

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

In the Matter of Water Quality Certification for

**RUGRAW, LLC
LASSEN LODGE HYDROELECTRIC PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 12496

SOURCE: South Fork Battle Creek

COUNTY: Tehama

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

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Acronyms and Abbreviations

<i>Amphibian Plan</i>	<i>Amphibian Monitoring and Adaptive Management Plan</i>
<i>Aquatic Weed Control Permit</i>	<i>Statewide National Pollutant Discharge Elimination System Permit for Residual Aquatic Pesticide Discharges to Water of the United States from Algae and Aquatic Weed Control Applications</i>
<i>Basin Plan</i>	<i>Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin</i>
<i>BMI</i>	<i>benthic macroinvertebrate</i>
<i>BMPs</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 Biological Resources Plan</i>	<i>Construction Biological Resources Management Plan</i>
<i>Construction General Permit</i>	<i>National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i>
<i>CRLF</i>	<i>California red-legged frogs</i>
<i>Deputy Director</i>	<i>Deputy Director of the Division of Water Rights</i>
<i>Dewatering Plan</i>	<i>Dewatering and Diversion Plan</i>
<i>DSMP</i>	<i>Debris and Sediment Management Plan</i>
<i>EIR</i>	<i>Environmental Impact Report</i>
<i>Erosion Plan</i>	<i>Erosion Control and Sedimentation Plan</i>
<i>ESA</i>	<i>Endangered Species Act</i>
<i>FERC</i>	<i>Federal Energy Regulatory Commission</i>
<i>Fish and BMI Plan</i>	<i>Resident Fish and Benthic Macroinvertebrate Monitoring and Adaptive Management Plan</i>
<i>FLA</i>	<i>Final License Application</i>
<i>FYLF</i>	<i>foothill yellow-legged frogs</i>
<i>Gaging Plan</i>	<i>Streamflow Gaging and Reporting Plan</i>
<i>Hazardous Materials Plan</i>	<i>Hazardous Materials Management Plan</i>
<i>MIF</i>	<i>minimum instream flow(s)</i>
<i>NMFS</i>	<i>National Marine Fisheries Service</i>
<i>Procedures</i>	<i>State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State</i>
<i>Regional Water Boards</i>	<i>Regional Water Quality Control Boards</i>
<i>Restoration Project</i>	<i>Battle Creek Salmon and Steelhead Restoration Project</i>

<i>RM</i>	<i>River Mile</i>
<i>Rugraw</i>	<i>Rugraw, LLC</i>
<i>State Water Board</i>	<i>State Water Resources Control Board</i>
<i>SWAMP</i>	<i>Surface Water Ambient Monitoring Program</i>
<i>USEPA</i>	<i>United States Environmental Protection Agency</i>
<i>USFWS</i>	<i>United States Fish and Wildlife Service</i>
<i>USGS</i>	<i>United States Geological Survey</i>
<i>Vegetation Plan</i>	<i>Riparian Vegetation Monitoring and Adaptive Management Plan</i>
<i>Water Quality Plan</i>	<i>Water Quality Monitoring and Adaptive Management Plan</i>
<i>WQMP Plans</i>	<i>Water Quality Monitoring and Protection Plans</i>

1.0 Project Description

On April 21, 2014, Rugraw, LLC (Rugraw) applied to the Federal Energy Regulatory Commission (FERC) for an original license for the Lassen Lodge Hydroelectric Project (Project), FERC Project No. 12496. The Project is to construct, operate, and maintain a new hydroelectric project on South Fork Battle Creek in Tehama County, California (Figure 1: Overview Map of South Fork Battle Creek). The Project will be located approximately 1.5 miles west of Mineral, California. The Project's transmission line will be located along a 12-mile route between the primary Project site and the town of Manton, California. The Project will be located on lands owned by Sierra Pacific Industries, Tehama County, and other private landowners. Rugraw does not own any land in the Project boundary but does hold grant deed easements for parcels along South Fork Battle Creek.

The Project diversion facilities will be located on the south bank of South Fork Battle Creek at River Mile (RM) 23, approximately 0.5 miles above the Old State Highway Route 36 Bridge. The powerhouse will be located on South Fork Battle Creek at RM 20.6, creating a 2.4-mile-long bypass reach. The Project will be upstream of the Battle Creek Salmon and Steelhead Restoration Project (Restoration Project)¹, with 0.7 miles of the Project's bypass reach extending upstream of Angel Falls (the upstream limit of the Restoration Project and limit of anadromy) (Figure 1: Overview Map of South Fork Battle Creek and Figure 2: Map Showing Project Diversion and Powerhouse).

Project facilities will include: (1) an eight-foot-tall, 63-foot-long diversion dam with six eight-foot-long pneumatic gates and two bottom sediment sluice gates; (2) an intake and control/fish screen structure located adjacent to the diversion dam; (3) a powerhouse with associated 5,230-foot-long high pressure penstock, transition structure, and 7,565-foot-long low pressure pipeline; and (4) 12 miles of new 60-kilovolt transmission lines with an associated switchyard and substation. The generation capacity will be five megawatts. Power generated from the Project will be transmitted via the new transmission lines that will interconnect with Pacific Gas and Electric Company's Volta-South transmission line in Manton, California.

Construction of the Project facilities is estimated to take six months and will begin in April following issuance of a FERC license. Construction activities will include: (1) upgrading 3,500 feet of existing roadways and constructing 2,350 feet of new roadways to create access to the Project area; (2) excavating 32,020 cubic yards of soil for penstock and pipeline installation; (3) clearing and grading for construction of the powerhouse, switchyard, and substation; (4) installing 110 to 150 poles and towers for the transmission line route; and (5) constructing the diversion dam, intake, and control/

¹ The Restoration Project is a cooperative effort between state and federal agencies, nongovernmental organizations, and private businesses to restore almost 50 miles of salmonid habitat in Battle Creek and its tributaries. If the Restoration Project is completed, anadromous fish could access 1.7 river miles of the bypass reach.

fish screen structures. Construction of the diversion dam will occur between July 1 and October 15. Water will be diverted around the construction area during in-water work.

The Project will operate as a run-of-river facility, meaning there will be negligible storage and all water diverted for power generation will be returned to the stream. The Project proposes to operate when creek flows are between 18 and 418 cubic feet per second (cfs). When operating, the Project will create a 2.4-mile-long bypass reach by diverting water from the diversion dam site and discharging water from the powerhouse. When offline, the six pneumatic gates in the diversion dam will be completely lowered, allowing all flow, sediment, and woody material to move downstream, as well as provide up and downstream fish passage. The Project will maintain a minimum flow in the bypass reach of 13 cfs. For additional information on the Project description, including its construction and operations, please refer to Chapter 2 of the final Environmental Impact Report (State Water Board 2020b).

1.1 Water Rights

Rugraw plans to operate the Project under a riparian right. Rugraw holds grant deed easements for several contiguous parcels of land along South Fork Battle Creek from Sierra Pacific Industries. The Project is non-consumptive and will return all diverted water to South Fork Battle Creek.

Rugraw will be responsible for reporting diversion and use under any claimed rights.

2.0 Federal Energy Regulatory Commission Proceedings

Rugraw originally filed a draft exemption application for the Project with FERC on May 15, 2012 (Rugraw 2012). FERC denied the exemption application on August 8, 2012, as the Project did not meet the requirements for exemption as it would not be at the site of an existing dam or use flows from a natural water feature (FERC 2012). FERC directed Rugraw to address potential deficiencies in its exemption application and provide additional information in a final license application (FLA). On April 21, 2014, Rugraw filed a FLA for the Project with FERC. Rugraw subsequently filed amendments to the FLA on November 20, 2015, September 5, 2018, and February 28, 2020. The 2015 amendment made minor technical revisions and included information from the final sediment, temperature, and fish habitat studies (Rugraw 2015b). The 2018 amendment added an anadromous fish monitoring program, developed in consultation with the National Marine Fisheries Service (NMFS), to the proposed environmental measures (Rugraw 2018b). The 2020 amendment changed the design of the diversion dam to comply with FERC safety requirements (Rugraw 2020). FERC issued a final Environmental Impact Statement for the Project on July 25, 2018 (FERC 2018). On February 4, 2019, FERC issued a letter adopting the anadromous fish measures as part of the FERC staff alternative with the exception of Rugraw's proposal to develop a Biological Assessment and reevaluate Project operations if anadromous fish are present (FERC 2019).

3.0 Regulatory Authority

3.1 Water Quality Certification and Related Authorities

The federal Clean Water Act (33 U.S.C. §§ 1251-1388) was enacted “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” (33 U.S.C. § 1251(a).) The Clean Water Act relies significantly on state participation and support in light of “the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution” and “plan the development and use” of water resources. (33 U.S.C. § 1251(b).) Section 101 of the Clean Water Act requires federal agencies to “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.” (33 U.S.C. § 1251(g).)

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

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

Water Code section 13383 authorizes the State Water Board to “establish monitoring, inspection, entry, reporting, and recordkeeping requirements” and obtain “other information as may be reasonably required” for activities subject to certification under section 401 of the Clean Water Act. For activities that involve the diversion of water for beneficial use, the State Water Board delegated this authority to the Deputy Director of the Division of Water Rights (Deputy Director), as provided for in State Water Board Resolution No. 2012-0029 (State Water Board 2012). In the *Redelegation of Authorities 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 2017).

