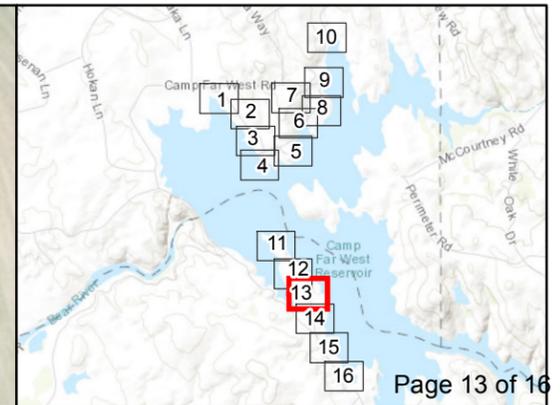
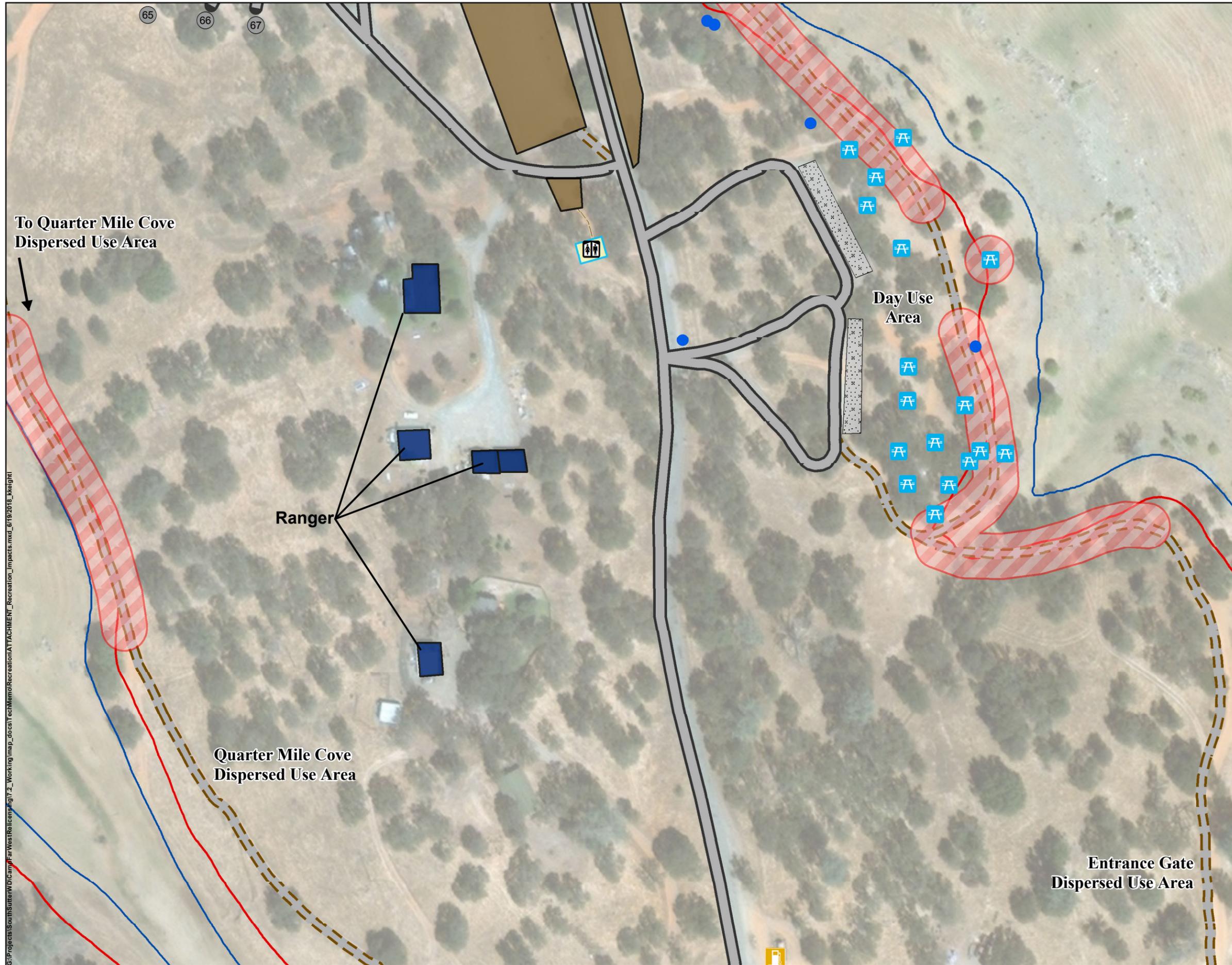
- Legend**
- Boat Ramp
 - Campsite-Group
 - Campsite-Standard
 - Picnic Site
 - Restroom
 - Water-Hydrant
 - Paved Road
 - Unpaved Road (dirt)
 - Boat Ramp
 - Parking Area (dirt)
 - Parking Area (paved)
 - Ranger
 - Restroom
 - FERC Boundary 2997
 - Normal Maximum Water Surface Elevation (300 ft)
 - Pool Raise Elevation 305 ft
 - Impacted area due to pool raise



