

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

---

---

**In the Matter of Water Quality Certification for**

**YUBA COUNTY WATER AGENCY  
YUBA RIVER DEVELOPMENT PROJECT**

**FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2246**

**Sources: Yuba River, North Yuba River, Middle Yuba River, Oregon Creek**

**Counties: Yuba, Sierra, and Nevada**

---

---

**WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE**

**Table of Contents**

Common Acronyms and Abbreviations ..... 4

1.0 Project Description ..... 5

2.0 Regulatory Authority ..... 9

3.0 California Environmental Quality Act ..... 14

4.0 Rationale for Water Quality Certification Conditions..... 15

5.0 Conclusion ..... 25

6.0 Water Quality Certification Conditions ..... 26

CONDITION 1. Flows..... 26

CONDITION 2. Ramping Rates ..... 33

CONDITION 3. Water Year Types ..... 36

CONDITION 4. Monitoring and Adaptive Management..... 39

CONDITION 5. Spill Reduction ..... 42

CONDITION 6. Closures at Lohman Ridge Diversion Tunnel..... 43

CONDITION 7. New Colgate Power Tunnel Intake..... 44

CONDITION 8. Large Woody Material at Our House and Log Cabin Diversion Dams  
and New Bullards Bar Reservoir ..... 45

CONDITION 9. Sediment Management ..... 45

CONDITION 10. Prevention of Narrows Reach Fish Stranding Events ..... 46

CONDITION 11. Aquatic Invasive Species Management ..... 47

CONDITION 12. Lower Yuba River Habitat Restoration ..... 48

CONDITION 13. New Bullards Bar Reservoir Fishery ..... 49

CONDITION 14. Recreation Facilities..... 49

CONDITION 15. Whitewater Boating Flows..... 50

CONDITION 16. Drought Management ..... 50

CONDITION 17. Hazardous Materials ..... 51

CONDITION 18. Coordinated Operations Plan with Narrows Project ..... 51

CONDITION 19. Construction and Maintenance..... 52

CONDITION 20. Fish Passage ..... 53

CONDITION 21. Mercury Management ..... 53

CONDITION 22. Annual Meeting and Technical Review Group ..... 54

CONDITIONS 23 – 50..... 55

References ..... 60

**List of Tables**

Table A. Water Right Licenses Held by YCWA for the Project..... 7

Table 1. MIFs at North Yuba River below New Bullards Bar Dam ..... 27

Table 2. MIFs at Oregon Creek below Log Cabin Diversion Dam ..... 27

Table 3. MIFs at Middle Yuba River below Our House Diversion Dam ..... 28

Table 4. MIFs at Yuba River below Narrows 2 Powerhouse and Narrows 2 Full Bypass  
..... 29

Table 5. MIFs Yuba River below Narrows 2 Powerhouse and Narrows 2 Full Bypass 30

Table 6. Maximum Daily Flow Reductions in the Yuba River below Narrows 2  
Powerhouse and Narrows 2 Full Bypass corresponding to Base Flow from September 1  
through December 31..... 34

Table 7. Maximum Daily Flow Reductions corresponding to Base Flow from January 1  
through May 31 ..... 35

Table 8. Maximum Daily Flow Reductions corresponding to Preceding End of Day Flow  
for April 1 through September 30 ..... 35

Table 9. Water Year Types for Middle Yuba River downstream of Our House Diversion  
Dam, Oregon Creek downstream of Log Cabin Diversion Dam, and North Yuba River  
downstream of New Bullards Bar Dam..... 36

Table 10. North Yuba Index ..... 37

Table 11. Coefficients for Calculation of Forecasted Inflow from Beginning of Month<sup>i</sup> to  
September 30..... 38

**List of Figures**

Figure 1. Schematic of the Yuba River Development Project Operations ..... 63

## Common Acronyms and Abbreviations

<i>AF</i>	<i>acre-feet</i>
<i>Bay-Delta Plan</i>	<i>Water Quality Control Plan for the San Francisco Bay-Sacramento/San Joaquin Delta Estuary</i>
<i>BMP</i>	<i>best management practices</i>
<i>CDFW</i>	<i>California Department of Fish and Wildlife</i>
<i>Central Valley Regional Water Board</i>	<i>Central Valley Regional Water Quality Control Board</i>
<i>CEQA certification</i>	<i>California Environmental Quality Act water quality certification</i>
<i>cfs</i>	<i>cubic feet per second</i>
<i>Construction General Permit</i>	<i>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>DWR</i>	<i>California Department of Water Resources</i>
<i>ESA</i>	<i>Endangered Species Act</i>
<i>FEIS</i>	<i>Final Environmental Impact Statement</i>
<i>FERC</i>	<i>Federal Energy Regulatory Commission</i>
<i>FLA</i>	<i>Final License Application</i>
<i>FWPE</i>	<i>Fish and Wildlife Preservation and Enhancement System</i>
<i>LWM</i>	<i>large woody material</i>
<i>MIFs</i>	<i>minimum instream flows</i>
<i>NMFS</i>	<i>National Marine Fisheries Service</i>
<i>Project</i>	<i>Yuba River Development Project</i>
<i>Regional Water Boards</i>	<i>Regional Water Quality Control Boards</i>
<i>State Water Board</i>	<i>State Water Resources Control Board</i>
<i>SR/SJR Basin Plan</i>	<i>Water Quality Control Plan for Sacramento River Basin and San Joaquin River Basin</i>
<i>TAF</i>	<i>thousand acre-feet</i>
<i>TMDL</i>	<i>total maximum daily loads</i>
<i>TRG</i>	<i>Technical Review Group</i>
<i>USACE</i>	<i>United States Army Corps of Engineers</i>
<i>USEPA</i>	<i>United States Environmental Protection Agency</i>
<i>USFWS</i>	<i>United States Fish and Wildlife Service</i>
<i>USFS</i>	<i>United States Department of Agriculture, Forest Service</i>
<i>USGS</i>	<i>United States Geological Survey</i>
<i>YCWA</i>	<i>Yuba County Water Agency (doing business as Yuba Water Agency)</i>
<i>Yuba Accord</i>	<i>Lower Yuba River Accord</i>

## 1.0 Project Description

Yuba County Water Agency (YCWA, doing business as Yuba Water Agency, or Licensee) owns and operates the Yuba River Development Project (Project), which is located on the Yuba, North Yuba, and Middle Yuba rivers and on Oregon Creek. The Yuba River is a tributary to the Feather River and is part of the Sacramento River Basin, which drains to the San Francisco Bay through the Sacramento-San Joaquin Delta Estuary. The nearest cities to the Project are Camptonville, located approximately three miles east of New Bullards Bar Reservoir, and Smartsville, located six miles southwest of the Narrows 2 Powerhouse. The Project was initially licensed to operate by the Federal Power Commission, predecessor to the Federal Energy Regulatory Commission (FERC), on May 16, 1963.

The Project includes the following facilities: 1) New Bullards Bar Dam and Reservoir; 2) Our House Diversion Dam; 3) Log Cabin Diversion Dam; 4) Lohman Ridge Diversion Tunnel; 5) Camptonville Diversion Tunnel; 6) New Colgate Powerhouse; 7) Narrows 2 Powerhouse (including bypass facilities); and 8) several roadways and recreational facilities (including a recreation water treatment facility for fire hydrants, toilets, and campsite spigots). The Project's energy generation capacity is 361 megawatts. Portions of the Project are on federal lands managed by the United States Department of Agriculture, Forest Service (USFS) as part of the Plumas and Tahoe national forests, and federal lands administered by the United States Army Corps of Engineers (USACE).

Figure 1: *Schematic of the Yuba River Development Project Operations* illustrates how water flows through the Project. Water generally flows through the Project as follows:

- The Project diverts water from the Middle Yuba River via Our House Diversion Dam through the Lohman Ridge Diversion Tunnel (maximum capacity of 860 cubic feet per second (cfs)), which discharges into Oregon Creek above the Log Cabin Diversion Dam.
- Discharge from the Lohman Ridge Diversion Tunnel and additional flow from Oregon Creek are diverted by Log Cabin Diversion Dam into the Camptonville Diversion Tunnel (maximum capacity of 1,100 cfs), which discharges into New Bullards Bar Reservoir (usable storage capacity of 966,103 acre-feet (AF)).
- Water is diverted from New Bullards Bar Dam into the New Bullards Bar Powerhouse Intake, then the New Colgate Power Tunnel, and then New Colgate Powerhouse, which is located on the Yuba River above Englebright Reservoir. New Colgate Powerhouse operates as a peaking hydropower facility, meaning its flow releases vary based on energy demand and the powerhouse can quickly increase water releases for hydropower production.
- New Colgate Powerhouse discharges to the Middle Yuba River above Englebright Reservoir, which is owned and operated by the USACE.
- Water is diverted from Englebright Reservoir into a power intake tunnel to the Narrows 2 Powerhouse.

- Narrows 2 Powerhouse discharges to the lower Yuba River below Englebright Dam, which flows into the Feather River.

YCWA releases minimum flows from Log Cabin Diversion Dam, Our House Diversion Dam, New Bullards Bar Dam, and the Narrows 2 Powerhouse into Oregon Creek, the Middle Yuba River, the North Yuba River, and the Yuba River, respectively. The Project also releases water into the Yuba River below Englebright (lower Yuba River) in order to meet flow requirements specified in YCWA's consumptive water rights, as described in Revised State Water Board Water Right Decision 1644 and Corrected Water Right Order No. 2008-0014. Corrected Water Right Order No. 2008-0014 provides for implementation of the Lower Yuba River Accord (Yuba Accord)<sup>1</sup>.

In addition to the extension of authorization to operate the Project for 50 years, YCWA proposes several general changes to existing Project facilities, including: 1) addition of a tailwater depression system at New Colgate Powerhouse; 2) addition of a new Auxiliary Flood Control Outlet at New Bullards Bar Reservoir; 3) modification of Our House Diversion Dam fish release outlet; 4) modification of Log Cabin Diversion Dam fish release outlet; 5) modification of Lohman Ridge Diversion Tunnel Intake; 6) modifications of recreation facilities at New Bullards Bar Reservoir; and 7) modifications of Project roads. Additional information on the Project facilities, current Project operations, and YCWA's proposed Project operations can be found in Exhibits A and B of YCWA's June 2, 2017 Amended Final License Application (Amended FLA) (YCWA 2017a), as updated by subsequent filings, including but not limited to, the: 1) July 21, 2017 submittal updating information on ramping rates, recreational flows, and recreational facility plans (YCWA 2017b); 2) September 15, 2017 submittal regarding amendments to operation of flood control facilities (YCWA 2017d); 3) November 1, 2017 submittal regarding amendments to hydropower generation estimates and projected costs of environmental measures (YCWA 2017e); 4) April 12, 2018 submittal requesting FERC replace the Amended FLA's existing large woody material (LWM) management plan at three facilities and filing an updated recreation facilities plan (YCWA 2018a); 5) April 27, 2018 submittals requesting FERC replace the Amended FLA's existing proposal for ramping and flow fluctuations below Narrow 2 Powerhouse, as well as updates to the water year types pertaining to Narrows 2 Powerhouse and Narrows 2 Full Bypass (YCWA 2018b); 6) July 27, 2018 submittal requesting FERC replace the Amended FLA's existing sediment management proposal for Our House and Log Cabin dams' sediment management (YCWA 2018c); and 7) September 19, 2018 submittal requesting FERC replace the previous recreation facilities plan with a revised plan (YCWA 2018d).

## **Water Rights**

Table A below lists the water rights held by YCWA for the Project.

---

<sup>1</sup> The Yuba Accord includes three separate but related agreements, including: 1) Fisheries Agreement, 2) Water Purchase Agreement, and 3) Conjunctive Use Agreement.

**Table A. Water Right Licenses Held by YCWA for the Project**

<b>Application No./ Permit No./ License No.</b>	<b>Priority Date and Face Value (AF/year)</b>	<b>Source</b>	<b>Purpose of Use</b>	<b>Diversion (cfs) and Storage (AF)</b>
A002197/ 001154 / 000435	2/11/1921 511,784.3	North Yuba River	FWPE <sup>2</sup> ; Power	700 cfs at North Yuba River 5,000 AF/yr at New Bullards Bar Reservoir
A003026/ 001354 / 000436	9/07/1922 10,000	North Yuba River	FWPE; Power	10,000 AF/yr at New Bullards Bar Reservoir
A005004/ 002604 / 000777	4/30/1926 15,000	North Yuba River	FWPE	15,000 AF/yr at New Bullards Bar Reservoir
A005631/ 015025/ 011565	7/30/1927 3,528,027. 8	North Yuba River, Middle Yuba River, Yuba River, and Oregon Creek	FWPE; Power	1,800 cfs at North Yuba River; 240 cfs at Oregon Creek; 810 at Middle Yuba River; 1,800 cfs at Yuba River; 490,000 AF/yr at New Bullards Bar Reservoir
A005632/ 015026/ Not Applicable	7/30/1927 1,159,000	North Yuba River and Yuba River	Domestic; Irrigation; FWPE; Recreational; Industrial; Other	43 cfs at North Yuba River; 1,550 cfs at Yuba River; 490,000 AF/yr at New Bullards Bar Reservoir
A009516/ 006106 / 003050	3/01/1939 72,397.8	North Yuba River	FWPE; Power	100 cfs at North Yuba River
A010282/ 008330 / 005544	9/12/1941 5335	North Yuba River	FWPE; Power	5,335 AF/yr at New Bullards Bar Reservoir
A015204/ 015027/ Not Applicable	2/20/1953 246,000	North Yuba River and Yuba River	Domestic; Irrigation; FWPE; Recreational; Industrial; Other	240,000 AF at New Bullards Bar Reservoir; 6,000 AF/yr at Yuba River

<sup>2</sup> FWPE – Fish and Wildlife Preservation and Enhancement

<b>Application No./ Permit No./ License No.</b>	<b>Priority Date and Face Value (AF/year)</b>	<b>Source</b>	<b>Purpose of Use</b>	<b>Diversion (cfs) and Storage (AF)</b>
A015205/ 015028/ 011566	2/20/1953 456,895	North Yuba River, Middle Yuba River, and Yuba River	Power	800 cfs at Yuba River; 245 cfs at North Yuba River; 3,900 <sup>3</sup> AF/yr at New Bullards Bar Reservoir
A015563/ 015029/ 011567	10/02/1953 614,206.4	North Yuba River, Middle Yuba River, Yuba River, and Oregon Creek	Power	910 cfs at Yuba River; 177,400 <sup>4</sup> AF/yr at New Bullards Bar Reservoir
A015574/ 015030/ Not Applicable	10/9/1953 514,000	North Yuba River, Middle Yuba River, Yuba River, and Oregon Creek	Domestic; Irrigation; FWPE; Recreational; Industrial; Other	514,000 <sup>5</sup> AF/yr at New Bullards Bar Reservoir

<sup>3</sup> Includes off-stream storage at Our House Dam.

<sup>4</sup> Includes off-stream storage at Our House Dam and Log Cabin Diversion Dam.

<sup>5</sup> Includes off-stream storage from Our House Dam and Log Cabin Diversion Dam.