On May 20, 2014, Rugraw filed an application for water quality certification (certification) with the State Water Board under section 401 of the Clean Water Act for the Project (Rugraw 2014b). On July 2, 2014, 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. Rugraw submitted its most recent certification application on November 14, 2019. The

submission of the application predates the effective date of the new Clean Water Act Section 401 Certification Rule (40 C.F.R. part 121), which took effect on September 11, 2020. Thus, this certification is not subject to the requirements of the new regulations.

On November 5, 2020, State Water Board staff requested comments from the Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) on the certification. (See Cal. Code Regs., tit. 23, § 3855, subd. (b)(2)(B).) Comments were received on November 10, 2020, and considered in certification development.

3.2 Water Quality Control Plans and Related Authorities

The nine California Regional Water Quality Control Boards (Regional Water Boards) have primary responsibility for the formulation and adoption of water quality control plans for their respective regions, subject to State Water Board and United States Environmental Protection Agency (USEPA) approval, as appropriate. (Wat. Code, § 13240 et seq.) The State Water Board may also adopt water quality control plans, which will supersede regional water quality control plans for the same waters to the extent of any conflict. (*Id.*, § 13170.) Water quality control plans designate the beneficial uses of water to be protected, water quality objectives established for the reasonable protection of those 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.

The Central Valley Regional Water Board adopted, and the State Water Board and the USEPA approved, the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Basin Plan) (Central Valley Regional Water Board 2018). The Basin Plan identifies the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses. The Basin Plan specifies that the beneficial uses of any specifically identified water body generally apply to its tributary streams. Therefore, the beneficial uses identified for Battle Creek apply to South Fork Battle Creek. The Basin Plan identifies the beneficial uses for Battle Creek as: irrigation; stock watering; hydropower generation; water contact recreation; other non-contact recreation; warm freshwater habitat; cold freshwater habitat; cold water migration; warm and cold freshwater spawning; and wildlife habitat. The State Water Board's certification for the Project must ensure compliance with the water quality standards in the Basin Plan.

In March 2019, the State Water Board submitted to FERC the plans and policies included in the state's comprehensive plan for orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state. This submission included the Basin Plan.

3.3 Construction General Permit

Rugraw will need to obtain coverage under the State Water Board's *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)*² (State Water Board 2009) for activities that disturb one or more acres of soil, or that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

3.4 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 (Procedures)*³ (State Water Board 2019)⁴. 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. Rugraw must comply with the Procedures when conducting Project-related dredge or fill activities that may impact waters of the state, including wetlands.

3.5 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)*⁵ (State Water

² Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html Last accessed November 4, 2020.

³ Resolution No. 2019-0015 and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html. Last accessed November 4, 2020.

⁴ The Procedures became effective on May 28, 2020.

⁵ Water Quality Order No. 2013 0002 DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Last accessed November 4, 2020.

Board 2013) applies to projects that require aquatic weed management activities. The Aquatic Weed Control General Permit sets forth detailed management practices to protect water quality from pesticide and herbicide use associated with aquatic weed control.

3.6 California Environmental Quality Act

The State Water Board is the lead agency for the purposes of the California Environmental Quality Act (CEQA). (Pub. Resources Code, § 21000 et seq; Cal. Code Regs., tit. 14, § 15000 et seq.)

On November 5, 2014, the State Water Board co-hosted two public joint scoping meetings with FERC to facilitate public, tribal, and agency input for the CEQA and National Environmental Policy Act processes. These public scoping meetings were held in Sacramento and Red Bluff.

On February 10, 2015, the State Water Board issued a Notice of Preparation (NOP) for the Project (State Water Board 2015). The NOP comment period began on February 10, 2015 and ended on March 12, 2015. During the NOP comment period, three comment letters were received.

On September 24, 2020, the State Water Board released a draft environmental impact report (EIR), analyzing environmental impacts associated with Project implementation as well as alternatives to the Project (State Water Board 2020a). Project alternatives evaluated in the draft EIR include: (1) minimum instream flows; (2) ramping rates; (3) temperature shutdown thresholds; and (4) no project. The draft EIR was available for public review and comment from September 24, 2020 to November 9, 2020. During the comment period, the State Water Board received seven comment letters.

The State Water Board considered comments received on the draft EIR in development of the final EIR. On November 13, 2020, the State Water Board released a final EIR for the Project. Pursuant to sections 15088 and 15132 of the CEQA Guidelines, the final EIR includes a summary of comments received on the draft EIR and the State Water Board's responses to comments.

The EIR includes mitigation measures to avoid or substantially reduce significant environmental impacts of the Project. Mitigation measures and associated mitigation, monitoring, and reporting requirements were incorporated into conditions of this certification in accordance with California Code of Regulations title 14, section 15091, subdivision (d) and title 23, section 3859, subdivision (a).

The State Water Board, through the Executive Director, certifies that the final EIR is adequate to support approval of the Project, with incorporation of the Mitigation, Monitoring, and Reporting Program (Attachment A), and CEQA Findings and Statement of Overriding Considerations (Attachment B). In accordance with CEQA Guidelines section 15090, the State Water Board, through the Executive Director, further certifies that: the final EIR has been completed in compliance with CEQA; the final EIR was presented to, reviewed by, and considered by the State Water Board prior to approving

the Project; and the final EIR represents the State Water Board's independent judgment and analysis. The State Water Board will file a Notice of Determination for the Project with the Office of Research and Planning within five working days of issuing the certification.

4.0 Rationale for Water Quality Certification Conditions

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 the Basin Plan⁶ and policies for water quality control, and other applicable water quality requirements. Section 401 of the federal Clean Water Act (33 U.S.C. § 1341) provides that the conditions contained in this certification 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 the following information:

- Rugraw's applications for certification (Rugraw 2014b, 2015a, 2016, 2017, 2018a, 2019);
- Rugraw's FLA and associated updates and amendments thereto (Rugraw 2015b, 2018b, and 2020);
- FERC's *Final Environmental Statement for Hydropower License* (FERC 2018);
- Recommended license terms and conditions submitted by state and federal agencies pursuant to Federal Power Act sections 10(a) and 10(j):
 - California Department of Fish and Wildlife's (CDFW) June 15, 2016, *Preliminary Comments and Recommendations* (CDFW 2016);
 - NMFS' June 21, 2016, *United States Department of Commerce's, National Oceanic and Atmospheric Administration's Fisheries Service, West Coast Region, Federal Power Act Comments, Preliminary §18 Prescriptions, §10(j) Conditions, and §10(a) Recommendations for the Lassen Lodge Hydroelectric Project* (NMFS 2016);
 - United States Fish and Wildlife Service's (USFWS) June 24, 2016, *Review of Notice of Application Ready for Environmental Analysis and Soliciting Comments, Recommendations, Terms and Conditions and Prescriptions* (USFWS 2016);
- State Water Board's EIR, prepared pursuant to Public Resources Code section 21100 and California Code of Regulations, title 14, sections 15084 and 15089;
- Comments associated with the aforementioned documents;
- Existing and potential beneficial uses, associated water quality objectives, and implementation measures and programs described in the Basin Plan;
- Project-related controllable water quality factors; and

⁶ Designated beneficial uses and associated water quality objectives for surface waters in the Project area are described in Section 3.2 of this certification, and in Section 2 of the Basin Plan.

- Other information in the record.

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

4.1 Rationale for Condition 1: Construction

Construction of Project facilities such as the diversion dam, powerhouse, and control/fish screen structure could negatively impact water quality and aquatic resources in the Project area and downstream. Condition 1 requires Rugraw to monitor water quality and biological resources (foothill yellow-legged frogs (FYLF), Cascades frogs, California red-legged frogs (CRLF), western pond turtle (*Actinemys marmorata*), and bald eagles), and implement measures to protect water quality and beneficial uses during Project construction activities and based on monitoring results. Specifically, Condition 1 requires water quality monitoring and adaptive management to ensure inflow passes the Project construction area and meets water quality objectives; monitoring and protection measures for FYLF, CRLF, Cascades frogs, western pond turtles; monitoring and management for bald eagles; and incidental monitoring for invasive bullfrogs and signs of chytridiomycosis.⁷

4.2 Rationale for Condition 2: Minimum Instream Flow Requirements

The Project will operate as a run-of-river hydropower facility, meaning the Project will generate power from inflow, as opposed to water storage, and all water diverted for power generation will be returned to South Fork Battle Creek. Project operations will create a bypass reach in South Fork Battle Creek by diverting water at the diversion dam, routing the water through 12,795 feet of penstock and pipeline which terminates in a powerhouse that generates hydroelectric power, and discharges into South Fork Battle Creek approximately 2.4 river miles downstream of the diversion. During Project operations, reduced instream flow in the bypass reach of South Fork Battle Creek could impact environmental resources.

Instream flows provide habitat for fish and wildlife, contribute to the scenic and aesthetic qualities of natural settings in the Project area, and support beneficial uses and water quality for surface waters. Condition 2 requires a minimum instream flow (MIF) of 13 cfs in the bypass reach during Project operations, as measured below the diversion dam and above Spring No. 4 (a point of additional inflow to South Fork Battle Creek). The MIF will provide habitat for resident rainbow trout and pool connectivity. Condition 2 also requires the Project to cease operations if flow in South Fork Battle Creek is insufficient to support both operation of the Project and 13 cfs in the bypass reach.

⁷ Chytridiomycosis is an infectious disease that affects amphibians. It is caused by parasitic chytrid fungi and often spread via bullfrogs and human activity (e.g., improper cleaning of field equipment) (Whittaker and Vredenburg 2011).