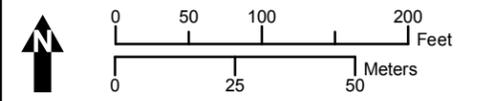
**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP22 NAD83
Map Prepared by: HDR | © 2018 South Sutter Water District

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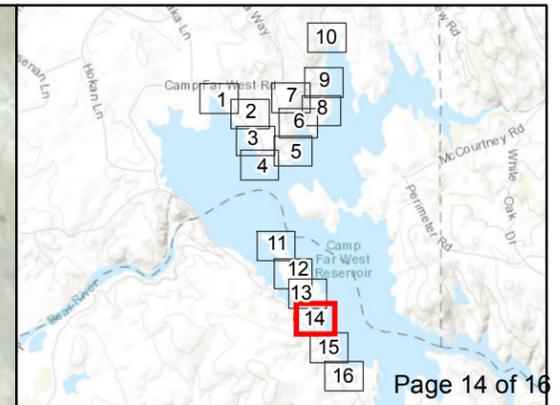
- Legend**
- Campsite-Standard
 - 🛢 Fuel Station
 - 🍷 Picnic Site
 - 🚻 Restroom
 - Water-Hydrant
 - ▬ Paved Road
 - ▬ Unpaved Road (dirt)
 - ▭ Parking Area (dirt)
 - ▭ Parking Area (paved)
 - ▭ Ranger
 - 🚻 Restroom
 - ▭ FERC Boundary 2997
 - ▬ Normal Maximum Water Surface Elevation (300 ft)
 - ▬ Pool Raise Elevation 305 ft
 - ▨ Impacted area due to pool raise



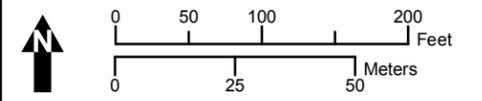
**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP:22 NAD83
Map Prepared by: HDR | © 2018 South Sutter Water District

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- Legend**
- Fuel Station
 - Gate
 - RV Dump Station
 - Paved Road
 - Unpaved Road (dirt)
 - Parking Area (paved)
 - Concession Stand; Store
 - Water-Sewage Pond
 - FERC Boundary 2997
 - Normal Maximum Water Surface Elevation (300 ft)
 - Pool Raise Elevation 305 ft
 - Impacted area due to pool raise



**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

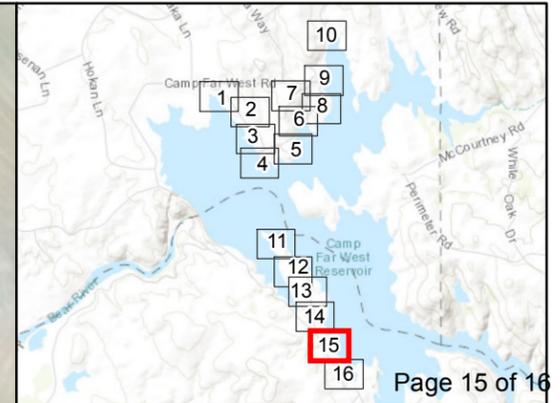
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP:22 NAD83

Map Prepared by: HDR | © 2018 South Sutter Water District

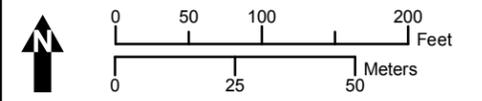
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**Entrance Gate
Dispersed Use Area**



