

**STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD**

In the Matter of Water Quality Certification for

**SOUTH SUTTER WATER DISTRICT'S
CAMP FAR WEST HYDROELECTRIC PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2997

SOURCE: Bear River

COUNTIES: Nevada, Yuba, and Placer

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

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Acronyms and Abbreviations

<i>ac-ft</i>	<i>acre-feet</i>
<i>AIS</i>	<i>aquatic invasive species</i>
<i>Aquatic Weed Control Permit</i>	<i>Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Residual Aquatic Pesticide Discharges to Water of the United States from Algae and Aquatic Weed Control Applications</i>
<i>Antidegradation Policy</i>	<i>Statement of Policy with Respect to Maintaining High Quality Waters in California</i>
<i>Basin Plans</i>	<i>Bay-Delta Plan and SR/SJR Basin Plan</i>
<i>Bay-Delta</i>	<i>San Francisco Bay/Sacramento-San Joaquin Delta Estuary</i>
<i>Bay-Delta Plan</i>	<i>Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary</i>
<i>BMI</i>	<i>benthic macroinvertebrate</i>
<i>BMPs</i>	<i>best management practices</i>
<i>CDEC</i>	<i>California Data Exchange Center</i>
<i>CDFW</i>	<i>California Department of Fish and Wildlife</i>
<i>Central Valley Regional Board</i>	<i>Central Valley Regional Water Quality Control Board</i>
<i>Water Board</i>	
<i>CEQA</i>	<i>California Environmental Quality Act</i>
<i>certification</i>	<i>water quality certification</i>
<i>cfs</i>	<i>cubic feet per second</i>
<i>CFWID</i>	<i>Camp Far West Irrigation District</i>
<i>Construction General Permit</i>	<i>National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i>
<i>Deputy Director</i>	<i>Deputy Director of the Division of Water Rights</i>
<i>DOI</i>	<i>Department of the Interior</i>
<i>Dredge or Fill Procedures</i>	<i>State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State</i>
<i>DSOD</i>	<i>Division of Safety of Dams - California Department of Water Resources</i>
<i>DWR</i>	<i>California Department of Water Resources</i>
<i>ESA</i>	<i>Endangered Species Act</i>
<i>FERC</i>	<i>Federal Energy Regulatory Commission</i>
<i>FLA</i>	<i>final license application</i>

<i>FPA</i>	<i>Federal Power Act</i>
<i>ft</i>	<i>feet</i>
<i>FWN</i>	<i>Foothills Water Network</i>
<i>GPS</i>	<i>global position system</i>
<i>IS/MND</i>	<i>Initial Study and Mitigated Negative Declaration</i>
<i>Licensee</i>	<i>South Sutter Water District</i>
<i>LWM</i>	<i>large woody material</i>
<i>MIF</i>	<i>minimum instream flow(s)</i>
<i>MMRP</i>	<i>Mitigation Monitoring and Reporting Plan</i>
<i>NMFS</i>	<i>National Marine Fisheries Service</i>
<i>NMWSE</i>	<i>normal maximum water surface elevation</i>
<i>NPDES</i>	<i>National Pollutant Discharge Elimination System</i>
<i>OEHHA</i>	<i>California Office of Environmental Health and Hazard Assessment</i>
<i>pool raise</i>	<i>Raising the normal maximum water surface elevation of Camp Far West Reservoir by five feet from 300 feet to 305 feet</i>
<i>Project</i>	<i>Camp Far West Hydroelectric Project</i>
<i>Provisions</i>	<i>Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions</i>
<i>REA Notice</i>	<i>Notice of Application Ready for Environmental Analysis and Soliciting Comments, Recommendations, Terms and Conditions, and Prescriptions</i>
<i>Regional Water Boards</i>	<i>Regional Water Quality Control Boards</i>
<i>SR/SJR Basin Plan</i>	<i>Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin</i>
<i>SSWD</i>	<i>South Sutter Water District</i>
<i>State Water Board</i>	<i>State Water Resources Control Board</i>
<i>TMDLs</i>	<i>total maximum daily loads</i>
<i>TRG</i>	<i>Technical Review Group</i>
<i>USEPA</i>	<i>United States Environmental Protection Agency</i>
<i>USFWS</i>	<i>United States Fish and Wildlife Service</i>
<i>USGS</i>	<i>United States Geological Survey</i>
<i>Water Boards</i>	<i>State Water Board and Regional Water Boards, collectively</i>
<i>WPT</i>	<i>western pond turtle</i>
<i>WQMP Plans</i>	<i>Water Quality Monitoring and Protection Plans</i>
<i>WY</i>	<i>Water Year</i>

1.0 Project Description

South Sutter Water District (SSWD or Licensee) owns and operates the Camp Far West Hydroelectric Project (Project), which is also referred to as Federal Energy Regulatory Commission (FERC) Project No. 2997. The Project is located on the Bear River in Nevada, Yuba, and Placer counties, California (Attachment A: Project Overview Maps and Schematics). The Project's existing FERC boundary encompasses 2,863.7 acres of land, all of which is SSWD-owned or private.

The Project has a total gross storage capacity of 93,740 acre-feet (ac-ft) in Camp Far West Reservoir and a nameplate generating capacity of 6.8 megawatts. The Project consists of Camp Far West Dam¹, Camp Far West Reservoir, and Camp Far West Powerhouse. Water in Camp Far West Reservoir is routed through the Camp Far West Powerhouse at the base of the dam for non-consumptive hydroelectric energy generation. Water for hydroelectric energy generation is returned to the Bear River. SSWD and Camp Far West Irrigation District (CFWID) divert water from the Bear River below Camp Far West Dam at Camp Far West Diversion Dam; this water is delivered to local users for irrigation and domestic uses.

In addition to continued operations, as part of the FERC relicensing process, SSWD proposes five changes to existing Project facilities: 1) raising Camp Far West Dam's spillway crest by five feet (ft), which would allow the normal maximum water surface elevation (NMWSE) of Camp Far West Reservoir to increase by five ft from an elevation of 300 ft to an elevation of 305 ft (also referred to as the pool raise); 2) modifying Project recreation facilities to replace or rehabilitate locations impacted by the pool raise; 3) adding an existing Project road to the FERC license; 4) modifying the FERC boundary to add areas necessary for Project operations, and to remove 189.7 acres that are no longer necessary for Project operations; and 5) implementing a new flow regime and additional environmental and recreation measures.

Under a separate pending FERC license amendment process for the current FERC Project license, SSWD intends to construct and operate an auxiliary spillway on Camp Far West Dam. The construction of the auxiliary spillway is not part of the FERC Project relicensing and will require a separate amendment to the current FERC license, as well as a separate water quality certification (certification)², and potential amendment to this certification (Condition 16). This certification applies to the construction activities associated with raising the existing spillway crest (i.e., pool raise) and the construction, operation, maintenance, and other activities associated with Project facilities over the term of a new FERC license.

¹ For purposes of this certification, Camp Far West Dam is defined as the main dam, a zoned earthfill structure, including the North and South Wing Dams.

² On February 17, 2022, SSWD applied for a certification associated with a FERC license amendment request for construction of the auxiliary spillway.

For additional information on the Project, please refer to Attachment B (Project Description).

2.0 Water Rights

Table A lists the water rights held by SSWD and CFWID³ in relation to the Project.

Table A. SSWD and CFWID Water Rights related to Project Diversions*

Application No. (Permit or License No.)	Water Right Owner	Source Stream	Priority Date	Place of Storage or Diversion	Purpose(s) of Use
A014804 (License No. 11118)	SSWD	Bear River	1952	Camp Far West Dam and Reservoir; Camp Far West Diversion Dam**	Irrigation, Domestic, and Incidental Power***
A010221 (License No. 11120)	SSWD	Bear River	1941	Camp Far West Dam and Reservoir; Camp Far West Diversion Dam**	Irrigation, Domestic, and Incidental Power***
A026162 (Permit No. 18360)	SSWD	Bear River	1980	Camp Far West Dam and Reservoir	Power
A000959 (License No. 385)	CFWID	Bear River	1918	Camp Far West Ditch; Horst and Durst Ditch	Agriculture
A002881 (License No. 2266)	CFWID	Bear River	1922	Camp Far West Reservoir; Camp Far West Ditch; Horst and Durst Ditch	Irrigation
A003843 (License No. 2267)	CFWID	Bear River	1924	Camp Far West Ditch	Irrigation
A010190 (License No. 2740)	CFWID	Bear River	1941	Camp Far West Reservoir; Camp Far West Ditch; Horst and Durst Ditch	Irrigation

³ Per a 1973 Supplemental Agreement to a 1957 Agreement between SSWD and CFWID, each year SSWD provides CFWID with the first 13,000 ac-ft of water from Camp Far West Reservoir.

- * Information is from the State Water Resource Control Board's electronic Water Rights Information Management System.
- ** During dry and critical years, a combined total of 4,400 ac-ft under Licenses 11118 and 11120 are authorized for the following purposes of use: Municipal, Industrial, Environmental, Irrigation, Domestic, and Incidental Power. (State Water Board Order WR 2000-10, ordering paragraph 1 [p. 18].)
- *** During dry and critical years, a combined total of 4,400 ac-ft under Licenses 11118 and 11120 are authorized to be rediverted at Harvey O. Banks Pumping Plant for use in the place of use of the State Water Project. (State Water Board Order WR 2000-10, ordering paragraph 2 [p. 18].)

Measures in Water Rights and Related Agreements

SSWD's water right Licenses 11118 and 11120 and Permit 18360, with priority dates of 1952, 1941, and 1980, respectively, include bypass requirements of 25 cubic feet per second (cfs) from April 1 through June 30 and 10 cfs from July 1 through March 31, or full bypass at times when total streamflow is less than these required flows.

In February 2000, SSWD, the California Department of Water Resources (DWR), and CFWID entered into a settlement agreement (Bear River Agreement) (DWR, SSWD, and CFWID 2000) to prospectively settle the responsibilities of SSWD, CFWID, and other Bear River water rights holders to contribute to the implementation of the water quality objectives in the *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (Bay-Delta Plan) adopted in 1995. In part, DWR agreed to assume the responsibility of all Bear River water rights holders to contribute to the implementation of the 1995 Bay-Delta Plan water quality objectives. In exchange, DWR would be able to buy up to 4,400 ac-ft from SSWD during dry or critical water years⁴.

In July 2000, the State Water Board issued Order WR 2000-10 finding that the Bear River Agreement will adequately ensure satisfaction of any allocation of responsibility to Bear River watershed water right holders for 1995 Bay-Delta Plan objectives and will not cause injury or enlargement of SSWD's water rights. In State Water Board Order WR 2000-10, the State Water Board amended DWR's water right Permits 16478, 16479, 16481, and 16482 to reflect DWR's assumption of Bear River water right holders' responsibilities for meeting the Bay-Delta Plan water quality objectives adopted in 1995. The State Water Board also amended SSWD's water right Licenses 11118 and 11120 to change the purpose of use, place of use, and place of rediversion to

⁴ The Bear River Agreement and SSWD's amended water rights define "dry" and "critical" years as determined by the "Sacramento Valley Water Year Hydrologic Classification" in the 1995 Bay-Delta Plan. (State Water Board Order WR 2000-10, p. 18, fn. 2; see also State Water Board 2018a, p. 18 [same index as p. 23 of 1995 Bay-Delta Plan].)

authorize transfers to DWR as noted above and in Table A. The State Water Board further provided:

4. During releases of water in connection with the change of purpose of use and place of use of up to 4,400 [ac-ft] transferred to DWR during dry and critical years, [SSWD] shall increase flows in the Lower Bear River by no more than 37 cubic feet per second from July through September. To avoid stranding impacts to anadromous fish in the Bear River below Camp Far West Reservoir, [SSWD] shall, by the end of a release period from the reservoir in connection with said change, ramp down flows from the reservoir at a rate not to exceed 25 [cfs] over a 24-hour period.

(State Water Board Order WR 2000-10, p. 19.) This ramping rate requirement is in addition to the water rights bypass flow requirements for protection of fish and wildlife. The obligations under the Bear River Agreement expire on December 31, 2035, or upon termination of the agreement, whichever occurs sooner.

Per State Water Board Order WR 2000-10, flows are to be measured immediately downstream of the Camp Far West Diversion Dam⁵, which is approximately one mile downstream of Camp Far West Dam. In practice, SSWD installs notched boards on the diversion dam and controls the elevation of the diversion dam impoundment to provide the required flow.

3.0 Federal Energy Regulatory Commission Proceedings

FERC issued a 40-year license for the Project on July 2, 1981.

On July 1, 2019, SSWD filed a final license application (FLA) with FERC proposing to relicense the Project (SSWD 2019a). On March 16, 2021, FERC issued a *Notice of Application Ready for Environmental Analysis and Soliciting Comments, Recommendations, Terms and Conditions, and Prescriptions* (REA Notice) for the Project (FERC 2021). On May 14, 2021, State Water Board staff filed preliminary terms and conditions for the FERC Project relicensing.

The FERC Project license expired on June 30, 2021. On July 13, 2021, FERC provided public notice of continued authorization for the Project to operate under the existing license until FERC acts on SSWD's application for a new license for the Project. This public notice also noted that FERC anticipated release of a draft Environmental Assessment for the Project in January 2022 (FERC 2021).

On November 22, 2021, SSWD filed an application with FERC for a non-capacity amendment under the existing Project license. Under that amendment application,

⁵ The Camp Far West Diversion Dam is not part of the Project licensed by FERC or proposed by SSWD for FERC Project relicensing. SSWD refers to Camp Far West Diversion Dam as the "Non-Project diversion dam."

SSWD proposes to construct a new auxiliary spillway structure for Camp Far West Reservoir, spillway channels, and other associated improvements and work to accommodate the new auxiliary spillway. As stated above and described in Attachment B, this certification is not for the construction activities proposed in SSWD's FERC license amendment application but does include ongoing operations of the proposed facilities once constructed and related improvements as part of the Project for purposes of the FERC relicensing for the Project.

4.0 Regulatory Authority

4.1 Water Quality Certification and Related Authorities

The federal Clean Water Act (33 U.S.C. §§ 1251-1388) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) The Clean Water Act relies significantly on state participation and support in light of "the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution" and "plan the development and use" of water resources. (33 U.S.C. § 1251(b).) Section 101 of the Clean Water Act (33 U.S.C. § 1251(g)) requires federal agencies to "co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources."

Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires any applicant for a federal license or permit that may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will comply with specified provisions of the Clean Water Act, including water quality standards promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act section 401 directs the agency responsible for certification to set effluent limitations and other conditions necessary to ensure compliance with the Clean Water Act and with "any other appropriate requirement of State law." (33 U.S.C. § 1341(d).) Section 401 further provides that certification conditions shall become conditions of any federal license or permit for the project. (*Ibid.*)

The State Water Board is the state agency responsible for Clean Water Act section 401 certification in California. (Wat. Code, § 13160.) The State Water Board has delegated authority to act on applications for certification to the Executive Director of the State Water Board. (Cal. Code Regs., tit. 23, § 3838, subd. (a); State Water Board Resolution No. 2012-0061.)

Water Code section 13383 authorizes the State Water Board to "establish monitoring, inspection, entry, reporting, and recordkeeping requirements" and obtain "other information as may be reasonably required" for activities subject to certification under section 401 of the Clean Water Act. For activities that involve the diversion of water for beneficial use, the State Water Board delegated this authority to the Deputy Director of the Division of Water Rights (Deputy Director), as provided for in State Water Board Resolution No. 2012-0029 (State Water Board 2012). In the *Redelegation of Authorities* memo issued by the Deputy Director on November 18, 2020, this authority is

re delegated to the Assistant Deputy Directors of the Division of Water Rights (State Water Board 2020a).

Procedure, Application, and Noticing. On May 17, 2021, SSWD filed a certification application for the FERC Project relicensing with the State Water Board under section 401 of the Clean Water Act (SSWD 2021a). On June 18, 2021, State Water Board staff provided public notice of the application, pursuant to California Code of Regulations, title 23, section 3858, by posting information describing the Project on the State Water Board's website.

On March 4, 2022, the State Water Board released a draft certification for the Project for public comment. The comment period for the draft certification concluded on April 1, 2022. The State Water Board received four comment letters on the draft certification from United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), Foothills Water Network (FWN)⁶, and SSWD. The State Water Board considered these comments in developing the final certification.

Additionally, on March 4, 2022, the State Water Board requested comments from the Central Valley Regional Water Board on the certification. (See Cal. Code Regs., tit. 23, § 3855, subd. (b)(2)(B).) No comments were received.

4.2 Water Quality Control Plans and Related Authorities

The State Water Board's certification for the Project must ensure compliance with applicable water quality standards and water quality objectives. Water quality control plans designate the beneficial uses of water that are to be protected (such as municipal and industrial, agricultural, and fish and wildlife beneficial uses), water quality objectives for the reasonable protection of the beneficial uses and the prevention of nuisance, and a program of implementation to achieve the water quality objectives. (Wat. Code, §§ 13241, 13050, subds. (h), (j).) The beneficial uses, together with the water quality objectives contained in the water quality control plans and applicable state and federal anti-degradation requirements, constitute California's water quality standards for purposes of the Clean Water Act. In issuing certification for a project, the State Water Board must ensure consistency with the designated beneficial uses of waters affected by the project, the water quality objectives developed to protect those uses, and anti-degradation requirements. (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology* (1994) 511 U.S. 700, 714-719 (*PUD No. 1*).)

The California Regional Water Quality Control Boards (Regional Water Boards) have primary responsibility for the formulation and adoption of water quality control plans for their respective regions, subject to State Water Board and United States Environmental Protection Agency (USEPA) approval, as appropriate. (Wat. Code, § 13240 et seq.) As

⁶ FWN comments were provided by the following member organizations: California Sportfishing Protection Alliance, Friends of the River, South Yuba River Citizens League, Sierra Club Mother Lode Chapter, and Trout Unlimited.

noted above, the State Water Board may also adopt water quality control plans⁷, which will supersede regional water quality control plans for the same waters to the extent of any conflict. (*Id.*, § 13170.) The State Water Board and Regional Water Boards (collectively Water Boards) adopt the plans pursuant to their authorities under the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) and the federal Clean Water Act (33 U.S.C. § 1313).

Sacramento and San Joaquin Rivers Basin Plan

The Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) adopted, and the State Water Board and the USEPA approved, the *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basins* (SR/SJR Basin Plan) (Central Valley Regional Water Board 2018). Basin plans are adopted and periodically revised pursuant to Water Code section 13240. The SR/SJR Basin Plan designates the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses. The SR/SJR Basin Plan specifies that the beneficial uses of any specifically identified waterbody generally apply to its tributary streams. The SR/SJR Basin Plan identifies the existing beneficial uses of the Bear River as: municipal and domestic supply; agricultural supply; hydropower generation; water contact recreation; other non-contact recreation; warm freshwater habitat; cold freshwater habitat; and wildlife habitat. Additionally, the SR/SJR Basin Plan identifies potential beneficial uses of the Bear River as: warm and cold freshwater migration; and warm and cold freshwater spawning. This certification for the Project must ensure compliance with the water quality standards in the SR/SJR Basin Plan.

Bay-Delta Plan

The Bay-Delta Plan establishes water quality objectives to protect beneficial uses of water in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) and tributary watersheds, including drinking water supply, irrigation supply, and fish and wildlife. The State Water Board adopts the Bay-Delta Plan pursuant to its authorities under the Porter-Cologne Water Quality Control Act and the federal Clean Water Act. The Bay-Delta Plan was most recently amended in 2018 (State Water Board 2018a).

The State Water Board has historically developed the water quality control plan for the Bay-Delta for several reasons. The Bay-Delta is a critically important natural resource that is both the hub of California's water supply system and the most valuable estuary and wetlands system on the West Coast. As diversions of water within and upstream of the Bay-Delta Estuary are a driver of water quality in the Bay-Delta watershed, much implementation of the Bay-Delta Plan relies on the combined water quality and water right authority of the State Water Board. In addition, the Bay-Delta falls within the boundaries of two Regional Water Boards. Having the State Water Board develop and adopt a water quality control plan that crosses Regional Water Board boundaries ensures a coordinated approach.

⁷ For example, the Bay-Delta Plan (State Water Board 2018a).

The beneficial uses in the Bay-Delta Plan are: municipal and domestic supply; industrial service supply; industrial process supply; agricultural supply; groundwater recharge; navigation; water contact recreation; non-contact water recreation; shellfish harvesting; commercial and sport fishing; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; estuarine habitat; wildlife habitat; and rare, threatened, or endangered species.

The Bay-Delta Plan generally is not self-implementing and does not allocate the responsibility of meeting objectives to water diverters in the Bear River. Subsequent regulatory actions, such as certifications, rulemakings, or water right adjudicative proceedings are required to implement the water quality objectives.

The State Water Board is developing Bay-Delta Plan amendments focused on the Sacramento River and its tributaries (including the Bear River), Delta eastside tributaries, Delta outflows, and interior Delta flows. This effort is referred to as the Sacramento/Delta Update to the Bay-Delta Plan. Protection of the Bay-Delta ecosystem and its native aquatic species requires an integrated approach to effectively connect upstream suitable cold water nursery habitat, floodplains, tidal marshland, and turbid open water habitats in the Delta and Bay and to connect those environments to the ocean. Accordingly, the Sacramento/Delta Update to the Bay-Delta Plan would provide for a flow regime that supports a connected and functioning ecosystem linking and integrating inflow, cold water habitat, Delta outflow, and interior Delta flow measures with complementary physical habitat restoration and other nonflow measures. Changes are proposed to the water quality objectives, including narrative and numeric flow objectives, and the program of implementation for those objectives, as well as changes to monitoring, reporting, and assessment requirements. Water users on Bay-Delta tributaries would bear responsibility for achieving the tributary flow objectives and for contributing to the Delta outflow objectives, including diverters upstream of and in the Delta (State Water Board 2020b).