4.3 Rationale for Condition 3: Operating Rules

Project operations can cause temperature changes and rapid flow changes in the bypass reach that are outside the natural range of variability and may adversely impact aquatic species. Condition 3 requires ramping rates in the bypass reach to reduce the Project's impacts to aquatic resources such as rainbow trout (*Oncorhynchus mykiss*) and FYLF, which are sensitive to sudden water elevation changes. Condition 3 also includes a temperature criterion, which if met, requires Rugraw to cease Project operations.

Rainbow Trout Ramping Rates. To protect rainbow trout in South Fork Battle Creek, Condition 3(A) requires a yearly ramp-up rate of one inch per hour, which is likely to prevent stranding of rainbow trout (Hunter 1992). Additionally, Condition 3(A) requires a ramp-down rate of one inch per hour from August 1 through April 14 for the protection of rainbow trout. These ramping rates are consistent with recommendations made by USFWS, NMFS, and FERC staff.

FYLF Ramping Rates. FYLF spawning can occur when water temperatures reach or exceed 12 degrees Celsius (°C) (Kupferberg et al. 2011). At 12°C, egg masses can take up to 20 days to hatch (Kupferberg et al. 2011). Data from other Northern California streams show that a large portion of egg masses can be laid in the water column as shallow as four inches below the water's surface (State Water Board 2020b). Considering these factors, a ramp-down rate of four inches over 20 days is needed to prevent dewatering of FYLF egg masses and tadpoles during the breeding season of April 15 through July 31.

The required ramp-down rate of four inches over 20 days is more conservative than the USFWS and FERC staff recommendations of one foot over three weeks (or four inches over seven days). The USFWS and FERC staff recommended ramp-down rate is based on an assessment by Yarnell et al. (2016) and is commonly recommended for FYLF management in Northern California hydropower projects. However, the State Water Board's environmental analysis evaluated Project specific aspects of South Fork Battle Creek and determined that a more conservative ramp-down rate is appropriate based on the potential water depth of egg masses and anticipated egg incubation periods at 12°C.

Condition 3(A) requires a conservative ramp-down rate based on available data for South Fork Battle Creek. Condition 8(C) allows Rugraw to propose a new ramp-down rate for protection of FYLF egg masses and tadpoles as part of the Amphibian Monitoring and Adaptive Management Plan (Amphibian Plan; Condition 8(C)). If alternative ramping rates are determined appropriate per Deputy Director approval of the Amphibian Plan before the Project begins operation, the ramping rate required in Condition 3(A) may not be implemented.

Temperature Criterion. Project operations can increase temperature in the bypass reach beyond a level that is protective of rainbow trout. Condition 3(B) requires Rugraw to stop operating if a specific temperature criterion (20°C) is met. This requirement is

consistent with recommendations from CDFW, FERC, and NMFS (CDFW 2016; FERC 2018; NMFS 2018).

4.4 Rationale for Condition 4: Gaging

Compliance with instream flow and ramping rate requirements of this certification (Condition 2 and Condition 3) require accurate and reliable measurements. Condition 4 requires Rugraw to develop and implement a Streamflow Gaging and Reporting Plan that details the location, operation and maintenance, and data collection and reporting protocols for each gage used to document certification compliance. The Streamflow Gaging and Reporting Plan also requires a schedule for the modification or construction of new gages that are needed to adequately record streamflow and comply with certification conditions.

4.5 Rationale for Condition 5: Water Quality

Project operations, including the temporary impoundment of water and the creation of a 2.4-mile-long bypass reach, have the potential to impact water quality in South Fork Battle Creek. During Project operations, the bypass reach will experience decreased flow that could increase water temperatures and impact water quality. Condition 5 requires Rugraw to develop a Water Quality Monitoring and Adaptive Management Plan to evaluate the impacts of Project operations on water quality and implement actions to address impacts if needed.

4.6 Rationale for Condition 6: Debris and Sediment Management

Large woody material and sediment are necessary components of a healthy aquatic system as they provide habitat for aquatic resources. The Project's diversion dam has the potential to disrupt the natural transport of large woody material and sediment in South Fork Battle Creek. Analysis of the bed load capacity at the diversion dam concluded the impoundment may fill with sediment annually, which would require regular sluicing or sediment passage (Northwest Hydraulic Consultants 2015). Additionally, fine sediments retained in the diversion dam's impoundment that are released during sluicing may increase turbidity in South Fork Battle Creek.

Condition 6 requires Rugraw to develop and implement a Debris and Sediment Management Plan (Debris and Sediment Plan) to ensure the passage of large woody material and sediment through sluicing activities at the diversion dam in a manner that minimizes the impacts of Project operation. When flows exceed 400 cfs, Rugraw will be required to stop operating and sluice to allow passage of large woody material and sediment. Additionally, the Debris and Sediment Plan requires Rugraw to consult with the State Water Board, CDFW, USFWS, and NMFS staff to evaluate and potentially develop a trigger for years where flow does not exceed 400 cfs. If a trigger is not developed for years when flow does not exceed 400 cfs, Rugraw will be required to consult with agencies to determine if sediment management actions are needed based on sediment deposition in the impoundment. Additionally, Condition 6 requires consideration of water quality impacts associated with sluicing activities.

4.7 Rationale for Condition 7: Erosion Control and Sedimentation

Protection of the beneficial uses identified in the Basin Plan requires effluent limitations for point and nonpoint source discharges to Battle Creek and its respective tributaries (e.g., South Fork Battle Creek). The Project includes construction of new facilities, roads, impervious surfaces, and other structures that could cause erosion and sedimentation and result in discharges that violate water quality standards. Condition 7 requires Rugraw to create an inventory of Project features that may cause erosion or sedimentation and periodically monitor those features for impacts to water quality. If Project features are causing erosion or sedimentation, Condition 7 requires Rugraw to submit a report to the Deputy Director detailing the water quality impacts and proposed measure(s) Rugraw will implement to reduce or eliminate these impacts.

4.8 Rationale for Condition 8: Biological Resources

Project operations may impact fish, benthic macroinvertebrate, riparian vegetation, and amphibian populations and/or habitat in the bypass reach. Condition 8 requires Rugraw to develop the following monitoring plans to evaluate the impacts of Project operations to these biological resources: (1) Resident Fish and Benthic Macroinvertebrate (BMI) Monitoring and Adaptive Management Plan; (2) Riparian Vegetation Monitoring and Adaptive Management Plan; and (3) Amphibian Plan. If monitoring determines Project operations have an adverse impact on biological resources, Condition 8 requires Rugraw to develop and implement adaptive management actions to reduce Project impacts. Additionally, Condition 8 requires incidental reporting of observed bullfrogs and chytridiomycosis. If bullfrogs or chytridiomycosis are observed, Rugraw, in consultation with resource agencies, must determine whether Project operations facilitate the establishment or spread of bullfrogs or chytridiomycosis and, if so, revise the appropriate plan(s) to include appropriate management measures.

As described in Condition 3, the certification requires a conservative ramp-down rate to protect FYLF egg masses and tadpoles as there is limited data on FYLFs in South Fork Battle Creek. Implementation of the Amphibian Plan will provide information on FYLF presence and habitat in South Fork Battle Creek. The Amphibian Plan will be developed in consultation with resource agencies and allows for implementation of an alternative ramping rate to the one established in Condition 3, if appropriate and approved by the Deputy Director.

4.9 Rationale for Condition 9: Anadromous Fish

The Project will be upstream of the Restoration Project, a multi-stakeholder effort aiming to restore historic anadromous fish habitat in Battle Creek. If the Restoration Project is successful, state and federally listed anadromous fish (Chinook salmon [*O. tshawytscha*] and steelhead [*O. mykiss*]) may gain access to the Project area⁸, which includes 1.7 miles of designated critical habitat for steelhead and 0.8-mile for

⁸ Anadromous fish would be able to access 1.7 miles (approximately 70 percent) of the bypass reach, from the powerhouse to Angel Falls (limit of anadromy).

Chinook salmon. If these species are present in the Project area, Rugraw may need to revise Project operations to protect beneficial uses (e.g., cold freshwater habitat and cold water migration). Condition 9(A) contains elements of Rugraw's Anadromous Fish Monitoring Program to ensure early detection of anadromous fish in the Project area, and to potentially implement interim flows if anadromous fish are found in the Project area (Rugraw 2018b). Additionally, if anadromous fish are detected in the bypass reach, Condition 9(B) requires Rugraw to conduct an instream flow and fish passage study to determine whether Rugraw must revise Project operations to protect anadromous fish and their habitat.

4.10 Rationale for Condition 10: Construction and Maintenance Activities

Protection of the beneficial uses identified in the Basin Plan requires effluent limitations for point and nonpoint source discharges to Battle Creek, and its respective tributaries (e.g., South Fork Battle Creek). The Project includes construction of new facilities and maintenance of those facilities over the Project term. Erosion, sedimentation, and other impacts from Project-related construction, operation, and maintenance activities have the potential to result in discharges that violate water quality standards. Condition 10 requires Rugraw to comply with terms of 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 during construction, operation, 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.

4.11 Rationale for Condition 11: Hazardous Materials

Construction of new Project facilities, modification of existing Project facilities, and routine and non-routine maintenance could affect water quality if pollutants (e.g., fuels, lubricants, herbicides, pesticides, and other hazardous materials) are discharged into Project waterways. Rugraw may need to perform work that involves the use of hazardous materials. Condition 11 requires implementation of the Hazardous Materials Management Plan to help ensure that land and aquatic resources will be protected. Condition 11 requires the implementation of standard practices for storing, using, transporting, and disposing of hazardous materials in the Project area to minimize potential negative impacts to water quality and beneficial uses.