## 2.0 Regulatory Authority

### 2.1 Water Quality Certification and Related Authorities

The federal Clean Water Act (33 U.S.C. §§ 1251-1387) 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 States’ “primary responsibilities and rights” to “prevent, reduce, and eliminate pollution.” (Id., § 1251(b).) Federal agencies must “co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.” (Id., § 1251(g).) 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 state water quality laws. (Id., § 1341(a)(1), (d).) The state’s certification may set conditions implementing Clean Water Act requirements, including the requirements of Section 303 of the Clean Water Act for water quality standards and implementation plans, or to implement “any other appropriate requirement of State law.” (Id. § 1341(d).) Section 401 further provides that certification conditions shall become conditions of any federal license or permit for the project. (*Ibid.*) If the state agency denies certification, the federal agency cannot approve the project.

The State Water Resources Control Board (State Water Board) is the state agency responsible for 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).)

In addition, Water Code section 13383 provides the State Water Board with the authority 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 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 Pursuant to Resolution No. 2012-0029* memo issued by the Deputy Director on October 19, 2017, this authority is redelegated to the Assistant Deputy Directors of the Division of Water Rights (State Water Board 2017a).

YCWA filed an application for water quality certification (certification) with the State Water Board under section 401 of the Clean Water Act for the Project on August 24, 2017 (YCWA 2017c). 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 September 21, 2017. On July 31, 2019, the State Water Board denied YCWA’s most recent application for certification without prejudice (YCWA 2018e), as YCWA had not yet initiated the California Environmental Quality Act (CEQA) process, which was delayed in part due to pending information associated with federal Endangered Species

Act (ESA) consultation regarding the impact of the Project and other hydroelectric facilities in the watershed.

On August 22, 2019, YCWA filed a petition with FERC, alleging that the State Water Board had waived its certification authority. On May 21, 2020, FERC issued an order granting YCWA's petition and asserting that the State Water Board had waived its certification authority. On June 20, 2020, the State Water Board filed a request for rehearing with FERC, requesting FERC reconsider its May 21, 2020 order finding waiver of the State Water Board's certification authority. The State Water Board's petition included a draft certification.

On July 7, 2020, State Water Board staff requested comments from the Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) on the draft certification. (See Cal. Code Regs., tit. 23, § 53855, subd. (b)(2)(B).) On July 16, 2020, comments were received from the Central Valley Regional Water Board on the draft certification. The comments have been incorporated into the final certification.

## **2.2 Water Quality Control Plans and Related Authorities**

The State Water Board's certification for the Project must ensure compliance with the water quality standards in the Central Valley Regional Water Board's *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (SR/SJR Basin Plan) (Central Valley Regional Water Board 2018) and the *Water Quality Control Plan for the San Francisco Bay/ Sacramento-San Joaquin Delta Estuary* (Bay-Delta Plan) (State Water Board 2018). 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 federal anti-degradation requirements, constitute California's water quality standards for purposes of the Clean Water Act. In issuing water quality 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.)

The nine 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 noted above, the State Water Board may also adopt water quality control plans<sup>6</sup>, which will supersede regional water quality control plans for the same waters to the extent of any conflict. (*Id.*, § 13170.) Water quality control plans are updated a triannual basis

---

<sup>6</sup> For example, the Bay-Delta Plan (State Water Board 2018).

which includes public input and reevaluation of designated and potential beneficial uses and water quality objectives.

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. The submission includes the SR/SJR Basin Plan and the Bay-Delta Plan.

#### *Sacramento and San Joaquin Rivers Basin Plan*

The Central Valley Regional Water Board adopted, and the State Water Board and USEPA approved, the SR/SJR Basin Plan. 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 identifies beneficial uses for surface waters in the Yuba River, including sources to Englebright Reservoir: municipal and domestic supply; irrigation; stock watering; power; contact recreation; canoeing and rafting; other noncontact recreation; cold freshwater habitat; cold spawning habitat; and wildlife habitat. The SR/SJR Basin Plan identifies beneficial uses for surface waters in the Yuba River, from Englebright Dam to the Feather River, as: irrigation; stock watering; power; contact recreation; canoeing and rafting; other noncontact recreation; warm freshwater habitat; cold freshwater habitat; warm water migration; cold water migration; cold spawning habitat; warm spawning habitat; and wildlife habitat.

#### *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 (Wat. Code, § 13000 et seq.) and the federal Clean Water Act (33 U.S.C. § 1313).

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.

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 existing Bay-Delta Plan does not allocate responsibility of meeting objectives to water diverters in the Yuba River; however, the State Water Board is developing Bay-Delta Plan amendments focused on the Sacramento River and its tributaries (including the Yuba 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. All 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 and in the Delta. The State Water Board is aware of, and encourages, the ongoing negotiations between interested stakeholders and various other state agencies to achieve voluntary solutions that may implement an updated Bay-Delta Plan. The State Water Board anticipates that YCWA will file a request to amend this certification, as necessary, in order to implement any voluntary solution to meet updated Bay-Delta Plan requirements.

### **2.3 Clean Water Act Section 303(d) Listing**

The State Water Board listed portions of the Yuba River in the *California's 2014 and 2016 California Integrated Report (Clean Water Act Section 303(d) List / 505(b) Report)* (2014/2016 Integrated Report) (State Water Board 2017a) as follows:

- New Bullards Bar Reservoir is listed for mercury;
- North Yuba River below New Bullards Bar Reservoir is listed for mercury;
- North Yuba River and the Middle Yuba River confluence to Englebright Reservoir are listed for chromium and mercury;
- Englebright Reservoir is listed for mercury;
- Oregon Creek is listed for copper and iron; and
- Yuba River below Englebright Dam is listed for copper and mercury.

Section 303(d) of the Clean Water Act requires total maximum daily loads (TMDLs) to be developed for impaired water bodies. TMDLs are written plans that define the maximum amount of a pollutant that a water body can receive without exceeding water quality standards and establish load allocations for point and nonpoint sources of pollution.

## 2.4 Construction General Permit

YCWA has proposed several construction projects that have the potential to disturb soil. YCWA will need to obtain coverage under the *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit)<sup>7</sup> (State Water Board 2009) for activities that disturb one or more acres of soil or whose projects 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 includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

## 2.5 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*<sup>8</sup> (Procedures) (State Water Board 2019), which became effective on May 28, 2020. The 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 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. YCWA must comply with the Procedures when conducting dredge or fill activities that may impact waters of the state, including wetlands.

## 2.6 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)<sup>9</sup> (State Water Board 2013) applies to projects that require aquatic weed management activities. The Aquatic Weed Control General Permit sets forth detailed management

---

<sup>7</sup> Water Quality Order No. 2009-0009-DWQ and National Pollutant Discharge Elimination System No. CAS000002, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ. Available online at: [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html). Last accessed June 16, 2020.

<sup>8</sup> State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. (State Water Board 2019). Available online at: [https://www.waterboards.ca.gov/water\\_issues/programs/cwa401/docs/procedures\\_confirmed.pdf](https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_confirmed.pdf). Last accessed June 19, 2020.

<sup>9</sup> 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 online at: [https://www.waterboards.ca.gov/water\\_issues/programs/npdes/pesticides/weed\\_control.html](https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html). Last accessed June 2, 2020.

practices to protect water quality from pesticide and herbicide use associated with aquatic weed control.

## **2.7 Statewide Mercury Provisions**

On May 2, 2017, the State Water Board adopted Resolution No. 2017-0027, which approved *Part 2 of the [Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions](#)*.<sup>10</sup> Resolution No. 2017-0027 provides 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 established definitions for the following three new beneficial use definitions (tribal traditional culture, tribal subsistence fishing, and subsistence fishing) for use by the State Water Board and Regional 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. These provisions will be implemented through National Pollution Discharge Elimination System permits, water quality certifications, waste discharge requirements, and waivers of waste discharge requirements.

## **3.0 California Environmental Quality Act**

YCWA is the lead agency for the purposes of CEQA compliance. (Pub. Resources Code, §§ 21000 – 21177). The State Water Board is a responsible agency for the Project. As of the date of certification, YCWA has not initiated the CEQA process by issuing a Notice of Preparation and has not certified an environmental impact report in compliance with CEQA requirements. On June 29, 2020, Governor Newsom signed into law, amendments to the Water Code that provide the State Water Board with the authority to issue certifications before completion of CEQA review, where waiting until completion of CEQA review presents a substantial risk of waiver of certification authority. See Wat. Code, section 13160, subd. (b)(2), as amended by Stats. 2020, ch. 18, § 9.

Here, FERC issued an order on May 21, 2020, approving YCWA's request to find that the State Water Board has waived certification, even though the State Water Board took steps to preserve its certification authority and could not have issued certification any sooner because YCWA has not prepared the necessary CEQA documents. The State Water Board disagrees with FERC's decision and has requested rehearing. Nevertheless, FERC's decision highlights the potential for certification to be waived if the State Water Board waits to issue certification until completion of CEQA, even

---

<sup>10</sup> Available online at: [https://www.waterboards.ca.gov/water\\_issues/programs/mercury/](https://www.waterboards.ca.gov/water_issues/programs/mercury/)  
Last accessed: July 16, 2020.

though the timing of CEQA review is under control of the applicant, not the State Water Board. Issuance of this certification will become effective only if the FERC order is overturned.

The issuance of this certification does not obviate YCWA's or the State Water Board's obligations under CEQA, and the State Water Board, pursuant to Water Code section 13160, subdivision (b)(1), reserves authority to reopen and revise this certification "as appropriate to incorporate feasible measures to avoid or reduce significant environmental impacts or to make any necessary findings based on the information provided in the environmental document prepared for the project." If the State Water Board exercises this authority, it will file a Notice of Determination with the State Clearinghouse within five days of issuance of an amended certification.

#### **4.0 Rationale for Water Quality Certification Conditions**

Water development projects in the Yuba River Basin, including the Project, have resulted in flow reductions and alterations that adversely affect water quality. Similarly, water development projects throughout the Sacramento River Basin, including the Project, have adversely altered flows in the larger stream system and the Bay-Delta. The certification conditions were developed to ensure that the Project complies with water quality requirements and other appropriate requirements of state law, including protecting beneficial uses of California's waters by complying with water quality objectives in water quality control plans and other applicable water quality requirements. Section 401 of the federal Clean Water Act (33 U.S.C. § 1341) provides that this certification's conditions be incorporated as mandatory conditions of the new license issued by FERC for the Project.

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

- i. YCWA's applications for certification (YCWA 2017c and YCWA 2018e);
- ii. YCWA's Amended FLA and associated updates thereto (listed and cited earlier in the document);
- iii. FERC's *Final Environmental Impact Statement for Hydropower License – Yuba River Development Project – Project No. 2246-065 – California* (FEIS) (FERC 2019);
- iv. California Department of Fish and Wildlife's (CDFW) Federal Power Act Section 10(j)(1) Recommendations (CDFW 2017);
- v. United States Department of the Interior Comments, Recommendations, Terms and Conditions, and Prescriptions, covering information provided for United States Fish and Wildlife Service (USFWS), Bureau of Land Management, and National Park Service (United States Department of the Interior 2017);
- vi. USFS's Final Section 4(e) Conditions (USFS 2018);
- vii. Comments associated with the aforementioned documents;
- viii. Beneficial uses and associated water quality objectives in the SR/SJR Basin Plan (Central Valley Regional Board 2018);

- ix. Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report) (State Water Board 2017a);
- x. Project-related controllable water quality factors;
- xi. Proceedings of the Yuba Salmon Forum; and
- xii. Other information in the record.

The following describes the rationale used to develop the conditions in this certification.

*Rationale for Flows, Ramping Rates, and Spill Reductions*

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. The approach for developing flow requirements, including ramping rates and spill reductions (Conditions 1, 2, and 5), for Project-affected stream reaches included consideration of the aquatic-dependent biota (primarily fish, amphibians, benthic macroinvertebrates (BMI), and riparian vegetation) that are currently and/or potentially present, hydroelectric energy generation, and water supply. This includes an evaluation of ecosystem conditions under existing and unimpaired streamflow using the operations model<sup>11</sup> and technical information developed during Project relicensing (including study results from relicensing studies). Additionally, potential future changes in precipitation/snowmelt magnitude and timing were also considered as flows were developed.

During relicensing, YCWA and most relicensing participants reached agreement on minimum instream flows (MIFs) for the Middle Yuba River below Our House Diversion Dam (Table 3) and Oregon Creek below Log Cabin Diversion Dam (Table 2), as well as ramping rates (Condition 2). State Water Board staff participated in relicensing discussions regarding these Project-related MIFs. Condition 1 requires MIFs for the Middle Yuba River and Oregon Creek that are designed to protect and enhance environmental and public resources and are consistent with those proposed by YCWA. Condition 2 requires implementation of YCWA-proposed ramping rates for better protection and enhancement of salmonid fry, spring-run Chinook salmon and steelhead redds, and riparian recruitment.

However, during relicensing, YCWA and relicensing participants could not reach agreement on MIFs for the North Yuba River below New Bullards Bar Reservoir or the lower Yuba River below Englebright Dam. Relicensing participants had differing views on MIFs that would be needed to protect and enhance environmental resources, water supply, and hydroelectric energy generation.

---

<sup>11</sup> The operations model was developed by YCWA using Microsoft Excel. The model uses the USACE's Hydrologic Engineering Center Data Storage System as a platform for input and output timeseries storage and management. The model has the capability of simulating various time periods (e.g., years to a single day) using 41 years of hydrology (i.e., Water Years 1970 through 2010).

The current flow regime in the lower Yuba River is governed by the Yuba Accord. The Yuba Accord is a set of agreements designed to address the interests of environmental groups, agriculture, water agencies, and hydroelectric operators relying on water from the Yuba River. The Yuba Accord flows were designed to allow for freshwater flows to support summer holding habitat for spring-run Chinook salmon while also providing water for hydropower, water transfers, and irrigation. The Yuba Accord flows took effect in 2008 after two years as a pilot project, and the flows were contemplated to remain in effect until issuance of a new FERC license. At YCWA's request, the Project's consumptive water rights were amended to require the Yuba Accord flows.

YCWA proposes continued implementation of the Yuba Accord flows with minor alterations, such as changes to ramping rates and water year type determinations in Schedule 5, Schedule 6, and Conference Years. Additionally, FERC's staff alternative modified YCWA's proposal to provide additional flow in the lower Yuba River from June 1 through August 31 in Schedule 6 years, and additional flow in the North Yuba River from June 1 through September 30 in all water years. YCWA's implementation of the Yuba Accord flows in the lower Yuba River has provided improved conditions in the lower Yuba River compared to the conditions prior to Yuba Accord implementation. However, there is uncertainty as to the impact of YCWA's proposed changes to the Yuba Accord flows, and additional modifications may be needed to better address the Project's impacts to the Yuba River and aquatic resources over the term of the license (such as those proposed by CDFW in its 10(j) conditions). There are indications that YCWA's flow proposal for the lower Yuba River below Englebright Dam may not adequately provide for:

- Holding temperatures for spring-run Chinook salmon in Schedule 6 years;
- Floodplain inundation during the winter and spring juvenile salmonid growth period;
- Juvenile salmonid habitat in the early growth period, which may trigger early or premature outmigration of juvenile salmonids; and
- Spill reductions for natural riparian regeneration following spring flows.