Antidegradation Policy

The State Water Board's **Statement of Policy with Respect to Maintaining High Quality Waters in California** (Antidegradation Policy)⁸ (State Water Board 1968) requires that the quality of existing high-quality water be maintained unless any change will be consistent with the maximum benefit to the people of the state, will not unreasonably impact present or anticipated future beneficial uses of such water, and will not result in water quality less than that prescribed in water quality control plans or policies. The Antidegradation Policy further requires best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained. The state Antidegradation Policy incorporates the federal Antidegradation Policy (40 C.F.R. section 131.12 (a)(1)), which requires "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

In March 2019, the State Water Board submitted to FERC the plans and policies included in the state's comprehensive plan for orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state. This submission included the SR/SJR Basin Plan, the Bay-Delta Plan, the Antidegradation Policy, and other applicable plans and policies for water quality control (FERC 2019).

4.3 Clean Water Act Section 303(d) Listing

The State Water Board listed portions of the Bear River in the **2018 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report)** (2018 Report) (State Water Board 2020c) as follows:

- 1) Bear River from Combie Reservoir to Camp Far West Reservoir is listed for mercury;
- 2) Camp Far West Reservoir is listed for mercury; and
- 3) Bear River downstream of Camp Far West Reservoir is listed for mercury, copper, and chlorpyrifos.

On January 19, 2022, the State Water Board adopted the **2020-2022 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report)** (2020 Report) (State Water Board 2022), which lists portions of the Bear River as follows:

⁸ State Water Board Resolution No. 68-16 and any amendments thereto. Available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf. Accessed on April 18, 2022.

- 1) Bear River from Combie Reservoir to Camp Far West Reservoir is listed for mercury;
- 2) Camp Far West Reservoir is listed for mercury; and
- 3) Bear River downstream of Camp Far West Reservoir is listed for mercury, aluminum, iron, and chlorpyrifos.

The 2020 Report will be submitted to USEPA for approval. Once approved by USEPA, the 2020 Report will supersede the 2018 Report.

Section 303(d) of the Clean Water Act requires total maximum daily loads (TMDLs) to be developed for impaired waterbodies. TMDLs are control programs that define the maximum amount of a pollutant that a waterbody can receive without exceeding water quality standards and establish waste load allocations and load allocations for point and nonpoint sources of pollution, respectively.

4.4 Statewide Mercury Provisions

The State Water Board adopted *Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions* (Provisions) (State Water Board 2017)⁹. The Provisions provide a consistent regulatory approach throughout the state by setting mercury limits to protect the beneficial uses associated with the consumption of fish by both people and wildlife. The State Water Board also adopted three new beneficial use definitions (tribal traditional culture, tribal subsistence fishing, and subsistence fishing) for use by the Water Boards. The State Water Board also approved one narrative and four numeric mercury objectives to apply to inland surface waters, enclosed bays, and estuaries of the state that have any of the following beneficial use definitions: commercial and sport fishing, tribal traditional culture, tribal subsistence fishing, wildlife habitat, marine habitat, preservation of rare and endangered species, warm freshwater habitat, cold freshwater habitat, estuarine habitat, or inland saline water habitat, with the exception of waterbodies or waterbody segments with site-specific mercury objectives. The Provisions will be implemented through National Pollutant Discharge Elimination System (NPDES) permits, certifications, waste discharge requirements, and waivers of waste discharge requirements.

4.5 Construction General Permit

For activities not explicitly covered by the conditions of this certification, SSWD will need to obtain coverage under the State Water Board's *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction

⁹ The Provisions are available online at: https://www.waterboards.ca.gov/water_issues/programs/mercury/. Accessed on April 18, 2022.

General Permit)¹⁰ (State Water Board 2009) for activities that disturb one or more acres of soil, or that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Coverage is required pursuant to Clean Water Action sections 301 and 402 that prohibit certain discharges of stormwater containing pollutants except in compliance with a NPDES permit. (33 U.S.C. §§ 1311, 1342(p); 40 C.F.R. pts. 122, 123, and 124.)

4.6 State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

On April 2, 2019, the State Water Board adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Dredge or Fill Procedures)¹¹, which became effective on May 28, 2020 (State Water Board 2019). Minor amendments to the Dredge or Fill Procedures became effective on November 18, 2021 (State Water Board 2021b)¹². The Dredge or Fill Procedures provide California's definition of wetland, wetland delineation procedures, and procedures for submitting applications for activities that could result in discharges of dredged or fill material to waters of the state. The Dredge or Fill Procedures ensure that State Water Board regulatory activities will result in no net loss of wetland quantity, quality, or permanence, compliant with the *California Wetlands Conservation Policy*, Executive Order W-59-93. SSWD must comply with the Dredge or Fill Procedures when conducting Project-related dredge or fill activities that may impact waters of the state, including wetlands.

¹⁰ Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Accessed on April 18, 2022.

¹¹ The Dredge or Fill Procedures are available online at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html. Accessed on April 18, 2022.

¹² Resolution No. 2021-0012 is available online at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp/rs2021_0012.pdf. Accessed on April 18, 2022.

4.7 Aquatic Weed Control General Permit

The *Statewide National Pollutant Discharge Elimination System Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications* (Aquatic Weed Control General Permit)¹³ (State Water Board 2013) applies to projects that require aquatic weed management activities. The Aquatic Weed Control General Permit sets forth detailed management practices to protect water quality from pesticide and herbicide use associated with aquatic weed control.

4.8 California Environmental Quality Act

SSWD is the lead agency for the purposes of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.). (Cal. Code Regs., tit. 14, § 15367.) The State Water Board is a responsible agency under CEQA. (*Id.*, § 15381.)

SSWD released a draft Initial Study and Mitigated Negative Declaration (IS/MND) for the FERC Project relicensing on October 29, 2021, with a comment period that concluded on November 29, 2021. On November 29, 2021, State Water Board staff provided comments on the draft IS/MND. A final IS/MND for the Project was approved by SSWD on February 25, 2022.

CEQA requires the lead agency to adopt a Mitigation Monitoring and Reporting Plan (MMRP) for projects where mitigation measures are a condition of project approval. (Cal. Code Regs., tit. 14, § 15091, subd. (d).) SSWD included an MMRP in its final IS/MND. Water quality protection measures and associated mitigation, monitoring, and reporting requirements were incorporated into conditions of this certification in accordance with California Code of Regulations, title 23, section 3859, subdivision (a). Table B identifies resource areas in the State Water Board's purview for which the final IS/MND identified mitigation measures for potential impacts, and associated certification conditions with water quality protection, monitoring, or reporting requirements.

This certification has been informed by the environmental information and analysis contained in the final IS/MND and other information in the record. These documents and other materials that constitute the public record are located at the State Water Board, Division of Water Rights, 1001 I Street, Sacramento, California. The State Water Board will file a Notice of Determination with the Office of Planning and Research within five working days of issuance of this certification. (Cal. Code Regs., tit. 14, Section 15096, subd. (i).)

¹³ Water Quality Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Accessed on April 18, 2022.

Table B. IS/MND Resource Areas and Corresponding Certification Conditions

IS/MND Resource Area and Mitigation Measure	Applicable Certification Condition
MM-BIO-01: Minimize Disturbance Footprint	Condition 6 (Erosion and Sediment Control)
MM-BIO-02: Restoration of Temporarily Disturbed Areas	Condition 6 (Erosion and Sediment Control)
MM-BIO-05: Biological Monitoring and Worker Environmental Awareness Training	Condition 5 (Aquatic Biological Resource Protection)
MM-BIO-06: No Net Loss of Sensitive Natural Communities	Condition 38
MM-BIO-07: Construction Best Management Practices (BMPs)	Condition 6 (Erosion and Sediment Control)
MM-BIO-08: Sensitive Community Fencing	Condition 5 (Aquatic Biological Resource Protection)
MM-BIO-09: Dry Work Areas	Condition 6 (Erosion and Sediment Control)
MM-BIO-15: Western Pond Turtle Visual Encounter Surveys	Condition 5 (Aquatic Biological Resource Protection)

5.0 Overview Rationale for Water Quality Certification Conditions

This section of the certification explains that the grant of certification as conditioned is within the scope of certification and why the conditions in Section 7.0 are necessary to ensure that the Project and its discharges will comply with water quality requirements. This section also includes, as necessary, citations to federal, state, or tribal laws that authorize the condition and sets forth citations to applicable regulatory authority. Section 4.0 also sets forth citations to applicable regulatory authority. The explanation and citations should be evaluated in the context of the certification as a whole, but the certification conditions are set forth only in Section 7.0.

As explained in this section, the conditions in this certification are generally required pursuant to the SR/SJR Basin Plan and the Bay-Delta Plan (Basin Plans), as described in the “Regulatory Authority” section, above.

The Dredge or Fill Procedures, adopted pursuant to Water Code sections 13140 and 13170, authorize approval of dredge or fill projects subject to satisfaction of specified requirements. California Code of Regulations, title 23, sections 3830 et seq. set forth state regulations pertaining to certifications. In particular, section 3856 sets forth information that must be included in certification requests, and section 3860 sets forth standard conditions that shall be included in all certification actions.

Water Code sections 13267 and 13383 authorize the Water Boards to establish monitoring and reporting requirements for persons discharging or proposing to discharge to navigable waters, or to discharge waste thereto. Water Code section 13165 authorizes the State Water Board to impose reasonable investigation and

reporting requirements regarding water quality control factors on state or local agencies (such as SSWD). Water Code section 1051 additionally authorizes the State Water Board to investigate waters diverted for beneficial use. Moreover, this certification ensures continued monitoring, reporting, and assessment of water quality for discharges that may impact waters of the state, including waters listed as impaired under Clean Water Act section 303(d).

Fish and Game Code section 5937 requires any owner of a dam to allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist downstream. Section 5937 and requirements to maintain or monitor flow or other water quality characteristics as required to meet section 5937 are appropriate conditions of state law necessary to protect fishery beneficial uses.

In general, the code citations, plans, and policies that support issuance of this certification that are described in Section 4.0 are not duplicated in this section. The conditions in this certification were developed to ensure compliance with water quality standards and water quality requirements established under the Porter-Cologne Water Quality Control Act and the federal Clean Water Act, including requirements in applicable water quality control plans, and other appropriate requirements of state law. The conditions in Section 7.0 of this certification are necessary to protect the beneficial uses of waters of the state identified in water quality control plans, prevent degradation of water quality, and help ensure compliance with state and federal water quality requirements.

Future updates to the Bay-Delta Plan may be approved by the State Water Board to include specific provisions for voluntary agreements as a means of implementing the water quality objectives for the protection of fish and wildlife beneficial uses. Some Sacramento River basin water users and water agencies are working to negotiate such agreements, which would provide increased water flows and habitat improvements for fish and wildlife. The State Water Board may amend this certification to accommodate an approved voluntary agreement to implement the Bay-Delta Plan or other voluntary solutions (e.g., Bear River Agreement).

When preparing the conditions in this certification, State Water Board staff reviewed and considered the following information:

- SSWD May 2021 application for certification (SSWD 2021a);
- SSWD FLA (SSWD 2019a) and associated amendments thereto (SSWD 2019b, SSWD 2019c);
- SSWD October 2021 draft IS/MND (SSWD 2021b);
- SSWD February 2022 final IS/MND (SSWD 2022);
- FERC March 2021 REA Notice (FERC 2021);
- Recommended and preliminary FERC license terms and conditions submitted by state agencies, federal agencies, and nongovernmental organizations pursuant to Federal Power Act (FPA) sections 10(a), 10(j), and 18.
 - National Marine Fisheries Service (NMFS) May 12, 2021, preliminary FPA section 18 prescription, section 10(a)

- recommendations, and section 10(j) conditions for the Project (NMFS 2021);
- Department of Interior, including USFWS and National Park Service, May 14, 2021, FPA section 10(a) recommendation and section 10(j) conditions for the Project (DOI 2021);
- CDFW May 14, 2021, FPA sections 10(a) and 10(j) recommendations for the Project (CDFW 2021);
- State Water Board staff May 14, 2021, certification preliminary terms and conditions (State Water Board 2021a)¹⁴;
- FWN May 17, 2021, comments and recommendations (FWN 2021); and
- USEPA May 17, 2021, comments, recommendations, terms and conditions, and prescriptions (USEPA 2021).
- SSWD June 29, 2021, response to recommended and preliminary FERC license terms and conditions and comments submitted by state agencies, federal agencies, and nongovernmental organizations (SSWD 2021c);
- Comments and responses associated with the aforementioned documents;
- Comments received on the draft certification released on March 4, 2022;
- Existing and potential beneficial uses, associated water quality objectives, and implementation measures and programs described in the SR/SJR Basin Plan (Central Valley Regional Water Board 2018), Bay-Delta Plan (State Water Board 2018a), and proceedings to amend the Bay-Delta Plan (State Water Board 2018b);
- Applicable water quality information, permits, policies, objectives, implementation measures, and programs (e.g., Construction General Permit, Clean Water Act Section 303(d) List / 305(b) Report, Dredge or Fill Procedures, etc.);
- Project-related controllable water quality factors; and
- Other information in the record.

The Project application, CEQA review, and other materials assessed in development of this certification, as well as the history of Project operations, demonstrate that the Project can operate to meet water quality standards and other appropriate requirements of state law if it complies with the conditions of this certification. The certification conditions provide a comprehensive framework to assess and address potential negative impacts to water quality and beneficial uses, and provide for continued compliance over changing conditions throughout the term of the new FERC license for the Project.

To the extent FERC considers any certification condition to include requirements outside the substantive scope of USEPA's Clean Water Act Section 401 Certification Rule, 85 Fed. Reg. 42, 210 (July 13, 2020) (Certification Rule), the Certification Rule—

¹⁴ Filed in accordance with the memorandum of understanding executed between FERC and the State Water Board on November 19, 2013.

including but not limited to 40 C.F.R. §§ 121.1(f) and (n), 121.3, 121.7(d)(1), and 121.9(b)—is inconsistent with federal law and controlling case law. Under section 401 of the Clean Water Act, when an activity requiring a federal permit or license “may result in any discharge into the navigable waters,” the applicant is required to obtain a certification that states the discharge will comply with applicable water quality standards and that also sets forth any “limitations” and “monitoring requirements” necessary to assure that the “applicant” will comply with water quality standards and “any other appropriate requirement of State law.” (33 U.S.C. § 1341(a) & (d).) Certification is required for such activity as a whole, not merely for its point-source discharges to waters of the United States. (PUD No. 1, supra, 511 U.S. at pp. 711-712.) USEPA has indicated its intent to revise the Certification Rule because, among other faults, it “may prevent state and tribal authorities from adequately protecting their water quality,” “may result in a state or tribe’s certification or conditions being permanently waived as a result of non-substantive and easily fixed procedural concerns,” and “may limit the flexibility of certifications and permits to adapt to changing circumstances.” (86 Fed. Reg. 29,543-29,544 (June 2, 2021).) USEPA has maintained its “substantial concerns” and has asked that the Certification Rule be voluntarily remanded in ongoing litigation. As explained in this certification, each certification condition is authorized by applicable state and federal law and is necessary to ensure compliance with such laws. This paragraph is hereby incorporated as part of the explanatory statement for each condition of this certification.

5.1 Rationale for Condition 1: Water Year Types

The Project discharges water into the Bear River downstream of Camp Far West Reservoir. Project discharges are the predominant flows of the Bear River directly downstream of Camp Far West Reservoir and have the potential to impact water quality and associated beneficial uses of the Bear River as identified in the SR/SJR Basin Plan. Water year (WY) type determinations are necessary to ensure compliance with minimum instream flows and other flow requirements, such as pulse flows, in this certification. Potentially impacted existing and potential beneficial uses of the Bear River include, but are not limited to: municipal and domestic supply; agricultural supply; hydropower generation; water contact recreation; other noncontact recreation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat. Additionally, Project operations may impact flow and water quality of the Bay-Delta, including beneficial uses of water identified in the Bay-Delta Plan and the SR/SJR Basin Plan, as Project activities and releases contribute to Bay-Delta inflow and outflow. Defining WY types is necessary to ensure protection of water quality and beneficial uses because WY type determinations are used to establish the timing and amount of flows. WY types are consistent with the protection of beneficial uses consistent with the Bay-Delta Plan and other water quality control plans, Fish and Game Code section 5937, and other applicable requirements, and are used to ensure monitoring and compliance with conditions in keeping with Clean Water Act section 401, Water Code 13383, and other applicable laws. Maintaining adequate minimum instream flows, in part, through implementation of WY type determinations ensures protection of water quality, and enables evaluation of compliance with applicable requirements consistent with Clean Water Act section 401.

During the FERC Project relicensing process, SSWD and most relicensing participants reached agreement on WY types. Condition 1 requires implementation of SSWD's proposed WY types for the Project. The WY types include five classifications: Wet, Above Normal, Below Normal, Dry, and Critically Dry. The WY types selected capitalize on times of higher water availability to provide supplemental environmental flows and provide minimal protection for aquatic species when water availability is low (CDFW 2021). By specifying WY types based on the preceding months' hydrology, implementation of Conditions 2, 3, and 4 (minimum instream flows, spring and fall pulse flows, and ramping rates) can be more responsive to current water conditions and therefore better address species temporal needs.

While use of SSWD's proposed WY types are suitable for the Project, the water year types in Condition 1 differ from the Bay-Delta Plan's "Sacramento Valley Water Year Hydrologic Classification," sometimes referred to as the "40-30-30" index, that is used in the Bear River Agreement and in State Water Board Order WR 2000-10, which amended SSWD's water right Licenses 11118 and 11120. Absent an amendment to or termination of State Water Board Order WR 2000-10, these water right license requirements and use of the Sacramento Valley Water Year Hydrologic Classification, when appropriate, remain unchanged. When the WY types differ between this certification and other applicable requirements, SSWD remains obligated to comply with the more stringent requirement (e.g., the higher minimum instream flow requirement, most gradual ramping rate, etc.).

5.2 Rationale for Condition 2: Minimum Instream Flows

The Project discharges flow into the Bear River downstream of Camp Far West Reservoir. Project discharges are the predominant flow releases in the Bear River downstream of Camp Far West Reservoir and have the potential to impact water quality and associated beneficial uses of the Bear River as identified in the SR/SJR Basin Plan. Existing and potential beneficial uses that may be impacted include, but are not limited to: agricultural supply; hydropower generation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat. Additionally, Project operations may impact flow and water quality of the Bay-Delta as Project discharges contribute to Bay-Delta inflow and outflow. Minimum instream flow (MIF) discharges directly impact water quality and associated beneficial uses.

Instream flows provide habitat for fish and wildlife, contribute to scenic and aesthetic qualities of natural settings, and help support beneficial uses and water quality objectives for surface waters as established in the SR/SJR Basin Plan. MIFs required in Condition 2 are anticipated to provide support for fish and wildlife species, water quality objectives, and associated beneficial uses in the Bear River downstream of Camp Far West Reservoir. Condition 2 MIFs are consistent with those proposed by SSWD as part of the FERC Project relicensing and as agreed to by most relicensing participants.

According to SSWD's 2022 final IS/MND, fish and wildlife species or associated habitat with the potential to occur in the Bear River downstream of Camp Far West Reservoir include: (1) California Central Valley steelhead distinct population segment (*Oncorhynchus mykiss*), which is federally threatened (January 5, 2006, 71 FR 834); (2) Southern distinct population segment of North American green sturgeon (*Acipenser medirostris*), which is federally threatened (April 7, 2006, 71 FR 17757); (3) Central Valley spring-run Chinook salmon evolutionarily significant unit (*Oncorhynchus tshawytscha*), which is federally threatened (June 28, 2005, 70 FR 37160); and (4) Central Valley fall/late fall-run (fall-run) Chinook salmon evolutionary significant unit, which is a Species of Concern (April 15, 2004, 69 FR 19975) (NMFS 2021). Fish and Game Code section 5937 requires any owner of a dam to allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist downstream. Conditioning MIFs ensures protection of biodiversity, ecosystem services, recreation, and water quality.

While use of SSWD's proposed MIFs are suitable for the Project, they differ from flow requirements listed in SSWD's water rights License 11118, License 11120, and Permit 18360. The water rights' bypass requirements of 25 cfs from April 1 through June 30 and 10 cfs from July 1 through March 31 are at times greater than the MIFs developed as part of the FERC Project relicensing process. This certification does not change the bypass flow requirements of SSWD's License 11118, License 11120, and Permit 18360. When the MIF requirements of this certification and the bypass flow requirements of the water rights differ, SSWD must comply with the higher MIF requirement.

The potential for further evaluation of flows during the term of the new Project FERC license is necessary due to the pending Sacramento/Delta Update to the Bay-Delta Plan, the potential modification or termination of the existing Bear River Agreement, and the potential development of voluntary agreements. To support this assessment, Condition 2(D) requires SSWD to consult on flows with CDFW, USFWS, NMFS, and State Water Board staff. Such consultation shall occur no later than 10 years following FERC license issuance, or earlier at the direction of the Deputy Director based on review of environmental monitoring data and/or Bay-Delta Plan amendments that relate to flows in the Sacramento River and its tributaries. To avoid duplication of effort, Condition 2(D) also includes a provision to forgo this consultation if SSWD enters into a State Water Board-approved comprehensive, long-term, voluntary agreement to implement Bay-Delta Plan amendments and the State Water Board amends this certification accordingly. The consultation shall also address what, if any, operational changes must be implemented.

5.3 Rationale for Condition 3: Fall and Spring Pulse Flows

The Project discharges flow into the Bear River downstream of Camp Far West Reservoir. Project discharges are the predominant flow releases in portions of the Bear River downstream of Camp Far West Reservoir and have the potential to impact water quality and associated beneficial uses of the Bear River as identified in the SR/SJR Basin Plan. Existing and potential beneficial uses that may be impacted include, but are

not limited to: agricultural supply; hydropower generation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat. Additionally, Project operations may impact flow and water quality of the Bay-Delta as Project discharges contribute to Bay-Delta inflow and outflow. Fish and Game Code section 5937 requires any owner of a dam to allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist downstream. Adequate pulse flows ensure protection of aquatic resources.

During FERC Project relicensing process, SSWD and most relicensing participants reached agreement on fall and spring pulse flows (SSWD 2019a). Condition 3 requires implementation of pulse flows consistent with SSWD's pulse flow proposal, which was developed to provide attraction and flushing flows for California Central Valley steelhead, North American green sturgeon, and Central Valley spring-run and fall-run Chinook salmon in the Lower Bear River and Dry Creek (NMFS 2021).