4.12 Rationale for Condition 12: Road Management

Construction, use, and maintenance of Project roads have the potential to impact water quality. Factors such as local topography, roadbed material, and drainage characteristics can influence the potential for water quality impacts. To avoid and minimize these potential water quality impacts, Condition 12 requires Rugraw to develop and implement a Road Management Plan. Condition 12 will help ensure Project roads do not cause discharges in violation of water quality standards.

4.13 Rationale for Condition 13: Annual Consultation

Monitoring and management plans required by this certification will assist the State Water Board in evaluating impacts associated with the implementation of new FERC license conditions on hydrological, biological, and geomorphological resources in the Project area throughout the term of the license. Annual consultation meetings allow for the discussion of monitoring results and resource trends, and development of adaptive management actions, if necessary, to protect water quality and beneficial uses. Condition 13 requires annual consultation meetings with State Water Board, CDFW, USFWS, and NMFS staff as well as other interested parties to review monitoring reports and discuss ongoing and forecasted operations, including revisions or modifications to monitoring and/or operations that may be needed to protect water quality and beneficial uses.

4.14 Rationale for Conditions 14 through 38

In order to ensure that the Project operates to meet water quality standards as anticipated, to ensure compliance with other relevant state and federal laws, and to ensure that the Project will continue to meet state water quality standards and other appropriate requirements of state law over its lifetime, this certification imposes conditions regarding monitoring, enforcement, and potential future revisions. 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 by this certification, the Project will be protective of the 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 CONSTRUCTION AND OPERATION OF THE LASSEN LODGE HYDROELECTRIC PROJECT (Project) will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of state law, under the following terms and conditions.

CONDITION 1. Construction

A minimum of six months prior to commencement of Project construction activities, the Licensee shall submit the following construction plans to the State Water Resources Control Board's (State Water Board) Deputy Director for the Division of Water Rights (Deputy Director) for review and consideration for approval:

- 1) Dewatering and Diversion Plan (Dewatering Plan);
- 2) Construction Biological Resources Management Plan (Construction Biological Resources Plan); and
- 3) Bald Eagle Management Plan.

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

1(A) Dewatering and Diversion Associated with Construction Activities

The objective of the Dewatering Plan shall be to identify and implement actions to protect water quality associated with Project construction activities that require a water diversion or in-water work below the maximum water surface elevation. The Licensee shall develop the Dewatering Plan in consultation with State Water Board, California Division of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) staff.

At a minimum, the Dewatering Plan shall include:

- 1) An overview of all in-water work that will require dewatering or diversion of water;
- 2) Schedule for conducting Project construction activities associated with in-water work, which shall be limited to the July 1 through October 15 time period;
- 3) Description of coffer dams or other barriers that will be used to isolate the construction area from instream flows;
- 4) List of construction materials that will be used in or adjacent to the watercourse. Any imported riprap, rocks, and gravels shall be pre-washed;

- 5) Description of measures, if needed, that will be implemented to avoid potential water quality impacts, fish stranding, and fish entrainment;
- 6) Protocols for upstream and downstream fish passage during in-water work;
- 7) Provisions to maintain downstream flow equal to upstream flow. If temporary flow modifications are needed, the Licensee shall provide a written description of the modification, reason(s) for its necessity, measures that will be implemented to protect water quality and beneficial uses, and the proposed timeline for flow modification and return to the required flows;
- 8) Proposed water quality monitoring (discussed further below) and reporting related to in-water Project construction activities. The Applicant shall describe the equipment, frequency, methods, and Quality Assurance Project Plan for the monitoring;
- 9) Description of how, upon completion of construction activities, flow will resume with the least disturbance to the substrate, water quality, and beneficial uses; and
- 10) Documentation of consultation with CDFW, USFWS, NMFS, Central Valley Regional Water Board, and State Water Board staff, including consulting agencies' comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

Water Quality Monitoring. For continuous water quality monitoring associated with in-water work, the Licensee shall at a minimum, monitor:

- 1) Temperature;
- 2) Turbidity;
- 3) Dissolved oxygen (measured in milligrams per liter and percent saturation);
- 4) pH; and
- 5) Conductivity.

Additionally, the Licensee shall collect and analyze grab samples for:

- 1) Suspended sediment concentrations; and
- 2) Settable solids.

Unless otherwise approved by the Deputy Director, continuous water quality monitoring shall occur every 30 minutes and grab samples shall occur every four hours during in-water work. Background monitoring shall be conducted at a location upstream of the work area, to establish natural water quality conditions. Monitoring of the work area shall be at a location no more than 300 feet downstream of the work area. Additionally, the Licensee shall continuously monitor for visible construction-related pollutants (e.g., oils, greases, fuels) throughout the entire construction period.

The Deputy Director and the Executive Officer of the Central Valley Regional Water Board (Executive Officer) shall be notified promptly, and in no case more than 24 hours, following a violation of a water quality objective. The notice shall include the cause of the violation, measures taken to correct the violation, and measures the Licensee will

implement to prevent a future violation. Project activities associated with the violation shall immediately cease and may not resume without approval from the Deputy Director.

Unless approved by the Deputy Director in writing, Project activities shall not cause increased turbidity greater than allowable levels identified in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Basin Plan) (Central Valley Regional Water Board 2018) and amendments thereto. If instantaneous turbidity exceedances are expected to result from sediment disturbance related to Project activities despite implementation of all reasonable best management practices, the Licensee shall consult with State Water Board and Central Valley Regional Water Board staff to determine appropriate averaging periods and/or modifications to the distance of the downstream monitoring locations from the work area. Activities associated with an exceedance of instantaneous turbidity limits may not occur without prior written approval from the Deputy Director.

1(B) Aquatic Biological Resources Protection Related to Construction Activities

The goal of the Construction Biological Resources Plan shall be to reduce Project construction impacts to amphibians by monitoring and implementing protection measures. The Construction Biological Resources Plan shall be developed in consultation with State Water Board, CDFW, and USFWS staff.

At a minimum, the Construction Biological Resources Plan shall include:

- 1) Protocols for preconstruction surveys, including:
 - a) Minimum qualifications of the person(s) conducting the surveys;
 - b) Timing of preconstruction surveys in relation to beginning Project construction activities;
 - c) Species and their associated habitats that will be surveyed, which shall include at a minimum all life stages (i.e., egg masses, tadpoles, juveniles, and adults) of foothill yellow-legged frogs (FYLF; *Rana boylei*), Cascades frogs (*R. cascadae*), California red-legged frogs (CRLF; *R. draytonii*), and western pond turtle (*Actinemys marmorata*); and
 - d) The survey areas, which shall include at a minimum all work areas (including staging areas). Additionally, surveys shall include the riparian and creek habitat at the diversion dam location and for 500 feet downstream;
- 2) Protocols for monitoring during construction activities to ensure special status species⁹ are not present;

⁹ For this certification, special status species are defined as: those species listed, proposed, or under review as threatened or endangered under the federal Endangered Species Act or California Endangered Species Act; those designated as Species of Special Concern by CDFW; those designated as Fully Protected under the California Fish and Game Code (sections 3511, 4700, 5050, and 5515); and those protected under the federal Bald and Golden Eagle Protection Act.

- 3) Protocols for handling and relocating special status species, including where the specimen(s) will be relocated such that the species will not re-enter the work area and will not be impacted by construction;
- 4) Avoidance measures to protect special-status species' habitats and specimens that cannot be relocated from construction impacts;
- 5) Protocols to prevent the introduction and spread of aquatic invasive species (e.g., bullfrogs) and diseases (e.g., chytridiomycosis¹⁰). Description of how observations of aquatic invasive species and diseases will be documented and reported. If aquatic invasive species or diseases are observed, the Licensee shall notify the Deputy Director within 48 hours and consult with State Water Board, CDFW, and USFWS staff to manage further spread and introduction; and
- 6) Environmental training that will be provided to construction staff, including the frequency of such training

The Licensee shall conduct preconstruction surveys prior to any in-water work or work in or near riparian areas. To the extent feasible, the Licensee shall not disturb rocks in the stream between March 1 and August 31. If at any time an egg mass is discovered, the Licensee shall immediately cease all construction work in the area and surrounding area that may have the potential to result in take (e.g., harassment, injury, or death). The Licensee shall not resume work until the eggs have hatched, unless otherwise directed by CDFW and USFWS staff as outlined below.

The Licensee shall notify State Water Board, CDFW, and USFWS staff within 48 hours of when any special-status species are encountered and/or relocated during a preconstruction survey. Species may only be relocated in accordance with the protocols outlined in the Deputy Director-approved Construction Biological Resources Plan. The Licensee shall stop work and notify State Water Board, CDFW, and USFWS staff within 24 hours if a special-status species is found during construction. The Licensee may resume work after the specimen has been relocated, or left of its own volition, and another preconstruction survey has been completed. If a specimen cannot be relocated, or does not leave, but can be adequately protected from take by avoidance measures identified in the Construction Biological Resources Plan, the Licensee may resume work upon approval from the USFWS and CDFW.

1(C) Bald Eagle Management

The goal of the Bald Eagle Management Plan shall be to reduce Project construction impacts to nesting bald eagles by monitoring and implementing protection measures. The Bald Eagle Management Plan shall be developed in consultation with CDFW, USFWS, and State Water Board staff.

At a minimum, the Bald Eagle Management Plan shall include:

- 1) Protocols for preconstruction nesting surveys, including:

¹⁰ Chytridiomycosis is an infectious disease in amphibians caused by chytrid fungi.