There is evidence that additional alterations to lower Yuba River flows and flows below New Bullards Bar may be needed to better address the Project's impacts on aquatic resources, water quality objectives, and beneficial uses. A more detailed description of potential insufficiencies with YCWA's flow proposal is included in CDFW's 10j, Section 3.4.8 *Rationale for Flow and Aquatic Resources Conditions – Minimum Instream Flows in the Lower Yuba River* (CDFW 2017, Recommended Conditions 2.5 and 2.6), and 3.4.6 *Rationale for Flow and Aquatic Resources Conditions – Minimum Instream Flows in the North Yuba River Downstream of New Bullards Bar Dam*.

Additional assessment is needed to determine required alterations to lower Yuba River flows and North Yuba River flows below New Bullards Bar given proposed changes to YCWA's flow and ramping proposals and changes made by the FERC's staff alternative. Further consultation is also needed with YCWA and state and federal agencies to fully assess current and potential future flow alterations in the lower Yuba River and North Yuba River. To allow for assessment of these changes and for

additional consultation, Condition 1 requires YCWA to initiate consultation on flows with CDFW, USFWS, National Marine Fisheries Service (NMFS), State Water Board staff, and, if applicable, the USFS. Such consultation would occur no later than 10 years following license issuance, or earlier at the direction of the Deputy Director based on review of environmental monitoring data (Condition 4) and/or adoption of any future amendments to the Bay-Delta Plan that address flows in the Sacramento River and its tributaries, including any State Water Board-approved voluntary solutions. The consultation shall also address what, if any, Project operational changes must be implemented.

This consultation term permits YCWA to move forward with its proposed flow regime as modified by FERC's staff alternative, and gather data to determine whether it will adequately comply with water quality requirements over the longer term.

The flow requirements in this certification include YCWA's proposed changes to the flows required in the consumptive water rights for the Project in Revised Decision 1644 and State Water Board Order No. 2008-0014. When the resulting consumptive water right flow requirements and this certification differ, YCWA remains obligated to implement the greater of the flow requirements, in order to remain in compliance with both requirements.

#### *Rationale for Water Year Type Definition*

YCWA proposed two conditions defining water year type classifications: (1) for reaches above Englebright Reservoir; and (2) for reaches below the Narrows 2 Powerhouse. Due to the different management approaches used for the two reaches, two water year classifications are suitable (Condition 3).

While use of YCWA's proposed water year classifications are suitable for the Project, they include minor changes from the classifications used in triggering flow requirements under YCWA's consumptive use rights, as described in Revised Decision 1644 and State Water Board Order No. 2008-0014. Absent a water right change petition, these consumptive use requirements remain unchanged. When the resulting water year type-based flow minimums differ between the consumptive use rights and this certification, YCWA remains obligated to implement the greater of the flow requirements, in order to remain in compliance with both requirements.

#### *Rationale for Monitoring and Management*

Monitoring and management plans aim to develop information regarding aquatic resources in the lower Yuba River in response to changes in flow conditions anticipated in the new license. The monitoring plans include monitoring for water temperature, water quality, salmonids, stream fish, BMI, foothill yellow-legged frogs, western pond turtles, sediment, riparian vegetation, LWM, bald eagles, and compliance with flows and reservoir levels. The methods and frequency of monitoring are designed to measure the response of resources to adjustments in streamflow and other conditions and to determine whether resource objectives are being met. These conditions also allow the Deputy Director, based on reporting and other information, the flexibility to require

adaptive management actions and to alter the monitoring program methodologies or frequencies of data collection.

Water quality (Condition 4A) and water temperature (Condition 4B) monitoring are important to determine compliance with state and federal water quality standards and examine long-term trends in water quality. The objectives of the water quality and water temperature monitoring plans are to monitor water quality conditions, including temperature, in Project reservoirs and impoundments and Project-affected reaches of the North, Middle, and Yuba rivers, as well as Oregon Creek, a tributary to the Middle Yuba River. Additionally, annual water temperature monitoring (Condition 4B) will provide information needed to determine whether cold freshwater beneficial uses are being protected.

Upper Yuba River Aquatic Monitoring (Condition 4C) provides for aquatic resource monitoring for all Project-affected stream reaches and reservoirs upstream of Englebright Reservoir, including New Bullards Bar Reservoir, the North Yuba River below New Bullards Bar Dam, Our House Diversion Dam Impoundment, the Middle Yuba River below Our House Diversion Dam, Log Cabin Diversion Dam Impoundment, Oregon Creek below Log Cabin Diversion Dam, and the Yuba River between the North Yuba River/Middle Yuba River confluence and Englebright Reservoir.

Lower Yuba River Aquatic Monitoring (Condition 4D) was collaboratively developed by YCWA, CDFW, USFWS, and other Project relicensing participants. This plan is designed to determine if implementation of the new license provides the desired resource protection, mitigation, and enhancement of ecological resources in the lower Yuba River. The methods and frequency of monitoring described in the plan will measure the response of resources to adjustments in streamflow and other conditions over the term of the new FERC license.

The Bald Eagle and American Peregrine Falcon Management Plan (Condition 4E), proposed by YCWA, is designed to ensure that Project operations and maintenance, as well as Project-related recreation activities do not result in “take” of bald eagles, their eggs, or nests. YCWA will implement measures to protect bald eagles, their eggs, and nests, consistent with federal and state laws and regulations.

Compliance with required flows and reservoir levels requires accurate and reliable gaging. Streamflow and reservoir level gages must be in place and functioning to document compliance with license conditions. In addition to ensuring adequate gaging tools for this Project, implementation of the *Streamflow and Reservoir Level Compliance Monitoring Plan* identified in Condition 4F will provide information needed for interpretation of monitoring results and inform potential adaptive management measures.

New Bullards Bar Dam, Our House Division Dam, and Log Cabin Diversion Dam inhibit natural movement and recruitment of LWM into the North Yuba, Middle Yuba, and Oregon Creek. Condition 8 requires passage of LWM downstream of Our House and Log Cabin Diversion Dams on the Middle Yuba and Oregon Creek as proposed by

YCWA in *GS3: Implement Our House and Log Cabin Diversion Dams and New Bullards Bar Reservoir Woody Material Management Plan (GS3)*. Condition 8 also requires YCWA to update GS3 to address water quality during proposed burning of LWM on a barge in New Bullards Bar.

Aquatic invasive species cause harm to the diversity and abundance of native species through competition for resources, predation, parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to habitats. The impacts of aquatic invasive species can affect the overall function of aquatic ecosystems. Currently, several known aquatic invasive species exist within the Project area and several more are known to occur nearby. USFS, USFWS, and CDFW worked collaboratively with YCWA to develop the Aquatic Invasive Species Management Plan (Condition 11) for the Project and YCWA filed it with FERC on November 8, 2019 (YCWA 2019). Implementation of the Aquatic Invasive Species Management Plan is needed to minimize and prevent the introduction and establishment of aquatic invasive species, reduce the spread of existing aquatic invasive species, and monitor for aquatic invasive species in Project reservoirs and stream reaches. The plan is also designed to increase awareness and educate the public on aquatic invasive species impacts, prevention measures, and management approaches. In addition, Condition 11 requires YCWA to implement the decontamination protocol referenced in the plan for any activities that require moving equipment from one waterbody to another waterbody to help prevent the spread of aquatic invasive species.

Project facilities operations affect the streamflow and modify aquatic habitats. Native fish evolved with seasonal flow regimes that no longer exist below the Project dams. Fish in New Bullards Bar Reservoir are also at risk of entrainment into Project facilities during drought years if the reservoir elevation approaches the FERC minimum pool and fish concentrate seeking thermal refuge in the reservoir. Under normal Project operations reservoir drawdown in the spring can create potential barriers to fish movement from New Bullards Bar Reservoir into tributaries. As the Project has created impoundments such as New Bullards Bar Reservoir, reservoir fishing opportunities have also been created. New Bullards Bar Reservoir is a popular location for recreational fishery. YCWA actively manages and stocks New Bullards Bar Reservoir with fish for recreational fishing. New Bullards Bar Reservoir Fishery (Condition 13) requires YCWA to continue to maintain the recreational fishery in New Bullards Bar Reservoir in consultation with CDFW and the State Water Board.

Implementation of a Hazardous Materials Management Plan (Condition 17) 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 sensitive species and their habitats. Condition 17 requires YCWA to implement its proposed Hazardous Materials Management Plan to address the storage, use, and transportation of hazardous materials.

*Rationale for Closures at Lohman Ridge Diversion Tunnel*

YCWA will be required to close the Lohman Ridge Diversion Tunnel and allow the unaltered flows to continue downstream during specific times of the year. Closure of the Lohman Ridge Diversion Tunnel (Condition 6) will help minimize Project-related flow fluctuations that are uncharacteristic of the natural hydrograph and help protect biota. CDFW has determined that under certain conditions, entrainment of aquatic organisms, including rainbow trout and potentially other native fish and frog species, occurs at a rate greater than 30 percent into Lohman Ridge Diversion Tunnel. This entrainment results in a net loss of aquatic resources from the stream reaches of the Middle Yuba River, upstream and downstream of Our House Diversion Dam (CDFW 2017). Entrainment of fish and other aquatic species into the Lohman Ridge Diversion Tunnel reduces population recruitment and limits or fragments the aquatic genetic diversity in the watershed (CDFW 2017). Fish that would normally pass downstream of this facility and re-populate fish populations are lost due to Project-related entrainment. Requiring closure of the Lohman Ridge Diversion Tunnel during peak entrainment timeframes (i.e., fall and spring) will help to reduce entrainment.

*Rationale for Use of New Colgate Powerhouse Intake*

When ambient air temperatures are cool, using the low-level outlet on New Bullards Bar Dam depletes water from the cold-water pool in the reservoir. As a result of this depletion of the cold-water pool, the downstream temperatures throughout the lower Yuba River may rise in the fall months when spring-run Chinook salmon spawn. Condition 7 is designed to save cold water for later in the year (i.e., fall) by requiring use of the upper intake in the spring. This condition will help improve water temperatures in the Middle and lower Yuba River and allow for greater growth and reproduction of both stream and anadromous salmonids.

*Rationale for Sediment Management*

Sediment is critical to the function of river ecosystems, as it provides habitat for fish spawning, BMI production, and frog reproduction. Sediment deposition during gradual flow reductions can form side channel bars that provide channel margin habitat, which is necessary for fish, amphibians, and BMI. Sediment accumulation behind the Log Cabin Diversion Dam and Our House Diversion Dam is a long-standing and ongoing issue. In 2016 and 2020, the State Water Board issued certifications for sediment management actions (i.e., sluicing and dredging) at Log Cabin Diversion Dam and Our House Diversion Dam. The purpose of the sediment management actions is to allow for removal of accumulated sediment behind these two diversion dams. The purpose of the Log Cabin and Our House Diversion Dams Sediment Management Plan (Condition 9) is to prescribe procedures and guidelines for the management of sediment behind Log Cabin Diversion Dam and Our House Diversion Dam throughout the term of the new FERC license.

*Rationale for Prevention of Narrows Reach Fish Stranding Events*

Coordinated operations between the Project (specifically the Narrows 2 Powerhouse, including bypass facilities) and the Narrows Hydroelectric Project's Narrows 1 Powerhouse have a history of stranding fish, including spring-run Chinook salmon (a state- and federally-listed threatened species) and fall-run Chinook salmon (a California

species of special concern and NMFS species of concern). Stranding occurs in the reach of the lower Yuba River below Englebright Dam to the Narrows 1 Powerhouse (CDFW 2017). Coordinated operations have caused lethal and sub-lethal effects to salmonids due to false attraction/delay, stranding, and redd dewatering (NMFS 2017). In 2015, the State Water Board issued a certification for the Narrows 2 Isolation Pool Restoration Project, which specifically addressed potential salmonid stranding associated with a gravel bar and flow fluctuations between the Narrows 2 and Narrows 1 powerhouses, as a result of Project operations. Condition 10 requires YCWA to develop and implement a plan to reduce fish stranding between the Narrows 1 and 2 powerhouses throughout the term of the new FERC Project license. This plan will emphasize protection of Chinook salmon and steelhead trout and include permanent or long-term measures.

#### Rationale for Restoration

Restoration activities such as lowering floodplain surfaces, planting riparian vegetation, LWM management, and/or gravel augmentation (Condition 12) will help improve the quantity, quality, and complexity of salmonid rearing habitat in the lower Yuba River. Central Valley spring-run Chinook salmon are listed as threatened under the federal ESA and the California ESA and steelhead trout are listed as threatened under the federal ESA. The status of both species on the Yuba River is in decline. Low return numbers and failure to support or restore fish populations are the result of many factors, including low-quality juvenile rearing habitat, lack of LWM and instream cover, lack of riparian overstory, reduced invertebrate food sources, and lack of access to floodplain habitat.

Riparian vegetation constitutes an important resource that can provide cover for juvenile salmonids and support invertebrate prey for salmonids. Regulated rivers often lack riparian floodplain and riparian overstory due to conditions that severely limit riparian regeneration and diminish or constrain available area for tree establishment. The Project contributes to the low quality and quantity of salmonid rearing habitat available in the Yuba River. Dams used in the Project block fish passage that make upstream habitat unavailable and Project flows have reduced floodplain and riparian corridor inundation and connectivity, which decreases the availability of rearing habitat in the bank and floodplain zones and suppresses the establishment of the riparian community.

The lower Yuba River generally lacks riparian floodplain and riparian overstory as well as LWM. LWM contributes to productive aquatic ecosystems and is an important component of stream channel maintenance and the formation of complex aquatic habitat along stream margins and in active river channels. Presently, LWM is impounded in the Project's reservoirs. For this reason, LWM of the size capable of influencing channel morphology is largely absent downstream of the Project's reservoirs.

#### Rationale for Recreation Facilities

YCWA proposes to implement a Recreation Facilities Plan (Condition 14), which would expand existing recreation facilities and develop new facilities to increase and improve recreation opportunities. The overall purpose of the Recreation Facilities Plan is to

provide appropriate protection, mitigation, and enhancement measures relating to recreation, which includes implementation of measures to protect of water quality.

*Rationale for Technical Review Group and Annual Meetings*

The formation of a Technical Review Group (TRG) (Condition 22) will facilitate communication and ensure that interested parties have an opportunity to discuss license implementation. The condition requires that YCWA organize and host TRG meetings, with at least one meeting to be held each year in April. The TRG meetings will provide an opportunity for communication and coordination between YCWA, resource agencies, nongovernmental organizations, and other interested parties.

*Rationale for Whitewater Boating Flows*

Whitewater boating opportunities are available downstream of the Project's facilities and these opportunities generally occur during spring and early summer months, when river flows can vary greatly as a result of rainfall and snowmelt. The major constraint for boaters' use is a lack of predictable flows in the Middle Yuba River upstream of Our House Diversion Dam (YCWA 2017a). As a result, YCWA has proposes to provide predictable flows below Our House Diversion Dam on weekend days. Condition 15 requires implementation of YCWA's proposed whitewater flows.

*Rationale for Drought Management*

Developing and implementing a Drought Management Plan (Condition 16) is important for successful management of water resources to protect all beneficial uses in California's extremely variable climate, including extended drought. Multiple, successive dry years present difficult choices between releasing reservoir water to meet immediate demands (e.g., deliveries and instream flow requirements) or storing reservoir water for a future year to address the risk of additional dry year(s). The Drought Management Plan will identify strategies for managing water during times of extreme shortage.