Implementation of pulse flows required in Condition 3 are anticipated to reduce the Project's potential impacts to water quality and beneficial uses associated with aquatic resources.

5.4 Rationale for Condition 4: Ramping Rates

The Project discharges flow into the Bear River downstream of Camp Far West Reservoir. Project discharges are the predominant flow releases in the Bear River downstream of Camp Far West Reservoir and have the potential to impact water quality and associated beneficial uses of the Bear River as identified in the SR/SJR Basin Plan. Existing and potential beneficial uses that may be impacted include but are not limited to: agricultural supply; hydropower generation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat. Additionally, Project operations may impact flow and water quality of the Bay-Delta, as Project discharges contribute to Bay-Delta inflow and outflow. Fish and Game Code section 5937 requires any owner of a dam to allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist downstream. Adequate ramping rates ensure protection of biodiversity, ecosystem services, and water quality.

Sudden reductions in flows can adversely affect aquatic organisms through stranding as water levels rapidly decrease causing exposure of previously inundated habitat. During FERC Project relicensing, SSWD and most relicensing participants reached agreement on ramping rate targets (SSWD 2019b). Condition 4 requires implementation of ramping rate targets consistent with SSWD's proposed targets. The ramping rate targets in Condition 4 will provide fish additional time to move from portions of the channel that may become disconnected from the main channel or that will become dewatered during flow changes associated with Project operations (CDFW 2021).

Additionally, Condition 4 requires fish stranding surveys during the first two years of spring flashboard installation and associated ramping rate target implementation at the Camp Far West Diversion Dam. During flashboard installation, SSWD must draw down

the Camp Far West Diversion Dam pool, install the flashboards, and then refill the Camp Far West Diversion Dam pool to initiate diversions. Currently, SSWD tries to accomplish this series of actions in one day, thereby creating flow fluctuations greater than the targeted ramping rates. Implementation of the new target ramping rates, monitoring, and adaptive management required in Condition 4 will reduce the potential for Project operations to cause fish stranding.

Under State Water Board Order WR 2000-10, SSWD's water right Licenses 11118 and 11120 currently include a ramping rate for reducing flows following specified releases for DWR under the Bear River Agreement: "To avoid stranding impacts to anadromous fish in the Bear River below Camp Far West Reservoir, [SSWD] shall, by the end of a release period ramp down flows from the reservoir at a rate not to exceed 25 [cfs] over a 24-hour period." (State Water Board 2000.) Ramping rates in State Water Board Order WR 2000-10 apply specifically to releases for DWR under the Bear River Agreement, not all Project releases. Absent an amendment to or termination of State Water Board Order WR 2000-10, these requirements remain unchanged and must be met by SSWD. SSWD remains obligated to comply with the terms and requirements of its water rights, this certification, and any other applicable requirements. In the event of overlap or conflict, compliance with the most gradual applicable ramping rate requirement will ensure compliance with Condition 4 of this certification and other applicable requirements.

5.5 Rationale for Condition 5: Aquatic Biological Resource Protections

Project discharges associated with construction, operation, and maintenance activities have the potential to interfere with native aquatic species, which depend heavily on aquatic food or live in riparian or wetland habitats, and adversely impact habitat use. During the pool raise and associated Project construction activities, such as recreation site relocation, there is a potential for impacts to aquatic species. Species listed as threatened or endangered under the federal Endangered Species Act (ESA) and the California ESA that have the potential to occur in the Project area include: (1) Vernal pool fairy shrimp (*Branchinecta lynchi*); (2) Vernal pool tadpole shrimp (*Lepidurus packardii*); (3) Western pond turtle (*Emys marmorata*); and (4) California red-legged frog (*Rana draytonii*). Condition 5 requires SSWD to develop and implement measures that minimize impacts from Project activities to aquatic resources. Condition 5, in part, includes mitigation measures from SSWD's final IS/MND intended to protect aquatic biological resources. Implementation of this condition will avoid unreasonable impacts to water quality and the beneficial uses related to aquatic biological resources and wildlife habitat.

5.6 Rationale for Condition 6: Sediment and Erosion Control

Erosion and sedimentation can contribute to significant degradation of the waters of the state; therefore, it is necessary to implement actions to limit or eliminate such discharges in order to protect water quality and associated beneficial uses. Condition 6 includes provisions for the protection of water quality and beneficial uses from erosion related to Project activities, including spillway operations and construction and

maintenance activities. Increasing Camp Far West Reservoir's NMWSE by five feet will inundate land and could result in erosion and sedimentation that could increase turbidity. Additionally, according to Figure 3.3.1-3 in SSWD's FLA (SSWD 2019a), two copper mining sites (Quail and Dairy Farm) will be inundated as part of the pool raise. The pool raise, relocation of recreational facilities or site features, and spillway operations have the potential to impact water quality and associated beneficial uses of Camp Far West Reservoir and the Bear River. Increases in erosion and sedimentation can violate water quality objectives and impact potential and existing beneficial uses including, but not limited to: agricultural supply; hydropower generation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat. Project discharges affected by erosion and increased sediment loads directly impact water quality and associated beneficial uses.

Condition 6(A) – Erosion Control. Project operations have the potential to result in erosion and/or sediment discharges to surface waters. Condition 6(A) requires SSWD to proactively inspect and maintain its facilities to prevent water quality objective violations and unreasonable impacts to beneficial uses from erosion and sediment discharges. SSWD is also required to develop water quality protection measures to implement in the event Project operations are adversely contributing to erosion and/or sedimentation to surface waters.

Condition 6(B) – Construction and Maintenance. This condition protects water quality by ensuring that SSWD complies, as applicable, with the Construction General Permit. (40 Code of Federal Regulations § 122.26(a)(9)(B).) SSWD is required to obtain coverage under the Construction General Permit for discharges to surface waters comprised of stormwater associated with construction activities, as described in Section 4.5 of this certification. This is required pursuant to Clean Water Act sections 301 and 402 that prohibit certain discharges of stormwater containing pollutants except in compliance with an NPDES permit. (33 U.S.C. section 1311, and 1342(p); 40 C.F.R. pts. 122, 123, and 124.) Protection of instream beneficial uses identified in the SR/SJR Basin Plan requires effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the Bear River, and its tributaries. Erosion from Project-related maintenance activities has the potential to result in discharges that violate water quality standards. Condition 6(B) requires SSWD to comply with the Construction General Permit, as applicable, or to develop and implement Water Quality Monitoring and Protection Plans (WQMP Plans) to protect water quality and beneficial uses. WQMP Plans will be developed for construction and maintenance activities with the potential to cause erosion, stream sedimentation, release of hazardous materials, or otherwise impair water quality that are not covered by another condition of the certification.

5.7 Rationale for Condition 7: Stream Gages

During the FERC Project relicensing process, SSWD proposed using three canal diversion gages¹⁵ to accurately measure components in the “cumulative usable inflow” equation used for WY type determination, pursuant to Condition 1 of this certification. Therefore, proper operation and maintenance of the gages used to inform the WY type determinations is necessary to comply with the conditions of this certification.

Condition 7 requires SSWD to develop and implement a Stream Gaging Plan to ensure accurate gaging information is collected and provided publicly for water quality and beneficial use protection.

Accurate gaging data are needed to determine WY types, which inform the required amount and timing of Project discharges, and thereby flows in the Bear River. Potentially impacted existing and potential beneficial uses of the Bear River include but are not limited to: municipal and domestic supply; agricultural supply; hydropower generation; water contact recreation; other non-contact recreation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat.

5.8 Rationale for Condition 8: Monitoring and Adaptive Management

Monitoring plans are necessary to develop information regarding water quality and aquatic resources in response to changes in environmental conditions related to Project operations and associated discharges during the term of a new FERC license. Condition 8 requires the development and implementation of monitoring plans to assess Project-related impacts to fish populations and water quality. The monitoring is designed to periodically evaluate aquatic resources and water quality over the term of the new FERC license, assess Project-related effects, and to determine whether water quality objectives are being met. Condition 8 also requires SSWD to propose and implement adaptive management actions, based on monitoring results and other information, and allows SSWD to request Deputy Director approval to alter the methodologies or frequencies of monitoring.

This monitoring and reporting condition is required to help ensure beneficial uses are protected and to comply with SR/SJR Basin Plan’s water quality objectives, and other appropriate requirements of state law. These monitoring requirements are consistent with the Water Boards authority to investigate the waters of the state, including for quality, and to require necessary monitoring and reporting pursuant to Water Code sections 1051, 13165, 13267, and 13383.

Condition 8(A) – Aquatic Resource Monitoring. Although flow requirements of this certification are intended to improve water quality and aquatic resources in the Bear River, monitoring, assessment, and adaptive management is required to ensure that the

¹⁵ The three proposed gages are located at the following locations: SSWD’s Main Canal, CFWID’s North Canal, and CFWID’s South Canal.

flows are adequate over the potential 50-year FERC license term. Additionally, Condition 2 allows for lower flows than are currently required by SSWD's water rights, which may be changed upon approval of a water right change petition. For portions of the April 1 through June 30 period for several WY types, minimum instream flows in Condition 2 are 5 to 15 cfs less than the existing MIF requirements of the 1981 FERC license and SSWD's water rights. Decreased MIFs could result in negative impacts to salmonids and benthic macroinvertebrates (BMI), such as stranding and degraded water quality. As noted above, monitoring, assessment, and adaptive management are needed to protect water quality and beneficial uses during the term of the new FERC license.

Condition 8(B) – Water Quality Monitoring. Project discharges have the potential to violate the SR/SJR Basin Plan water quality objectives. This condition requires SSWD to implement a water quality monitoring plan to assess water quality during the term of the new FERC license, assess compliance with water quality objectives and protection of beneficial uses, and identify changes to Project-related activities to address and avoid potential Project-related impacts. Water quality data will identify if Project discharges are impacting water quality in a manner that may violate a water quality standard.

5.9 Rationale for Condition 9: Hazardous Materials

Implementation of a Hazardous Substances Plan is essential to ensuring hazardous materials are properly stored, used, transported, and managed in the Project area to avoid and minimize the release of hazardous materials to water, and the associated impacts to beneficial uses, including impacts to aquatic resources and their habitats. Condition 9 requires SSWD to develop and implement a Hazardous Substances Plan to address the storage, use, transportation, and disposal of hazardous substances for the protection of water quality.

Site management requires implementation of best practices to prevent, minimize, and clean up potential spills associated with ongoing operation, maintenance, and construction related to the Project during the term of the new FERC license. For instance, fuels and lubricants associated with the use of mechanized equipment have the potential to result in toxic discharges to waters of the state in violation of water quality standards, including toxicity and floating material water quality objectives. Secondary containment around hazardous material storage sites helps ensure that any leaks or spills of hazardous materials do not result in a discharge to waters. This condition protects water quality by ensuring that hazardous materials are not discharged to waters of the state when equipment is being used or stored. (Dredge or Fill Procedures, Section IV.B.1.)

The SR/SJR Basin Plan includes narrative water quality objectives for oil, grease, and other hazardous materials. "Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses." (Central Valley Regional Water Board 2018). Condition 9 requires development

and implementation of a hazardous materials management plan to prevent hazardous material spills into waters of the state, including containment criteria pursuant to California Code of Regulations, title 27, section 20320. Implementation of this condition will avoid unreasonable impacts to water quality and beneficial uses including, but not limited to: wildlife habitat; warm freshwater habitat; cold freshwater habitat; and water contact recreation

5.10 Rationale for Condition 10: Extremely Dry Condition

California's history of drought illustrates the importance of planning for extremely dry conditions and multiple dry years or drought conditions. It is difficult to anticipate the specific impacts of consecutive dry years or a long-term drought and identify where limited water supplies may be best used during times of shortage during the term of a FERC license. Drought conditions combined with the Project may adversely impact water quality through decreased instream flow and lower reservoir levels which can result in increased water temperatures, decreased dissolved oxygen levels, algal blooms, and increased amounts of aquatic invasive species. Drought conditions can cause normal Project operations to exceed water quality objectives and adversely impact beneficial uses and water supply.

State Water Board Resolution No. 2017-0012, resolves that the state shall update plans, permits, and policies to improve "ecosystem resilience to the impacts of climate change, including but not limited to actions that protect headwaters, facilitate restoration, enhance carbon sequestration, build and enhance healthy soils, and reduce vulnerability to and impacts from fires." Condition 10 provides the Project flexibility for adaptive implementation during times of extremely dry conditions.

Implementation of this condition will avoid unreasonable impacts to water quality and beneficial uses including, but not limited to: municipal and domestic supply; agricultural supply; hydropower generation; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; and wildlife habitat.

5.11 Rationale for Condition 11: Recreation Facilities

Operations and maintenance activities associated with the Project's recreation facilities have the potential to impact water quality. Construction of new recreation facilities, modification of existing recreation facilities, or other ground-disturbing activities could increase soil erosion and sediment delivery to surface waters. Erosion can adversely impact water quality and associated aquatic habitat by increasing turbidity and limit habitat suitability for many aquatic resources. Condition 11 requires SSWD to develop and implement a plan that identifies activities at recreation facilities with the potential to impact water quality (e.g., operations and maintenance, construction) and actions that will be taken to protect water quality. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses, including but not limited to: water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; and wildlife habitat.

During the FERC Project relicensing process, SSWD proposed a *Recreation Facilities Plan* to maintain access to Project recreation facilities after the proposed pool raise¹⁶, protect worker/public health and safety, and to control erosion and sedimentation (SSWD 2019b). SSWD's proposed *Recreation Facilities Plan* includes measures related to recreation but does not include specific actions to assess and manage recreation facilities and features for water quality protection.

Additionally, inundation and relocation of Project recreation facilities and site features due to the pool raise have the potential to impact water quality and beneficial uses identified in the SR/SJR Basin Plan. To avoid and minimize potential water quality impacts, Condition 11 requires modifications to the *Recreation Facilities Plan* that includes assessment of Project recreation facilities and site features for their potential to impact water quality. Condition 11 requires SSWD to develop and implement a *Recreation Facilities Plan* that includes monitoring and implementation of measures to protect water quality.

5.12 Rationale for Condition 12: Mercury Management

The Bear River from Combie Reservoir to Camp Far West Reservoir, Camp Far West Reservoir, and the Bear River downstream of Camp Far West Reservoir are listed under Clean Water Act section 303(d) as impaired by mercury. The Bear River has been affected by historic gold mining activities including the use of mercury and hydraulic gold mining. Mercury deposits associated with historic gold mining activities remain in the Bear River system and may be affected by Project operations and activities in a manner that causes water quality and human health impacts. Water quality and human health impacts may result from an increased amount or mobilization of methylmercury in the watershed. Additionally, reservoirs can increase the rate of mercury methylation, allowing mercury to bioaccumulate in fish tissue and thereby increase the risk to human health.

The California Office of Environmental Health Hazard Assessments (OEHHA) combined new data with previous data from two studies by Sakai et al. and Davis et al. to update the safe eating guidelines for Camp Far West Reservoir (Saiki et al. 2010) (Davis et al. 2009). Fish tissue samples were collected between 2000 and 2015 within Camp Far West Reservoir and on the Bear River in the vicinity of the Project and evaluated for methylmercury concentration. A total of 70 fish were sampled, of which the mean mercury concentrations for channel catfish (0.44 parts per million) and largemouth and spotted bass (0.85 parts per million) equaled or exceeded OEHHA's Advisory Tissue Level for any safe fish consumption for children and women of 0.44 parts per million wet-weight (OEHHA 2009). Condition 12 requires SSWD to evaluate its Project operations in relation to mercury and methylation of mercury and to

¹⁶ SSWD's FLA proposes continued operations of the Project with a new 50-year license term, and the pool raise (SSWD 2019a). As the FLA included both relicensing and the pool raise, it is anticipated that a FERC order regarding Project relicensing will also address the pool raise.

develop and implement, if appropriate, plans to address any Project-related impacts to mercury in compliance with the Provisions (State Water Board 2017). Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses, including but not limited to: warm freshwater habitat; cold freshwater habitat; recreation, and wildlife habitat.

5.13 Rationale for Condition 13: Aquatic Invasive Species Management

Aquatic invasive species (AIS) can result in violations of water quality objectives and impact potential and existing beneficial uses identified in the SR/SJR Basin Plan by impeding navigable waterways, clogging or damaging water delivery systems, reducing recreational access and opportunities, impairing water quality, weakening flood control structures, and diminishing sportfish populations (CDFW 2021). AIS can contribute to a net loss of the overall abundance, diversity, and condition of aquatic resources in a watershed (Dredge or Fill Procedures, Section IV.B.1.) AIS have the potential to be introduced and maintained in the Project area via Project operations, Project construction related activities associated with the recreation site relocations, and recreational activities. Implementation of AIS management activities will minimize and prevent the introduction, establishment, and spread of AIS into and throughout the Project area.

SSWD's FLA notes AIS, including Asian clam (*Corbicula fluminea*), American bullfrog (*Lithobates catesbeianus*), Eurasian milfoil (*Myriophyllum spicatum*), and water primrose (*Ludwigia spp.*), have been documented in the Project vicinity (SSWD 2019a). Other species not currently found in the Project area, but considered to be AIS of concern due to their potential to be introduced to the Project area include Quagga and zebra mussels (*Dreissena rostriformis bugensis* and *Dreissena polymorpha*, respectively), New Zealand mudsnail (*Potamopyrgus antipodarum*), virile crayfish (*Orconectes virilus*), Hydrilla (*Hydrilla verticillata*), curly leaf pondweed (*Potamogeton crispus*), Brazilian waterweed (*Egeria densa*), parrot's feather milfoil (*Myriophyllum aquaticum*), and didymo (*Didymosphenia geminata*) (SSWD 2019a). Condition 13 requires SSWD to develop and implement an AIS plan to help prevent the spread of existing AIS as well as the introduction and spread of AIS that are not currently in the Project area. To avoid duplicative efforts, and as appropriate, the Licensee may reference relevant sections or elements of its 2019 Draft Dreissenid Mussel Vulnerability Assessment and Camp Far West Reservoir Dreissenid Mussel Prevention Plan (*in press*) for Camp Far West Reservoir to meet portions of the AIS Plan requirements. Implementation of this condition will help avoid AIS impacts to water quality and beneficial uses associated with Project activities including but not limited to: warm freshwater habitat; cold freshwater habitat; and wildlife habitat.

5.14 Rationale for Condition 14: Large Woody Material Management

Large woody material (LWM) contributes to productive aquatic ecosystems and is an important component of stream channel maintenance and the formation of complex aquatic habitat both along stream margins and in active river channels. LWM provides cover and holding habitat for native, resident, and migratory fish and organic matter that

supports the aquatic food web. LWM in the upper watersheds can be carried downstream during high flow events. Anchored or lodged woody material can create complex in-channel hydraulics that promote zones of scour and deposition, creating accumulations of spawning gravels, providing hydraulic refugia (Bisson et al. 1987), and creating pools by forcing flows to scour channel beds and banks. Woody material enriches native fish species aquatic habitat by supplying nutrients and substrate for aquatic organisms (Anderson et al. 1978).

Project facilities may block downstream movement of LWM from the Upper Bear River watershed that would otherwise support habitat for native fish species. In SSWD's FERC FLA, SSWD acknowledges an unavoidable adverse effect of continued Project operation is that the Project will capture sediment and LWM that would otherwise be available in the Lower Bear River (SSWD 2019a). Existing and potential beneficial uses that may be impacted by lack of LWM include but are not limited to: warm freshwater habitat; cold freshwater habitat; warm and cold freshwater migration; warm and cold freshwater spawning; and wildlife habitat.

In NMFS's April 15, 2019 Comments on the Draft Final License Application for the Project, NMFS notes that although LWM and spawning gravel are "available" now, the transport of LWM and addition of new substrate materials to the Lower Bear River will continue to be blocked by Camp Far West Dam under the new FERC license for the Project (NMFS 2019). Since the Project does not currently include LWM management actions, it can block the recruitment of LWM to the lower Bear River during the Project's proposed 50-year FERC license term. Additionally, the pool raise may result in higher mobilizing flows that would deplete LWM levels downstream of the Project more rapidly than existing Project spill events.

Condition 14 requires SSWD to develop and implement a Large Woody Material Management Plan that describes proposed LWM management actions and monitoring of Project impacts on LWM availability in the Lower Bear River to ensure protection of water quality and beneficial uses. Requiring a Large Woody Material Management Plan will reduce potential Project effects to aquatic resource-related beneficial uses over the term of the new FERC Project license and is consistent with certifications issued to other hydroelectric projects in the Bear River system. Implementation of this condition will help avoid impacts to water quality and beneficial uses related to fish and habitat, and support the related requirement under Fish and Game Code section 5937 that fish be maintained in good condition below a dam.

Upstream hydroelectric projects such as the Yuba-Bear Hydroelectric Project, Upper Drum-Spaulding Hydroelectric Project, and Lower Drum Hydroelectric Project include LWM management conditions that provide for the passage of LWM downstream of Project dams. Without LWM management for the Project, upstream LWM passage actions may result in the collection of LWM in Camp Far West Reservoir and fail to provide benefits to the Lower Bear River.

5.15 Rationale for Condition 15: Annual Consultation and Annual Review Group

The formation of a Technical Review Group (TRG) and annual consultation will facilitate communication and ensure that interested parties have an opportunity to engage and discuss FERC license implementation. Monitoring and management plans required by this certification will assist USFWS, CDFW, NMFS, State Water Board, and other interested agency representatives in evaluating impacts, including those to water quality, associated with the implementation of new FERC license conditions on hydrologic, biologic, and geomorphologic resources in the Project area throughout the term of the new FERC license. Annual consultation meetings bring the relicensing participants and interested parties together to discuss monitoring results and resource trends, and develop adaptive management actions, if necessary, to protect water quality and beneficial uses. Condition 15 requires that SSWD organize and host TRG meetings, with at least one meeting to be held each year. The TRG meetings will provide an opportunity for communication and coordination between SSWD, resource agencies, tribes, nongovernmental organizations, and other interested parties. The TRG will meet annually to review and discuss efforts completed in the previous year and those planned for the coming year to inform the ongoing protection of water quality and beneficial uses.