- a) Minimum qualifications of the person(s) conducting the surveys;
 - b) Timing of preconstruction surveys in relation to beginning Project construction activities;
 - c) The survey areas, which shall include at a minimum all work areas (including staging areas);
- 2) Protocols for monitoring during construction activities to ensure bald eagle nests are not present;
 - 3) Avoidance measures to protect nesting bald eagles which shall include appropriate buffers;
 - 4) Environmental training that will be provided to construction staff, including the frequency of such training; and
 - 5) Reporting protocols which shall include reporting all observations to CDFW using the California Bald Eagle Nesting Territory Survey Form.

1(D) Other Construction Related Provisions

The Licensee shall comply with the State Water Board's *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)*¹¹ (Condition 10), including provisions for linear underground/overhead projects for portions of the Project related to the construction of the transmission line and penstock.

Additionally, the Licensee shall develop and implement the Hazardous Materials Management Plan (Condition 11) for construction and throughout the FERC license term and any amendments thereto.

CONDITION 2. Minimum Instream Flow

2(A) Minimum Instream Flow

During Project operations, the Licensee shall maintain a minimum instream flow (MIF) of 13 cubic feet per second (cfs) in the bypass reach.¹² If inflow to the diversion dam's impoundment is less than 18 cfs (i.e., 13 cfs MIF plus the five cfs required to operate), and the Licensee cannot maintain 13 cfs in the bypass reach, the Licensee shall stop diverting water, lower the pneumatic gates, and allow flow to pass unimpeded through the diversion dam into the bypass reach and shall not recommence operations until inflow exceeds 18 cfs.

¹¹ Water Quality Order 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, and any amendments thereto. Information on the Construction General Permit is available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Last accessed on November 9, 2020.

¹² The bypass reach is 2.4 river miles of South Fork Battle Creek starting where water is diverted at the Project's diversion dam and ending downstream where water is discharged from the powerhouse into South Fork Battle Creek.

Unless otherwise approved by the Deputy Director, the Licensee shall measure MIF compliance at a minimum of three gage locations (Condition 4):

- 1) Above the headwaters of the impoundment;
- 2) Downstream of the diversion dam in the bypass reach above Spring No. 4; and
- 3) Below the powerhouse.

MIF shall be measured in two ways: (1) as an instantaneous flow; and (2) as the 24-hour average of the flow (mean daily flow). The instantaneous flow is the value used to construct the mean daily flow value and shall be measured in 15-minute or more frequent increments. Each instantaneous flow measurement shall be equal to or greater than 90 percent of the MIF. The mean daily flow is the average of the incremental readings of instantaneous flow from midnight (12:00 AM) of one day to midnight (12:00 AM) of the next day and shall be equal to or greater than the required MIF. The Licensee shall record instantaneous (usually every 15 minutes) flow readings in South Fork Battle Creek: (1) upstream of the diversion dam; (2) downstream of the diversion dam at the gage location above Spring No. 4; and (3) below the powerhouse discharge. Gaging locations shall be identified in Condition 4. Gaging and flow measurements shall be consistent with United States Geological Survey (USGS) standards. The Licensee shall report any deviation from the required flows to the Deputy Director within 24 hours of the deviation. The Licensee shall post all flow and other data to the California Data Exchange Center website within 24 hours of flow measurement, unless otherwise approved by the Deputy Director.

2(B) Unplanned Temporary Flow Modifications

MIF 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: (1) natural events such as landslides, storms, or wildfires; (2) vandalism; (3) malfunction or failure of Project works; recreation accidents; or (4) other public safety incidents. 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 flow modification. Within 96 hours of the beginning of any unplanned temporary flow modification, the Licensee shall provide the Deputy Director with an update of the conditions associated with the modification and an estimated timeline for returning to the required 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

flow 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 temporary MIF modification; and (5) a plan to prevent the need for modification of MIFs resulting from a similar emergency or event in the future. The Deputy Director may require modifications to the Licensee's plan to prevent future modifications of MIFs resulting from similar emergencies or events. The Licensee shall implement the plan and any modifications required by the Deputy Director.

2(C) Evaluation of Flows

No earlier than five years following commencement of Project operations, and after considering monitoring results associated with Project operations in accordance with the conditions of this certification and the FERC license, the Deputy Director may require the Licensee to initiate consultation regarding flows with State Water Board, CDFW, USFWS, and NMFS staff. Such consultation would be performed to determine whether the required flows are reasonably protecting the water quality and beneficial uses of South Fork Battle Creek, and determine what, if any, flow adjustments are needed. The consultation shall include discussion of: (1) all monitoring conducted through conditions of this certification that pertain to environmental resources and Project flows; (2) any adverse effects to environmental resources associated with Project flows; and (3) proposed updates to Project flows and/or identification of management actions to address adverse effects to environmental resources associated with Project flows.

Within six months of initiating consultation, the Licensee shall submit to the Deputy Director for review and consideration of approval: (1) documentation of consultation and the consulting agencies' comments and recommendations; (2) any changes to the flows and/or other management actions proposed by the Licensee; (3) a description of how any changes proposed by the Licensee incorporate or address the agencies' comments and recommendations; and (4) schedule for implementation of any changes to flows and/or management actions proposed by the Licensee. The Deputy Director may approve the Licensee's proposal or require other changes to the flows or management actions to the extent necessary to ensure reasonable protection of the beneficial uses. If changes to the flows or management actions are required, within 30 days of the Deputy Director's approval of the Licensee's proposal or changes to the proposal, the Licensee shall file a request with FERC to amend the flow or other requirements in the license, if necessary. The Licensee shall implement the new flows as soon as reasonably practicable after receiving the Deputy Director's decision and any other required approvals.

CONDITION 3. Operating Rules

3(A) Ramping Rates

The Licensee shall implement the ramping rates specified in this condition upon commencement of Project operations unless otherwise approved by the Deputy Director. Ramping rates in this condition do not apply to Project operations: (1) during an emergency or equipment malfunction as defined in Condition 2(B); or (2) if the

natural change of inflow exceeds the control of the Project. During Project operations, flows related to ramping rates shall be continuously measured at the same compliance gages (Condition 4) required for MIFs (Condition 2). The Licensee shall implement the following ramping rate provisions for the bypass reach in South Fork Battle Creek:

- 1) The Licensee shall operate the Project to avoid an increase in instream flows of more than one inch per hour year-round;
- 2) From August 1 through April 14, the Licensee shall operate the Project to avoid a decrease in instream flows of more than one inch per hour; and
- 3) From April 15 through July 31, the Licensee shall operate the Project to avoid a decrease in instream flow of more than four inches over 20 days, unless the Deputy Director-approved Amphibian Monitoring and Adaptive Management Plan (Condition 8(C)) approves an alternative.

The Licensee shall submit an annual compliance report to the Division of Water Rights Water Quality Certification Program Manager by August 1 of each year to document compliance with the ramping rates. Ramp-up and ramp-down events shall be listed with the time and change in depth noted at the compliance point(s) identified in the Streamflow Gaging and Reporting Plan (Condition 4).

3(B) Temperature Shutdown

The Licensee shall stop operations if temperature in the bypass reach is greater than or equal to 20°C and the temperature above the point of diversion is less than 20°C. The Licensee may recommence operations when the temperature in the South Fork Battle Creek bypass reach is less than 20°C, or if the temperature above the point of diversion is greater than 20°C. For compliance with the temperature requirement, the Licensee may use temperature monitoring locations consistent with those required for water quality monitoring (Condition 5) or alternate locations approved by the Deputy Director.

CONDITION 4. Streamflow Gaging

A minimum of nine months prior to commencement of Project operations, the Licensee shall submit a Streamflow Gaging and Reporting Plan (Gaging Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objectives of the Gaging Plan shall be to identify and construct a gaging system to ensure compliance with the prescribed MIFs and ramping rates required by this certification. The Licensee shall develop the Gaging Plan in consultation with State Water Board, CDFW, USFWS, and NMFS staff.

At a minimum, the Gaging Plan shall include:

- 1) Locations of existing and proposed gages needed to ensure compliance with streamflow requirements. At a minimum, and unless otherwise approved by the Deputy Director, gages shall be located in South Fork Battle Creek:
 - (1) above the headwaters of the impoundment created by the diversion dam;
 - (2) downstream of the diversion dam in the bypass reach above Spring No. 4;
 - and (3) below the powerhouse discharge;

- 2) Gage installation and maintenance specifications, including gage types and calibration techniques, which shall be in compliance with USGS standards;
- 3) Measures to avoid or minimize water quality impacts during gage installation, operation, and maintenance;
- 4) Protocols for real-time flow and water surface elevation monitoring for ramping rate compliance;
- 5) Schedule for modification or installation of gages; and
- 6) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff, consulting agencies' comments and recommendations made in connection with the Gaging Plan, and a description of how the Gaging Plan incorporates or addresses the comments and recommendations.

The Licensee shall install and initiate operation of all gages required for compliance with the conditions of this certification at least two months prior to commencing Project operations. The Licensee shall obtain all necessary permits and regulatory approvals prior to gage installation.

Streamflow data collected by the Licensee shall be reviewed by hydrographers for quality assurance and quality control. The reviewed data shall be catalogued and made available to USGS in annual hydrology summary reports. The Licensee shall provide streamflow data to State Water Board, CDFW, USFWS, and NMFS staff upon request. The Licensee shall post all flow and other data to the California Data Exchange Center website within 24 hours of flow measurement, unless otherwise approved by the Deputy Director.