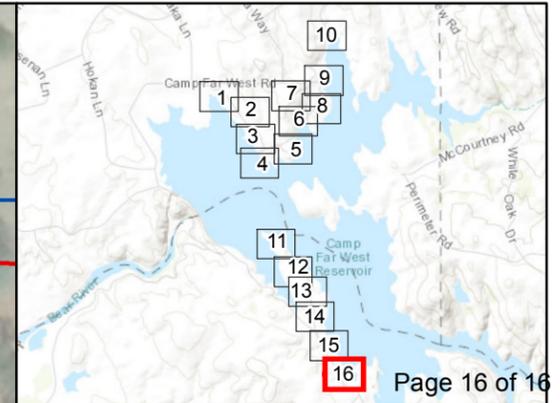
- Legend**
- Unpaved Road (dirt)
 - FERC Boundary 2997
 - Normal Maximum Water Surface Elevation (300 ft)
 - Pool Raise Elevation 305 ft
 - Impacted area due to pool raise



**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

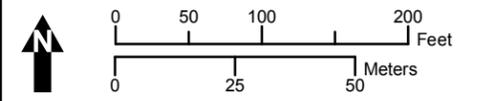
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP22 NAD83

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- Legend**
- Unpaved Road (dirt)
 - FERC Boundary 2997
 - Normal Maximum Water Surface Elevation (300 ft)
 - Pool Raise Elevation 305 ft
 - Impacted area due to pool raise

**Entrance Gate
Dispersed Use Area**



**Recreation Area Impacts
Due to 305' Pool Raise**
SSWD Camp Far West Hydroelectric
Project No. 2997

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: CASP22 NAD83
Map Prepared by: HDR | © 2018 South Sutter Water District

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Appendix D. California Emissions Estimator Model (CalEEMod) Output

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Camp Far West FERC Relicensing - Feather River AQMD Air District, Annual

**Camp Far West FERC Relicensing
Feather River AQMD Air District, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	0.00	User Defined Unit	30.00	1,306,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	3.4	Precipitation Freq (Days)	67
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - area to be disturbed for the pool raise = 30 acres
- Construction Phase - adjusted based on project description
- Off-road Equipment - adjusted per project description
- Off-road Equipment - adjusted based on project description
- Off-road Equipment - adjusted per project description
- Trips and VMT - adjusted based on project description
- Grading - acres to be disturbed = 30 acres
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
------------	-------------	---------------	-----------

tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstructionPhase	NumDays	45.00	200.00
tblGrading	AcresOfGrading	0.00	30.00
tblGrading	AcresOfGrading	10.00	0.00
tblGrading	MaterialExported	0.00	550.00
tblGrading	MaterialImported	0.00	1,730.00
tblLandUse	LandUseSquareFeet	0.00	1,306,800.00
tblLandUse	LotAcreage	0.00	30.00
tblOffRoadEquipment	HorsePower	97.00	217.00
tblOffRoadEquipment	HorsePower	97.00	217.00
tblOffRoadEquipment	HorsePower	97.00	217.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	173.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	285.00	110.00

tblTripsAndVMT	VendorTripLength	6.60	40.00
tblTripsAndVMT	VendorTripLength	6.60	40.00
tblTripsAndVMT	VendorTripLength	6.60	40.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
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tblTripsAndVMT	WorkerTripNumber	23.00	16.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.2831	2.2440	2.5605	6.4400e-003	0.0525	0.0861	0.1386	0.0116	0.0811	0.0927	0.0000	562.6922	562.6922	0.1347	0.0000	566.0588
Maximum	0.2831	2.2440	2.5605	6.4400e-003	0.0525	0.0861	0.1386	0.0116	0.0811	0.0927	0.0000	562.6922	562.6922	0.1347	0.0000	566.0588

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2025	0.2831	2.2440	2.5605	6.4400e-003	0.0525	0.0861	0.1386	0.0116	0.0811	0.0927	0.0000	562.6916	562.6916	0.1347	0.0000	566.0582
Maximum	0.2831	2.2440	2.5605	6.4400e-003	0.0525	0.0861	0.1386	0.0116	0.0811	0.0927	0.0000	562.6916	562.6916	0.1347	0.0000	566.0582

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2025	4-5-2025	0.7235	0.7235
2	4-6-2025	7-5-2025	0.7305	0.7305
3	7-6-2025	9-30-2025	0.6984	0.6984
		Highest	0.7305	0.7305