5.16 Rationale for Condition 16: Auxiliary Spillway Project

According to SSWD's FLA, normal Project operation is to fill Camp Far West Reservoir in the winter, spill excess flows over the ungated existing spillway, and empty the reservoir by the end of the irrigation season (SSWD 2019a). Since the reservoir operates in a manner where flows are stored until they exceed the reservoirs' capacity and spill over Camp Far West Dam's spillway, the Project's effect on downstream flood flows are limited. As part of Project relicensing, SSWD proposed to continue to operate Camp Far West Dam in a manner consistent with current operations with the exception of implementing the pool raise and operating an auxiliary spillway. Operations of the existing and auxiliary spillway will allow higher flows to pass downstream of Camp Far West Dam than existing conditions, which could impact downstream levees (FERC 2022).

On May 3, 2022, FERC requested SSWD provide additional information regarding the Camp Far West Dam 90-Percent Auxiliary Spillway Design (FERC 2022). Specifically, FERC requests SSWD consider design changes, such as the installation of spillway gates, and operational changes (i.e., reducing the normal reservoir storage levels to better capture and regulate flood flows). FERC set June 2, 2022, as the deadline for SSWD to provide additional information, which is prior to when this certification is issued.

Since designs for the auxiliary spillway and operational changes are not yet finalized, there is insufficient information available to evaluate the impacts to water quality, beneficial uses, and flood potential. Condition 16 requires SSWD to consult with the Deputy Director to determine if an amendment to this certification is needed to address operations of the auxiliary spillway, prior to its use.

5.17 Overview of Rationale for Conditions 17-39

This certification imposes additional conditions regarding Project approvals, monitoring, enforcement, and potential future revisions. This section explains why a condition is necessary to assure that the authorized discharge will comply with water quality requirements, and cites to federal, state, or tribal law that authorizes the condition. (40 C.F.R. § 121.7(d)(1).) The statements in this section correspond with the conditions set forth in Conditions 17-39. In addition, the code citations, plans, and policies that support issuance of this certification are described in Sections 4.0 and 5.0 and are not duplicated in this section but are incorporated herein. Conditions 17-39 are necessary to protect the beneficial uses of waters of the state identified in water quality control plans, prevent degradation of water quality, and help ensure compliance with state and federal water quality requirements.

Condition 17 is necessary to comply with Water Code section 13167. Conditions 18 through 21 contain important clarifications concerning the scope and legal effect of this certification, and other legal requirements that may apply to the Project.

Monitoring, reporting, and assessment actions, and the information developed through such actions, must be readable, shared, and coordinated with other appropriate entities, and accessible to ensure that a discharge activity complies with water quality requirements. Water Code sections 13267 and 13383 authorize the Water Boards to establish monitoring and reporting requirements for persons discharging or proposing to discharge waste. Water Code section 13167 requires the Water Boards to ensure that monitoring data and assessment information are available in a single location and that the information is presented in a manner easily understandable by the public. To fulfill this legislative mandate, Condition 17 requires electronic data submittal in a compatible format with existing system specifications. Compliance with this condition enhances the accessibility of data and transparency of regulatory actions. This allows regulatory agencies and the public to better assess compliance and understand water quality trends or data anomalies by compiling data and making it readily available.

Water Code section 13160, subdivision (b)(1) allows the State Water Board to issue a certification when there is “reasonable assurance that an activity of any person subject to the jurisdiction of the state board will comply with applicable requirements” of state and federal law. In accordance with the California ESA (Fish & G. Code, § 2050 et seq.) and federal ESA (16 U.S.C. § 1531 et seq.), Condition 18 of the certification does not authorize any act which results in the taking of a threatened, endangered, or candidate species. An applicant for certification is required to identify other licenses, permits, and agreements in the application. In the event an applicant for certification needs authorization from the state or federal authorities, California Code of Regulations, title 23, section 3856, subdivision (e), requires that the applicant provide copies of “any final and signed federal, state, and local licenses, permits, and agreements (or copies of the draft documents, if not finalized) that will be required for any construction, operation, maintenance, or other actions associated with the activity. If no final or draft document is available, a list of all remaining agency regulatory approvals being sought shall be included.” To help ensure the integrity of the certification process and its focus on

ensuring that Project activities meet water quality standards and other appropriate requirements of state law, Condition 19 serves to notify applicants that there may be additional applicable federal, state, or local laws or ordinances with which they must comply, including the state and federal Endangered Species Acts (Condition 18).

Water Code section 13160, subdivision (b)(1) allows the State Water Board to issue a certification when there is “reasonable assurance that an activity of any person subject to the jurisdiction of the state board will comply with applicable requirements” of state and federal law. Because agency organization and authorities change over time, Condition 20 provides direction for continuity of oversight in the event an agency’s authority or responsibility is transferred to or subsumed by another agency.

The State Water Board is responsible for the water right, water quality, and drinking water functions of the California state government. (Wat. Code, § 174.) Certain certifications involve an appropriation of water subject to part 2 of division 2 of the Water Code or the diversion of water for certain beneficial uses. (See, e.g., Cal. Code Regs., tit. 23, § 3855, subd. (b)(1)(A).) Condition 21 explains the State Water Board’s issuance of this certification is not adjudicating or approving the validity of water rights that may be related to Project. It also recognizes the State Water Board’s authority, independent of its water quality authority, to prevent unauthorized or threatened unauthorized diversions of water. This helps to ensure that an applicant for a federal license or permit that involves a discharge to navigable waters understands that, except as specified in the certification, the certification does not constitute, or excuse the applicant from obtaining any other State Water Board approvals required for the activity.

Conditions 22 through 24 are necessary to assure that any discharge authorized under the certification will comply with water quality requirements. (Wat. Code, § 13160.) These conditions comply with California Code of Regulations, title 23, section 3860, which sets forth conditions that must be included in all certifications. Condition 22 is a standard condition that “shall be included as conditions of all certification actions” pursuant to California Code of Regulations, title 23, section 3860, subdivision (a). This condition places the Licensee on notice that the certification action may be modified or revoked following administrative or judicial review. Condition 23 is a standard condition that “shall be included as conditions of all water quality certification actions” pursuant to California Code of Regulations, title 23, section 3860(b). This condition clarifies the scope of the certification’s application and ensures that any applicant for a federal license or permit, which may result in a discharge into navigable waters, is subject to the appropriate State certification. Condition 24 is a standard condition that “shall be included as conditions of all water quality certification actions” pursuant to California Code of Regulations, title 23, section 3860(c). This fee requirement condition is also required pursuant to California Code of Regulations, title 23, section 3833(b), which requires payment of fees by project proponents applying for certification. Fees are essential to support the Water Boards certification program, which includes the development of certifications and related inspections to ensure the protection of water quality and beneficial uses that may be impacted by a project.

Conditions 25 through 35 are necessary to ensure that the Project operates to meet water quality standards and other appropriate requirements of state law, or that adjustments are made to ensure continued compliance with water quality standards in light of new information, changes to the Project, or changes to the standards themselves. (Wat. Code, § 13160.)

This certification requires monitoring, reporting, and analysis as important elements to ensure that the Project activities will comply with state and federal water quality requirements and other appropriate requirements of state law. (Wat. Code, § 13160.) Conditions 25, 26, and 27 provide for extensions of time to comply with requirements, prevention or remedy of violations, and notification of changed conditions to ensure compliance and prevent violations of water quality standards. In the event of non-compliance, modified conditions may be necessary to return the Project to compliance and prevent violation of water quality standards. Conditions 28 and 29 require the licensee to comply with water quality control plans and to take all reasonable measures to protect water quality and beneficial uses, in accordance with plans adopted pursuant to state and federal water laws. Water Code section 13267 authorizes the State Water Board to require any person or entity who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste to furnish, under penalty of perjury, technical or monitoring reports when necessary to investigate the quality of any waters of the state. Condition 30 requires such reports that are necessary to ensure compliance with water quality standards.

Condition 31, related to site access requirements, is authorized pursuant to the Water Boards' authority to investigate the quality of any waters of the state, including specific site access authorized under Water Code section 13267 and 13383. Site access is needed to ensure compliance with the certification and associated protection of water quality and beneficial uses. Condition 32 protects water quality by requiring site personnel and agencies to be familiar with the content of the certification and that the certification must be kept at Project sites for easy access and reference. Being familiar with the certification and having it on site will allow the personnel to complete work in accordance with the conditions of this certification. (Wat. Code, § 13263.) This condition also ensures any agent of is aware of certification requirements needed to protect water quality and any authorized discharge will comply with the terms and conditions of this certification, which requires compliance with water quality objectives and beneficial uses adopted or approved under sections 13170 or 13245 of the Water Code, and with other appropriate requirements of state law. Such conditions in the certification are necessary to ensure that all activities will comply with applicable water quality standards and other appropriate requirements (33 U.S.C. section 1341; California Code of Regulations, title 23, section 3859, subdivision (a)) and cannot be adhered to if the agents are unaware of applicable requirements. These conditions are necessary to ensure compliance with applicable water quality objectives and protection of beneficial uses found in the SR/SJR Basin Plan, adopted pursuant to Water Code section 13240, and detailed in the certification.

Condition 33 reserves the State Water Board's authority to add to or modify conditions of this certification to ensure that Project activities meet water quality objectives and protect beneficial uses. (Wat. Code, § 13160.)

Condition 34 requires that SSWD use analytical methods approved by California's Environmental Laboratory Accreditation Program, when available, to ensure that such analyses are done in a consistent manner, with appropriate quality control to ensure the results are reliable for determining compliance with the certification.

Condition 35 provides that the State Water Board will provide notice and an opportunity to be heard in exercising its authority to add or modify certification conditions.

Condition 36 allows for fish passage studies and related fish passage implementation activities if a determination is made that it is reasonably foreseeable that listed anadromous fish species will be reintroduced into Project-impacted areas. As water quality parameters for anadromous fish may be different from fish currently present above Project facilities, Condition 36 is necessary to ensure the protection of existing and potential beneficial uses.

Condition 37 provides for changing conditions related to climate change during the term of the new FERC license in order to protect water quality and beneficial uses. State Water Board Resolution No. 2017-0012, resolves that the state shall update plans, permits, and policies to improve "ecosystem resilience to the impacts of climate change, including but not limited to actions that protect headwaters, facilitate restoration, enhance carbon sequestration, build and enhance healthy soils, and reduce vulnerability to and impacts from fires."

Conditions 38 and 39 are necessary to ensure that the Project is implemented, operated, and maintained in continued compliance with state and federal water quality requirements, including the State Water Board's Dredge or Fill Procedures and statewide aquatic pesticides general permit pursuant to the Clean Water Act and Porter-Cologne Water Quality Control Act, as those requirements may change or be amended during the term of the new FERC Project license. (Wat. Code, § 13160.)

Condition 38 ensures permanent physical loss and permanent ecological degradation of waters of the state are adequately mitigated. This condition is necessary to ensure compliance with state and federal antidegradation policies and is consistent with Section IV.B.1.a of the Dredge or Fill Procedures, which requires that the Water Boards will approve a project only after it has been determined that a sequence of actions has been taken to first avoid, then to minimize, and lastly compensate for adverse impacts that cannot be practicably avoided or minimized. (See also California Code of Regulations, section 3856, subdivision (h) [requiring submittal of proposed mitigation and description of steps taken to avoid, minimize, or compensate].) These compensatory mitigation conditions are also consistent with Executive Order W-59-93 commonly referred to as California's "No Net Loss" Policy for wetlands. The objective of the No Net Loss Policy is to ensure no overall net loss of and a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California. Further,

compensatory mitigation requirements must comply with subpart J of the Supplemental State Guidelines. Mitigation requirements related to financial assurances are also required to ensure that compensatory mitigation will be provided. (Dredge or Fill Procedures, section IV.B.5.f.)

In the event that any provision of this certification is found invalid, Condition 40 ensures that all other provisions will remain effective and water quality will still be protected. (Wat. Code, § 13160.)

6.0 Conclusion

The State Water Board finds that, with the conditions and limitations imposed by this certification, the Project will be protective of the state and federal water quality standards and other appropriate requirements of state law.

7.0 Water Quality Certification Conditions

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT OPERATION OF THE CAMP FAR WEST HYDROELECTRIC PROJECT (Project) will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of state law, under the following terms and conditions.

CONDITION 1. Water Year Types

South Sutter Water District (SSWD or Licensee) shall use the water year (WY) types outlined in this condition to implement this water quality certification (certification) as soon as reasonably practicable but no later than 90 days after Federal Energy Regulatory Commission (FERC) license issuance. The WY types for October 15 through March 14 are based on the criteria in Table 1 and this condition. The WY types for March 15 through October 14 are based on the criteria in Table 2 and this condition. When the WY types differ between this certification and other applicable requirements (e.g., water rights), the Licensee is obligated to comply with the more stringent requirement (e.g., the higher minimum instream flow requirement – Condition 2, most gradual ramping rate – Condition 4).

WY Type Determination for October 15 through March 14

The WY type for October 15 through March 14 shall be determined based on the previous April 1 through September 30 cumulative usable inflow to Camp Far West Reservoir (defined below), as specified in Table 1. The WY type for October 15 through March 14 shall be calculated once each year, by October 14, shall be implemented by 12:00 P.M. (noon) on October 15, and shall apply through March 14.

Table 1. WY Types for Project: October 15 through March 14

WY Type	Cumulative Usable Inflow into Camp Far West Reservoir for Previous April 1 through September 30 Period (acre-feet)
Wet	Greater than or equal to 80,000
Above Normal	41,000 to 79,999
Below Normal	36,000 to 40,999
Dry	20,000 to 35,999
Critically Dry	Less than 20,000

For the purpose of this certification, and unless otherwise approved by the State Water Resources Control Board (State Water Board) Deputy Director of the Division of Water Rights (Deputy Director), “cumulative usable inflow” into Camp Far West Reservoir shall be calculated as the sum of daily canal diversions from April 1 through September 30 at SSWD’s Main Canal and Camp Far West Irrigation District’s (CFWID’s) North and South canals, in cubic feet per second (cfs), multiplied by 1.98347 to convert the cfs to acre-feet (ac-ft), less the difference between Camp Far West Reservoir storage on April 1 and September 30. Camp Far West Reservoir storage on both dates (April 1

and September 30) shall be limited to a maximum reservoir storage volume of 93,737 ac-ft, or the maximum storage possible before uncontrolled spill through the dam spillway¹⁷. For the “cumulative usable inflow”, following the pool raise, the maximum reservoir storage volume shall be 103,573 ac-ft, unless otherwise approved by the Deputy Director. SSWD shall notify FERC and the Deputy Director of any measured changes to the maximum reservoir storage volume (e.g., a bathymetric survey is completed), or a determination that the maximum reservoir storage volume following pool raise is not 103,573 ac-ft.

SSWD’s Main Canal diversions and CFWID’s North and South canal diversions shall be calculated as the mean daily flow in cfs. Storage in Camp Far West Reservoir shall be determined by converting the daily reservoir elevation¹⁸ to storage in ac-ft using the Camp Far West Reservoir area-capacity curve (Figure 1: Camp Far West Reservoir Gross and Usable Area-Capacity Curves). At the time of issuance of this certification, hourly diversion data for the Main Canal, North Canal, and South Canal diversions were reported on a weekly basis. Unless otherwise approved by the Deputy Director, the gages used to provide data for these calculations shall be: (1) Main Canal Diversion (Main Canal M012936¹⁹); (2) South Canal Diversion (CFWID South Canal Flow Meter M012932²⁰); (3) North Canal Diversion (North Canal Flow Gage M007949²¹); and (4) Camp Far West Storage (California Data Exchange Center [CDEC] Gage CFW).

¹⁷ Following completion of SSWD’s proposed construction of a concrete cap on top of the existing spillway, the normal maximum water surface elevation of Camp Far West Reservoir will be increased by five feet from 300 feet to 305 feet (also referred to as the pool raise) and Camp Far West Reservoir’s maximum controlled storage is anticipated to be 103,573 ac-ft.

¹⁸ As recorded at California Data Exchange Center Gage CFW [Camp Far West], maintained by the California Department of Water Resources Flood Management. The gage reports real-time Camp Far West Reservoir stage and end-of-month Camp Far West Reservoir storage. Available at: http://cdec4gov.water.ca.gov/dynamicapp/staMeta?station_id=CFW. Accessed on April 18, 2022.

¹⁹ Data available at: <https://app.outpostcentral.com/remote/reportmain.aspx?public=1&rid=7768>. Accessed on April 18, 2022.

²⁰ Data available at: <https://app.outpostcentral.com/remote/reportmain.aspx?public=1&rid=7201>. Accessed on April 18, 2022.

²¹ Data available at: <http://www.picovale.com/cfwid/cfwid.cfm>. Accessed on April 18, 2022.

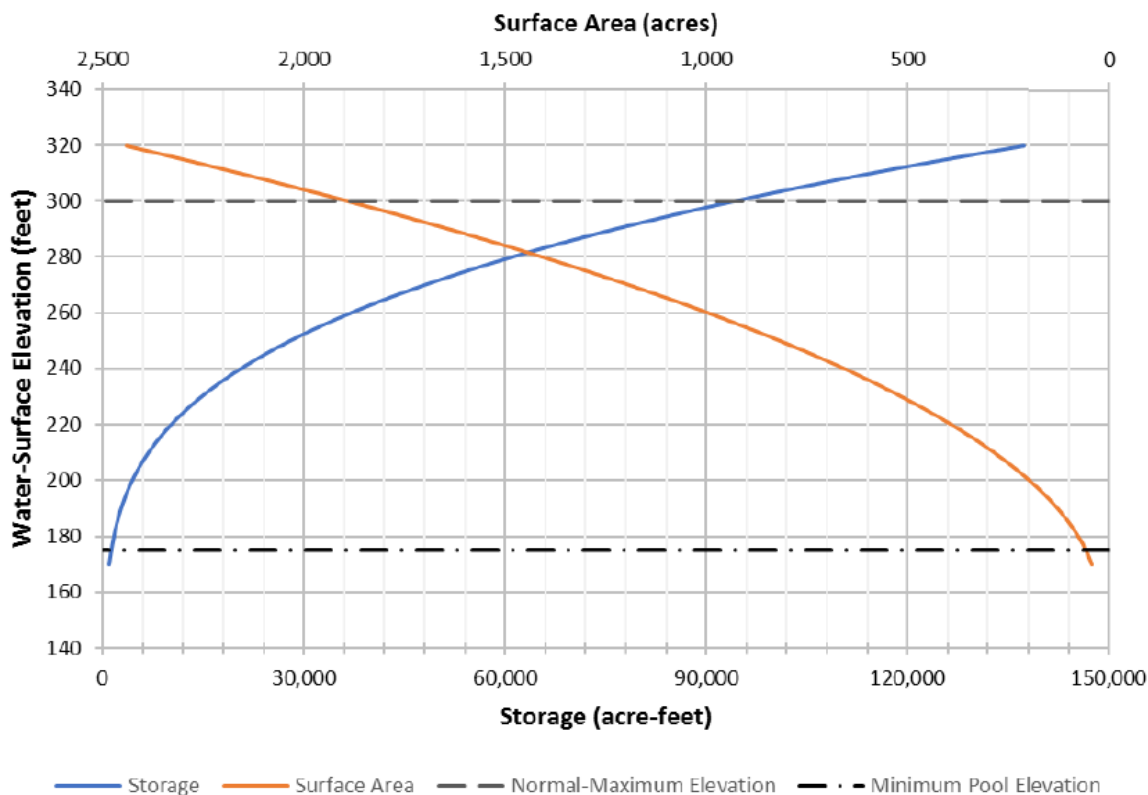


Figure 1. Camp Far West Reservoir Gross and Usable Area-Capacity Curves

WY Type Determination for March 15 through October 14

The WY type for March 15 through October 14 shall be determined as specified in Table 2, based on the California Department of Water Resources (DWR) 50 percent exceedance forecast of the WY unimpaired flow in the Yuba River near Smartsville plus Deer Creek, as estimated by DWR’s Bulletin 120²².

The DWR Bulletin 120 forecast published in March and April shall apply from the 15th day of that month through the 14th day of the next month. From May 15 through October 14, the WY type shall be based on the DWR forecast published in May. If DWR has not released the Bulletin 120 by March 14, April 14, or May 14, then the WY type shall be determined by the most recently published Bulletin 120 in the interim and shall be redetermined and implemented within 48 hours of the next Bulletin 120 publication.

²² Bulletin 120 is a DWR publication issued four times a year, in the second week of February, March, April, and May. It contains forecasts of the volume of seasonal runoff from California’s major watersheds, and summaries of precipitation, snowpack, reservoir storage, runoff, and flow in various regions of California.

Table 2. WY Types for Project: March 15 through October 14 based on Forecasted Unimpaired Flow in Yuba River plus Deer Creek

WY Type	50 Percent Exceedance Forecast of WY Unimpaired Runoff in Yuba River near Smartsville plus Deer Creek (ac-ft)*
Wet	Greater than 3,240,000
Above Normal	2,191,000 to 3,240,000
Below Normal	1,461,000 to 2,190,000
Dry	901,000 to 1,460,000
Critically Dry	Less than or equal to 900,000

* As estimated by DWR Bulletin 120. Values rounded to the nearest 1,000 ac-ft shall be used to determine WY type.

CONDITION 2. Minimum Instream Flows

2(A) Minimum Instream Flow Requirements

The Licensee shall implement the minimum instream flows (MIFs) presented in Table 3 in the Bear River downstream of Camp Far West Dam and Powerhouse, as soon as reasonably practicable but no later than 30 days following FERC license issuance, unless an alternative timeline is approved by the Deputy Director. This certification does not change the bypass flow requirements of SSWD’s water right License 11118, License 11120, and Permit 18360. When the MIF requirements of this certification and the bypass flow requirements of SSWD’s water rights differ, the Licensee must comply with the higher flow requirements. The ramping rates in Condition 4 apply when making changes to releases described in this condition.