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

CONDITION 5. Water Quality

A minimum of nine months prior to commencement of Project operations, the Licensee shall submit a Water Quality Monitoring and Adaptive Management Plan (Water Quality Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objective of the Water Quality Plan shall be to monitor for impacts of Project operation to the water quality and beneficial uses in the bypass reach or otherwise associated with the Project. The Licensee shall develop the Water Quality Plan in consultation with State Water Board, CDFW, USFWS, and NMFS staff.

At a minimum, the Water Quality Plan shall include:

- 1) Continuous in situ monitoring for temperature, dissolved oxygen (measured in milligrams per liter and percent saturation), turbidity, conductivity, and pH;
- 2) Monitoring locations, which at a minimum shall include:
 - a) Above the Project's impoundment;

- b) In the bypass reach above Spring No. 4; and
- c) Below the powerhouse discharge;
- 3) Monitoring frequency and duration, which at a minimum shall include 30-minute intervals for continuous monitoring. At a minimum, water quality monitoring shall be conducted during the first five years of Project operation (i.e., Years 0-5) and every five years thereafter (i.e., Year 10, Year 15, etc.). The Licensee shall commence water quality monitoring at least two months prior to commencing Project operations;
- 4) Monitoring protocols consistent with the Surface Water Ambient Monitoring Program (SWAMP) or equivalent methods approved by the Deputy Director;
- 5) Quality assurance/quality control protocols;
- 6) Schedule for installing and maintaining monitoring equipment, as necessary;
- 7) Reporting and adaptive management that summarizes monitoring results, highlights any observed Project-related impacts to water quality (including unforeseen violations of Basin Plan water quality objectives), and reports on any adaptive management actions taken or proposed to reduce observed Project-related impacts to water quality. Reports shall be submitted by August 1 in the subsequent year in which monitoring occurred. As part of reporting, the Licensee may propose alterations to the Water Quality Plan (e.g., change in frequency of monitoring). The Licensee shall provide justification for any proposed modifications to the Water Quality Plan; and
- 8) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff including consulting agencies' comments and recommendations made in connection with the Water Quality Plan, and a description of how the Water Quality Plan incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved Water Quality Plan and any approved amendments thereto. The Licensee shall implement the Water Quality Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. The Licensee shall not commence Project operation without receipt of Deputy Director approval of the Water Quality Plan. Any revisions to the Water Quality Plan must be approved by the Deputy Director.

CONDITION 6. Debris and Sediment Management

A minimum of six months prior to commencement of Project operations, the Licensee shall submit a Debris and Sediment Management Plan (Debris and Sediment Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objective of the Debris and Sediment Plan shall be to identify effective methods of moving woody material and sediment downstream of the diversion dam and reduce or prevent water quality (e.g., turbidity) impacts associated with sluicing activities. The Licensee shall develop the Debris and Sediment Plan in consultation with State Water Board, Central Valley Regional Water Board, CDFW, USFWS, and NMFS staff.

At a minimum, the Debris and Sediment Plan shall include:

- 1) Procedures for sluicing sediment from the diversion dam's impoundment;
- 2) Frequency of and triggers for sluicing sediment;
 - a) At a minimum, the Licensee shall cease Project operations and sluice sediment during flow events that exceed 400 cfs; and
 - b) The Licensee shall consult with the above agencies on development of a trigger for sluicing sediment in years where flows do not exceed 400 cfs. If a flow trigger is not developed, the Licensee shall consult with State Water Board, Central Valley Regional Water Board, CDFW, USFWS, and NMFS staff in years where flows do not exceed 400 cfs to determine if additional actions are needed for sediment and large woody material transport downstream of the diversion dam;
- 3) Definition of large woody material and protocols for ensuring passage of large woody material at the diversion dam;
- 4) Establishment of a pre-operational baseline of sediment and large woody material in the impoundment area, if any;
- 5) Schedule and protocol for annual monitoring of sediment and large woody material accumulation in the impoundment;
- 6) Protocols for monitoring and reporting turbidity in the impoundment and bypass reach during sluicing events (including unforeseen violations of Basin Plan water quality objectives); and
- 7) Documentation of consultation with State Water Board, Central Valley Regional Water Board, CDFW, USFWS, and NMFS staff, consulting agencies' comments and recommendations made in connection with the Debris and Sediment Plan, and a description of how the Debris and Sediment Plan incorporates or addresses the comments and recommendations.

By August 1 of each year, the Licensee shall submit a report to State Water Board, Central Valley Regional Water Board, CDFW, USFWS, and NMFS staff that documents all sluicing events implemented in the prior calendar year. At a minimum, the report shall include the dates and flows associated with sluicing events, the results of sediment and large woody material monitoring, and turbidity measurements during sluicing events.

The Licensee shall file with FERC the Deputy Director-approved Debris and Sediment Plan and any approved amendments thereto. The Licensee shall implement the Debris and Sediment Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. The Licensee shall not commence Project operation without receipt of Deputy Director approval of the Debris and Sediment Plan. Any revisions to the Debris and Sediment Plan must be approved by the Deputy Director.

CONDITION 7. Erosion Control and Sedimentation

No later than six months prior to commencement of Project operation, the Licensee shall submit an Erosion Control and Sedimentation Plan (Erosion Plan) to the Deputy

Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objective of the Erosion Plan shall be to develop and implement erosion and sedimentation control actions for areas with potential erosion associated with Project operations. The Licensee shall develop the Erosion Plan in consultation with CDFW, USFWS, NMFS, Central Valley Regional Water Board, and State Water Board staff.

At a minimum, the Erosion Plan shall include:

- 1) Initial inventory of sites and Project features with potential to experience or cause erosion or sedimentation over the term of the FERC license and any amendments thereto. The inventory shall include an assessment of landslide hazard and slope stability;
- 2) Years in which the Licensee will monitor inventory sites for signs of erosion or sedimentation;
- 3) Criteria for prioritizing inventory sites for treatment; and
- 4) Documentation of consultation with CDFW, USFWS, NMFS, Central Valley Regional Water Board, and State Water Board staff, consulting agencies' comments and recommendations made in connection with the Erosion Plan, and a description of how the Erosion Plan incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved Erosion Plan and any approved amendments thereto. The Licensee shall implement the Erosion Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. The Licensee shall not commence Project operation without receipt of Deputy Director approval of the Erosion Plan. Any revisions to the Erosion Plan must be approved by the Deputy Director.

No later than six months following each monitoring event, the Licensee shall submit a report that details monitoring results and any required sediment control actions to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Licensee shall develop each report in consultation with State Water Board, CDFW, USFWS, NMFS, and Central Valley Regional Water Board staff.

At a minimum, each report shall include:

- 1) A description of the conditions of each inventory site, including signs of erosion or sedimentation;
- 2) A prioritized list, based on the criteria developed in the Erosion Plan, of inventory sites that require treatment;
- 3) Identification of best management practices (BMPs) and treatments that will be implemented to control erosion and sedimentation. At a minimum, the Licensee shall consider relevant measures from the most recent United States Forest Service ***National Best Management Practices for Water Quality***

Management on National Forest System Lands (United States Forest Service 2012) and other appropriate documents;

- 4) A schedule for implementing erosion and sedimentation BMPs and treatments;
- 5) Performance metrics to assess the effectiveness of erosion and sedimentation BMPs and treatments;
- 6) A schedule for monitoring and reporting effectiveness of erosion and sedimentation BMPs and treatments to ensure performance metrics are met; and
- 7) Documentation of consultation with State Water Board, CDFW, USFWS, NMFS, and Central Valley Regional Water Board staff, consulting agencies' comments and recommendations made in connection with the report, and a description of how the report incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved report and any approved amendments thereto. The Licensee shall implement measures described in the report upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

CONDITION 8. Biological Resources

A minimum of six months prior to commencement of Project operations, the Licensee shall submit the following monitoring and adaptive management plans to the Deputy Director for review and consideration for approval:

- 1) Resident Fish and Benthic Macroinvertebrate (BMI) Monitoring and Adaptive Management Plan (Fish and BMI Plan);
- 2) Riparian Vegetation Monitoring and Adaptive Management Plan (Vegetation Plan); and
- 3) Amphibian Monitoring and Adaptive Management Plan (Amphibian Plan).

The Licensee shall develop the plans in consultation with State Water Board, CDFW, USFWS, and NMFS staff. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved plans and any approved amendments thereto. The Licensee shall implement the plans upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. The Licensee shall not commence Project operation without receipt of Deputy Director approval of the Fish and BMI Plan, Vegetation Plan, and Amphibian Plan. Any revisions to the Fish and BMI Plan, Vegetation Plan, and Amphibian Plan must be approved by the Deputy Director.

8(A) Resident Fish and Benthic Macroinvertebrates

The objective of the Fish and BMI Plan shall be to monitor for impacts to resident fish and BMI due to Project operations and guide adaptive management decisions and actions. At a minimum, the Fish and BMI Plan shall include:

- 1) Proposed fish species to be monitored;

- 2) Identification of monitoring years, which shall at a minimum include the first five years (i.e., Years 0 through 5) of Project operation. The Licensee shall also identify the schedule for monitoring in those years;
- 3) Identification of monitoring locations, which shall include the following locations:
 - a) Above the Project's impoundment/diversion dam, in the bypass reach above Angel Falls, and in the bypass reach below Angel Falls to assess fish populations and BMI; and
 - b) At the Project's tailrace to assess for fish attraction;
- 4) Description of BMI sampling protocols using the SWAMP methodology unless otherwise approved by the Deputy Director;
- 5) Metrics for analyzing how Project operations impact the fish population, distribution, habitat, and the BMI community;
- 6) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee may propose any updates or adaptive management measures to the plan based on the monitoring results or new information related to fish and BMI that may be impacted by Project operations. The Licensee shall submit monitoring results to State Water Board, CDFW, USFWS, and NMFS staff; and
- 7) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff, consulting agencies' comments and recommendations made in connection with the Fish and BMI Plan, and a description of how the Fish and BMI Plan incorporates or addresses the comments and recommendations.