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6180	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.6180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6180	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.6180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/6/2025	1/31/2025	5	20	
2	Construction	Grading	2/1/2025	11/7/2025	5	200	
3	Cleanup	Site Preparation	11/8/2025	12/5/2025	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Air Compressors	2	8.00	78	0.48
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Off-Highway Trucks	1	2.00	350	0.38
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	217	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	217	0.37
Construction	Air Compressors	1	8.00	78	0.48
Construction	Cranes	1	8.00	231	0.29
Construction	Excavators	0	8.00	158	0.38
Construction	Generator Sets	1	8.00	84	0.74
Construction	Graders	0	8.00	187	0.41
Construction	Off-Highway Trucks	1	2.00	350	0.38
Construction	Off-Highway Trucks	1	8.00	510	0.38
Construction	Rubber Tired Dozers	0	8.00	247	0.40
Construction	Scrapers	0	8.00	367	0.48
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Tractors/Loaders/Backhoes	1	8.00	217	0.37
Construction	Welders	1	8.00	46	0.45
Cleanup	Off-Highway Trucks	1	8.00	402	0.38
Cleanup	Off-Highway Trucks	1	8.00	173	0.38
Cleanup	Pavers	0	8.00	130	0.42
Cleanup	Paving Equipment	0	8.00	132	0.36
Cleanup	Rollers	0	8.00	80	0.38
Cleanup	Rubber Tired Dozers	0	8.00	247	0.40
Cleanup	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Worker	7.0000e-004	5.1000e-004	5.1900e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.3000e-004	0.0000	1.6001	1.6001	3.0000e-005	0.0000	1.6009
Total	7.0000e-004	5.1000e-004	5.1900e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.3000e-004	0.0000	1.6001	1.6001	3.0000e-005	0.0000	1.6009

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0239	0.1999	0.2542	5.8000e-004		7.8200e-003	7.8200e-003		7.3800e-003	7.3800e-003	0.0000	50.8649	50.8649	0.0131	0.0000	51.1928
Total	0.0239	0.1999	0.2542	5.8000e-004	0.0000	7.8200e-003	7.8200e-003	0.0000	7.3800e-003	7.3800e-003	0.0000	50.8649	50.8649	0.0131	0.0000	51.1928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.1000e-004	5.1900e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.3000e-004	0.0000	1.6001	1.6001	3.0000e-005	0.0000	1.6009
Total	7.0000e-004	5.1000e-004	5.1900e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.3000e-004	0.0000	1.6001	1.6001	3.0000e-005	0.0000	1.6009

3.3 Construction - 2025

Unmitigated Construction On-Site

Off-Road	0.2417	1.9459	2.1629	5.1700e-003		0.0763	0.0763		0.0718	0.0718	0.0000	448.3043	448.3043	0.1154	0.0000	451.1880
Total	0.2417	1.9459	2.1629	5.1700e-003	0.0161	0.0763	0.0924	1.7500e-003	0.0718	0.0736	0.0000	448.3043	448.3043	0.1154	0.0000	451.1880

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	9.8300e-003	1.9600e-003	5.0000e-005	1.1600e-003	2.0000e-005	1.1800e-003	3.2000e-004	2.0000e-005	3.4000e-004	0.0000	4.8536	4.8536	1.4000e-004	0.0000	4.8570
Vendor	1.4300e-003	0.0382	8.7200e-003	2.4000e-004	7.1600e-003	9.0000e-005	7.2400e-003	2.0700e-003	8.0000e-005	2.1500e-003	0.0000	22.9154	22.9154	3.0000e-004	0.0000	22.9229
Worker	6.9800e-003	5.0700e-003	0.0519	1.8000e-004	0.0234	1.3000e-004	0.0235	6.2100e-003	1.2000e-004	6.3300e-003	0.0000	16.0007	16.0007	3.4000e-004	0.0000	16.0092
Total	8.7200e-003	0.0531	0.0626	4.7000e-004	0.0317	2.4000e-004	0.0319	8.6000e-003	2.2000e-004	8.8200e-003	0.0000	43.7696	43.7696	7.8000e-004	0.0000	43.7891

3.4 Cleanup - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2500e-003	0.0441	0.0704	1.9000e-004		1.7800e-003	1.7800e-003		1.6300e-003	1.6300e-003	0.0000	16.5527	16.5527	5.3500e-003	0.0000	16.6865
Total	7.2500e-003	0.0441	0.0704	1.9000e-004	0.0000	1.7800e-003	1.7800e-003	0.0000	1.6300e-003	1.6300e-003	0.0000	16.5527	16.5527	5.3500e-003	0.0000	16.6865

Unmitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.1000e-004	5.1900e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.3000e-004	0.0000	1.6001	1.6001	3.0000e-005	0.0000	1.6009
Total	7.0000e-004	5.1000e-004	5.1900e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.3000e-004	0.0000	1.6001	1.6001	3.0000e-005	0.0000	1.6009