*Rationale for Coordinated Operations Plan with Narrows Hydroelectric Project*

Both the Project and Narrows Hydroelectric Project receive water from Englebright Reservoir. However, these two projects are operated under two different FERC licenses. Condition 18 requires YCWA to develop a plan to coordinate operations of the projects to ensure implementation of the flow-related conditions in the Project license, including maintenance of flow requirements and ramping rates during normal operations, scheduled outages, and unscheduled outages (to the extent feasible).

*Rationale for Construction and Maintenance*

Protection of the 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 Yuba River and its tributaries. Erosion from Project-related construction and maintenance activities has the potential to result in discharges that violate water quality standards. Condition 19 requires YCWA 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.

As part of relicensing, YCWA proposed implementation of an Erosion and Sediment Control Plan to minimize Project-related erosion and sedimentation. The plan covers ground-disturbing activities associated with routine Project-related operations, maintenance, and new construction that could produce sedimentation issues near streams or reservoirs. The plan includes best management practices (BMPs) to control site-specific erosion and sedimentation as well as emergency erosion control measures and protocols to control sedimentation during or after severe storm events. This plan has been integrated into a broader condition related to Construction and Maintenance (Condition 19) associated with the Project.

#### *Rationale for Fish Passage*

The Yuba Salmon Forum is a collaborative process that began in 2011, and is comprised of state and federal agencies, hydroelectric operators in the watershed (including YCWA), municipalities, and nongovernmental organizations. The purpose of the Yuba Salmon Forum is to evaluate and recommend implementation actions that could result in sustainable populations of salmonids in the Yuba River watershed and contribute to recovery goals. As part of the Central Valley salmonid recovery plan, the Yuba Salmon Forum considers other beneficial uses of water resources and habitat values in neighboring watersheds. Actions considered by the Yuba Salmon Forum included fish reintroduction above Englebright Dam, and the group completed initial evaluation of six fish passage alternatives, as well as an alternative for lower Yuba River habitat improvements.

Englebright Dam is the upper limit of anadromy on the Yuba River. Though Englebright Dam is owned by USACE, YCWA's Project operations rely on Englebright Dam to support peaking hydroelectric energy production at New Colgate and baseflow operations at Narrows 2 Powerhouse. The Project cannot operate as it has historically or proposed in its Amended FLA without use of Englebright Dam. Additionally, Project operations directly alter operations of Englebright Dam by reducing the duration and magnitude of spills from Englebright Dam and by controlling flows in the lower Yuba River. Additionally, prior to encountering Englebright Dam, anadromous fish are subject to Project impacts that affect flows in the lower Yuba River. As such, under current conditions, the Project directly impacts listed salmonids through its historic and proposed future operations. Condition 20 requires YCWA to develop a report that includes a proposal regarding fisheries reintroduction to reduce Project-related effects to listed salmonids.

#### *Rationale for Mercury Management*

The Yuba River has been affected by historic gold mining activities including the use of mercury and hydrologic gold mining. Mercury deposits associated with historic gold mining activities remain in the Yuba River system and may be affected by Project operations and activities in a manner that causes impacts to water quality and/or human health impacts. Water quality and human health impacts may result from an increased

amount or mobilization of methylmercury in the watershed. Additionally, Project reservoirs can increase the rate of mercury methylation allowing mercury to bioaccumulate in fish tissue and increase human health risk. During relicensing, YCWA evaluated methylmercury concentrations in fish tissue samples collected from the Yuba River. Forty-seven edible-sized fish were sampled, of which 43 of fish (91 percent) exceeded the California Office of Environmental Health Hazard Assessment's Advisory Tissue Levels for safe fish consumption for children and women. Analytical results from New Bullard Bar smallmouth bass tissue samples revealed concentrations of bioaccumulated mercury as high as 0.807 parts per million wet-weight, which is almost twice the California Office of Environmental Health Hazard Assessment's Advisory Tissue Levels for safe fish consumption for children and women. Condition 21 requires YCWA to evaluate its Project operations in relation to mercury and methylation of mercury and develop plans to address any Project-related impacts to mercury in compliance with the *Tribal Subsistence Beneficial Uses and Mercury Provisions of the Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan* (State Water Board 2017b).

#### Rationale for Conditions 23 – 50

This certification imposes additional conditions regarding monitoring, enforcement, and potential future revisions, to address issues likely to arise during the extended term of the new FERC license. These are necessary for a variety of reasons, including: to ensure that the Project operates to meet water quality standards as anticipated over time; to ensure compliance with other relevant state and federal laws; to ensure that the Project will continue to meet state water quality standards and other appropriate requirements of state law during the extended license period; and to provide for adaptation of conditions in light of changing events, including the potential for voluntary solutions to implement the requirements associated with anticipated updated to the Bay-Delta Plan. Additionally, California Code of Regulations, title 23, section 3860 requires imposition of certain mandatory conditions for all certifications, which are included in this certification.

## **5.0 Conclusion**

The State Water Board finds that, with the conditions and limitations imposed under this certification, the proposed Project will comply with applicable state water quality standards and other appropriate requirements of state law.

## **6.0 Water Quality Certification Conditions**

**ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT OPERATION OF THE YUBA RIVER DEVELOPMENT PROJECT** (Federal Energy Regulatory Commission Project No. 2246) 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. Flows**

#### **1(A) Minimum Instream Flows**

The Licensee shall implement the minimum instream flows (MIFs), presented in Tables 1 through 5, as soon as reasonably practicable but no later than three months following license issuance, unless an alternative timeline is approved by the State Water Resources Control Board's (State Water Board) Deputy Director of the Division of Water Rights (Deputy Director) due to the need for facility modifications. No later than one month following license issuance, the Licensee shall submit any request for any alternative timelines for MIFs implementation to the Deputy Director for review and consideration for approval. The request shall include specific information on which facility(ies) requires modification, support for the alternative timeline(s), and MIFs the Licensee plans to implement in the interim period between license issuance and completion of facility(ies) modifications. The Licensee shall implement the MIFs required by this certification within 30 days of completing any approved facility(ies) modifications. The Deputy Director may require modifications as part of any approval.

The Licensee shall implement MIFs in the following Yuba River Development Project (Project) reaches: North Yuba River below New Bullards Bar Dam, as defined in Table 1; Oregon Creek below Log Cabin Diversion Dam, as defined in Table 2; Middle Yuba River below Our House Diversion Dam, as defined in Table 3; and lower Yuba River below Narrows 2 Powerhouse and Narrows 2 Full Bypass, as defined in Table 4 and Table 5. The MIF requirements specify the time period and MIFs in cubic feet per second (cfs) by water year type, as well as the compliance point for the MIFs (i.e., United States Geological Survey [USGS] gage). Water year types are defined in Condition 3 of this water quality certification (certification). The Licensee shall report any deviation from the required MIFs to the Deputy Director within 24 hours of the deviation along with an explanation of the deviation and any proposed actions to avoid future deviations. The Licensee shall measure and document all flows, as required per this certification. Flow data shall be made publicly available in a readily accessible format. The Licensee shall furnish electronic streamflow records to State Water Board staff upon request. Additionally, any flow data, including whitewater flow data required by Condition 15, shall be submitted to the State Water Board in a form consistent with the requirements of Condition 33.

**Table 1. MIFs at North Yuba River below New Bullards Bar Dam  
(as measured in cfs at USGS Gage No. 11413520)**

<b>Month</b>	<b>Wet Water Year</b>	<b>Above Normal Water Year</b>	<b>Below Normal Water Year</b>	<b>Dry Water Year</b>	<b>Critically Dry Water Year</b>
October 1 - 30	13	13	13	13	7
November 1 - 30	13	13	13	13	7
December 1 - 31	13	13	13	13	7
January 1 - 31	13	13	13	13	7
February 1 - 29	13	13	13	13	7
March 1 - 31	11	12	13	13	7
April 1 - 30	5	5	5	5	5
May 1 - 31	5	5	5	5	5
June 1 - 30	60	60	60	60	60
July 1 - 31	40	40	40	40	40
August 1 - 31	40	40	40	40	40
September 1 - 30	30	30	30	30	30

**Table 2. MIFs at Oregon Creek below Log Cabin Diversion Dam  
(as measured in cfs at USGS Gage No. 11409400)**

<b>Month</b>	<b>Wet Water Year</b>	<b>Above Normal Water Year</b>	<b>Below Normal Water Year</b>	<b>Dry Water Year</b>	<b>Critically Dry Water Year</b>
October 1 - 30	8 <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>
November 1 - 30	17 <sup>1</sup>	15 <sup>1</sup>	15 <sup>1</sup>	10 <sup>1</sup>	6 <sup>1</sup>
December 1 - 31	17 <sup>1</sup>	15 <sup>1</sup>	15 <sup>1</sup>	10 <sup>1</sup>	6 <sup>1</sup>
January 1 - 31	17 <sup>1</sup>	15 <sup>1</sup>	15 <sup>1</sup>	10 <sup>1</sup>	6 <sup>1</sup>
February 1 - 29	24 <sup>1</sup>	19 <sup>1</sup>	18 <sup>1</sup>	12 <sup>1</sup>	12 <sup>1</sup>
March 1 - 31	30 <sup>1</sup>	30 <sup>1</sup>	18 <sup>1</sup>	12 <sup>1</sup>	12 <sup>1</sup>
April 1 - 30	43 <sup>1</sup>	43 <sup>1</sup>	27 <sup>1</sup>	18 <sup>1</sup>	18 <sup>1</sup>
May 1 - 31	43 <sup>1</sup>	43 <sup>1</sup>	27 <sup>1</sup>	18 <sup>1</sup>	18 <sup>1</sup>
June 1 - 30	43 <sup>1</sup>	43 <sup>1</sup>	27 <sup>1</sup>	18 <sup>1</sup>	18 <sup>1</sup>
July 1 - 31	25 <sup>1</sup>	20 <sup>1</sup>	15 <sup>1</sup>	10 <sup>1</sup>	6 <sup>1</sup>
August 1 - 31	13 <sup>1</sup>	10 <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>
September 1 - 30	13 <sup>1</sup>	10 <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>

<sup>1</sup> Or inflow to the impoundment behind Log Cabin Diversion Dam, if inflow is less.

**Table 3. MIFs at Middle Yuba River below Our House Diversion Dam  
 (as measured in cfs at USGS Gage No. 11408880)<sup>1</sup>**

<b>Month</b>	<b>Wet Water Year</b>	<b>Above Normal Water Year</b>	<b>Below Normal Water Year</b>	<b>Dry Water Year</b>	<b>Critically Dry Water Year</b>
October 1 - 31	60 <sup>1</sup>	60 <sup>1</sup>	55 <sup>1</sup>	50 <sup>1</sup>	40 <sup>1</sup>
November 1 - 30	60 <sup>1</sup>	60 <sup>1</sup>	55 <sup>1</sup>	50 <sup>1</sup>	40 <sup>1</sup>
December 1 - 31	70 <sup>1</sup>	60 <sup>1</sup>	55 <sup>1</sup>	50 <sup>1</sup>	40 <sup>1</sup>
January 1 - 31	90 <sup>1</sup>	75 <sup>1</sup>	70 <sup>1</sup>	50 <sup>1</sup>	40 <sup>1</sup>
February 1 - 29	90 <sup>1</sup>	75 <sup>1</sup>	70 <sup>1</sup>	50 <sup>1</sup>	40 <sup>1</sup>
March 1 - 31	100 <sup>1</sup>	90 <sup>1</sup>	80 <sup>1</sup>	55 <sup>1</sup>	45 <sup>1</sup>
April 1 - 30	120 <sup>1</sup>	100 <sup>1</sup>	90 <sup>1</sup>	70 <sup>1</sup>	60 <sup>1</sup>
May 1 - 31	120 <sup>1</sup>	100 <sup>1</sup>	90 <sup>1</sup>	70 <sup>1</sup>	60 <sup>1</sup>
June 1 - 30	120 <sup>1</sup>	100 <sup>1</sup>	90 <sup>1</sup>	70 <sup>1</sup>	60 <sup>1</sup>
July 1 - 31	100 <sup>1</sup>	80 <sup>1</sup>	70 <sup>1</sup>	60 <sup>1</sup>	45 <sup>1</sup>
August 1 - 31	80 <sup>1</sup>	70 <sup>1</sup>	60 <sup>1</sup>	50 <sup>1</sup>	45 <sup>1</sup>
September 1 - 30	70 <sup>1</sup>	60 <sup>1</sup>	55 <sup>1</sup>	50 <sup>1</sup>	45 <sup>1</sup>

<sup>1</sup> Or inflow to the impoundment behind Our House Diversion Dam, if inflow is less.

**Table 4. MIFs at Yuba River below Narrows 2 Powerhouse and Narrows 2 Full Bypass  
 (as measured in cfs at USGS Gage No. 11418000)**

<b>Time Period</b>	<b>Schedule 1<sup>1</sup></b>	<b>Schedule 2</b>	<b>Schedule 3</b>	<b>Schedule 4</b>	<b>Schedule 5</b>	<b>Schedule 6</b>	<b>Conference Year</b>
October 1 - 31	700	700	700	700	600	600	500
November 1 - 30	700	700	700	700	600	600	500
December 1 - 31	700	700	700	700	550	550	500
January 1 - 31	700	700	700	700	550	550	500
February 1 - 29	700	700	700	700	550	550	500
March 1 - 31	700	700	700	700	550	550	500
April 1 - 15	700	700	700	700	600	600	-- <sup>2</sup>
April 16 - 30	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>
May 1 - 31	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>
June 1 - 30	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>
July 1 - 31	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>
August 1 - 31	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>	-- <sup>2</sup>
September 1 - 30	700	700	700	700	500	500	500

<sup>1</sup> Schedules are defined in Condition 3.

<sup>2</sup> See flow requirements for Marysville USGS gage no. 11421000, in Table 5.

**Table 5. MIFs Yuba River below Narrows 2 Powerhouse and Narrows 2 Full Bypass  
(as measured in cfs at Marysville – USGS streamflow gage 11421000)**

<b>Time Period</b>	<b>Schedule 1<sup>1</sup></b>	<b>Schedule 2</b>	<b>Schedule 3</b>	<b>Schedule 4</b>	<b>Schedule 5</b>	<b>Schedule 6</b>	<b>Conference Year</b>
October 1 - 31	500	500	500	400	400	350	350
November 1 - 30	500	500	500	500	500	350	350
December 1 - 31	500	500	500	500	500	350	350
January 1 - 31	500	500	500	500	500	350	350
February 1 - 29	500	500	500	500	500	350	350
March 1 - 31	700	700	500	500	500	350	350
April 1 - 15	1,000	700	700	600	500	350	300
April 16 - 30	1,000	800	700	900	600	500	245
May 1 - 15	2,000	1,000	900	900	600	500	245
May 16 - 31	2,000	1,000	900	600	400	400	245
June 1 - 15	1,500	800	500	400	400	350	245
June 16 - 30	1,500	500	500	400	440	350	150
July 1 - 31	700	500	500	400	400	350	150
August 1 - 31	600	500	500	400	400	350	150
September 1 - 30	500	500	500	400	400	350	150

<sup>1</sup> Schedules are defined in Condition 3.