The Deputy Director reserves the authority to modify the Fish and BMI Plan based on monitoring results including requiring implementation of adaptive management measures.

8(B) Riparian Vegetation

The objective of the Riparian Vegetation Plan shall be to monitor for impacts to riparian vegetation due to Project operations and guide adaptive management decisions and actions. At a minimum, the Riparian Vegetation Plan shall include:

- 1) Target riparian plant species to be monitored;
- 2) Identification of monitoring years, which shall at a minimum include the first five years (Years 0-5) of Project operation. The Licensee shall also identify the schedule for monitoring in those years;
- 3) Identification of monitoring locations in South Fork Battle Creek from representative areas above and in the Project's impoundment and in the bypass reach;
- 4) Metrics for analyzing how Project operations impact riparian vegetation distribution and species composition;
- 5) Incidental reporting of any observed aquatic invasive plant species and an evaluation of whether Project operations are related to its presence and prevalence in the area;
- 6) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee may propose any updates or adaptive

management measures to the plan based on the monitoring results or new information related to riparian vegetation that may be impacted by Project operations. The Licensee shall submit monitoring results to State Water Board, CDFW, USFWS, and NMFS staff; and

- 7) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff, consulting agencies' comments and recommendations made in connection with the Riparian Vegetation Plan, and a description of how the Riparian Vegetation Plan incorporates or addresses the comments and recommendations.

The Deputy Director reserves the authority to modify the Fish and BMI Plan based on monitoring results including requiring implementation of adaptive management measures.

8(C) Amphibians

The objective of the Amphibian Plan shall be to monitor for impacts to amphibians due to Project operations and guide adaptive management decisions and actions. At a minimum, the Amphibian Plan shall include:

- 1) Protocols for monitoring all life stages (i.e., egg masses, tadpoles, juveniles, adults) of FYLF, Cascades frogs, western pond turtle, and CRLF;
- 2) Monitoring locations, which at a minimum shall include stage recording from April 15 through July 31, at a location that is either a FYLF breeding site or a narrow stream cross-section;
- 3) Identification of monitoring years, which shall at a minimum include the first five years (Years 0-5) of Project operation. The Licensee shall also identify the schedule for monitoring in those years;
- 4) Metrics for analyzing how Project operations impact amphibian populations, distribution, and habitat;
- 5) Additional measures that may be implemented to reduce impacts of Project operations on amphibians;
- 6) Incidental reporting of any observed bullfrogs or signs of chytridiomycosis;
- 7) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee may propose any updates or adaptive management measures to the plan based on the monitoring results or new information related to amphibian that may be impacted by Project operations. The Licensee shall submit monitoring results to State Water Board, CDFW, and USFWS staff; and
- 8) Documentation of consultation with State Water Board, CDFW, and USFWS staff, consulting agencies' comments and recommendations made in connection with the Amphibian Plan, and a description of how the Amphibian Plan incorporates or addresses the comments and recommendations.

Implementation of Adaptive Management Measures. If any of the following occur, the Licensee shall revise and resubmit the Amphibian Plan for Deputy Director review and consideration for approval:

- 1) Bullfrogs or signs of chytridiomycosis are observed, and it is determined that Project operations facilitate the establishment or spread of bullfrogs or chytridiomycosis;
- 2) CRLF are observed; or
- 3) Deputy Director directs the Licensee to develop adaptive management actions based on a request, with appropriate supporting documentation, from CDFW, USFWS, or State Water Board staff.

The Licensee shall revise the Amphibian Plan to develop appropriate management measures in consultation with State Water Board, CDFW, and USFWS staff. The Deputy Director may require modifications as part of any approval.

Potential Updates to FYLF Ramping Rates. The Amphibian Plan may include revised ramping rates for protection of FYLF egg masses and tadpoles. At a minimum, a proposal to modify the FYLF ramping rates in Condition 3 shall include:

- 1) The proposed ramping rate revision (e.g., ramping rate, proposed timing of ramping);
- 2) Justification for the revised ramping rates, which may include monitoring data;
- 3) A schedule for implementing the proposed ramping rates;
- 4) Any modifications to monitoring; and
- 5) Documentation of consultation with State Water Board, CDFW, and USFWS, staff, consulting agencies' comments and recommendations made in connection with the proposal, and a description of how the proposal incorporates or addresses the comments and recommendations.

CONDITION 9. Anadromous Fish

9(A) Interim Flows and Snorkel Surveys for Anadromous Fish

The Licensee shall implement Rugraw, LLC's proposed actions regarding anadromous fish as filed with FERC on September 5, 2018 (Rugraw 2018b) with the following modifications:

Snorkel Surveys. Upon specific triggers being met (as enumerated below), the Licensee shall conduct snorkel surveys for anadromous fish in the 1.7 river miles of South Fork Battle Creek from the Project's powerhouse tailrace (River Mile 20.6) upstream to Angel Falls (River Mile 22.3). State Water Board, CDFW, USFWS, and NMFS staff shall be invited to participate in these surveys. For purposes of snorkel surveys, anadromous fish are defined as:

- 1) Steelhead: Defined as any *Oncorhynchus mykiss* greater than 16 inches (40.6 centimeters) in total length, per California Code of Regulations, title 14, section 5.88(a); and
- 2) Central Valley spring-run Chinook salmon: Defined as any *O. tshawytscha* by run timing.

The Deputy Director may revise the above definitions of anadromous fish based upon input from CDFW, USFWS, and NMFS.

Snorkeling Survey Triggers. The Licensee shall implement snorkel surveys if the following two triggers are met:

- 1) All manmade fish barriers below the Project have been removed or otherwise modified to allow for fish passage; and
- 2) Flow over Angel Falls is equal to or greater than 400 cfs, or other flow approved by the Deputy Director based upon input from CDFW, USFWS, and NMFS, as measured at a flow gage located downstream of the Project's powerhouse discharge between November 1 and May 31.

Snorkeling Timing. The Licensee shall schedule and conduct a snorkel survey within two weeks following each 400 cfs (or other Deputy Director-approved) flow event, unless otherwise approved by the Deputy Director. If flows remain too high for safe snorkeling in that subsequent two-week period, then snorkeling shall be completed at the next earliest opportunity that safe conditions exist.

Reporting and Consultation. The Licensee shall provide snorkel survey results, including if anadromous salmonids are detected, to State Water Board, CDFW, USFWS, and NMFS staff within one calendar week of completion.

Interim Flows. If anadromous fish are detected in the bypass reach, the Deputy Director may require interim flows to be implemented (e.g., pulse flow, MIF) while longer term flows are developed in accordance with Condition 9(B).

9(B) Anadromous Fish Passage and Instream Flow Study

No later than three months following the detection of anadromous salmonids in the bypass reach, the Licensee shall submit an Anadromous Fish Passage and Instream Flow Study (Anadromous Fish Study) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objective of the Anadromous Fish Study shall be to determine how flow requirements (e.g., MIFs, pulse flow) and other certification requirements (e.g., temperature shutdown trigger, ramping rates) need to be modified to protect anadromous fish in the bypass reach. The Anadromous Fish Study shall also consider flows needed to facilitate upstream anadromous fish passage over potential barriers. The Licensee shall develop the Anadromous Fish Study in consultation with State Water Board, CDFW, USFWS, and NMFS staff.

At a minimum, the Anadromous Fish Study shall include:

- 1) Protocols for evaluating anadromous fish habitat in South Fork Battle Creek below Angel Falls at a full range of flows as it relates to fish density, carrying capacity, fry and juvenile rearing habitat, and spawning habitat;
- 2) Protocols for identifying the flow range that provides upstream fish passage over potential barriers in the bypass reach and analyzing the interim pulse flow

- (if applicable) to determine its adequacy for anadromous fish in the South Fork Battle Creek below Angel Falls;
- 3) A schedule for implementing the study;
 - 4) Reporting requirements for providing State Water Board, CDFW, USFWS, and NMFS staff results of the study; and
 - 5) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff, consulting agencies' comments and recommendations made in connection with the study plan, and a description of how the study plan incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved Anadromous Fish Study and any approved amendments thereto. The Licensee shall conduct the Anadromous Fish Study upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

Once the Anadromous Fish Study is complete, the Licensee shall consult with State Water Board, CDFW, USFWS, and NMFS staff to determine if the study' results warrant revising the flow requirements of the certification. If revisions are necessary, the Licensee shall consult with the aforementioned agencies to develop revised flow requirements that are protective of anadromous fish and their habitat while considering potential impacts to amphibians. The Licensee shall submit the proposed revision(s) to the Deputy Director for review and consideration for approval no later than one year following completion of the study. The Deputy Director may require modifications as part of any approval.

At a minimum, the proposal shall include:

- 1) Summary of the study results;
- 2) The proposed revision(s) to flow requirements and other conditions of the certification;
- 3) Justification for the proposed revision(s);
- 4) A schedule for implementing the proposed revision(s); and
- 5) Documentation of consultation with State Water Board, CDFW, USFWS, and NMFS staff, consulting agencies' comments and recommendations made in connection with the proposal, and a description of how the proposal incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved proposal and any approved amendments thereto. The Licensee shall implement the revised flow(s) upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. Any revisions to the proposal must be approved by the Deputy Director.