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Total	6.6180	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							
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Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.5143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.1037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.6180	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
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	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Camp Far West FERC Relicensing - Feather River AQMD Air District, Summer

**Camp Far West FERC Relicensing
Feather River AQMD Air District, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	0.00	User Defined Unit	30.00	1,306,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	3.4	Precipitation Freq (Days)	67
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - area to be disturbed for the pool raise = 30 acres
- Construction Phase - adjusted based on project description
- Off-road Equipment - adjusted per project description
- Off-road Equipment - adjusted based on project description
- Off-road Equipment - adjusted per project description
- Trips and VMT - adjusted based on project description
- Grading - acres to be disturbed = 30 acres
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstructionPhase	NumDays	45.00	200.00
tblGrading	AcresOfGrading	0.00	30.00
tblGrading	AcresOfGrading	10.00	0.00
tblGrading	MaterialExported	0.00	550.00
tblGrading	MaterialImported	0.00	1,730.00
tblLandUse	LandUseSquareFeet	0.00	1,306,800.00
tblLandUse	LotAcreage	0.00	30.00
tblOffRoadEquipment	HorsePower	97.00	217.00
tblOffRoadEquipment	HorsePower	97.00	217.00
tblOffRoadEquipment	HorsePower	97.00	217.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	173.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	285.00	110.00

tblTripsAndVMT	VendorTripLength	6.60	40.00
tblTripsAndVMT	VendorTripLength	6.60	40.00
tblTripsAndVMT	VendorTripLength	6.60	40.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripNumber	30.00	16.00
tblTripsAndVMT	WorkerTripNumber	23.00	16.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	2.5109	20.0323	26.0525	0.0602	0.4907	0.7836	1.2557	0.1066	0.7393	0.8269	0.0000	5,802.4129	5,802.4129	1.4502	0.0000	5,838.6687
Maximum	2.5109	20.0323	26.0525	0.0602	0.4907	0.7836	1.2557	0.1066	0.7393	0.8269	0.0000	5,802.4129	5,802.4129	1.4502	0.0000	5,838.6687

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2025	2.5109	20.0323	26.0525	0.0602	0.4907	0.7836	1.2557	0.1066	0.7393	0.8269	0.0000	5,802.4129	5,802.4129	1.4502	0.0000	5,838.6687
Maximum	2.5109	20.0323	26.0525	0.0602	0.4907	0.7836	1.2557	0.1066	0.7393	0.8269	0.0000	5,802.4129	5,802.4129	1.4502	0.0000	5,838.6687

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	36.2628	0.0000														

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/6/2025	1/31/2025	5	20	
2	Construction	Grading	2/1/2025	11/7/2025	5	200	
3	Cleanup	Site Preparation	11/8/2025	12/5/2025	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Air Compressors	2	8.00	78	0.48
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Off-Highway Trucks	1	2.00	350	0.38
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	217	0.37

Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	217	0.37
Construction	Air Compressors	1	8.00	78	0.48
Construction	Cranes	1	8.00	231	0.29
Construction	Excavators	0	8.00	158	0.38
Construction	Generator Sets	1	8.00	84	0.74
Construction	Graders	0	8.00	187	0.41
Construction	Off-Highway Trucks	1	2.00	350	0.38
Construction	Off-Highway Trucks	1	8.00	510	0.38
Construction	Rubber Tired Dozers	0	8.00	247	0.40
Construction	Scrapers	0	8.00	367	0.48
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Tractors/Loaders/Backhoes	1	8.00	217	0.37
Construction	Welders	1	8.00	46	0.45
Cleanup	Off-Highway Trucks	1	8.00	402	0.38
Cleanup	Off-Highway Trucks	1	8.00	173	0.38
Cleanup	Pavers	0	8.00	130	0.42
Cleanup	Paving Equipment	0	8.00	132	0.36
Cleanup	Rollers	0	8.00	80	0.38
Cleanup	Rubber Tired Dozers	0	8.00	247	0.40
Cleanup	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	12	16.00	0.00	0.00	20.00	40.00	25.00	LD_Mix	HDT_Mix	HHDT
Construction	9	16.00	2.00	110.00	20.00	40.00	25.00	LD_Mix	HDT_Mix	HHDT
Cleanup	2	16.00	0.00	0.00	20.00	40.00	25.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.3943	19.9866	25.4209	0.0582		0.7823	0.7823		0.7381	0.7381		5,606.8984	5,606.8984	1.4460		5,643.0480
Total	2.3943	19.9866	25.4209	0.0582	0.0000	0.7823	0.7823	0.0000	0.7381	0.7381		5,606.8984	5,606.8984	1.4460		5,643.0480