Table 3 specifies the time period and MIFs in cfs by WY type (Condition 1). Unless otherwise specified by this condition, flows shall be measured in two ways: (1) as an instantaneous flow; and (2) as the 24-hour average of the flow (mean daily flow). The instantaneous flow shall be used to construct the mean daily flow value and shall be measured in 15-minute or more frequent increments. Each instantaneous flow measurement shall be equal to or greater than 90 percent of the designated minimum flow requirement. The mean daily flow is the average of the incremental readings of instantaneous flow from midnight (12:00 A.M.) of one day to midnight of the next day. The Licensee shall record instantaneous flow readings at all gages, consistent with United States Geological Survey (USGS) standards, and ensure the gages are calibrated for the full range of flows that are required. Unless otherwise approved by the Deputy Director, the Licensee shall report any deviation from the required flows in this certification (i.e., flows required per Conditions 2, 3, and 4) to the Deputy Director within 24 hours of the deviation.

MIF Measurement. MIFs of 30 cfs or less shall be measured at the fish release valve (USGS Gage No. 11423800) off SSWD’s Main Canal. MIFs greater than 30 cfs shall be measured at the USGS gage near Wheatland, California (USGS Gage No. 11424000). Flows shall be measured at the specified gage locations identified in this condition unless otherwise approved by the Deputy Director.

Dissemination of Flow-related Information. The Licensee shall comply with applicable California laws, regulations, and requirements regarding measuring and monitoring water diversions, including California Code of Regulations, title 23, section 933, and amendments thereto. The Licensee shall post all flow and other applicable data, that is not already on the USGS website, to the CDEC website within 24-hours of flow measurement, unless otherwise approved by the Deputy Director.

The Licensee shall publicly notice at an easily accessible location on the internet, all known events that will affect MIF releases (e.g., powerhouse outages, construction, etc.) a minimum of 30 days in advance or as soon as known if less than 30 days in advance. The Licensee shall furnish electronic streamflow records to State Water Board staff upon request. Additionally, streamflow data shall be submitted to the State Water Board in a form consistent with the requirements of Condition 7 and Condition 17.

Table 3. MIFs Downstream of Camp Far West Dam and Powerhouse by WY Type* (measured in cfs)

Time Period	Wet	Above Normal	Below Normal	Dry	Critically Dry
Oct 1–Oct 14	10	10	10	10	10
Oct 15–Oct 31	50	25	25	10	10
Nov 1–Nov 14	100	60	30	20	10
Nov15–Feb 28(29)	125	60	30	20	15
Mar 1–Mar 31	60	40	30	20	15
Apr 1–Apr 30	40	25	25	20	15
May 1–May14	40	25	25	15	15
May 15–May31	25	25	20	10	10
June 1–June 14	25	25	15	10	10
June 15–June 30	20	20	10	10	10
July 1–Sep 30	10	10	10	10	10

* Per Condition 1 of the certification.

If facility modifications are needed to achieve any of the MIFs, the Licensee shall submit any request for alternative MIF implementation timelines to the Deputy Director for review and consideration for approval. The request shall be submitted no later than 60 days following issuance of the new FERC license. The request shall include: specific information on which facility or facilities require modification; the proposed alternative timeline(s) and MIF(s) the Licensee proposes to implement in the interim period between FERC license issuance and completion of facility modifications; and support for the alternative timeline(s) and interim MIF(s). The Deputy Director may require modifications as part of any approval. Upon Deputy Director approval, the Licensee shall file with FERC the Deputy Director-approved alternative MIF implementation timelines. The Licensee shall implement the applicable MIF(s) required by this certification, provided in Table 3, no later than 30 days following completion of any approved facility modifications.

2(B) Planned Temporary Flow Modifications

The flows specified in this certification may be temporarily modified for non-emergency facility construction, modification, or maintenance. Non-emergency variance requests shall be submitted to the Deputy Director for approval as far in advance as practicable, but no less than four months in advance of the desired effective date. The Licensee shall notify the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) of the proposed temporary MIF variance.

The temporary variance request shall include: a description of the proposed construction, modification, or maintenance; the planned duration and magnitude of the MIF variance; documentation of notification to CDFW, USFWS, and NMFS, and any comments received; measures that will be implemented to protect water quality and beneficial uses; and a schedule for the proposed construction, modification, or maintenance. The Deputy Director may deny the request or require modifications as part of any approval. Upon Deputy Director approval, the Licensee shall provide public notice of the MIF variance. The Licensee shall file with FERC the Deputy Director-approved temporary modifications to flow requirements and any approved amendments thereto.

2(C) Unplanned Temporary Flow Modifications

The flows specified in this certification may be temporarily modified if required by equipment malfunction reasonably beyond the control of the Licensee, as directed by law enforcement authorities, or in emergencies. An emergency is defined as an unforeseen event that is reasonably out of the control of the Licensee and requires the Licensee to take immediate action, either unilaterally or under instruction by law enforcement or other regulatory agency staff, to prevent imminent loss of human life or substantial property damage. An emergency may include but is not limited to: natural events such as landslides, storms, or wildfires; vandalism; malfunction or failure of Project facilities; recreation accidents; or other public safety incidents. Drought is not considered an emergency for purposes of this condition. The Licensee shall make all reasonable efforts to promptly resume required flows.

When possible, the Licensee shall notify the Deputy Director prior to any unplanned temporary flow modification. In all instances, the Licensee shall notify the Deputy Director, CDFW, USFWS, and NMFS within 24 hours of the beginning of any unplanned temporary flow modification. Within 96 hours of the beginning of any unplanned temporary flow modification, the Licensee shall provide the Deputy Director with an update of the conditions associated with the modification and an estimated timeline for returning to the required flows.

No later than 30 days following completion of any unplanned temporary flow modification, the Licensee shall provide the Deputy Director, CDFW, USFWS, and NMFS with: (1) a written description of the modification and reason(s) for its necessity; (2) photo documentation of the emergency or reason for the flow modification; (3) a

timeline for returning to the required flow or timeline when the flow resumed; (4) a description of corrective actions taken in response to an unplanned temporary flow modification; and (5) a plan to prevent the need for modification of flows resulting from a similar emergency or event in the future. The Deputy Director may require modifications to the Licensee's plan to prevent future modifications of flows resulting from similar emergencies or events. The Licensee shall implement its plan and any modifications required by the Deputy Director.

2(D) Evaluation of Flows

Following adoption of any future amendments to the *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (Bay-Delta Plan) related to flows in the Sacramento River and its tributaries (including those being developed under the Sacramento/Delta Update to the Bay-Delta Plan at the time of certification issuance), the Deputy Director may require the Licensee to initiate consultation on flows with CDFW, USFWS, NMFS, and State Water Board staff. Such consultation should determine whether the required flows are reasonably protective of water quality and beneficial uses in the Bear River, and whether they meet the requirements of the Bay-Delta Plan and other requirements of state law pertaining to water quality. The consultation shall also address what, if any, flow adjustments must be implemented to protect beneficial uses, comply with water quality objectives, or otherwise protect water quality in the Bear River, Sacramento River, Bay-Delta, and tributary watersheds. If the Licensee enters into a State Water Board-approved voluntary agreement implementing objectives in the Sacramento/Delta Update or other update to the Bay-Delta Plan and the relevant terms of the agreement are included in this certification, then the Deputy Director may determine that consultation is unnecessary if similar functions are performed through the voluntary agreement approval and amended certification processes.

If the above consultation and evaluation of flows does not occur within 10 years of FERC license issuance, the Licensee shall initiate consultation with CDFW, USFWS, NMFS, and State Water Board staff. The consultation shall include discussions of: (1) all monitoring conducted through conditions of this certification that pertain to environmental resources and Project flow releases; (2) any adverse effects to environmental resources associated with Project flow releases; and (3) proposed updates to the flow schedules and/or identification of management actions to address adverse effects to environmental resources associated with Project flow releases.

Within six months of initiating consultation and no later than 11 years following FERC license issuance, the Licensee shall submit to the Deputy Director for review and consideration of approval: documentation of consultation and the consulting agencies' comments and recommendations; any changes to the flows and/or other management actions proposed by the Licensee; and a description of how any changes proposed by the Licensee incorporate or address the agencies' comments and recommendations. The Deputy Director may approve the Licensee's proposal or require other changes to the flows to the extent necessary to ensure reasonable protection of beneficial uses. If changes to the flows are required, within 10 days of the Deputy Director's approval of

the Licensee's proposal or changes to the flows, the Licensee shall file a request with FERC to amend the flow requirements in the Project license. The Licensee shall implement the new flows as soon as reasonably practicable after receiving the Deputy Director's decision and any other required approvals.

CONDITION 3. Spring and Fall Pulse Flows

The Licensee shall implement the fall and spring pulse flows provided in Table 4, Table 5, and Table 6, no later than three months following issuance of the new FERC license, unless an alternative timeline is approved by the Deputy Director. Fall and spring pulse flows shall be measured for compliance consistent with the provisions outlined for flow measurement in Condition 2. The MIFs (Condition 2) may be used to help satisfy the fall and spring pulse flow requirements. The ramping rates in Condition 4 apply when making changes to releases described in this condition.

Fall Pulse Flows. The Licensee shall provide a fall pulse flow in each Wet, Above Normal, and Below Normal WYs (as defined in Condition 1, Table 1), as detailed in Table 4. In a Wet WY, the Licensee shall provide a second fall pulse flow as detailed in Table 5. The timing of the first and second fall pulse flows shall be as follows:

- *First Fall Pulse Flow (in each Wet, Above Normal, and Below Normal WY):* If mean daily flows equal to or greater than the pulse flows in Table 4 have occurred between November 1, 12:00 A.M. and November 9, 11:59 P.M., then the first fall pulse flow is not required in that year. If the mean daily flows are not equal to or greater than the pulse flows in Table 4, the Licensee shall provide a fall pulse flow as detailed in Table 4 between November 10 and November 17. The pulse flow must be initiated and completed between 12:00 A.M. on November 10 and 11:59 P.M. on November 17.
- *Second Fall Pulse Flow (in each Wet WY):* If mean daily flows between November 21 and November 30 are equal to or greater than the pulse flows in Table 5, then the second fall pulse flow is not required in that year. If the mean daily flows are not equal to or greater than the pulse flows in Table 5, the Licensee shall provide a second fall pulse flow as detailed in Table 5 between December 1 and December 7. The second pulse flow must be initiated and completed between 12:00 A.M. on December 1 and 11:59 P.M. on December 7.

The Licensee may determine the specific timing of each pulse flow within the specified periods.

A fall pulse flow is not required in Dry or Critically Dry WYs, and a second fall pulse flow is not required in Above Normal or Below Normal WYs.

Table 4. First Fall Pulse Flow Downstream of Camp Far West Dam and Powerhouse (measured in cfs)

Period (day)	Wet WY*	Above Normal WY*	Below Normal WY*
Day 1	≥ 175	≥ 125	≥ 125
Day 2	≥ 175	≥ 125	≥ 125
Day 3	≥ 125	≥ 75	≥ 75

* Per Condition 1, Table 1 for October 15 – March 14 WYs.

Table 5. Second Fall Pulse Flow Downstream of Camp Far West Dam and Powerhouse (measured in cfs)

Period (day)	Wet WY*	Above Normal WY*	Below Normal WY*
Day 1	≥ 175	None	None
Day 2	≥ 175	None	None
Day 3	≥ 125	None	None

* Per Condition 1, Table 1 for October 15 – March 14 WY Type.

Spring Pulse Flow. The Licensee shall provide a spring pulse flow in each Below Normal, Dry, and Critically Dry WYs (as defined in Condition 1, Table 2), as detailed in Table 6 and this condition. If the applicable pulse flows in Table 6 have occurred after April 1 and before the first applicable date listed in Table 6 (e.g., in a Critically Dry WY the spring pulse flows must occur prior to April 11), the Licensee is not required to release a spring pulse flow pursuant to Table 6. A spring pulse flow is not required in Wet or Above Normal WY types. The spring pulse flow shall begin no sooner than the date specified in Table 6, based on the applicable WY type, and end within a two-week period of the applicable date.

Table 6. Spring Pulse Flow Downstream of Camp Far West Dam and Powerhouse (measured in cfs)

Period (day)	Below Normal WY* (April 27)	Dry WY* (April 19)	Critically Dry WY* (April 11)
Day 1	≥ 200	≥ 200	≥ 200
Day 2	≥ 200	≥ 200	≥ 200
Day 3	≥ 150	≥ 150	≥ 150
Day 4	≥ 100	≥ 100	≥ 100
Day 5	≥ 75	≥ 75	≥ 75
Day 6	≥ 50	≥ 50	≥ 50

* Per Condition 1, Table 2 March 15 – October 14 WY Type.

Modifications to the timing of pulse flows specified in this condition may occur due to:
(a) planned temporary flow modification events as defined in Condition 2(B);
(b) unplanned events as specified in Condition 2(C); or (c) upon Licensee’s request and approval from the Deputy Director. The Licensee’s request for modifications to timing of

pulse flows shall include rationale for the requested time adjustment, along with concurrences for the timing modification from CDFW, NMFS, and USFWS.

CONDITION 4. Ramping Rates

No later than 30 days following issuance of the new FERC license, unless otherwise approved by the Deputy Director, the Licensee shall implement the ramping rates specified in this condition. This certification does not change the ramping rate requirement of SSWD's water rights, including as amended by State Water Board Order WR 2000-10. The Licensee remains obligated to comply with the terms and requirements of its water rights, this certification, and any other applicable requirements. In the event of overlap or conflict, compliance with the most gradual applicable ramping rate requirement will ensure compliance with Condition 4 of this certification and other applicable requirements.

Ramping rates in this condition do not apply to Project operations: (1) during an emergency or equipment malfunction as defined in Condition 2(C); (2) if the natural change of inflow exceeds the control of the Project; or (3) during instances where the Licensee is directed by FERC or the California Division of Safety of Dams (DSOD) to test or exercise valves at Project facilities²³ that do not allow for compliance with the ramping rates.

The Licensee shall make a good faith effort to operate the Camp Far West Powerhouse and Low-Level Outlet such that a change in the release rate shall not cause instream flows downstream of the Camp Far West Diversion Dam to decrease at a rate greater than the rates listed in Table 7 and Table 8. The Licensee shall implement ramping rates required by this condition when the mean hourly release from Camp Far West Dam is less than the maximum diversion capacity of Camp Far West Powerhouse²⁴ from November through May. Ramping rates shall be measured as described in Condition 2.

The ramping rates in this condition shall also apply when making changes between MIF releases described in Condition 2 and implementing fall and spring pulse flow releases described in Condition 3. The ramping rates in this condition are targets: if the Licensee, after a good faith effort to adhere to the target ramping rates, exceeds one or more target ramping rate, the Licensee shall notify USFWS, NMFS, CDFW, and State Water Board staff within 48 hours of the exceedance. This notification shall include the duration of the exceedance, flows during the exceedance, reason for the exceedance

²³ Whenever possible, the testing of valves should be scheduled to limit impacts to water quality and beneficial uses. Modifications to flows and ramping rates associated with FERC and DSOD testing shall be performed in accordance with Condition 2(B) unless such modifications comply with Condition 2(C).

²⁴ The existing maximum diversion capacity of Camp Far West Powerhouse at the time of certification issuance is 725 cfs.

(e.g., unexpected upstream releases resulting in imminent spill at Camp Far West Dam), and proposed measures to avoid the exceedance during future implementation of the ramping rates. The Licensee shall implement the proposed measures or other measures required by the Deputy Director, upon receipt of Deputy Director and any other required approvals.

Ramping Rates for the Bear River

4(A) Ramping during November 1 through January 31

The Licensee shall, from November 1 through January 31 of each year, make a good faith effort to not reduce the combined release from the Camp Far West Powerhouse and the Camp Far West Dam Low-Level Outlet at a rate greater than the target ramping rates in Table 7.

Additionally, the Licensee shall 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 flow passes over the Camp Far West Dam Spillways. If the Licensee determines it is necessary to reduce the combined release from the Camp Far West Powerhouse and Camp Far West Dam Low-Level Outlet prior to flow passing over the Camp Far West Dam Spillways, the Licensee shall make a good faith effort to reduce the combined release using the ramping rates specified in Table 7.

4(B) Ramping during February 1 through May 31

The Licensee shall, from February 1 through May 31 of each year, make a good faith effort to not reduce the combined release from the Camp Far West Powerhouse and the Camp Far West Dam Low-Level Outlet at a rate greater than the target ramping rates in Table 7.

Table 7. Target Ramping Rates from November 1 through May 31*

Mean Hourly Release from a Combination of Camp Far West Dam Low-Level Outlet and Powerhouse for Previous Hour (cfs)	Target Maximum Reduction in Release for that Hour (maximum of three steps** per day) (cfs)
600-725	100
450-599	75
330-449	60
230-329	50
150-229	40
100-149	25
60-99	20
30-59	15
10-29	10

* Target ramping rates do not apply during the Camp Far West Diversion Dam flashboard installation period. See Section 4(C) below for requirements related to ramping associated with installation of flashboards.

** One step is defined as an hourly reduction equal to the appropriate value in the table. An example of implementation of the maximum reduction of three steps per day would be a decrease from 725 cfs to 450 cfs, as follows: Step 1: ramping down from 725 cfs to 625 cfs; Step 2: ramping down from 625 cfs to 525 cfs; and Step 3: ramping down from 525 cfs to 450 cfs.

4(C) Ramping during Springtime Installation of Flashboards at Camp Far West Diversion Dam (April or May)

During spring flashboard installation²⁵ at Camp Far West Diversion Dam, the Licensee shall make a good faith effort to not reduce the combined release from the Camp Far West Powerhouse and Camp Far West Dam Low-Level Outlet at a rate greater than the target ramping rates in Table 8. If the Camp Far West Diversion Dam becomes automated during the term of the new FERC license such that the physical limitations and challenges associated with flashboard installation are no longer applicable, the Licensee shall implement the target ramping rates provided in Table 7 of this condition.

²⁵ Activities associated with flashboard installation at Camp Far West Diversion Dam include: drawing down the Camp Far West Diversion Dam pool; installing the flashboards; and refilling the Camp Far West Diversion Dam pool to initiate diversions to SSWD's and CFWID's irrigation canals.

Table 8. Target Ramping Rates for Springtime Flashboard Installation at the Camp Far West Diversion Dam (April or May)

Mean Hourly Release from Combination of Camp Far West Dam Low-Level Outlet and Powerhouse for Previous Hour (cfs)	Target Maximum Reduction in Release from Combination of Camp Far West Dam Low-Level Outlet and Powerhouse for that Hour (unlimited steps per day) (cfs)
600-725	200
450-599	150
330-449	120
230-329	100
150-229	80
100-149	50
60-99	40
30-59	30
10-29	20

4(D) Monitoring during Flashboard Installation

During the first two years of implementing the target ramping rates listed in Table 8, the Licensee shall conduct fish stranding surveys in the reach downstream of the Camp Far West Diversion Dam. Surveys shall take place when flows are reduced for the installation of the flashboards on the Camp Far West Diversion Dam during daylight hours. Surveys shall be conducted at the lowest flows of down ramping prior to, or during flashboard installation. Surveys shall be completed before flows begin to increase. Surveys shall be conducted by staff trained in identifying Chinook salmon and steelhead. Starting 1,000 feet downstream from the Camp Far West Diversion Dam, staff shall survey for stranded fish along each bank of the Bear River for a distance of 3,000 feet downstream. Surveys may be by foot or boat and shall move from upstream (starting 1,000 feet downstream of the diversion dam) to downstream (ending 4,000 feet downstream of the diversion dam, along each bank).

Surveyors shall search for stranded Chinook salmon and steelhead in interstitial spaces that were wetted and are now dry or that will become dry shortly, including edgewater, backwater, perched habitats, and exposed bars. Surveyors shall wear polarized sunglasses and, to the extent possible, face the sun or observe at an oblique angle to avoid shadows. If stranded Chinook salmon or steelhead are found, the Licensee shall collect the following information:

- (i) The number of stranded fish (dead and alive) by species. If 100 or fewer juvenile fish are estimated at each stranding location, then all juvenile fish shall be counted. If more than 100 live juvenile fish are present, abundance shall be estimated.
- (ii) Location of stranding or mortality, including: 1) global positioning system (GPS) coordinates; and 2) distance from the wetted edge of the main channel.
- (iii) Photographs of where stranding or mortality occurred to document the dimensions, general habitat features, and ability of the fish to return to the main

channel. The ability of fish to return to the main channel shall be visually assessed based on fish size (i.e., body depth) and the depth, continuity, and direction of flow between the stranding location and the main channel.

- (iv) Incidental fish stranding observations of species not specifically targeted (e.g., sturgeon and hardhead minnow).
- (v) Observations of fish stranding during ramping events shall be compiled into a Fish Stranding Annual Report and submitted to the Deputy Director for review and approval no later than 120 days following completion of the fish stranding surveys. The Licensee shall provide CDFW, NMFS, and USFWS a minimum of 30 days to review and comment on the Fish Stranding Annual Report prior to its submission to the Deputy Director. In addition to the items listed above, the Fish Stranding Annual Report shall include:
 - Identification of any potential Project-related impacts to fish stranding;
 - Licensee-proposed adaptive management actions to address potential Project-related fish stranding impacts based on monitoring results; and
 - Comments and recommendations made by CDFW, NMFS, and USFWS, on the Fish Stranding Annual Report along with a description of how the report incorporates or addresses the comments and recommendations.

As part of any approval, the Deputy Director may require: (a) modification to the annual report, including monitoring modifications (e.g., extending the duration or locations of monitoring); or (b) actions to address Project-related fish stranding. The Licensee shall file with FERC the Deputy Director-approved annual report, together with any required modifications. The Licensee shall implement any Deputy Director-approved Fish Stranding Annual Report upon receipt of Deputy Director and any other required approvals.