### 1(B) Planned Temporary Flow Modifications

The Licensee may request temporary MIF variances 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 United States Department of Agriculture, Forest Service (USFS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and United States Fish and Wildlife Service (USFWS) of the proposed temporary MIF variance. The 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 the USFS, CDFW, NMFS, and USFWS, 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 the Federal Energy Regulatory Commission (FERC) the Deputy Director-approved temporary modifications to flow requirements and any approved amendments thereto.

### 1(C) Unplanned Temporary Flow Modifications

The flows specified in Condition 1 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 works; 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 within 24 hours of the beginning of any unplanned temporary streamflow modification. Within 96 hours of the beginning of any unplanned temporary streamflow 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 MIFs.

Within 30 days of any unplanned temporary MIF modification, the Licensee shall provide the Deputy Director with: (1) a written description of the modification and reason(s) for its necessity; (2) photo documentation of the emergency or reason for the streamflow modification; (3) a timeline for returning to the required MIF or timeline when the MIF resumed; (4) a description of corrective actions taken in response to an

unplanned under-release of flow; and (5) a plan to prevent the need for modification of MIFs resulting from a similar emergency or event in the future.

1(D) Evaluation of Flows

After considering monitoring results from Condition 4 and other information associated with conditions in this certification, and/or 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) (State Water Board 2018) addressing flows in the Sacramento River and its tributaries (including those currently being developed under the Sacramento/Delta Update to the Bay-Delta Plan), the Deputy Director may require the Licensee to initiate consultation on flows with CDFW, USFWS, NMFS, State Water Board staff, and, if applicable, the USFS. Such consultation would determine whether the required flows are reasonably protective of water quality and beneficial uses in the Yuba River and Project-related tributaries and/or whether they meet the requirements of the Bay-Delta Plan. The consultation shall also address what, if any, flow adjustments must be implemented. Consultation under this condition shall not be necessary if the Licensee enters into a State Water Board-approved comprehensive and long-term, watershed-wide voluntary solution implementing such changes to the Sacramento/Delta Update to the Bay-Delta Plan, and any updates to the certification necessary to implement the solution are incorporated into this certification.

If the above consultation and evaluation of MIFs does not occur within 10 years of license issuance, the Licensee shall initiate consultation with CDFW, USFWS, NMFS, State Water Board staff, and, if applicable, the USFS. The consultation shall include discussions of: 1) all monitoring conducted through conditions of this certification that pertain to environmental resources and Project flow releases by river reaches (i.e., North Yuba, Middle Yuba, Oregon Creek, and lower Yuba River (i.e., Yuba River below Englebright Dam)); 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 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 extent necessary to ensure reasonable protection of the 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 thereto, the Licensee shall file a request with FERC to amend the flow requirements and/or other management actions in the license. The Licensee shall implement the new flows and/or other management actions as soon as reasonably practicable after receiving the Deputy Director's decision and any other required approvals.

**CONDITION 2. Ramping Rates**

The Licensee shall implement ramping rates specified by this condition as soon as reasonably practicable but no later than 30 days after license issuance, unless otherwise approved by the Deputy Director. Ramping rates specified in this condition do not apply: (a) to Project operations during an emergency or other event as defined in Condition 1(C)); (b) to releases required by the United States Army Corps of Engineers (USACE) flood control criteria; (c) to releases required to maintain a flood control buffer or for other flood control purposes; (d) to bypasses of uncontrolled flows into Englebright Reservoir; or (e) during times when Englebright Dam is spilling. Flows shall be continuously measured at Smartsville USGS Gage No. 11418000 and made in accordance with the following ramping rate criteria.

**2(A) Salmonid Fry and Juvenile Stranding Prevention Ramping Rate (Year-round)**

Year-round streamflow downstream of Englebright Dam shall: 1) not exceed a rate increase of more than 500 cfs per hour, nor a rate decrease of more than 200 cfs per hour, as measured at the beginning of each hour; 2) not vary up or down by more than 15 percent of the average daily flow; and 3) not be reduced to a daily average flow of less than 70 percent of the prior day's average daily flow.

**2(B) Spring-Run Chinook Salmon Redd Dewatering Prevention Ramping Rate (September 1 – December 31)**

From September 1 through December 31, the Licensee shall not reduce the flow downstream of Englebright Dam to less than the greater of: 1) the applicable MIF requirement specified in Condition 1 (Table 4 and Table 5); or 2) the flow that would result from applying the appropriate maximum daily flow reduction specified in Table 6.

**Table 6. Maximum Daily Flow Reductions in the Yuba River below Narrows 2 Powerhouse and Narrows 2 Full Bypass corresponding to Base Flow from September 1 through December 31**

<b>Base Flow<sup>1</sup> Range (cfs)</b>	<b>Maximum Daily Flow Reduction (cfs)</b>
450 – 549	200
550 - 849	250
850 - 1049	300
1,050 – 1,349	350
1,350 – 1,599	400
1,600 – 1,849	450
1,850 – 2,199	500
2,200 – 2,549	550
2,550 – 2,899	600
2,900 – 3,199	650
3,200 – 3,549	700
3,550 – 4,130	750

<sup>1</sup> Base Flow shall be determined using the maximum five-day running average flow that occurs from September 1 – December 31. Between September 2 – 5, the base flow shall be determined using the average daily flow on September 1.

**2(C) Steelhead Redd Dewatering Prevention Ramping Rate (January 1 – May 31)**

From January 1 through May 31, the Licensee shall not reduce the flow downstream of Englebright Dam to less than the greater of: 1) the applicable MIF requirement specified in Condition 1 (Table 4 and Table 5); or 2) the flow that would result from applying the maximum daily flow reduction amount specified in Table 7. Additionally, for flows below 450 cfs, ramping rates shall be the Salmonid Fry and Juvenile Stranding Prevention Ramping Rate (see section 2(A), above).

**Table 7. Maximum Daily Flow Reductions corresponding to Base Flow from January 1 through May 31**

<b>Base Flow<sup>1</sup> Range (cfs)</b>	<b>Maximum Daily Flow Reduction (cfs)</b>
450 - 499	200
500 - 549	250
550 - 649	300
650 - 849	350
850 – 1,199	400
1,200 – 1,449	450
1,450 – 1,699	500
1,700 – 1,899	550
1,900 – 2,149	600
2,150 – 2,399	650
2,400 – 2,699	700
2,700 – 2,949	750
2,950 – 3,199	800
3,200 – 3,449	850
3,450 – 3,899	900
3,900 – 4,130	950

<sup>1</sup> Base Flow shall be determined using the maximum five-day running average flow that occurs from January 1 – May 31. Between January 1 – 5, the base flow shall be determined by the average daily flow on December 31.

2(D) Riparian Seedling Recruitment Ramping Rate (April 1 – July 15)

From April 1 through July 15, the Licensee shall not reduce streamflow downstream of Englebright Dam to less than the greater of: 1) the applicable MIF requirement specified in Condition 1 (Table 4 and Table 5); 2) the flow that would result from applying the maximum flow reduction amount specified in Table 6 and Table 7; or 3) the flow that would result from applying 120 percent of the maximum daily flow reduction amount specified in Table 8 for the previous end of day’s flow. Flow reductions greater than those listed in Table 8 may be implemented if needed to maintain Englebright Reservoir water surface elevation above 516 feet.

**Table 8. Maximum Daily Flow Reductions corresponding to Preceding End of Day Flow for April 1 through September 30**

<b>Previous End of Day Flow (cfs)</b>	<b>Maximum Daily Flow Reduction (cfs)</b>
400 - 999	79
1,000 – 1,999	150
2,000 - 4,130	200

**CONDITION 3. Water Year Types**

3(A) Water Year Type Determination Upstream of Englebright Dam

The Licensee shall classify water year types and schedules according to this condition as soon as reasonably practicable but no later than 30 days after license issuance. For water year type determinations above Englebright Reservoir, the Licensee shall determine the water year type based on the criteria in Table 9. The Licensee shall determine the water year type in the months of February, March, April, May, and October based on the California Department of Water Resources (DWR) Bulletin 120<sup>12</sup> forecast.

**Table 9. Water Year Types for Middle Yuba River downstream of Our House Diversion Dam, Oregon Creek downstream of Log Cabin Diversion Dam, and North Yuba River downstream of New Bullards Bar Dam**

<b>Water Year Type</b>	<b>DWR Forecast of Total Unimpaired Runoff in Yuba River (at Smartsville USGS Gage No. 11418000) or DWR Full Natural Flow Near Smartsville for the Water Year<sup>1</sup> (Thousands of Acre-Feet)</b>
Wet	Greater than 3,240
Above Normal	2,191 to 3,240
Below Normal	1,461 to 2,190
Dry	901 to 1,460
Critically Dry	616 to 900
Extreme Critically Dry	Equal to or Less than 615

<sup>1</sup> DWR rounds the Bulletin 120 forecast to the nearest thousands of acre-feet (TAF) to establish water year types in February, March, April and May. DWR rounds its Full Natural Flow calculation to establish water year types in October, to the nearest acre-foot; the Licensee shall round DWR's Full Natural Flow calculation in October to the nearest TAF.

In each of the months of February, March, April, and May, the water year type shall be based on DWR's water year forecast of unimpaired runoff in the Yuba River at the Smartsville Gage No. 11418000 as established in DWR's Bulletin 120. DWR's Bulletin 120 as published in February, March, and April shall apply from the 16<sup>th</sup> day of that month through the 15<sup>th</sup> day of the next month. For example, Bulletin 120 published in the second week of February shall establish the water year type from February 16 through March 15. Additionally, from May 16 through October 15, the water year type shall be based on DWR's Bulletin 120 published in May.

From October 16 through February 15 of the following year, the water year type shall be based on the sum of DWR's monthly (not daily) full natural flow in the Yuba River for the

<sup>12</sup> Bulletin 120 is a publication issued four times a year, in the second week of February, March, April, and May by DWR. It contains forecasts of the volume of seasonal runoff from California's major watersheds, and summaries of precipitation, snowpack, reservoir storage, and runoff in various regions of California.

full prior water year at Smartsville USGS Gage No. 11418000. The sum is currently made available by DWR on the California Data Exchange Center in the folder named "FNF Sum"<sup>13</sup>.

If DWR does not make the full natural flow available by October 15, the water year type shall be based on DWR's May Bulletin 120, until the full natural flow for the full prior water year is made available. The Licensee shall implement the required water year type determination within three days of the date when DWR makes the full natural flows for the full prior year available through February 15.

3(B) Water Year Type Classification Downstream of Englebright Dam

The Licensee shall use Bulletin 120 each year in each of the months of February, March, April, and May to determine the applicable water year type as described in Table 10, as defined in the North Yuba Index.

**Table 10. North Yuba Index**

<b>Water Year Type</b>	<b>Thousands of Acre-Feet</b>
Schedule 1	Equal to or greater than 1,400
Schedule 2	Equal to or greater than 1,040 and less than 1,400
Schedule 3	Equal to or greater than 920 and less than 1,040
Schedule 4	Equal to or greater than 820 and less than 920
Schedule 5	Equal to or greater than 693 and less than 820
Schedule 6	Equal to or greater than 500 and less than 693
Conference Year	Less than 500

The North Yuba Index shall be defined as follows:

$$\text{North Yuba Index} = Sa^{\text{NBB}} + I^{\text{NBB}}, \text{ where:}$$

$Sa^{\text{NBB}}$  is the actual recorded amount of water in storage in New Bullards Bar Reservoir on September 30 of the previous water year as reported for USGS Gage No. 11413515 minus 234,000 AF;

and

$I^{\text{NBB}}$  is calculated as follows:

$$I^{\text{NBB}} = \text{Total Actual Inflow to New Bullards Bar Reservoir from October 1 to the end of Month}^{i-1} \text{ (Month}^{i-1} \text{ is the previous month)} \\ + \text{Forecasted Inflow from Beginning of Month}^i \text{ (Month}^i \text{ is the current month)} \\ \text{to September 30,}$$

where

Total Actual Inflow to New Bullards Bar Reservoir from October 1 to the end of Month<sup>i-1</sup> is the calculated inflow in TAF based on a monthly summation of inflow as follows:  
 Total Actual Inflow to New Bullards Bar Reservoir from October 1 to the end of Month<sup>i-1</sup>  
 = Monthly change in stored water + Monthly outflow and where:

<sup>13</sup> Available online at: <http://cdec.water.ca.gov/cgi-progs/stages/FNFSUM>. Last Accessed July 10, 2020

Forecasted Inflow from the Beginning of Month<sup>i</sup> to September 30 is calculated as follows:

$$\text{Forecasted Inflow to NBB}^i = \text{February New Bullards Bar Inflow} \\ + \text{March Inflow} + \text{April-July Inflow} + \text{August-September Inflow}$$

Forecasted inflow to New Bullard Bar shall be determined for each month using statistically-derived linear coefficients shown in Table 11, applied to the measured inflow to New Bullards Bar Reservoir and DWR’s Bulletin 120 for February, March, April, and May, and subsequent updates of forecasts of unimpaired flow of the North Yuba River at Goodyears Bar (USGS Gage No. 11413000) and at the Yuba River at Smartsville (USGS Gage No. 11418000). DWR’s forecast published in February, March, and April shall apply from the 16<sup>th</sup> day of that month through the 15<sup>th</sup> day of the next month. The North Yuba Index determined by the final Bulletin 120 update for the water year (i.e., the May forecast) shall remain in effect until the February Bulletin 120 update of the following water year.

**Table 11. Coefficients for Calculation of Forecasted Inflow from Beginning of Month<sup>i</sup> to September 30**

Forecast Month	Forecasted For	Constant (C) (AF)	Total Actual Inflow to New Bullards Bar Reservoir <sup>3</sup> (C1) (no units)	Bulletin 120 <sup>2, 4</sup> Forecasted Smartsville (C2) (no units)	Bulletin 120 <sup>2</sup> Forecasted Goodyear's Bar (C3) (no units)
February	February	-2,146	0.01424	0.52533	--
	March	-3,221	0.02458	0.54787	--
	April-July	-30,416	0.01413	0.62473	-0.24081
	August-September	--	0.01593	0.64037	--
March	March	-23,495	0.00596	0.55386	--
	April-July	-31,134	0.01237	0.62162	-0.23266
	August-September	--	0.01473	0.59396	--
April	April-July	-30,665	0.00547	0.61332	-0.19623
	August-September	--	0.01409	0.53241	--
May <sup>1, 5</sup>	April-July	-31,652	0.01033	0.61645	-0.22353
	August-September	--	0.01298	0.50071	--

<sup>1</sup> For all subsequent forecast updates, the May coefficients shall be used, with the forecasted Goodyears Bar runoff equaling 0.273 times the current forecasted Yuba River unimpaired flow at Smartsville USGS Gage No. 11418000.

<sup>2</sup> The Bulletin 120 forecasted flow for Smartsville and Goodyears Bar shall use the 50-percent exceedance forecasted flow.

<sup>3</sup> Total actual inflow means inflow to date from October 1 of the previous year.

- <sup>4</sup> “Forecasted Smartsville” is the DWR forecast for “Yuba River at Smartsville Plus Deer Creek”.
- <sup>5</sup> The May calculation of Forecasted New Bullards Bar Inflow and subsequent updated calculations shall be reduced by the actual New Bullard Bar inflow between April 1 and the calculation date.