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207
Total	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.3943	19.9866	25.4209	0.0582		0.7823	0.7823		0.7381	0.7381	0.0000	5,606.8984	5,606.8984	1.4460		5,643.0479
Total	2.3943	19.9866	25.4209	0.0582	0.0000	0.7823	0.7823	0.0000	0.7381	0.7381	0.0000	5,606.8984	5,606.8984	1.4460		5,643.0479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207
Total	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207

3.3 Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1614	0.0000	0.1614	0.0175	0.0000	0.0175			0.0000			0.0000
Off-Road	2.4174	19.4585	21.6286	0.0517		0.7627	0.7627		0.7181	0.7181		4,941.7148	4,941.7148	1.2715		4,973.5019
Total	2.4174	19.4585	21.6286	0.0517	0.1614	0.7627	0.9241	0.0175	0.7181	0.7356		4,941.7148	4,941.7148	1.2715		4,973.5019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	3.1000e-003	0.0958	0.0189	5.1000e-004	0.0120	1.9000e-004	0.0122	3.3000e-003	1.8000e-004	3.4800e-003			53.9473	53.9473	1.4400e-003		53.9831
Vendor	0.0142	0.3663	0.0852	2.4200e-003	0.0740	8.7000e-004	0.0749	0.0213	8.4000e-004	0.0221			253.4347	253.4347	3.1600e-003		253.5137
Worker	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657			195.5145	195.5145	4.2500e-003		195.6207
Total	0.0935	0.5078	0.7357	4.8900e-003	0.3293	2.3100e-003	0.3316	0.0891	2.1700e-003	0.0913			502.8964	502.8964	8.8500e-003		503.1176

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1614	0.0000	0.1614	0.0175	0.0000	0.0175			0.0000			0.0000
Off-Road	2.4174	19.4585	21.6286	0.0517		0.7627	0.7627		0.7181	0.7181	0.0000	4,941.7148	4,941.7148	1.2715		4,973.5019
Total	2.4174	19.4585	21.6286	0.0517	0.1614	0.7627	0.9241	0.0175	0.7181	0.7356	0.0000	4,941.7148	4,941.7148	1.2715		4,973.5019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Hauling	3.1000e-003	0.0958	0.0189	5.1000e-004	0.0120	1.9000e-004	0.0122	3.3000e-003	1.8000e-004	3.4800e-003		53.9473	53.9473	1.4400e-003		53.9831
Vendor	0.0142	0.3663	0.0852	2.4200e-003	0.0740	8.7000e-004	0.0749	0.0213	8.4000e-004	0.0221		253.4347	253.4347	3.1600e-003		253.5137
Worker	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207
Total	0.0935	0.5078	0.7357	4.8900e-003	0.3293	2.3100e-003	0.3316	0.0891	2.1700e-003	0.0913		502.8964	502.8964	8.8500e-003		503.1176

3.4 Cleanup - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.7253	4.4144	7.0437	0.0189		0.1775	0.1775		0.1633	0.1633			1,824.6234	1,824.6234	0.5901	1,839.3764
Total	0.7253	4.4144	7.0437	0.0189	0.0000	0.1775	0.1775	0.0000	0.1633	0.1633			1,824.6234	1,824.6234	0.5901	1,839.3764

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657			195.5145	195.5145	4.2500e-003	195.6207

Total	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.7253	4.4144	7.0437	0.0189		0.1775	0.1775		0.1633	0.1633	0.0000	1,824.6234	1,824.6234	0.5901		1,839.3764
Total	0.7253	4.4144	7.0437	0.0189	0.0000	0.1775	0.1775	0.0000	0.1633	0.1633	0.0000	1,824.6234	1,824.6234	0.5901		1,839.3764

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207
Total	0.0761	0.0457	0.6316	1.9600e-003	0.2433	1.2500e-003	0.2445	0.0645	1.1500e-003	0.0657		195.5145	195.5145	4.2500e-003		195.6207

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.586316	0.026584	0.167517	0.094215	0.018410	0.004432	0.020637	0.074281	0.001155	0.000922	0.003934	0.000991	0.000607

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.2973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	27.9655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.2973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	27.9655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	36.2628	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