CONDITION 5. Aquatic Biological Resource Protections

To reduce potential impacts to aquatic biological resources during the pool raise and any other ground disturbing activities associated with Project implementation that have the potential to impact aquatic biological resources, the Licensee shall implement the following measures:

- **Biological Monitoring:** A qualified biologist shall monitor construction activities that could potentially cause adverse impacts on aquatic biological resources. The amount and duration of monitoring shall be determined by the qualified biologist, but at minimum shall include a pre-construction survey 24-hours prior to the start of the ground disturbing activity and shall include site visits throughout the activity. The survey area shall include all disturbed areas with the potential for impacts to aquatic biological resources (SSWD 2021b, MM-BIO-05).
- **Western Pond Turtles.** If western pond turtles (WPTs) are found during biological monitoring, they shall be relocated to an area with similar habitat within 350 feet of Camp Far West Reservoir and a minimum of 500 feet from the construction activities. If a WPT nest is located, construction

activities within 100 feet shall cease immediately and the Licensee shall contact CDFW to consult on appropriate actions to avoid egg disturbance. Work may resume once CDFW-approved actions have been implemented to protect WPT eggs (SSWD 2021b, MM-BIO-15).

- Egress. At the end of each workday, all steep-sided excavations more than two feet deep shall be provided with one or more ramps, to allow biological resource egress.
- Worker Environmental Awareness Training. A qualified biologist shall conduct mandatory contract/worker environmental awareness training for construction personnel on aquatic biological resources potentially present in the work area, and actions that must be implemented to reduce potential Project-related impacts (SSWD 2021b, MM-BIO-05).
- Fencing. If ground disturbing activities are planned within 250 feet of a vernal pool or within 100 feet of other aquatic biological resource habitats, protective fencing shall be installed between the aquatic biological resource habitat(s) and the construction area(s) to it reduce disturbance and protect water quality (SSWD 2021b, MM-BIO-08).

CONDITION 6. Erosion and Sediment Control

6(A) Erosion Control Plan

No later than one year following FERC license issuance, the Licensee shall submit an Erosion Control Plan (Erosion Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Erosion Plan shall minimize Project-related erosion and sedimentation impacts associated with operations of the Project facilities (e.g., existing and auxiliary spillways, recreation sites, and access roads). The Erosion Plan shall be developed in consultation with CDFW, NMFS, USFWS, and State Water Board staff. At a minimum, the Erosion Plan shall include:

- (i) Initial and periodic assessment and monitoring by a qualified engineering geologist of Project spillways and features (e.g., area inundated by the pool raise, access roads) that could contribute to erosion and/or sediment transport to surface waters;
- (ii) Identification of best management practices (BMPs) that will be implemented to control erosion and sedimentation. Unless otherwise approved by the Deputy Director, at a minimum, BMPs shall include the following:
 - Silt fence and/or fiber rolls along the perimeter of all work areas to prevent the displacement of fill material and to intercept and capture sediment prior to entering aquatic resources (SSWD 2021b, MM-BIO-07).
 - Reducing vegetation clearing and ground disturbance to the smallest area possible (SSWD 2021b, MM-BIO-01).
 - Fence and/or flag all areas to be avoided during construction activities to prevent disturbance (SSWD 2021b, MM-BIO-08).

- Return all exposed and/or disturbed areas resulting from ground disturbing activities to their original contours and grades and restore using locally native seed mixes (SSWD 2021b, MM-BIO-02).
 - Put in place and implement control measures for erosion, excessive sedimentation, and sources of turbidity prior to the commencement of, during, and after any ground disturbing activities, or any other Project activities that could result in erosion or sediment discharges to surface water (SSWD 2021b, MM-BIO-07).
 - Use caution when handling and/or storing chemicals (e.g., fuel, hydraulic fluid) near waterways. Appropriate materials shall be on site to prevent and manage spills to prevent impacts to surface waters.
 - When not in use, store equipment in upland areas in a manner that is protective of surface waters and, at a minimum, is outside the ordinary high-water mark.
 - Inspect all construction equipment for leaks before entering the Project area. All equipment shall be well maintained and inspected daily while on site to prevent leaks of fuels, lubricants, or other fluids into waters of the United States or waters of the state. Stationary equipment (e.g., generators) within 100 feet of aquatic habitat shall be parked over secondary containment. Additionally, service and refueling shall be conducted in a designated area, where no potential exists for fuel spills to seep or wash into waterways.
 - Locate stockpiles outside of riparian habitat and protect with appropriate BMPs. If more than 0.25 inch of rain is forecasted during the construction period, all stockpiles shall be covered with plastic and surrounded with sediment control technologies or berms to prevent sediment run-off.
 - Implement BMPs prior to initiating ground disturbing activities within 250 feet of a vernal pool or within 100 feet of other aquatic resource habitats to prevent potential construction related impacts (SSWD 2021b, MM-BIO-07). BMPs shall include using appropriate measures to intercept and capture sediment before it enters aquatic resource habitats, as well as implementation of erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to initiating any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized.
 - No ground disturbing shall occur within 72 hours of a rain event. If rain is forecasted within 72 hours of scheduled work, work shall be postponed until 72 hours after the potential for the forecasted rain event (SSWD 2021b, MM-BIO-09).
- (iii) Criteria for prioritizing and ranking erosion sites for treatment, and an associated schedule for treating each site;
- (iv) Identification of anticipated maintenance activities, including the timing and frequency of their implementation;
- (v) Implementation and effectiveness monitoring. If erosion control measures are not effective, the Licensee shall implement additional erosion control measures

approved by the State Water Board and continue monitoring until the site has stabilized;

- (vi) Performance metrics to assess the effectiveness of erosion and sediment control BMPs at preventing and reducing Project-related impacts;
- (vii) Documentation of consultation with CDFW, NMFS, USFWS, and State Water Board staff, comments and recommendations made as part of consultation, and a description of how the Erosion Plan incorporates or addresses the comments and recommendations;
- (viii) Protocols for emergency erosion and sediment control implemented upon notice to the Deputy Director; and
- (ix) Format and schedule for reports to document, summarize, and analyze monitoring results and make recommendations. Reports shall include identification of any potential concerns, an assessment of the effectiveness of implemented measures, and any proposed modifications to better address Project-related impacts. Reports shall be submitted to CDFW, NMFS, USFWS, and State Water Board staff. The Deputy Director may require implementation of additional monitoring or other actions in response to the information provided in the monitoring reports.

Any modifications to the Erosion Plan require approval by the Deputy Director prior to implementation. The Licensee shall file with FERC the Deputy Director-approved Erosion Plan, any approved amendments thereto, and any additional Deputy-Director required actions. The Licensee shall implement the Erosion Plan, any amendments thereto, and any additional required actions upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

6(B) Construction and Maintenance

When applicable, the Licensee shall comply with the State Water Board's *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit)²⁶ (State Water Board 2009), and amendments thereto. For construction and maintenance activities with the potential to impact water quality or beneficial uses that are not subject to the Construction General Permit and/or that are not covered by another condition of this certification, the Licensee shall prepare and implement site-specific Water Quality Monitoring and Protection Plans (WQMP Plans) for Deputy Director review and consideration for approval.

At a minimum, the WQMP Plans must demonstrate compliance with sediment and turbidity water quality objectives in the *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin* (SR/SJR Basin Plan), as adopted and may be

²⁶ Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Accessed on April 18, 2022.

amended by the Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) (Central Valley Regional Water Board 2018).

The Licensee shall submit WQMP Plans to the Deputy Director for review and consideration for approval at least 120 days prior to the desired start date of the applicable construction or maintenance activity. The objective of the WQMP Plans shall be to identify and implement control measures for construction, maintenance, or other activities with the potential to cause erosion, stream sedimentation, fugitive dust, soil mass movement, release of hazardous materials, or other water quality impairment.

WQMP Plans shall be based on actual site geologic, soil, and groundwater conditions, and at a minimum shall include:

- (i) A description of site conditions and the proposed activity;
- (ii) Detailed descriptions, design drawings, and specific topographic locations of all control measures in relation to the proposed activity, which may include:
 - a. Measures to divert runoff away from disturbed land surfaces;
 - b. Measures to collect and filter runoff from disturbed land surfaces, including sediment ponds;
 - c. Measures to dissipate energy and prevent erosion;
- (iii) Revegetation measures for disturbed areas, which shall include use of native plants and locally-sourced plants and seeds; and
- (iv) A monitoring, maintenance, and reporting schedule.

The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved WQMP Plans, and any approved amendments thereto. The Licensee shall implement the WQMP Plans upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

CONDITION 7. Stream Gages

No later than one year following FERC license issuance, the Licensee shall submit a Stream Gaging Plan (Gage Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Gage Plan shall ensure transparency and compliance with Condition 1 of this certification. The Gage Plan shall be developed in consultation with CDFW, NMFS, USFWS, and State Water Board staff. At a minimum, the Gage Plan shall include:

- (i) A plan to transmit data from all gages to CDEC or make such data publicly available;
- (ii) Initial and periodic assessment and monitoring of gages by a qualified individual in accordance with USGS standards for gages. This includes a list of anticipated USGS-standard maintenance activities that will be implemented to ensure the long-term and ongoing effectiveness of the Project's gages, including the timing and frequency of such actions;
- (iii) Calibrated rating curves for all gages;

- (iv) Documentation of consultation with CDFW, NMFS, USFWS, and State Water Board staff, comments and recommendations made as part of consultation, and a description of how the Gage Plan incorporates or addresses the comments and recommendations; and
- (v) Format and schedule for reports to document, summarize, and analyze gage implementation and make recommendations, if needed. Reports shall include identification of any potential concerns, an assessment of the effectiveness of the gages or methods to determine and document compliance with Condition 1, and any proposed modifications to better assess and document diversions and flows. Reports shall be submitted to CDFW, NMFS, USFWS, and State Water Board staff. The Deputy Director may require modifications to the Gage Plan or other actions in response to the information provided in the reports.

The Licensee shall file with FERC the Deputy Director-approved Gage Plan, any approved amendments thereto, and any additional Deputy Director required actions. Modification to the Gage Plan require approval by the Deputy Director prior to implementation. The Licensee shall implement any Deputy Director-approved modifications to the Gage Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

CONDITION 8. Monitoring and Adaptive Management

8(A) Aquatic Resource Monitoring

No later than one year following FERC license issuance, the Licensee shall submit an Aquatic Resource Monitoring and Adaptive Management Plan (ARMP) to the Deputy Director for review and consideration for approval. The objective of the ARMP shall be to monitor for impacts to salmonids and benthic macroinvertebrates (BMI) in the Bear River below Camp Far West Dam due to Project operations and guide adaptive management decisions and actions, as needed. The ARMP shall be developed in consultation with State Water Board staff, USFWS, NMFS, and CDFW. At a minimum, the ARMP shall include:

- (i) Proposed fish species and life stages to be monitored. At a minimum, the Licensee shall monitor for fall-run Chinook salmon and steelhead. Additionally, the Licensee shall monitor for BM-I;
- (ii) Identification of monitoring years;
- (iii) The Licensee shall also identify the timing of the monitoring in each year;
- (iv) Identification of monitoring locations;
- (v) Description of sampling protocols. For BMI monitoring the Surface Water Ambient Monitoring protocols shall be used unless otherwise approved by the Deputy Director;
- (vi) Metrics for analyzing how Project operations impact the fish population, distribution, habitat, and BMI community;
- (vii) Format, schedule, and reporting to document, summarize, and analyze aquatic resource monitoring results. The Licensee may propose any updates or adaptive management measures to the plan based on the monitoring results or new

information related to fish and BMI that may be impacted by Project operations. The Licensee shall submit monitoring results to State Water Board, CDFW, USFWS, and NMFS staff; and

- (viii) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff on plan development, consulting agencies' comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

Any modifications to the ARMP shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC the Deputy Director-approved ARMP and any amendments thereto. The Licensee shall implement any Deputy Director-approved ARMP upon receipt of Deputy Director and any other required approvals.

8(B) Water Quality Monitoring

No later than three months following FERC license issuance, the Licensee shall submit a Water Quality Monitoring and Adaptive Management Plan (Water Quality Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Water Quality Plan shall be developed in consultation with Central Valley Regional Water Board and State Water Board staff. The goal of the Water Quality Plan shall be to assess Project-related impacts to water quality and identify adaptive management actions to reduce Project-related impacts, as necessary. At a minimum, the Water Quality Plan shall include:

- (i) Proposed monitoring locations. At a minimum, monitoring locations shall include:
 - Bear River above Camp Far West Reservoir;
 - Camp Far West Reservoir;
 - Bear River below Camp Far West Dam and above the Camp Far West Diversion Dam; and
 - Bear River below the Camp Far West Diversion Dam.
- (ii) Frequency of proposed water quality monitoring. At a minimum, monitoring frequency shall occur:
 - Prior to, during, and following the proposed raising of the normal maximum water surface elevation of Camp Far West Reservoir by five feet from 300 feet to 305 feet (pool raise). The Licensee shall begin monitoring a minimum of one week prior to the pool raise, and continue for a minimum of one week following the pool raise;
 - For two full years within the first five years following FERC license issuance;
 - During a Dry or Critically Dry WY (as defined in Condition 1) following Year 20 of FERC license issuance. If no Dry or Critically Dry WY occurs between license Years 20 and 25, the Licensee shall monitor water quality in Year 26 following license issuance;

Monitoring frequency for in-situ basic water quality parameters shall occur at one hour or more frequent intervals. The frequency of grab samples shall be determined in consultation during plan development;

- (iii) Constituents to be monitored. Unless otherwise approved by the Deputy Director, monitoring constituents shall include in-situ basic water quality parameters, total metal concentrations, dissolved metal concentrations, and pesticides listed in Table 3.3.2-8 of SSWD's FLA (SSWD, 2019a);
- (iv) Description of potential water quality impacts that may be caused by the pool raise, including an evaluation of potential impacts from the historic mines adjacent to Camp Far West Reservoir (Quail and Dairy Farm mines). If necessary, propose management actions that will be implemented to avoid or reduce these potential impacts;
- (v) Description of quality assurance and quality control procedures that will be used for collection and handling of samples and data validation. Procedures should be consistent with the requirements of Condition 34, as applicable;
- (vi) Reporting and adaptive management. Format, schedule, and reporting to document, summarize, and analyze water quality monitoring results. The reporting shall include an evaluation of the results and any recommendations regarding whether additional monitoring is needed in future years, beyond what is required as part of Deputy Director approval of the Water Quality Plan. The Licensee may propose updates or adaptive management measures to the Water Quality Plan based on the monitoring results or new information related to water quality that may be impacted by Project operations. To the extent feasible, monitoring reports shall be submitted to Central Valley Regional Water Board and the State Water Board a minimum of 60 days prior to the Annual Meeting (Condition 15); and
- (vii) Consultation documentation. Documentation of consultation with Central Valley Regional Water Board and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

The Deputy Director may modify or approve modifications to the requirements referenced in this condition based on a request from the Licensee with supporting information or new information based on monitoring or other reliable sources that supports such modifications. Any modifications to the Water Quality Plan require approval by the Deputy Director prior to implementation. The Licensee shall file with FERC the Deputy Director-approved Water Quality Plan and any amendments thereto. The Licensee shall implement the Deputy Director-approved Water Quality Plan and any amendments thereto upon receipt of Deputy Director and any other required approvals.

CONDITION 9. Hazardous Materials

No later than one year following FERC license issuance, the Licensee shall submit a Hazardous Substances Plan to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Hazardous Substances Plan shall address the storage, spill prevention, cleanup, and disposal of oil and hazardous substances associated with the Project activities (e.g., pool raise and Project operations). The Licensee shall consult with Central Valley Regional Water Board and State Water Board staff in the development of the

Hazardous Substances Plan. At a minimum, the Hazardous Substances Plan shall include:

- (i) Onsite containment for storage of chemicals classified as hazardous shall be away from watercourses and include secondary containment and appropriate management as specified in California Code of Regulations, title 27, section 20320;
- (ii) The Licensee's plan to maintain in the Project area a cache of spill cleanup equipment suitable to contain any Project spill, including information on the location of the spill cleanup equipment and of the location, type, and quantity of oil and hazardous substances stored in the Project area;
- (iii) Immediate reporting to the State Water Board, Central Valley Regional Water Board, and other relevant agencies of the magnitude, nature, time, date, location, and action taken for any spill;
- (iv) A monitoring and reporting component that details water quality monitoring and corrective measures to reduce water quality impacts that will be taken if spills occur, as well as information on how hazardous substances will be properly disposed of once their useful life has past or as part of cleanup activities;
- (v) Evaluation of any release and cleanup of hazardous substances. This evaluation shall be completed no later than 120 days after the release and include consultation with Central Valley Regional Water Board and State Water Board staff and a report submitted to the Deputy Director with any proposed updates to plan to avoid such releases in the future; and
- (vi) Documentation of consultation with Central Valley Regional Water Board and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

The Deputy Director may require implementation of additional actions in response to the information provided as part of a report following a release or other information indicating a threat to water quality or beneficial uses. Any modifications to the Hazardous Substances Plan require approval by the Deputy Director prior to implementation. The Licensee shall file with FERC the Deputy Director-approved Hazardous Substances Plan, any amendments thereto, and any additional Deputy Director-required actions. The Licensee shall implement the Deputy Director-approved Hazardous Substances Plan, any amendments thereto, and any additional required actions upon receipt of Deputy Director and any other required approvals.

CONDITION 10. Extremely Dry Conditions

In the event of extremely dry conditions, which may include a year in which the Governor of the State of California declares a drought emergency for Yuba County, Nevada County, or Placer County, or multiple consecutive Dry or Critically Dry water year types as defined by Condition 1, the Licensee may request modification of the flow and related requirements of this certification. If the Licensee anticipates that it may request modification pursuant to this condition, the Licensee shall notify CDFW, USFWS, NMFS, and the Deputy Director of the Licensee's concerns related to flows

and related requirements as early as possible. If the Licensee requests modification pursuant to this condition, the Licensee shall develop a Revised Operations Plan in consultation with the agencies listed in this paragraph and State Water Board staff for flows and related requirements during the extremely dry conditions.

The Licensee shall provide interested parties with notice of the proposed Revised Operations Plan at least seven days prior to submittal to the Deputy Director. Whenever possible, the Licensee shall provide an opportunity for interested parties to comment on the proposed Revised Operations Plan, prior to submittal to the Deputy Director, and provide such comments to the Deputy Director as part of submittal of the Revised Operations Plan. At a minimum, the Licensee's request shall include: proposed water diversion amounts, proposed modifications to the certification conditions (e.g., ramping rates, pulse flows, MIFs), beneficial uses that will benefit from the proposed changes; a timeline for the return to regular operations and compliance with the certification conditions; proposed monitoring during the revised operations period, including an estimation of any impacts the revised operations may have on any beneficial uses of water; identification of measures to reasonably protect beneficial uses under the circumstances; and proposed water conservation measures that will be implemented. If conservation measures are not applicable, the Licensee shall describe the circumstances and justification for not implementing water conservation measures.

The Licensee shall submit the proposed Revised Operations Plan to the Deputy Director for review and consideration for approval. The Licensee shall also provide a summary of any comments received and how the comments were addressed. The Deputy Director may require modifications to the Revised Operations Plan as part of any approval. The Licensee may implement the Revised Operations Plan upon receipt of Deputy Director and other required approvals, in accordance with the schedule and requirements specified therein. The Licensee shall file with FERC the Deputy Director-approved Revised Operations Plan, and any approved amendments thereto.

CONDITION 11. Recreation Facilities

No later than one year following FERC license issuance, unless otherwise approved by the Deputy Director, the Licensee shall submit an updated *Recreation Facilities Plan*²⁷ (Recreation Plan) to the Deputy Director for review and consideration of approval. Upon license issuance and until the updated Recreation Facilities Plan is approved by the Deputy Director, the Licensee shall implement the *Recreation Facilities Plan* it filed with FERC on October 25, 2019, as approved or modified by FERC as part of any relicensing proceedings. All recreation site relocations and actions associated with the pool raise, with the potential to impact water quality and beneficial uses, shall not be implemented until the updated Recreation Plan is approved by the Deputy Director. The Deputy Director may require modifications as part of any approval of the updated

²⁷ The Recreation Plan was filed by SSWD with FERC as part of the Final License Application amendment on October 25, 2019 (SSWD 2019b) and agreed to by USFWS, National Park Service, CDFW, and Foothills Water Network.

Recreation Facilities Plan. The Licensee shall consult with all of the parties that agreed to the 2019 Recreation Plan and State Water Board staff in developing the updated Recreation Plan. At a minimum, the Recreation Plan shall be updated to include:

- (i) Water quality sampling associated with recreation facility operations over the term of the new FERC license. The Recreation Plan shall include the monitoring locations, method, quality assurance project plan, and frequency for: turbidity, dissolved oxygen, *Escherichia coli*, total petroleum hydrocarbons (gasoline range), and oil/grease;
- (ii) Description of in-water (e.g., boat launches and floating docks) and other recreation facilities to be constructed, built, closed, or relocated, and identification of associated water quality monitoring to ensure the protection of water quality and beneficial uses. As appropriate, water quality monitoring may refer to WQMP Plans or coverage under the Construction General Permit (Condition 6(B));
- (iii) A comprehensive list and map of recreation facilities associated with the Project, and any known modifications to existing recreation facilities (including removal) or new facilities to be constructed during the term of the new FERC license. This list and map shall be updated throughout the term of the new FERC license as new information becomes available;
- (iv) Description of recreation facilities that would be inundated as part of and following the pool raise during maximum reservoir fill events;
- (v) For sites to be constructed, built, closed, or relocated, description of the site conditions including the estimated area of impervious surfaces prior to and following recreational site construction/removal activities;
- (vi) A schedule of construction work for recreation sites to be constructed, built, closed, or relocated. An updated schedule shall be provided when changes are identified;
- (vii) Identification of the need for aquatic vegetation management at recreation sites, when applicable, and actions that may be implemented as needed;
- (viii) A list of additional permits and environmental review required for implementation of the plan;
- (ix) Description of BMPs and other measures that will be implemented to protect water quality during implementation of the updated Recreation Plan. BMPs shall include, as appropriate, measures to divert, collect, filter, and dissipate runoff to protect surface waters from sedimentation; and
- (x) A monitoring, maintenance, and reporting schedule.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to the updated Recreation Plan shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to the updated Recreation Plan. The Licensee shall implement any Deputy Director-approved modifications to the updated Recreation Plan upon receipt of Deputy Director and any other required approvals.