Formula terms are only applicable as shown in Table 11 (e.g., the March forecast does not include a term for forecasted February New Bullards Bar Inflow). The following formula shall be used to calculate the terms of the formula for Forecasted Inflow to NBB<sup>i</sup> using the corresponding coefficients from Table 11):

- February New Bullards Bar Inflow =  $C + C1 \times \text{Total Actual Inflow to New Bullards Bar} + C2 \times \text{Forecasted Smartsville}^{(\text{February})}$
- March New Bullards Bar Inflow =  $C + C1 \times \text{Total Actual Inflow to New Bullards Bar} + C2 \times \text{Forecasted Smartsville}^{(\text{March})}$
- April New Bullards Bar Inflow – July New Bullards Bar Inflow =  $C + C1 \times \text{Total Actual Inflow to New Bullards Bar} + C2 \times \text{Forecasted Smartsville}^{(\text{April} - \text{July})} + C3 \times \text{Forecasted Goodyears Bar}^{(\text{April} - \text{July})}$
- August New Bullards Bar Inflow – September New Bullards Bar Inflow =  $C1 \times \text{Total Actual Inflow to New Bullards Bar} + C2 \times \text{Forecasted Smartsville}^{(\text{August} - \text{September})}$

Terms are calculated in AF and the result is converted to TAF for use in the calculation of the Forecasted Total Inflow to New Bullards Bar ( $I^{\text{NBB}}$  (TAF)).

#### **CONDITION 4. Monitoring and Adaptive Management**

##### **4(A) Water Quality Monitoring**

The Licensee shall implement YCWA’s Proposed Condition WR8: *Implement Water Quality Monitoring* (WR8), as submitted to FERC on October 27, 2016 (YCWA 2016a, Encl. 1J) with the following modifications.

By January 30 of each year in which monitoring occurred in the previous year pursuant to this condition, the Licensee shall submit a Water Quality Monitoring Report to the Deputy Director for review and consideration of approval. In addition to the items identified in WR8, the Water Quality Monitoring Report shall include: 1) an analysis of monitoring results for the previous year and any prior years monitoring along with identification of any potential Project-related impacts to water quality; and 2) Licensee-proposed adaptive management actions or monitoring plan modifications to address potential Project-related impacts to water quality.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to WR8 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to WR8. The Licensee shall implement any

Deputy Director-approved modifications to WR8 upon receipt of Deputy Director and any other required approvals. The Licensee shall file the Deputy Director-approved Water Quality Monitoring Report, together with any required WR8 modifications, with FERC.

#### 4(B) Water Temperature Monitoring

The Licensee shall implement YCWA's Proposed Condition WR7: *Implement Water Temperature Monitoring (WR7)*, as submitted to FERC on October 27, 2016 (YCWA 2016a, Encl. 1I) with the following modifications.

By January 30 of each year, the Licensee shall submit a Water Temperature Monitoring Annual Report to the Deputy Director for review and consideration of approval. In addition to the items identified in WR7, the Water Temperature Monitoring Annual Report shall include: 1) an analysis of monitoring results for the prior monitoring years along with identification of any potential Project-related impacts to water temperature (such as Project flow releases); and 2) Licensee-proposed adaptive management actions or monitoring plan modifications to address potential Project-related impacts to water temperature.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to WR7 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to WR7. The Licensee shall implement any Deputy Director-approved modifications to WR7 upon receipt of Deputy Director and any other required approvals. The Licensee shall file the Deputy Director-approved Water Temperature Monitoring Annual Report, together with any required WR7 modifications, with FERC.

#### 4(C) Upper Yuba River Aquatic Monitoring

The Licensee shall implement YCWA's Proposed Condition AR7: *Upper Yuba River Aquatic Monitoring Plan (AR7)*, as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E3, Attachment 1 Implementation Plans) with the following modifications.

By January 30 of each year in which monitoring occurred in the previous year pursuant to this condition, the Licensee shall submit an Upper Yuba River Aquatic Monitoring Report to the Deputy Director for review and consideration of approval. In addition to items identified in AR7, the Upper Yuba River Aquatic Monitoring Report shall include: 1) an analysis of the previous year and any prior years monitoring results along with identification of any potential Project-related impacts; and 2) Licensee-proposed adaptive management actions or monitoring plan modifications to address potential Project-related impacts to salmonids, anadromous fish stranding, substrate and large woody material (LWM), riparian vegetation, and benthic macroinvertebrates.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to AR7 shall be approved

by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR7. The Licensee shall implement any Deputy Director-approved modifications to AR7 upon receipt of Deputy Director and any other required approvals. The Licensee shall file the Deputy Director-approved Upper Yuba River Aquatic Monitoring Report, together with any required AR7 modifications, with FERC.

#### 4(D) Lower Yuba River Aquatic Monitoring

The Licensee shall implement YCWA's Proposed Condition AR8: *Implement Lower Yuba River Aquatic Monitoring Plan (AR8)*, as submitted to FERC on December 2, 2016 (YCWA 2016b, Encl. 1C) with the following modifications.

By January 30 of each year in which monitoring occurred in the previous year pursuant to this condition, the Licensee shall submit a Lower Yuba River Aquatic Monitoring Report to the Deputy Director for review and consideration of approval. In addition to items identified in AR8, the Lower Yuba River Aquatic Monitoring Report shall include: 1) an analysis of previous year's and any prior years' monitoring results along with identification of any potential Project-related impacts; and 2) Licensee-proposed adaptive management actions or monitoring plan modifications to address potential Project-related impacts to salmonids, anadromous fish stranding, substrate and LWM, riparian vegetation, and benthic macroinvertebrates.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to AR8 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR8. The Licensee shall implement any Deputy Director-approved modifications to AR8 upon receipt of Deputy Director and any other required approvals. The Licensee shall file the Deputy Director-approved Lower Yuba River Aquatic Monitoring Report, together with any required AR8 modifications, with FERC.

#### 4(E) Bald Eagles

No later than one year following license issuance, the Licensee shall implement YCWA's Proposed Condition TR2: *Implement Bald Eagle and American Peregrine Falcon Management Plan (TR2)*, as submitted to FERC November 8, 2019 (YCWA 2019, Attachment 4). By December 31 of each year following implementation of TR2, the Licensee shall submit a Bald Eagle Monitoring Report to the Deputy Director for review and consideration of approval. In addition to items identified in TR2, the Bald Eagle Monitoring Report shall include any Licensee-proposed adaptive management actions or monitoring plan modifications to address potential Project-related impacts to bald eagles, their nests, or their eggs.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any additional modifications to TR2 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with

FERC any Deputy Director-approved modifications to TR2. The Licensee shall implement any Deputy Director-approved modifications to TR2 upon receipt of Deputy Director and any other required approvals. The Licensee shall file the Deputy Director-approved Bald Eagle Monitoring Report, together with any required TR2 modifications, with FERC.

4(F) Streamflow and Reservoir Level Compliance Monitoring

No later than six months following license issuance, the Licensee shall implement YCWA's Proposed Condition WR4: *Implement Streamflow and Reservoir Level Compliance Monitoring Plan (WR4)*, as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E3, Attachment 1 Implementation Plans).

By December 1 of each year, the Licensee shall submit a Streamflow and Reservoir Level Compliance Annual Report to the Deputy Director for review and consideration of approval. In addition to the items identified in WR4, the Streamflow and Reservoir Level Compliance Annual Report shall include: 1) information on compliance for the year and any corrective measures implemented since the last report; and 2) Licensee proposed maintenance, decommissioning, or new equipment and associated proposed measures to protect water quality that will be implemented for the proposed activity; and 3) adaptive management actions or monitoring plan modifications.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to WR4 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to WR4. The Licensee shall implement any Deputy Director-approved modifications to WR4 upon receipt of Deputy Director and any other required approvals. The Licensee shall file the Deputy Director-approved Streamflow and Reservoir Level Compliance Annual Report, together with any required WR4 modifications, with FERC.

**CONDITION 5. Spill Reduction**

No later than 30 days following license issuance, the Licensee shall implement spill reductions at New Bullards Bar Dam, Log Cabin Diversion Dam, and Our House Diversion Dam as follows:

5(A) Spill Reduction at New Bullards Bar Dam in the North Yuba River

The Licensee shall implement YCWA's Proposed Condition AR4: *Control Project Spills at New Bullards Bar Dam (AR4)*, as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E2, Section E2.4.4). The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to AR4 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR4. The Licensee shall implement any Deputy Director-approved modifications to AR4 upon receipt of Deputy Director and any other required approvals.

5(B) Spill Reduction at Log Cabin Diversion Dam in Oregon Creek

The Licensee shall implement YCWA's Proposed Condition AR12: *Control Project Spills at Log Cabin Diversion Dam* (AR12), as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E2, Section E2.4.12). The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to AR12 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR12. The Licensee shall implement any Deputy Director-approved modifications to AR12 upon receipt of Deputy Director and any other required approvals.

5(C) Spill Reduction at Our House Diversion Dam in the Middle Yuba River

The Licensee shall implement YCWA's Proposed Condition AR2: *Control Project Spills at Our House Diversion Dam* (AR2), as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E2, Section E2.4.2). The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to AR2 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR2. The Licensee shall implement any Deputy Director-approved modifications to AR2 upon receipt of Deputy Director and any other required approvals.

**CONDITION 6. Closures at Lohman Ridge Diversion Tunnel**

No later than five years following license issuance, the Licensee shall manage closures of the Lohman Ridge Diversion Tunnel as described in this condition.

6(A) Spring and Summer Tunnel Closures

If the end-of-March New Bullards Bar Reservoir storage is 775 TAF or greater and the DWR March median water year forecast of total unimpaired runoff in the Yuba River at Smartsville is greater than 2,191 TAF, the Licensee shall, on April 1, close the Lohman Ridge Diversion Tunnel and it shall remain fully closed through September 30 of that calendar year. Concurrent with any Lohman Ridge Diversion Tunnel closure, the Licensee shall open the Log Cabin Diversion Dam low-level outlet and fish release valve. The Licensee may leave the Camptonville Diversion Tunnel fully open. If the subsequent DWR April median water year forecast is less than 2,191 TAF, the Licensee may begin opening the Lohman Ridge Diversion Tunnel within two business days of the publication of DWR's April Bulletin 120 and provide spill reduction consistent with Condition 5 of this certification.

6(B) Fall Tunnel Closures

The Licensee shall fully close the Lohman Ridge Diversion Tunnel from October 1 through December 31 of each year. This condition is subject to temporary modification for planned activities (e.g., if required for repairs to the dam or associated equipment) in accordance with Condition 1(B) or unplanned events (e.g., equipment malfunction, as

directed by law enforcement authorities, or in emergencies) in accordance with Condition 1(C)).

#### 6(C) Notifications

For spring tunnel closures, the Licensee shall monitor the March DWR Bulletin 120 forecast and New Bullards Bar Reservoir elevation and make a good faith effort to notify the USFS, CDFW, USFWS, FERC, and State Water Board staff at least five days prior to any anticipated tunnel closure. The Licensee shall notify USFS, CDFW, USFWS, FERC, and State Water Board staff at least one day prior to any anticipated tunnel closure, and provide notification following tunnel closure that notes the date and time the tunnel was closed, as well as when the tunnel is subsequently opened. Concurrent with these notifications, the Licensee shall post a notice at the Our House Diversion Dam and New Colgate Powerhouse public river access points, describing potential flow increases, and coordinate with USFS to post the same notice at other recreation facilities and public river access points downstream of Our House Diversion Dam on the Middle Yuba River.

#### 6(D) Permitting

Where facilities must be modified or constructed to allow for compliance with the required tunnel closures, the Licensee shall submit applications for permits to modify or construct the facilities as soon as reasonably practicable but no later than two years following license issuance, and shall complete the work as soon as reasonably practicable but no later than two years after receiving all required permits and approvals for the work.

### **CONDITION 7. New Colgate Power Tunnel Intake**

The Licensee shall, as soon as completing any necessary equipment and safety work and no later than three years following license issuance, operate the upper intake of the temperature control structure on the New Colgate Power Tunnel Intake during the months of March, April, and May. Prior to operation of the upper intake, the Licensee shall continue to operate the lower intake on the New Colgate Power Tunnel Intake during the months of March, April, and May. The Licensee shall consult with the Technical Review Group (TRG) during the annual meeting (Condition 22) to determine which New Colgate Power Tunnel Intake (i.e., does not need to be the upper intake) will be used during each of the months in the remainder of the water year (June – September). A description of which intake was used throughout the remainder of the water year shall be included in the report submitted annually in conjunction with annual meetings (Condition 22).

The Licensee shall inspect the upper intake on the New Colgate Power Tunnel for safety and functionality prior to its first use under this condition. The Licensee shall make any necessary safety inspections and equipment improvements to facilitate use of the upper intake within three years of license issuance. The Licensee shall provide

updates regarding safety inspections, necessary equipment improvements, and the timeline for use of the upper intake at the annual meeting (Condition 22).

Any changes to the operations of the New Colgate Power Tunnel Intake associated with this condition shall be approved by the Deputy Director prior to implementation. The Deputy Director may require modifications as part of any approval. The Licensee shall implement any changes to the operations of the New Colgate Power Tunnel Intake upon receipt of Deputy Director and any other required approvals. The Licensee shall file any Deputy Director-approved updates with FERC.

**CONDITION 8. Large Woody Material at Our House and Log Cabin Diversion Dams and New Bullards Bar Reservoir**

No later than one year following license issuance, the Licensee shall implement YCWA's Proposed Condition *GS3: Implement Our House and Log Cabin Diversion Dams and New Bullards Bar Reservoir Woody Material Management Plan (GS3)*, as submitted to FERC on April 12, 2018 (YCWA 2018a, Attachment 3), with the following modifications.

Prior to initiating the alternative to burn LWM on a barge in New Bullards Bar Reservoir, as described in Section 3.3.5 of GS3<sup>14</sup>, the Licensee shall submit proposed modifications to the Deputy Director for review and consideration of approval. The Licensee shall consult with State Water Board and Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) staff in the development of the proposed modifications. The proposed modifications shall describe the procedures that will be used to burn LWM on barges, including any chemicals that will be used, water quality monitoring, proposed measures that will be implemented to protect water quality, and disposal methods for remaining ash and associated waste materials.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to GS3 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to GS3. The Licensee shall implement any Deputy Director-approved modifications to GS3 upon receipt of Deputy Director and any other required approvals.

**CONDITION 9. Sediment Management**

The Licensee shall implement YCWA's Proposed Condition *GS2: Log Cabin and Our House Diversion Dams Sediment Management Plan (GS2)*, as submitted to FERC on July 27, 2018 (YCWA 2018c), and as augmented by conditions in the State Water Board's April 2020 certification for the Log Cabin Diversion Dam and Our House

---

<sup>14</sup> This section states "In years when woody material exceeds the storage capacity of the Primary and Secondary burn sites, the woody material may be burned on the surface of the reservoir in cooperation with the [USFS] and after YCWA has obtained all necessary permits and approvals."