CONDITION 12. Mercury Management

Within three years of FERC license issuance, the Licensee shall evaluate the extent to which Project operations increase the mobilization or methylation of mercury and submit the evaluation to the Deputy Director for review and consideration for approval. The Licensee shall consult with State Water Board and Central Valley Regional Water Board staff in development of the evaluation. The evaluation shall include existing water quality and fish tissue data related to mercury and the extent to which Project operations contribute to the mobilization or methylation of mercury. Evaluation of Project contributions of mercury mobilization or methylation shall include consideration of potential impacts associated with reservoir stratification and Project flow releases to the Bear River. The evaluation shall also identify the extent to which the Licensee is implementing measures related to mercury management under its existing Project operations (e.g., posting of health warnings, etc.).

After submittal of the evaluation, the Deputy Director may require the Licensee to develop a Mercury Management Plan that addresses, to the extent feasible, Project operations and activities that increase the mobilization or methylation of mercury. If required, the Mercury Management Plan shall be developed in consultation with the State Water Board and Central Valley Regional Water Board staff. The Mercury Management Plan shall comply with the *Tribal Subsistence Beneficial Uses and Mercury Provisions* (State Water Board 2017). The Mercury Management Plan shall include a review of potential measures to reduce the amount of methylmercury or rate of mercury methylation in the watershed as affected by the Project (such as changes to operations related to power generation, reservoir management, sediment dredging, and/or sediment capping), and the feasibility of implementation measures. The Mercury Management Plan shall also describe any necessary measures to protect human health from exposure through fish consumption (such as posting health warnings and operating recreational fishing as catch-and-release only).

If, based on the information contained in the Mercury Management Plan or other available information, the Deputy Director determines there are appropriate and feasible measures the Licensee should implement to reduce the amount of methylmercury, reduce the mobilization or methylation of mercury, and/or protect human health, the Deputy Director may require the Licensee to develop a Mercury Reduction Implementation Plan, which shall be submitted to the Executive Director of the State Water Board for review and consideration for approval, after notice and opportunity for hearing. The Mercury Reduction Implementation Plan shall be developed in consultation with State Water Board and Central Valley Regional Water Board staff.

The Licensee shall file with FERC the Deputy Director-approved evaluation, Deputy Director-approved Mercury Management Plan, and Executive Director-approved Mercury Reduction Implementation Plan, together with any required modifications. Upon receiving all necessary regulatory approvals, the Licensee shall implement the measures identified in the applicable plan.

CONDITION 13. Aquatic Invasive Species Management

No later than one year following FERC license issuance, the Licensee shall submit an Aquatic Invasive Species Monitoring and Management Plan (AIS Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The AIS Plan shall be developed in consultation with CDFW, NMFS, USFWS, Central Valley Regional Water Board, and State Water Board staff. The AIS Plan shall: (1) identify and implement BMPs to minimize and prevent the introduction and spread of aquatic invasive species (AIS) into and through Project-affected waters; (2) provide education and outreach to ensure public awareness of the potential effects of AIS in Project-affected waters and actions needed to avoid or address them; (3) develop and implement monitoring programs to ensure early detection of AIS; (4) monitor the spread of established AIS. At a minimum, the AIS Plan shall include:

- (i) Guidance and references the Licensee will use to manage AIS that occur or have the potential to occur in Project-affected waters;
- (ii) Identification of AIS that occur and have the potential to occur in Project-affected waters. AIS identification shall include consideration of at least Quagga and zebra mussels (*Dreissena bugensis* and *Dreissena polymorpha*), New Zealand mudsnail (*Potamophyrus antiodarum*), Eurasian milfoil (*Myriophyllum spicatum*), Hydrilla (*Hydrilla verticillata*), Asian clam (*Corbicula fluminea*), Floating water primrose (*Ludwigia peploides ssp. Montevidensis*), American bullfrog (*Lithobates catesbeianus*), Brazilian waterweed (*Egeria densa*), Parrot's feather milfoil (*Myriophyllum aquaticum*), virile crayfish (*Orconectes virilus*), Curly leaf pondweed (*Potamogeton crispus*), and didymo (*Didymosphenia geminata*). For those that occur, include information on where the AIS occurs and its density, as applicable;
- (iii) BMPs that will be implemented to manage AIS;
- (iv) An education and outreach program that will be implemented to ensure public awareness and actions to avoid the introduction and spread of AIS. The education program shall include appropriate signage and/or public information or pamphlets at designated boat access sites. Signage and pamphlets shall include information on procedures for proper boat and equipment cleaning before leaving the waterbody;
- (v) A monitoring and reporting program that will be implemented to ensure early detection of new AIS and monitor for the spread or reduction of established AIS. The monitoring program shall include the species that will be monitored for, monitoring protocols, frequency, and locations. The program shall describe how the Licensee will evaluate and report on the performance of AIS management efforts. The program shall include the criteria that will be used to evaluate the performance of AIS BMPs. The reports shall include identification of changes associated with the presence of AIS in Project-affected waters and recommendations to address the presence or change in density of AIS. The Licensee shall propose any updates to the plan based on the monitoring results or other available information. Reports shall be submitted to CDFW, NMFS, USFWS, Central Valley Regional Water Board, and the Deputy Director;

- (vi) An adaptive management program that describes how the Licensee plans to adjust AIS monitoring methods or BMPs based on evaluation of information and monitoring resulting from implementation of the plan; and
- (vii) Documentation of consultation with CDFW, NMFS, USFWS, Central Valley Regional Water Board, and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

As appropriate, the Licensee may reference relevant sections or elements of its 2019 Draft Dreissenid Mussel Vulnerability Assessment and Camp Far West Reservoir Dreissenid Mussel Prevention Plan (*in press*) for Camp Far West Reservoir to meet portions of the AIS Plan requirements. The Deputy Director may direct the Licensee to implement additional actions to address AIS in Project-affected waters based on monitoring results or other information in the record. Any modifications to the AIS Plan require approval by the Deputy Director prior to implementation. The Licensee shall file with FERC the Deputy Director-approved AIS Plan, any approved amendments thereto, and any additional Deputy Director-required actions. The Licensee shall implement the AIS Plan, any amendments thereto, and any additional required actions upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

CONDITION 14. Large Woody Material Management

No later than one year following FERC license issuance, the Licensee shall submit a Large Woody Material Management Plan (LWMM Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The LWMM Plan shall be developed in consultation with, CDFW, NMFS, USFWS, and State Water Board staff. The LWMM Plan shall describe how the Licensee proposes to manage large woody material during the FERC license term and provide periodic assessment of Project impacts to large woody material transport in the Lower Bear River watershed. At a minimum, the LWMM Plan shall include:

- (i) A description of: (a) what constitutes large woody material (i.e., size criteria) that will be captured, removed, stored, and placed as part of this condition; and (b) how other woody material will be handled or disposed of as part of the Project's operations;
- (ii) Proposed monitoring to assess the effectiveness of the Licensee's large woody material management (e.g., mobilization and distribution of large woody material in the Lower Bear River);
- (iii) Detailed description of the methods, locations, volume, and frequency of large woody material collection, removal, storage, and placement;
- (iv) Method the Licensee will use to determine if root wads present a risk to recreation or dam safety. If the root wad would not present a risk to recreation or dam safety, the root wad shall be allowed to continue downstream of the dam;

- (v) Monitoring and reporting program that describes how the Licensee will evaluate and report on the performance of LWMM Plan efforts. The plan shall include the criteria that will be used to evaluate the performance of LWMM Plan measures. The Licensee shall propose updates to the LWMM Plan based on the monitoring results. Reports shall be submitted to the Deputy Director, CDFW, USFWS, NMFS, and DSOD. The Deputy Director may require implementation of additional monitoring, large woody material management measures, or other actions in response to the information provided in the monitoring reports;
- (vi) Plan for removal and placement or disposal of large woody material from the dam, dam spillways, or other locations that may pose a safety concern when directed by FERC or DSOD;
- (vii) An adaptive management program that describes how the Licensee plans to adjust large woody material management and monitoring based on evaluation of information and monitoring resulting from implementation of the LWMM Plan; and
- (viii) Documentation of consultation with CDFW, NMFS, USFWS, and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved LWMM Plan, and any approved amendments thereto. The Licensee shall implement the LWMM Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. Any revisions to the LWMM Plan shall be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 15. Annual Consultation and Technical Review Group

During the first full calendar year following issuance of the new FERC license, the Licensee shall establish a Technical Review Group (TRG) and host the first annual TRG meeting. TRG meetings shall be held annually prior to April 15 of each calendar year unless otherwise agreed to by the TRG. The purpose of the TRG shall be to discuss implementation of the Project license. At a minimum, the Licensee shall invite the following to participate in the TRG: representatives from the State Water Board, CDFW, NMFS, USFWS, and National Park Service; interested tribes; and nongovernmental organizations (TRG members). The annual meeting shall be noticed at least 30 days in advance to the TRG members, to the Licensee's Project interested parties email list, and on the Licensee's Project webpage. The annual TRG meeting shall be open to the public. The TRG shall establish communication protocols to facilitate interactions between TRG members and other participants that allow for open participation and communication between all parties. At the annual meetings, the TRG shall:

- (i) Review the status of implementing FERC license and certification conditions;
- (ii) Review monitoring data from all monitoring conducted the previous calendar year and monitoring planned for the coming calendar year, as well as the remainder of the current calendar year;

- (iii) Review prior calendar year's maintenance activities and planned routine and non-routine maintenance for the remainder of the existing calendar year and coming calendar year;
- (iv) Review prior calendar year's changes and discuss foreseeable changes to Project facilities or features in the remainder of the current calendar year, upcoming calendar year, and beyond;
- (v) Discuss necessary revisions or modifications to plans related to the certification; and
- (vi) Discuss:
 - o Needed protection measures for species newly listed or proposed special status species;
 - o Changes to existing plans for actions that may no longer be necessary due to delisting of a species; and
 - o Changes to existing plans to incorporate new information about species requiring protection.

Materials shall be provided to TRG members at least 30 days prior to the annual meeting. The Licensee shall submit a report to State Water Board staff that summarizes the annual TRG meeting no later than 60 days following the annual TRG meeting.

CONDITION 16. Auxiliary Spillway Project

Prior to operating the auxiliary spillway²⁸, the Licensee shall consult with the Deputy Director to determine whether an amendment to this certification is needed to address auxiliary spillway operations to ensure protection of water quality and beneficial uses, and address flood potential. The Licensee must receive approval from the Deputy Director that no amendment is needed, or request and receive an amendment to this certification prior to operating the auxiliary spillway.

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CONDITION 17. Unless otherwise specified in this certification or at the request of the Deputy Director, data and/or reports shall be submitted electronically in a format accepted by the State Water Board to facilitate the incorporation of this information into public reports and the State Water Board's water quality database systems in compliance with California Water Code section 13167.

²⁸ On November 22, 2021, SSWD submitted a license amendment application to FERC for construction of an auxiliary spillway. On February 17, 2022, SSWD applied for a certification associated with its FERC license amendment request for construction of an auxiliary spillway.

CONDITION 18. This certification does not authorize any act which results in the take of a threatened, endangered, or candidate species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish & G. Code, §§ 2050 – 2097) or the federal ESA (16 U.S.C. §§ 1531 – 1544). If a “take” will result from any act authorized under this certification or water rights held by the Licensee, the Licensee must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The Licensee is responsible for meeting all requirements of the applicable ESAs for the Project authorized under this certification.

CONDITION 19. This certification shall not be construed as replacement or substitution for any necessary federal, state, and local approvals. The Licensee is responsible for compliance with all applicable federal, state, or local laws or ordinances and shall obtain authorization from applicable regulatory agencies prior to the commencement of Project activities.

CONDITION 20. Any requirement in this certification that refers to an agency whose authorities and responsibilities are transferred to or subsumed by another state or federal agency, will apply equally to the successor agency.

CONDITION 21. Notwithstanding any conditions in this certification, the Licensee’s diversions and uses of water related to the Project are subject to the separate and independent conditions and legal requirements under its water rights. Nothing in this certification shall be construed as State Water Board approval of the validity of any water rights, including pre-1914 or riparian claims. The State Water Board has separate authority under the Water Code to investigate and take enforcement action, if necessary, to prevent any unauthorized or threatened unauthorized diversions of water.

CONDITION 22. This certification is subject to modification or revocation upon administrative or judicial review, including but not limited to review and amendment pursuant to California Water Code, section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with section 3867).

CONDITION 23. This certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent application for certification was filed pursuant to California Code of Regulations, title 23, section 3855, subdivision (b) and that application for certification specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

CONDITION 24. This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, division 3, chapter 28.

CONDITION 25. Notwithstanding any more specific provision of this certification, any plan developed as a condition of this certification requires review and approval by the Deputy Director. The State Water Board's approval authority, including authority delegated to the Deputy Director or others, includes the authority to withhold approval or to require modification of a proposal, plan, or report prior to approval. The State Water Board may take enforcement action if the Licensee fails to provide or implement a required item in a timely manner. If a time extension is needed to submit an item for approval, the Licensee shall submit a written request for the extension, with justification, no later than 30 days prior to the deadline. The Licensee shall file with FERC any Deputy Director-approved time extensions. The Licensee shall not implement any plan, proposal, or report until after receiving the applicable State Water Board approval and any other necessary regulatory approvals.

CONDITION 26. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation is subject to any remedies, penalties, process, or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process, or sanctions for the violation or threatened violation constitutes a limitation necessary to ensure compliance with the water quality standards and other pertinent requirements incorporated into this certification. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

CONDITION 27. The Licensee shall submit any change to the Project, including operations, facilities, technology changes or upgrades, or methodology, which could have a significant or material effect on the findings, conclusions, or conditions of this certification, to the State Water Board for prior review and written approval. The State Water Board shall determine significance and may require consultation with other state and/or federal agencies. If the State Water Board is not notified of a change to the Project, it will be considered a violation of this certification. If such a change would also require submission to FERC, the change must first be submitted and approved by the Executive Director of the State Water Board, unless otherwise delegated in this certification or other State Water Board approval.

CONDITION 28. This certification is contingent on compliance with all applicable requirements of the SR/SJR Basin Plan and the Bay-Delta Plan, as they may be amended.

CONDITION 29. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act. The Licensee shall take all reasonable measures to protect the beneficial uses of waters of the state, including the Bear River.

CONDITION 30. In response to a suspected violation of any condition of this certification, the State Water Board or Central Valley Regional Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. (Wat. Code, §§ 1051, 13165, 13267, and 13383.)

CONDITION 31. Upon request, a construction schedule shall be provided to State Water Board and Central Valley Regional Water Board staff. The Licensee shall provide State Water Board and Central Valley Regional Water Board staff access to the Project site to document compliance with this certification.

CONDITION 32. A copy of this certification shall be provided to any contractor and all subcontractors conducting Project-related work, and copies shall remain in their possession at the Project site. The Licensee shall be responsible for work conducted by its contractor, subcontractors, or other persons conducting Project-related work.

CONDITION 33. The State Water Board reserves the authority to add to or modify the conditions of this certification: (1) to incorporate changes in technology, sampling, or methodologies; (2) if monitoring results indicate that continued operation of the Project could violate water quality objectives or impair beneficial uses; (3) to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act; (4) to incorporate terms of a State Water Board-approved voluntary agreement that helps to meet water quality standards and other appropriate requirements of state law; (5) to coordinate the operations of this Project and other hydrologically connected water development projects, where coordination of operations is reasonably necessary to meet water quality objectives and protect beneficial uses of water; and (6) to require additional monitoring and/or other measures, as needed, to ensure that continued Project operations and maintenance meet water quality objectives and protect beneficial uses.

CONDITION 34. The Licensee shall use analytical methods approved by California's Environmental Laboratory Accreditation Program, where such methods are available. Samples that require laboratory analysis shall be analyzed by Environmental Laboratory Accreditation Program-certified laboratories.

CONDITION 35. The State Water Board shall provide notice and an opportunity to be heard in exercising its authority to add to or modify the conditions of this certification.

CONDITION 36. The Executive Director reserves the authority to modify or add conditions to this certification if the Executive Director determines that it is reasonably foreseeable that state- or federally-listed anadromous fish species will be reintroduced into additional Project-affected streams to ensure adequate protection of beneficial uses identified in the SR/SJR Basin Plan, compliance with applicable water quality objectives, or compliance with other requirements of state law to protect such beneficial uses. For this condition, “reasonably foreseeable” includes, but is not limited to, a comprehensive reintroduction effort or plan that has a reasonable likelihood of implementation within the following 18 months.

The Deputy Director also reserves the authority to require the Licensee to develop and conduct studies if it is reasonably foreseeable that listed anadromous fish species will be reintroduced into Project-affected areas. Such studies shall be designed, in consultation with USFWS, NMFS, CDFW, and State Water Board staff, to develop fish passage, flows, or other measures, as well as determine appropriate modifications to the certification to minimize potential impacts and protect water quality and beneficial uses. Introduction of anadromous fish may require reevaluation of the Project facilities, flow regimes, availability of large woody material, and access to Project-affected tributaries.

CONDITION 37. Future changes in climate projected to occur throughout the term of the new FERC license may significantly alter the assumptions used to develop the conditions of this certification. The State Water Board reserves authority to add to or modify the conditions of this certification, to require additional monitoring and/or other measures, as needed, to verify that Project operations meet water quality objectives and protect the beneficial uses assigned to Project-affected stream reaches.

CONDITION 38. The Licensee shall ensure no net loss of wetland or riparian habitat functions under the standards and procedures set forth in the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (State Water Board 2019) and the California Wetlands Conservation Policy (Governor’s Executive Order W-59-93 (August 23, 1993)) and any amendments thereto. The Licensee shall demonstrate compliance with the Dredge or Fill Procedures upon request from the Deputy Director.

CONDITION 39. The Licensee shall comply with the terms and conditions in the State Water Board’s *Statewide National Pollutant Discharge Elimination System Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications*²⁹ (State Water Board 2013), and ongoing amendments thereto.

²⁹ Water Quality Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Accessed on April 18, 2022.

CONDITION 40. The provisions of this certification are severable. If any provision of this certification is found invalid, affects the validity of the certification, or would result in a determination that the State Water Board has waived its section 401 certification authority for the Project, the State Water Board reserves authority to consider whether an alternative term would address the water quality issue without being found invalid or resulting in a waiver determination. If any provision of this certification is found invalid, affects the validity of the certification, or would result in a determination that the State Water Board has waived its section 401 certification authority for the Project, the remainder of this certification shall not be affected.



Eileen Sobeck
Executive Director

May 16, 2022

Date

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ATTACHMENT A:
PROJECT OVERVIEW MAPS AND SCHEMATICS
WATER QUALITY CERTIFICATION
FOR
CAMP FAR WEST HYDOELECTRIC PROJECT

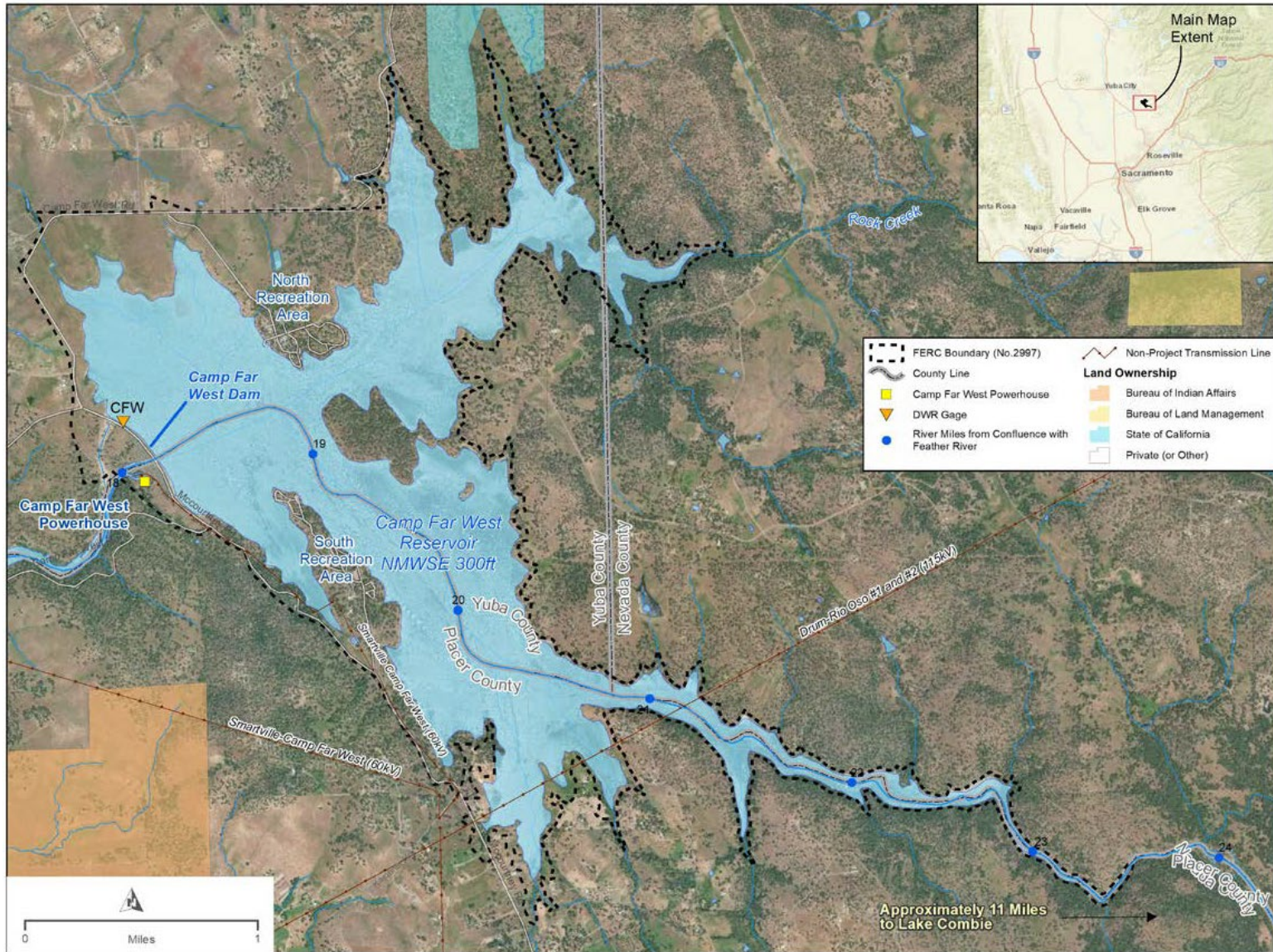


Figure A1. Overview Map of Camp Far West Reservoir (SSWD 2019a)

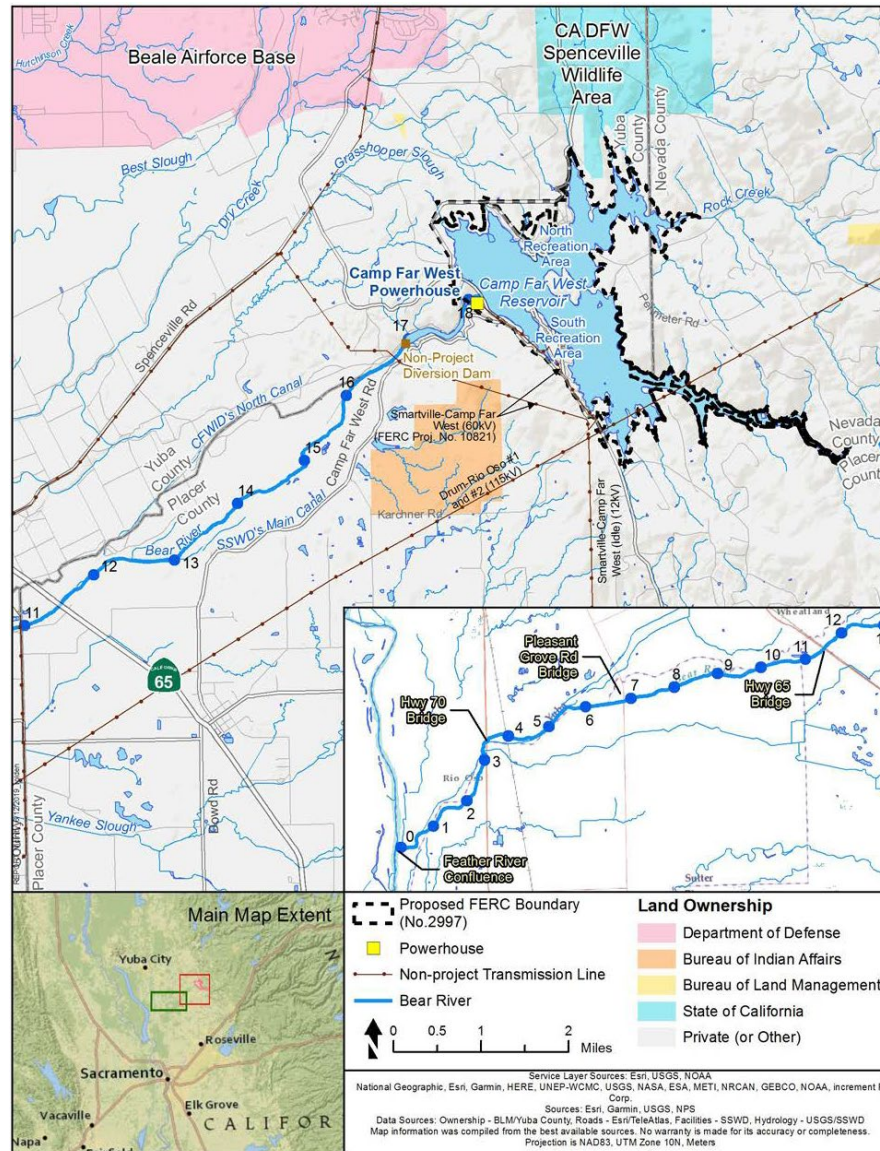


Figure A2. Regional Map of Camp Far West Hydroelectric Project (SSWD 2019a)

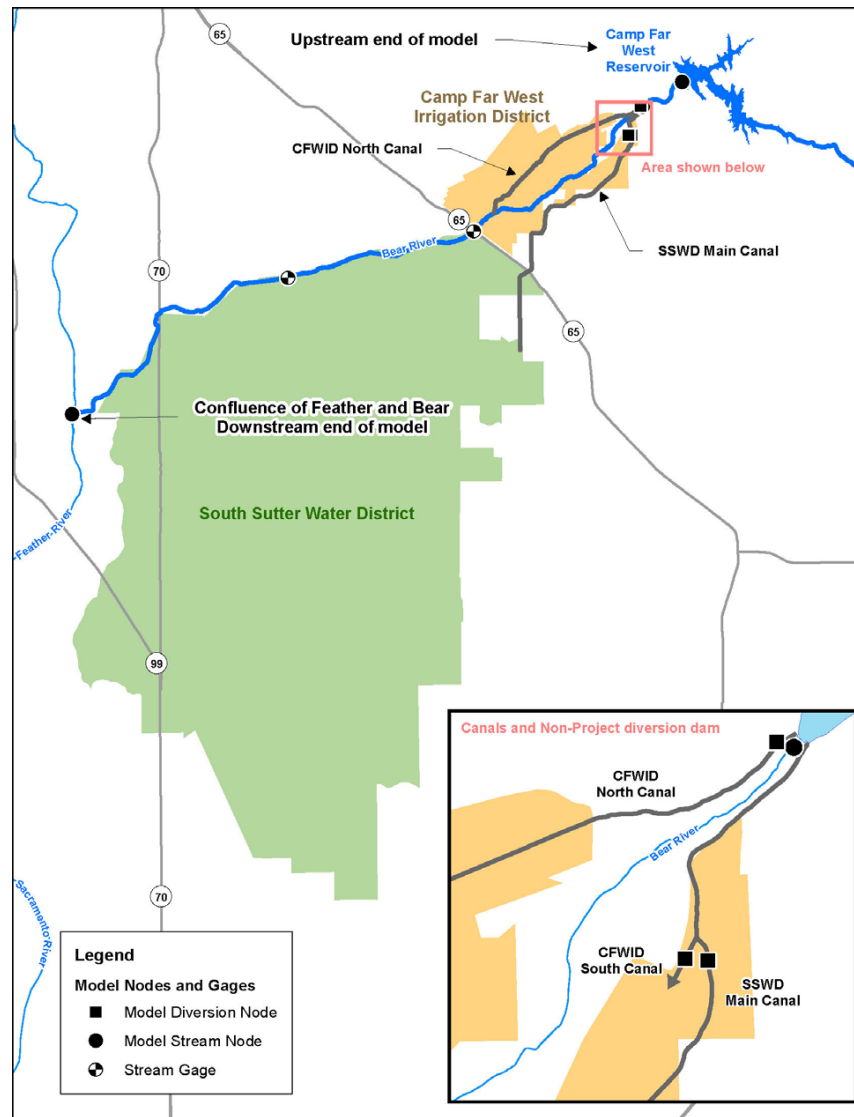


Figure A3. Project Map of SSWD and CFWID service areas, as well as Operations Model Nodes (SSWD 2016)



Figure A4. Camp Far West Hydroelectric Project Main Features (SSWD 2019a)

Notes:

- Not all gages are currently monitored
- Gage names indicated here are not official USGS names
- Figure is schematic, not drawn to scale

Key:

CFW = Camp Far West Reservoir
 Div Dam = Non-project Diversion Dam
 CFWID = Camp Far West Irrigation District
 SSWD = South Sutter Water District

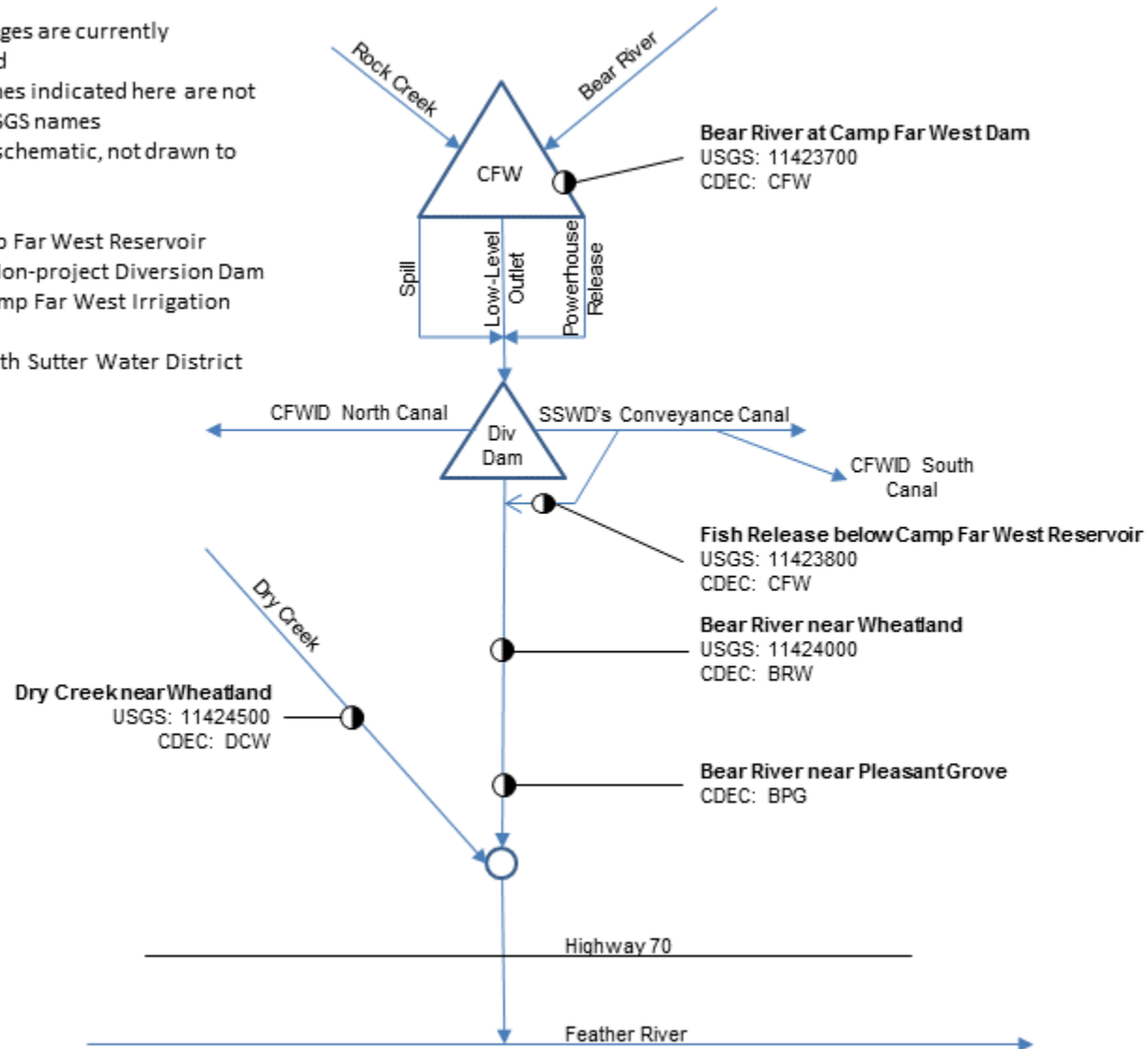


Figure A5. Project Vicinity Schematic, including Gage Locations (SSWD 2018)

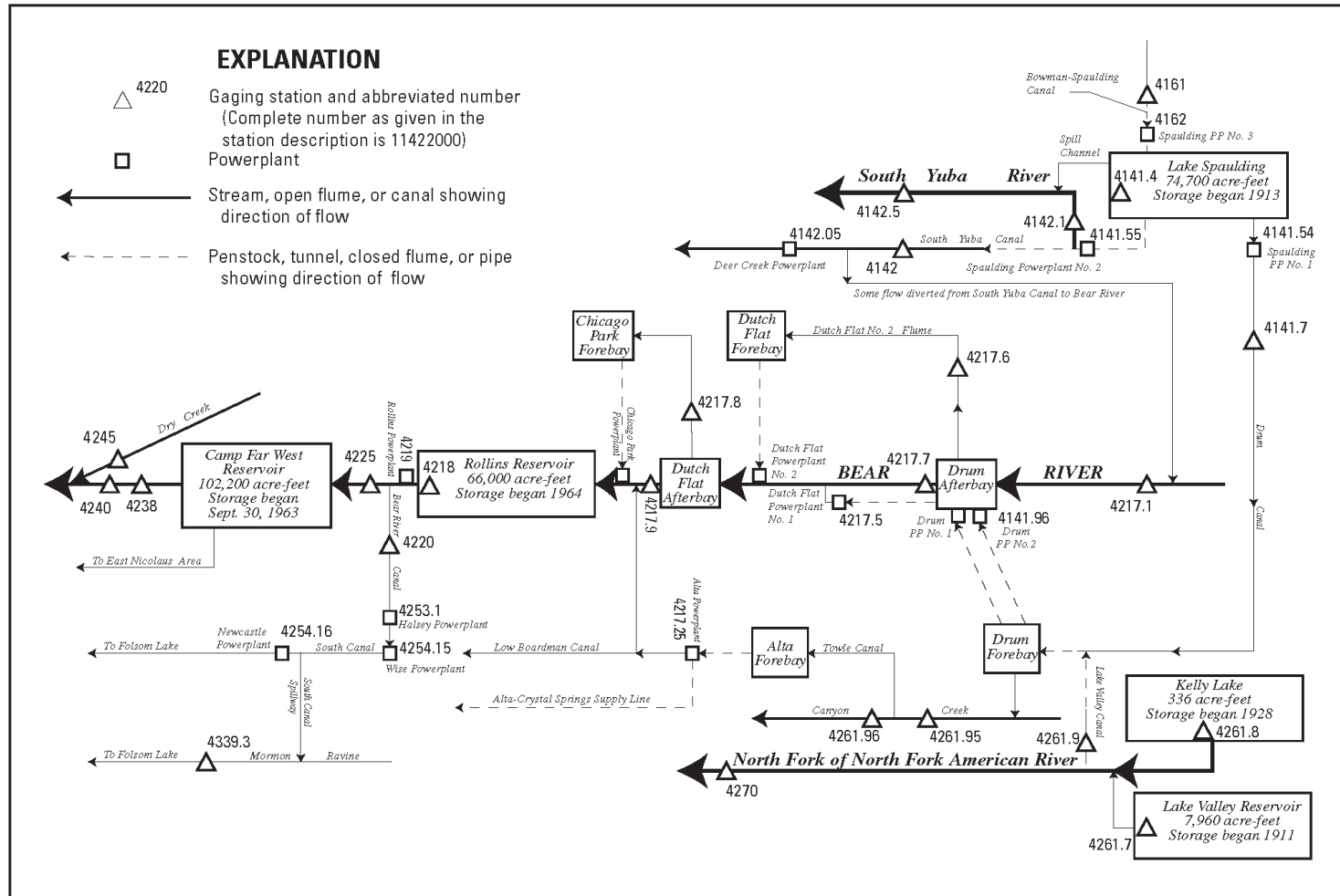


Figure A6. Schematic of Reservoirs and Gage Networks, in the Bear River Basin, Upstream and Downstream of Camp Far West Reservoir (USGS 2007)

ATTACHMENT B:
PROJECT DESCRIPTION
WATER QUALITY CERTIFICATION
FOR
CAMP FAR WEST HYDOELECTRIC PROJECT

The Camp Far West Hydroelectric Project (Project) consists of a single development that primarily includes Camp Far West Dam and associated reservoir, and powerhouse. In addition, the Project includes a switchyard and two recreation areas. Project features are summarized below:

- **Camp Far West Reservoir:** Originally, Camp Far West Reservoir's capacity was 104,000 acre-feet (ac-ft) at the normal maximum water surface elevation (NMWSE) of 300 feet. Based on a 2008 bathymetric survey, the Camp Far West Reservoir has a gross storage capacity of 93,740 ac-ft. The maximum reservoir depth at NMWSE is approximately 150 feet (ft). At its minimum operating elevation of 175 ft, the reservoir contains 1,307 ac-ft and has a surface area of about 74 acres (ac). Below the minimum operating elevation, reservoir storage is not available for release (i.e., dead storage).
- **Camp Far West Dam:** Camp Far West Dam is defined as the main dam, a 185-foot high, 40-foot wide, 2,070-foot long zoned earthen-fill dam, and the North and South Wing Dams alongside the main dam.
- **Camp Far West Dam Spillway:** Camp Far West Dam Spillway is a 300-ft long, ungated, ogee-type reinforced concrete structure overflow spillway with a maximum design capacity of 106,500 cubic feet per second (cfs) at a reservoir elevation of 320 ft is located adjacent to the right abutment of the Camp Far West main dam.
- **Camp Far West Dam Intakes:** There are two intake structures associated with the Camp Far West Dam:
 - Powerhouse intake which consists of a reinforced concrete ungated vertical intake tower 22-ft high, with openings on three sides: two 10-ft-wide by 14-ft-high and one 10-ft-wide by 10-ft high. A concrete bulkhead enables positive closure, and the sill elevation measures 197.0 ft. The tower connects to a 760-ft-long, 8-ft diameter concrete tunnel through the left abutment of Camp Far West Dam that conveys water directly to the Camp Far West Powerhouse.
 - Low-level outlet intake which consists of a reinforced concrete ungated vertical intake tower 25-ft-4 inch (in.) high, with openings on three sides – each 7-ft-wide by 8-ft-high. The sill elevation measures 175.0 ft. A 350-ft-long 48-in. diameter steel pipe connects the intake structure for the outlet works to a valve chamber. The valve has a release capacity of 500 cfs at NMWSE and discharges directly to the Bear River.
- **Camp Far West Switchyard:** Camp Far West Switchyard is a fenced switchyard adjacent to the Camp Far West Powerhouse containing circuit breakers, transformers, and disconnection switches. The switchyard also contains Pacific Gas and Electric electrical equipment facilities that are not part of the Project.
- **Recreation Areas:** The North Shore Recreation Area and South Shore Recreation Area include campgrounds, day use areas, and boat ramps.

As part of current operations, power can only be generated when the elevation of the Camp Far West Reservoir water surface is at or above 236 ft and when reservoir outflow is greater than 130 cfs. During the irrigation season, up to a maximum of

530 cfs passes through the 6.8-megawatt (MW) powerhouse in conformance with downstream irrigation and MIF 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. Operation of the powerhouse is automatic, except for start-up which is done manually. A powerhouse shutdown activates an alarm at Sacramento Municipal Utility District's dispatch center, which requires sending trained personnel to the site to determine the problem and re-start the powerhouse.

The Camp Far West Reservoir is primarily fed by rainfall-produced runoff and releases from upstream hydroelectric and water projects, including Pacific Gas and Electric's Drum-Spaulding Project, The Nevada Irrigation District's Yuba-Bear Hydroelectric Project and Nevada Irrigation District's Lake Combie. The reservoir is operated as a fill-and-spill system and does not have any dedicated flood control space or flood control rules. In general, the Project's operations include storage of water at Camp Far West Reservoir for non-consumptive hydropower generation and water supply. In most years, the reservoir reaches NMWSE in January when the basin produces its heaviest runoff, and then starts to decline in April or May as releases for irrigation increase. During the irrigation season, up to a maximum of 530 cfs passes through the powerhouse in conformance with downstream irrigation and MIF requirements. The reservoir typically reaches its lowest point in the mid-October period when irrigation deliveries are no longer made. 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. The reservoir elevation varies between its maximum of 300 ft and minimum operating elevation of 175 ft, below which the reservoir storage is not available for release.

The Project provides irrigation water to growers in SSWD's and CFWID's service areas. SSWD also operates the Project to meet Bear River minimum instream flow requirements and to generate power. SSWD leases the power generating facilities to Sacramento Municipal Utility District, which operates the Camp Far West Powerhouse and switchyard.

In addition to continued operations, the Project includes the following changes: 1) raising the NMWSE of Camp Far West Reservoir by five feet (ft) from 300 ft to 305 ft (pool raise); 2) modifications to the Project boundary; 3) adding an existing Project road to the FERC license; and 4) relocating and rehabilitating Project recreation facilities at Camp Far West Reservoir.

The pool raise would involve demolition of the concrete cap on the existing Camp Far West Dam spillway, the addition of approximately 1,730 cubic yards of concrete to raise the existing spillway crest from an elevation of 300 ft to an elevation of 305 ft, and anchoring of 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-ft crest length will not change.

On November 22, 2021, SSWD requested a FERC license amendment under its existing Project license for the construction of an auxiliary spillway. The proposed auxiliary spillway structure would be an ogee-type weir, horizontally concaved, with a crest length of 300 ft. The proposed auxiliary spillway would be constructed of reinforced concrete and be of similar design to the adjacent, existing spillway structure. The auxiliary spillway is being proposed for construction to elevation 304.8 ft. When the pool raise is complete, the auxiliary spillway, in combination with the modified existing spillway, will have a combined capacity of 126,600 cfs at a water surface elevation of 318.5 ft.

The existing FERC boundary encompasses 2,863.7 acres of land, none of which is federal lands or Indian tribal lands. SSWD proposes to reduce the Project's FERC boundary by 189.7 acres, to remove lands no longer necessary for operations and reflect the higher accuracy elevation data made available since the creation of the original boundary geometry.

The existing road proposed to be added to the FERC license is in the proposed and existing FERC Project boundaries. The road extends approximately 0.25 miles from an existing SSWD locked gate at Camp Far West Road to the Camp Far West Powerhouse and Switchyard. The existing road is not open to the public for safety reasons and is used and maintained solely by SSWD.

As a result of the pool raise, 104 recreational facilities or site features would be impacted along the shoreline at the North Shore Recreation Area and South Shore Recreation Area. Most of the features requiring relocation (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 (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. The impacted area of the recreation features requiring relocation due to the pool raise is estimated to be approximately 15 acres. Impacted facilities and features include roads, camping sites, picnic sites, vehicle spurs, boat ramps, and parking areas. Impacted features would be relocated, re-routed or re-aligned within one year of construction work. The construction would be completed outside the peak recreation season (i.e., Memorial Day through Labor Day holiday weekends).

Maps and schematics of Project facilities and features can be found in Attachment A. Additional information regarding the Project facilities, current operations, and proposed operations can be found in Exhibit E, sections 2.1 and 2.2 of SSWD's 2019 Final License Application (SSWD 2019a).