Diversion Dam Sediment Management (collectively sediment management plan). No later than two years following license issuance, the Licensee shall submit to the Deputy Director, for review and consideration of approval, any modifications to sediment management plan. The modifications shall be developed in consultation with CDFW, USFWS, State Water Board, and Central Valley Regional Water Board staff. As part of consultation, the Licensee shall provide feedback on recent sediment management activities implemented under this condition, lessons learned, and any other information pertinent to the proposed modifications

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

**CONDITION 10. Prevention of Narrows Reach Fish Stranding Events**

No later than one year following license issuance, the Licensee shall submit a Fish Stranding Prevention Plan to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Fish Stranding Prevention Plan shall be developed in consultation with CDFW, NMFS, USFWS, and State Water Board staff. The goal of the Fish Stranding Prevention Plan shall be to reduce fish stranding in the lower Yuba River from immediately below Englebright Dam to the Narrows 1 Powerhouse (Narrows Reach). At a minimum, the Fish Stranding Prevention Plan shall include:

1. Permanent or long term measures the Licensee will implement to reduce or eliminate fish stranding, especially for anadromous salmonids, during the range of flows experienced in the Narrows Reach as a result of Project operations and coordinated operations with the Narrows Hydroelectric Project (FERC Project No 1403). Such measures may include, but are not limited to, changes in Narrows 2 facilities operations and/or coordinated operations with the Narrows 1 Powerhouse, construction of entrainment deterrents, maintenance of gravel bars and streambanks, or filling of intermittent pools;
2. Identification of existing locations in the Narrows Reach where stranding has occurred or has the potential to occur, including, but not limited to: the interstitial spaces of boulders and pools of water that form between the large pool below Englebright Dam (Dam Pool) and the pool in front of the Full Bypass (Full Bypass Pool), the Full Bypass Pool, the north bank and/or gravel bars of the river downstream of the Partial Bypass, the isolation pool on the gravel bar on the south bank of the river downstream of the Full Bypass Pool, and other areas on the south bank and/or gravel bars downstream of the Full Bypass Pool;
3. A schedule for implementation;

4. Monitoring to evaluate the initial and ongoing effectiveness of the measures with respect to fish stranding;
5. Documentation of consultation with CDFW, NMFS, USFWS, and State Water Board staff, comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations; and
6. Format and schedule for reports that document, summarize, and analyze monitoring results. The Licensee shall propose any updates to the plan based on the monitoring results or new information related to conditions that may be impacted by the Project. Reports shall include identification of any potential concerns, as well as proposed actions to address any Project-related impacts. Reports shall be submitted to CDFW, NMFS, USFWS, and State Water Board staff.

The Deputy Director may require additional actions based on monitoring and other available information (e.g., reports) related to Project-related fish stranding in the Narrows Reach. The Licensee shall file with FERC the Deputy Director-approved Fish Stranding Prevention Plan, any approved modifications thereto, and any additional required action(s). The Licensee shall implement the Fish Stranding Prevention Plan, any approved modifications, and additional actions upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

#### **CONDITION 11. Aquatic Invasive Species Management**

No later than one year following license issuance, the Licensee shall implement YCWA's Proposed Condition AR5: *Implement Aquatic Invasive Species Management Plan* (AR5), as submitted to FERC on November 8, 2019 (YCWA 2019, Attachment 1). In addition to AR5, the Licensee shall implement the FERC staff alternative related to monitoring locations at New Bullards Bar and agency consultation, as noted in FERC's *Final Environmental Impact Statement for Hydropower License – Yuba River Development Project – Project No. 2246-065 – California* (FEIS) (FERC 2019). In addition, during Project activities that require movement of equipment from one waterbody to another waterbody, the Licensee shall comply with CDFW's aquatic invasive species decontamination protocol identified in Appendix D of the above referenced Aquatic Invasive Species Management Plan.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition based on monitoring results. Any additional modifications to AR5 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR5. The Licensee shall implement any Deputy Director-approved modifications to AR5 upon receipt of Deputy Director and any other required approvals.

**CONDITION 12. Lower Yuba River Habitat Restoration**

No later than two years following license issuance, the Licensee shall submit a Lower Yuba River Habitat Restoration (Restoration Plan) for review and consideration for approval by the Deputy Director. The Deputy Director may require modifications as part of any approval. The Restoration Plan's objective shall be the restoration and enhancement of functioning juvenile salmonid rearing habitat in the lower Yuba River through implementation of specific restoration and enhancement measures that may include lowering of floodplain surfaces, planting of riparian vegetation, installation of LWM, and gravel augmentation. The Restoration Plan shall be developed in consultation with staff from the State Water Board, CDFW, USFWS, and NMFS. At a minimum, the Restoration Plan shall include:

1. Identification of restoration and enhancement actions that will be implemented by the Licensee in the lower Yuba River. Development of restoration and enhancement actions shall at a minimum include consideration of lowering of floodplain surfaces, planting of riparian vegetation, installation of LWM, and gravel augmentation;
2. Schedule for restoration and enhancement activities;
3. Total number of acres to be restored or enhanced;
4. Locations of restoration sites;
5. Performance metrics to assess restoration and enhancement actions at reducing Project-related impacts to juvenile salmonid rearing habitat in the lower Yuba River;
6. Anticipated maintenance activities;
7. Implementation and effectiveness monitoring to ensure obtainment of performance metrics. Restoration Plan monitoring may coincide with other monitoring activities, such as those in Condition 4 (Licensee's Proposed Condition AR8: *Implement Lower Yuba River Aquatic Monitoring Plan*);
8. Measures and monitoring that will be implemented to protect water quality and beneficial uses. This may be done through Water Quality Management Plans (Condition 19) or as part of this plan or modifications to this plan to the extent specific site and restoration activity details are available for inclusion in the Restoration Plan;
9. Documentation of consultation with USFS, CDFW, USFWS, and State Water Board staff, comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations; and
10. Format and schedule for reports that document, summarize, and analyze monitoring results. The Licensee shall propose and implement any updates to the plan based on the monitoring results or new information related to the conditions in the watershed that may be impacted by Project operations. Reports shall include identification of any potential concerns, as well as proposed actions to address any Project-related impacts. Reports shall be submitted to CDFW, NMFS, USFWS, and State Water Board staff.

The Deputy Director may require adaptive management actions be implemented based on the results of effectiveness monitoring, reporting, or other related information. The Licensee shall file the Deputy Director-approved Restoration Plan, together with any required plan modifications, with FERC. The Licensee shall implement the Restoration Plan upon receipt of Deputy Director and any other required approvals. Any modifications to the Restoration Plan shall be approved by the Deputy Director prior to implementation.

**CONDITION 13. New Bullards Bar Reservoir Fishery**

No later than one year following license issuance, the Licensee shall implement YCWA's Proposed Condition AR6: *Implement New Bullards Bar Reservoir Fish Stocking Plan (AR6)*, as submitted to FERC on November 8, 2019 (YCWA 2019, Attachment 2), with the following modifications.

In years in which the report includes creel survey results for the previous calendar year or proposed modifications to the fish stocking program, the Licensee shall provide a draft of the report, including any recommendations for changes to the fish stocking program, to the Deputy Director for consideration of approval. The draft report shall be provided to the Deputy Director at least 30 days before the final report is submitted to FERC. The Licensee shall incorporate any modifications to the report provided as part of Deputy Director approval of the report. The Licensee shall file the Deputy Director-approved report with FERC.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any additional modifications to AR6 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to AR6. The Licensee shall implement any Deputy Director-approved modifications to AR6 upon receipt of Deputy Director and any other required approvals.

**CONDITION 14. Recreation Facilities**

No later than one year following license issuance, the Licensee shall implement YCWA's Proposed Condition RR1: *Recreation Facilities Plan (RR1)*, as submitted to FERC on September 19, 2018 (YCWA 2018d, Attachment 1), with the following modifications.

The Licensee shall consult annually with CDFW, USFWS, and State Water Board staff regarding potential effects to state- or federally-listed species and/or species of special concern<sup>15</sup> as a result of implementation of RRI. Where applicable, the Licensee shall implement the aquatic invasive species measures outlined in Condition 11 of the

---

<sup>15</sup> As defined on CDFW's Species of Special Concern website. Available online at: <https://wildlife.ca.gov/Conservation/SSC>. Last accessed July 16, 2020.

certification. Additionally, the Licensee shall comply with the construction and maintenance requirements outlined in Condition 19 of this certification.

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any additional modifications to RR1 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to RR1. The Licensee shall implement any Deputy Director-approved modifications to RR1 upon receipt of Deputy Director and any other required approvals.

#### **CONDITION 15. Whitewater Boating Flows**

No later than one year following license issuance, the Licensee shall implement: (1) YCWA's Proposed Condition RR2: *Provide Recreation Flow Information* (RR2), as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E2, Section E2.6.2), and (2) YCWA's Proposed Condition RR3: *Provide Whitewater Boating Below Our House Diversion Dam* (RR3), as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E2, Section E2.6.3).

The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to RR2 and/or RR3 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to RR2 and/or RR3. The Licensee shall implement any Deputy Director-approved modifications to RR2 and/or RR3 upon receipt of Deputy Director and any other required approvals.

#### **CONDITION 16. Drought Management**

No later than two years following license issuance, the Licensee shall submit a Drought Management Plan to the Deputy Director for review and consideration of approval. The Deputy Director may require modifications as part of any approval. The Drought Management Plan shall be developed in consultation with CDFW, USFWS, USFS, NMFS, State Water Board, and if applicable Bureau of Land Management staff. At a minimum, the Drought Management Plan shall include:

1. Consultation on the Drought Management Plan. Consultation shall include determination of multi-year "drought conditions". Such multi-year drought conditions may include several consecutive years in which the Governor of the State of California declares a drought emergency for Yuba, Sierra, or Nevada counties, or multiple consecutive Dry or Critically Dry water year types;
2. Guidance for operations during multi-year drought conditions, including:
  - a. Identification of management options that may require a variance to certification conditions to address multi-year droughts;
  - b. Evaluation of different, specific multi-year drought scenarios;
  - c. Considerations that will be evaluated for different management options, such as an estimate of water to be saved and the alternative beneficial uses for which the water is being conserved; a timeline for the return to regular

- operations; proposed monitoring for the revised operations, including an estimation of any impacts the revised operations may have on beneficial uses of water; and
- d. Proposed water conservation measures that will be implemented;
  3. Consultation, notification, and regulatory approval procedures that will be implemented during drought conditions, which shall include, at a minimum, CDFW, USFWS, USFS, NMFS, and State Water Board staff; and
  4. Comments received during the consultation process and identification of how the Licensee addressed the comments.

The Licensee shall file with FERC the Deputy Director-approved Drought Management Plan, and any approved modifications thereto. The Licensee shall implement the Drought Management Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

**CONDITION 17. Hazardous Materials**

No later than one year following license issuance, the Licensee shall implement YCWA's Proposed Condition WR1: *Hazardous Materials Management Plan (WR1)*, as submitted to FERC on November 8, 2019 (YCWA 2019, Attachment 5). The Deputy Director reserves the right to modify or approve modifications to the requirements referenced in this condition. Any modifications to WR1 shall be approved by the Deputy Director prior to implementation. The Licensee shall file with FERC any Deputy Director-approved modifications to WR1. The Licensee shall implement any Deputy Director-approved modifications to WR1 upon receipt of Deputy Director and any other required approvals.

**CONDITION 18. Coordinated Operations Plan with Narrows Project**

No later than one year following license issuance, the Licensee shall file with the Deputy Director a Coordinated Operations Plan for the Project and Narrows Hydroelectric Project (FERC Project No. 1403). The Licensee shall consult with NMFS, USFWS, CDFW, and State Water Board staff in developing the Coordinated Operations Plan. The purpose of this Coordinated Operations Plan is to provide for coordinated operations of the Project and the Narrows Hydroelectric Project to ensure implementation of the flow-related conditions in the Project's license, including maintenance of flow requirements and ramping rates during normal operations, scheduled outages, and unscheduled outages (to the extent feasible). The Deputy Director may require modifications as part of any approval.

The Licensee shall file with FERC the Deputy Director-approved Coordinated Operations Plan, and any approved modifications thereto. The Licensee shall implement the Coordinated Operations Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

The State Water Board reserves the right to modify or approve modifications to the requirements referenced in this certification upon the Licensee's relicensing and certification of the Narrows Hydroelectric Project.

### **CONDITION 19. 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)<sup>16</sup> (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<sup>17</sup>, the Licensee shall prepare and implement site-specific Water Quality Monitoring and Protection Plans (WQMP Plans) for Deputy Director approval. WQMP Plans must demonstrate compliance with sediment and turbidity water quality objectives in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (SR/SJR Basin Plan) (Central Valley Regional Water Board 2018). The WQMP Plans shall be consistent with the most current USFS *National Best Management Practices for Water Quality Management on National Forest System Lands*<sup>18</sup> (USFS 2012) and other appropriate documents.

The Licensee shall submit WQMP Plans to the Deputy Director for review and 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:

- The relevant elements of YCWA's Proposed Condition GS1: *Implement Erosion and Sediment Control Plan* (GS1), as submitted to FERC on October 27, 2016 (YCWA 2016a, Encl 1A);
- A description of site conditions and the proposed activity;
- Detailed descriptions, design drawings, and specific topographic locations of all control measures in relation to the proposed activity, which may include:
  - Measures to divert runoff away from disturbed land surfaces;

---

<sup>16</sup> Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ.

<sup>17</sup> For example, sediment management activities covered by Condition 9 would not be required to have a separate WQMP Plan.

<sup>18</sup> Volume 1: National Core BMP Technical Guide (FS-990a). Issued April 2012. Available online at: <https://www.fs.fed.us/naturalresources/watershed/bmp.shtml>. Last accessed July 11, 2020.

- Measures to collect and filter runoff from disturbed land surfaces, including sediment ponds at the diversion and powerhouse sites; and
- Measures to dissipate energy and prevent erosion;
- Revegetation measures for disturbed areas, which shall include use of native plants and locally-sourced plants and seeds; and
- 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 approval and any other required approvals, in accordance with the schedule and requirements specified therein.

#### **CONDITION 20. Fish Passage**

No later than six months following license issuance, the Licensee shall initiate consultation with NMFS, USFS, USFWS, CDFW, USACE, and State Water Board staff on studies regarding fish passage. At a minimum these studies shall include:

- An assessment of a reasonable range of passage alternatives. This shall include evaluating alternatives for adult and juvenile volitional fish passage, as well as adult and juvenile trap and haul to locations above Englebright Dam and/or New Bullards Bar Reservoir. The evaluation of alternatives shall include an assessment of the adequacy of existing studies, and/or the need for additional studies. The assessment shall include all comments from agencies on the studies and on the selection of an alternatives;
- Reservoir transit studies for adult and juvenile passage;
- Identification of flows needed to support passage alternatives; and
- Identification of any proposed changes that will be implemented to Project facilities, flow regimes, fish stocking plans, availability of LWM, gravel augmentation, and access to Project-affected tributaries.

No later than three years following license issuance, the Licensee shall complete the studies and submit an informational report to the Deputy Director for review, including related information, and a proposal regarding anadromous fish passage past Project facilities. The Licensee shall develop the report in consultation with NMFS, USFS, USFWS, CDFW, USACE, and State Water Board staff. The Deputy Director may require modifications to the report. The Licensee shall file the Deputy Director reviewed informational report with FERC.

The Executive Director may require implementation of the proposal in the report, or other alternative, following notice and an opportunity to be heard.

#### **CONDITION 21. Mercury Management**

Within three years of license issuance, the Licensee is required to 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 of approval. The evaluation may use information collected during monitoring required by Condition 4(A). 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.

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. 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 of the Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan* (State Water Board 2017b). 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 effected by the Project (such as changes to Project operations related to power generation, reservoir management, sediment dredging, and/or sediment capping), and an examination of implementation measures feasibility. The Mercury Management Plan shall also describe any necessary measures to protect human health from exposure through fish consumption (such as posting health warnings at reservoirs, operating recreational fishing as catch-and-release only, or ceasing to stock reservoirs).

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 will require the Licensee to develop a Mercury Reduction Implementation Plan, which shall be submitted to the Executive Director for review and consideration of 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 staffs. The Licensee shall file the Executive Director-approved Mercury Reduction Implementation Plan, together with any required plan modifications, with FERC. Upon receiving all necessary regulatory approvals, the Licensee shall implement the measures identified in the Mercury Reduction Implementation Plan.

## **CONDITION 22. Annual Meeting and Technical Review Group**

No later than one year following license issuance, the Licensee shall establish a TRG and host annual meetings in April regarding implementation of the Project license. At a minimum, State Water Board staff, CDFW, USFS, USFWS, BLM, NMFS, and Foothills Water Network shall be invited to participate in the TRG. The annual meeting shall be noticed at least 30 days in advance on the Licensee's Project webpage and open to the public. The TRG shall establish communication protocols to facilitate interactions between group members that allow for open participation and communication between

all parties. The first meeting of the TRG shall be held no later than the first full calendar year after license issuance. At the annual meetings, the TRG shall:

1. Review the status of implementing the FERC license and certification conditions;
2. Review monitoring data from all monitoring conducted the previous year;
3. Review elements of current year maintenance plans and any non-routine maintenance;
4. Discuss foreseeable changes to Project facilities or features;
5. Discuss the status of salmonid reintroduction plan(s);
6. Discuss necessary or anticipated revisions or modifications to plans approved as part of this certification; and
7. Discuss species listing implications, including:
  - o Needed protection measures for species newly listed as threatened, endangered, or sensitive;
  - 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 and other interested parties at least 30 days prior to the annual meeting. The Licensee shall submit a report to the State Water Board that summarizes the annual consultation meeting no later than 30 days following the annual consultation meeting. The Licensee may integrate the requirements of this condition with elements of its Proposed Condition GEN1: *Organize Ecological Group and Host Meetings*, as submitted to FERC on June 5, 2017 (YCWA 2017a, Volume II: Exhibit E, Appendix E2, Section E2.1.1).

## **CONDITIONS 23 – 50**

**CONDITION 23.** Issuance of this certification shall become effective upon the earliest of: a grant of rehearing of FERC's May 22, 2020 order finding waiver of the State Water Board's water quality certification authority; issuance of a judicial order overturning that order; or issuance of another judicial or administrative action finding that FERC improperly found waiver of the State Water Board's certification authority. Unless and until such action overturning FERC's finding of waiver, this certification shall not be considered a final action for the purposes of Water Code section 13160 regarding reconsideration or for administrative review.

**CONDITION 24.** The Licensee shall ensure no net loss of wetland or riparian habitat functions and compliance with 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).

**CONDITION 25.** This certification is subject to modification to incorporate feasible measures to avoid or reduce significant environmental impacts or to make any necessary findings based on any environmental documents certified by the California Environmental Quality Act (CEQA) lead agency after this certification is issued,

including any revisions to those environmental documents made as a result of judicial review of the CEQA lead agency's approval of the Project.

**CONDITION 26.** Notwithstanding any more specific provision of this certification, any plan developed as a condition of this certification requires review and consideration of 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 Deputy Director approval, the Licensee shall submit a written request for the extension, with justification, to the Deputy Director no later than 60 days prior to the deadline. The Licensee shall file with FERC any Deputy Director-approved time extensions. The Licensee shall not implement any plans or reports until after receiving Deputy Director approval and any other necessary regulatory approvals.

**CONDITION 27.** 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 (including those identified under the Sacramento/Delta Update to the Bay-Delta Plan); (4) 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 (5) to require additional monitoring and/or other measures, as needed, to ensure that continued Project operations meet water quality objectives and protect beneficial uses.

**CONDITION 28.** Future changes in climate projected to occur during the FERC license term 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 29.** 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 30.** The State Water Board reserves the authority for the Executive Director to add to or amend to the conditions of this certification, to enable implementation of State Water Board-approved voluntary solutions pursuant to Bay-Delta Plan implementation, which may include amendment of this certification.

**CONDITION 31.** In addition to the specific conditions in this certification, the Project shall be operated in a manner consistent with all applicable requirements of the Bay-Delta Plan and SR/SJR Basin Plan.

**CONDITION 32.** In addition to the 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 must take all reasonable measures to protect the beneficial uses of the Yuba River and its tributaries.

**CONDITION 33.** 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.

**CONDITION 34.** This certification does not authorize any act which results in the taking 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 35.** 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 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 36.** 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 37.** 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 SR/SJR Basin Plan objectives and 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.

**CONDITION 38.** 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 39.** 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 40.** Any requirement in this certification that refers to an agency or entity whose authorities or responsibilities are transferred to or subsumed by another state or federal agency or entity, will apply equally to the successor agency or entity.

**CONDITION 41.** For Project-related work that requires construction, a construction schedule shall be provided to the State Water Board staff upon request. The Licensee shall provide State Water Board and Central Valley Regional Water Board staffs access to Project sites to document compliance with this certification.

**CONDITION 42.** 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(s). The Licensee shall be responsible for work conducted by its contractor, subcontractors, or other persons conducting Project-related work.

**CONDITION 43.** 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.

**CONDITION 44.** Activities associated with operation and maintenance of the Project that threaten or potentially threaten water quality shall be subject to further review by the Deputy Director and Executive Officer of the Central Valley Regional Water Board. Any proposal for Project maintenance or repair work involving Project-affected waterbodies, not otherwise expressly covered in this certification, including desilting of dam impoundments, impoundment drawdowns to facilitate repair or maintenance work,

and tailrace dredging, shall be filed with the Deputy Director for prior review and consideration for approval.

**CONDITION 45.** The Licensee shall comply with the terms and conditions in the State Water Board's *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; State Water Board Order 2009-0009-DWQ, as amended by State Water Board Orders 2010-0014-DWQ and 2012-0006-DWQ), and ongoing amendments during the life of the Project.

**CONDITION 46.** 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* (State Water Board Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by State Water Board Orders 2014-0078-DWQ, 2015-0029-DWQ, and 2016-0073-EXEC), and ongoing amendments during the life of the Project.

**CONDITION 47.** Nothing in this certification shall be construed as State Water Board approval of the validity of any water rights, including pre-1914 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 48.** 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 49.** 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 50.** This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, division 3, chapter 28.



\_\_\_\_\_  
Eileen Sobeck  
Executive Director

\_\_\_\_\_  
July 17, 2020

Date

Enclosure: Figure 1: Schematic of the Yuba River Development Project Operations

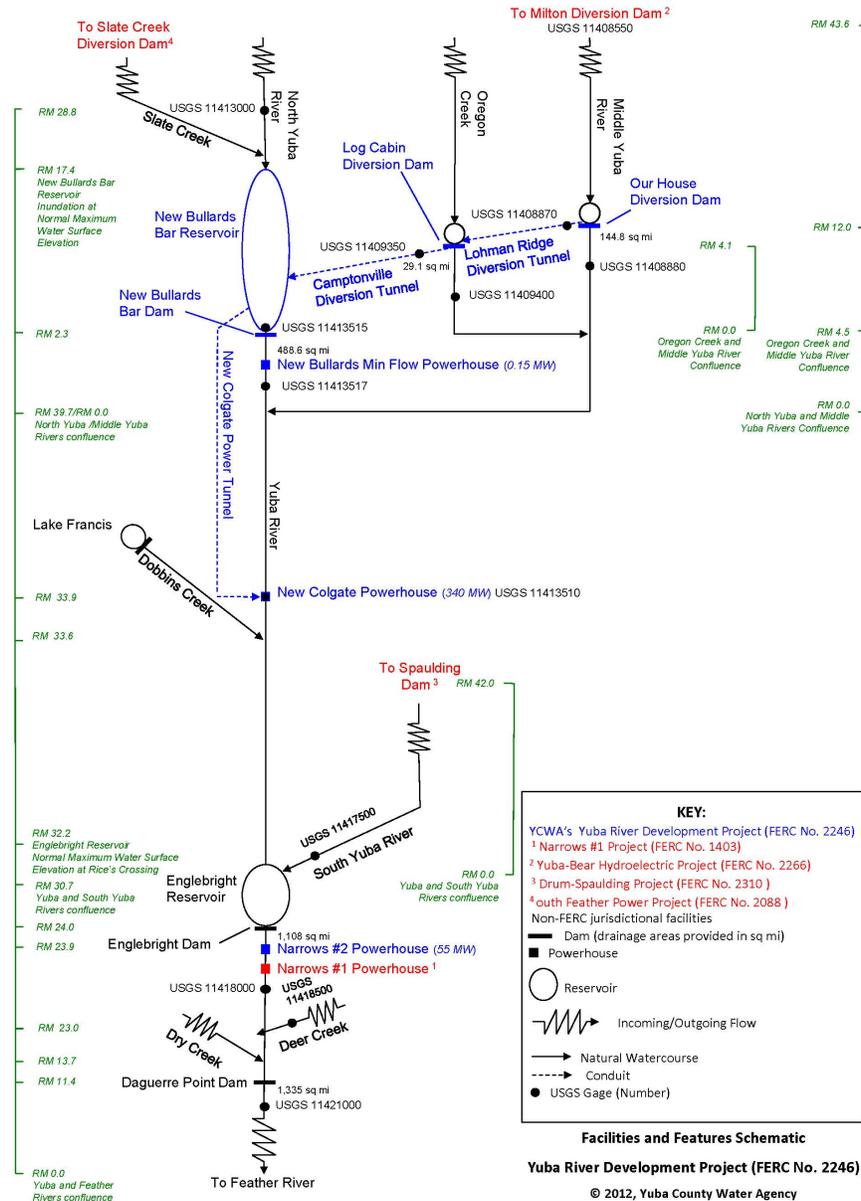
## References

- California Department of Fish and Wildlife (CDFW). 2017. *Recommended Conditions for Fish and Wildlife Protection, Mitigation, and Enhancement*.
- Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board). 2018. *The Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin (SR/SJR Basin Plan)*. Fifth Edition. Revised May 2018 (with Approved Amendments).
- Federal Energy Regulatory Commission (FERC). 2019. *Final Environmental Impact Statement for Hydropower License, Yuba River Development Project, Project No. 2246-065*. January 2019.
- National Marine Fisheries Service (NMFS). 2017. *NOAA Fisheries Service's Preliminary Comments, Federal Power Act Fishway Prescriptions, §10(j) Terms and Conditions, and §10(a) Recommendations for the Yuba River Development Project (P-2246)*. August 2017.
- State Water Resources Control Board (State Water Board). 2003. *Revised Water Right Decision 1644 In the Matter of: Fishery Resources and Water Right Issues of the Lower Yuba River*. July 16, 2003.
- \_\_\_\_\_. 2008. *Petition for Long-Term Transfer of up to 200,000 Acre-Feet of Water Per Year from Yuba County Water Agency to the Department of Water Resources and the United State Bureau of Reclamation under Permit 15026*. Corrected Water Right Order No. 2008-0014
- \_\_\_\_\_. 2009. *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit). Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ.
- \_\_\_\_\_. 2012. *Delegation of Authority to State Water Resources Control Board Members Individually and to the Deputy Director for Water Rights*. Resolution No. 2012-0029.
- \_\_\_\_\_. 2013. *Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Residual Aquatic Pesticide Discharges to Waters of the United States From Algae and Aquatic Weed Control Applications*. 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.
- \_\_\_\_\_. 2017. *2014 and 2016 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)*. Resolution No. 2017-0059.
- \_\_\_\_\_. 2017a. *Redelegation of Authorities pursuant to Resolution No. 2012-0029*.

- \_\_\_\_\_. 2017b. *Tribal Subsistence Beneficial Uses and Mercury Provisions of the Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan*. Resolution No. 2017-0027.
- \_\_\_\_\_. 2018. *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan)*. Resolution No. 2018-0059.
- \_\_\_\_\_. 2019. *State Wetland Definition and Procedures for Discharge of Dredged or Fill Material to Waters of the State (Procedures)*. Resolution No. 2019-0015.
- United States Department of Agriculture Forest Service (USFS). 2012. *National Best Management Practices for Water Quality Management on National Forest System Lands*. Volume 1: National Core BMP Technical Guide (FS-990a). April 2012.
- \_\_\_\_\_. 2018. *Forest Service Final Terms and Conditions, and Recommendations Yuba River Development Project, FERC no. 2246-065 Yuba County Water Agency*. September 24, 2018.
- United States Department of the Interior. 2017. *Comments, Recommendations, Terms and Conditions, and Prescriptions – Notice Ready for Environmental Analysis for the Yuba River Development Project, Federal Energy Regulatory Commission Project No. P-2246-065; Yuba, Nevada, and Sierra Counties, California*. August 2017.
- Yuba County Water Agency (YCWA). 2016a. *YCWA’s Understanding of Agreed-Upon Forest Service FPA § 4(e) Potential Conditions*. October 27, 2016.
- \_\_\_\_\_. 2016b. *YCWA’s Understanding of Agreed-Upon FPA § 10(j) Potential Recommendations*. December 1, 2016.
- \_\_\_\_\_. 2017a. *Amended Final License Application*. FERC Project No. 2246. June 2, 2017.
- \_\_\_\_\_. 2017b. *Amended Final License Application*. FERC Project No. 2246. July 21, 2017.
- \_\_\_\_\_. 2017c. *Submittal of Application for Water Quality Certification*. August 24, 2017.
- \_\_\_\_\_. 2017d. *Amended Final License Application*. FERC Project No. 2246. September 15, 2017.
- \_\_\_\_\_. 2017e. *Amended Final License Application*. FERC Project No. 2246. November 1, 2017.
- \_\_\_\_\_. 2018a. *Revised Log Cabin and Our House Diversion Dams and New Bullards Bar Reservoir Large Woody Material Management Plan for License Application*. April 12, 2018.

- \_\_\_\_\_. 2018b. *Revised YCWA Proposed Condition WR3, Determine Water Year Types for Conditions Pertaining to Narrows 2 Powerhouse and Narrows Full Bypass*. April 27, 2018.
- \_\_\_\_\_. 2018c. *Revised YCWA Proposed Condition GS2, Implement Our House and Log Cabin Diversion Dams Sediment Management Plan*. July 27, 2018.
- \_\_\_\_\_. 2018d. *Revised YCWA Proposed Condition RR1, Implement Recreation Facilities Plan*. September 19, 2018.
- \_\_\_\_\_. 2018e. *Submittal of Application for Water Quality Certification*. August 3, 2018.
- \_\_\_\_\_. 2019. *Five Revised Implementation Plans for New License*. November 8, 2019.

**Figure 1. Schematic of the Yuba River Development Project Operations**



Source: Yuba County Water Agency Website, Project Maps Schematics and Fact Sheets, YCWA Relicensing Fact Sheet and Flow Schematic (2012)