9(C) Reservation of Authority

The State Water Board reserves the authority to require additional conditions and/or revise existing conditions of this certification if listed anadromous fish species are

identified in or introduced into Project-affected stream reaches. The State Water Board also reserves the authority to require the Licensee to develop and conduct studies (beyond the study required in Condition 9(B)) in consultation with State Water Board, CDFW, USFWS, and NMFS staff if listed anadromous fish are identified in or introduced into Project-affected stream reaches. Such studies shall be designed to determine and recommend appropriate measures to minimize impacts to listed anadromous species in the Project-affected area.

CONDITION 10. Construction and Maintenance Activities

When applicable, the Licensee shall comply with the **Construction General Permit** (State Water Board 2009) and amendments thereto. For any construction and maintenance activities with the potential to impact water quality or beneficial uses that are not subject to the Construction General Permit, the Licensee shall prepare and implement site-specific Water Quality Monitoring and Protection Plans (WQMP Plans). WQMP Plans must demonstrate compliance with sediment and turbidity water quality objectives in the Basin Plan. The Licensee shall consider developing the WQMP Plans consistent with the most recent *United States Forest Service National Best Management Practices for Water Quality Management on National Forest System Lands* (United States Forest Service 2012) and other appropriate documents. The Licensee shall submit the WQMP Plans to the Deputy Director for review and consideration for approval at least 45 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, for which impacts to water quality are not covered by this certification.

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

- 1) Description of site conditions and the proposed activity;
- 2) Detailed descriptions, design drawings, and specific topographic locations of all control measures in relation to the proposed activity, which may include:
 - a) Measures to divert runoff away from disturbed land surfaces;
 - b) Measures to collect and filter runoff from disturbed land surfaces, including sediment ponds at the diversion and powerhouse sites; and
 - c) Measures to dissipate energy and prevent erosion;
- 3) Revegetation measures for disturbed areas, which shall include use of native plants and locally sourced plants and seeds; and
- 4) 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 11. Hazardous Materials

A minimum of six months prior to commencement of Project construction activities, the Licensee shall submit a Hazardous Materials Management Plan (Hazardous Materials Plan) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objective of the Hazardous Materials Plan shall be to identify measures for the storage and disposal of hazardous materials and develop protocols for handling spills during Project construction, operation, and maintenance activities. The Licensee shall develop the Hazardous Materials Plan in consultation with State Water Board and Central Valley Regional Water Board staff.

At a minimum, the Hazardous Materials Plan shall include:

- 1) Identification of all hazardous materials to be used during construction, operation, and maintenance of the Project. The list of hazardous materials shall be updated, as appropriate, throughout the term of the FERC license and any amendments thereto;
- 2) Identification of all on-site spill response materials, including those in spill kits, and their potential use and location. At a minimum, hazardous materials spill kits shall be maintained onsite and in vehicles for small spills. These kits shall include oil-absorbent material and tarps to contain and control any minor releases. During Project activities, emergency spill supplies and equipment shall be kept adjacent to all areas of work and in staging areas and shall be clearly marked;
- 3) Measures to manage, remediate, and dispose of waste;
- 4) Locations and protocols for storing hazardous materials, which, at a minimum, shall not be stored in or near a floodplain;
- 5) Measures to limit, control, and clean up spills, which shall include use of bermed storage areas, regular equipment inspections, and fueling/refueling procedures;
- 6) Procedures for notifying State Water Board, Central Valley Regional Water Board, and other appropriate agencies of any hazardous materials spills, measures taken to contain and clean up the spills, and measures the Licensee will take to prevent future spills; and
- 7) Documentation of consultation with State Water Board and Central Valley Regional 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.

Annually and prior to Project construction activities, all staff, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to effectively comply with the applicable environmental laws and regulations,

including water quality compliance and hazardous materials spill prevention and response measures.

Hazardous materials or other materials that can affect water quality shall not be disposed of or released onto the ground, the underlying groundwater, or any surface water. All construction and maintenance waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials (including equipment lubricants, solvents, and cleaners), shall be removed to an appropriate waste facility permitted or otherwise authorized to treat, store, or dispose of such materials.

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

CONDITION 12. Road Management

A minimum of six months prior to commencement of Project operations, the Licensee shall submit a Road Management Plan to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The objective of the Road Management Plan shall be to prescribe the maintenance and construction of Project roads in a manner that is protective of water quality. The Licensee shall develop the Road Management Plan in consultation with State Water Board, CDFW, USFWS, NMFS, and Central Valley Regional Water Board staff.

At a minimum, the Road Management Plan shall include:

- 1) An inventory and map of all roads associated with the Project, including new and existing roads and locations of drainage structures, streams, and surface water bodies;
- 2) An assessment of Project roads to determine if any drainage structures or road segments are impacting or have the potential to impact water quality;
- 3) Proposed measures and an implementation schedule to rehabilitate or upgrade existing roads and minimize erosion from Project roads during operation. The Licensee shall consider developing the measures consistent with the most recent *United States Forest Service National Best Management Practices for Water Quality Management on National Forest System Lands* (United States Forest Service 2012)
- 4) A schedule and plan for inspection and maintenance of Project roads throughout the term of the license and any extensions; and
- 5) Documentation of consultation with State Water Board, CDFW, USFWS, NMFS, and Central Valley Regional Water Board staff including consulting agencies' comments and recommendations made in connection with the Road

Management Plan, and a description of how the Road Management Plan incorporates or addresses the comments and recommendations.

The Licensee shall file with FERC the Deputy Director-approved Road Management Plan and any approved amendments thereto. The Licensee shall implement the Road Management Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein. The Licensee shall not commence Project operation without receipt of Deputy Director approval of the Road Management Plan. Any revisions to the Road Management Plan must be approved by the Deputy Director.

CONDITION 13. Annual Consultation

No later than one year following license issuance, the Licensee shall establish a Technical Review Group (TRG) to meet annually regarding implementation of the Project license. At a minimum, State Water Board staff, CDFW, USFWS, NMFS, and interested tribes and nongovernmental organizations (TRG members) shall be invited to participate in the TRG. The annual meeting shall be noticed at least 30 days in advance to the TRG members and the Licensee's Project interested parties email list. The annual meeting shall be 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 in September of the year following license issuance, and every September thereafter, unless an alternate month is approved by the TRG.

At the annual meetings, the TRG shall:

- 1) Review the status of implementing 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 the Battle Creek Salmon and Steelhead Restoration Project or any other restoration actions in Battle Creek that may impact the Project;
- 6) Discuss necessary revisions or modifications to plans approved as part of this certification; and
- 7) Discuss:
 - a) Needed protection measures for species newly listed or proposed special status species;
 - b) Changes to existing plans for actions that may no longer be necessary due to delisting of a species; and
 - c) Changes to existing plans to incorporate new information about species requiring protection.

Materials shall be provided to TRG members at least 30 days prior to the annual meeting. The Licensee shall submit a report to State Water Board staff that

summarizes the annual consultation meeting no later than 60 days following the annual consultation meeting.

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CONDITION 14. Notwithstanding any more specific conditions in this certification, the Licensee shall comply with all mitigation measures, monitoring, and reporting requirements described in the Mitigation, Monitoring, and Reporting Program (Attachment A).

CONDITION 15. The Licensee shall file an *Initial Statement of Water Diversion and Use* with the Division of Water Rights prior to July 1 of the year following initial water diversion. (Wat. Code, § 5101.) Every year thereafter, the Licensee shall file a *Supplemental Statement of Water Diversion and Use* via the State Water Board's Report Management System or successor system.

CONDITION 16. Notwithstanding any more specific provision of this certification, any plan developed as a condition of this certification requires review and approval by the Deputy Director. The State Water Board's approval authority, including authority delegated to the Deputy Director or others, includes the authority to withhold approval or to require modification of a proposal, plan, or report prior to approval. The State Water Board may take enforcement action if the Licensee fails to provide or implement a required item in a timely manner. If a time extension is needed to submit an item for 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 17. The State Water Board reserves the authority to add to or modify the conditions of this certification: (1) to incorporate changes in technology, sampling, or methodologies; (2) if monitoring results indicate that continued operation of the Project could violate water quality objectives or impair beneficial uses; (3) to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act; (4) to 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 of South Fork Battle Creek.

CONDITION 18. 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 19. 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 20. This certification is contingent on compliance with all applicable requirements of the Basin Plan.

CONDITION 21. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act. The Licensee shall take all reasonable measures to protect the beneficial uses of South Fork Battle Creek and its tributaries.

CONDITION 22. 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 23. 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 24. The Licensee shall submit any change to the Project, including operations, facilities, technology changes or upgrades, or methodology, which would 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 25. 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 26. 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 27. 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 28. Any requirement in this certification that refers to an agency whose authorities and responsibilities are transferred to or subsumed by another state or federal agency, will apply equally to the successor agency.

CONDITION 29. Upon request, a construction schedule shall be provided to agency staff. The Licensee shall provide State Water Board and Central Valley Regional Water Board staff access to Project sites to document compliance with this certification.

CONDITION 30. 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 31. 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 32. 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.

CONDITION 33. Nothing in this certification shall be construed as State Water Board approval of the validity of any water rights, including pre-1914 or riparian claims. The State Water Board has separate authority under the Water Code to investigate and take enforcement action, if necessary, to prevent any unauthorized or threatened unauthorized diversions of water.

CONDITION 34. 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 35. 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 36. This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, division 3, chapter 28.

CONDITION 37. The Licensee shall ensure no net loss of wetland or riparian habitat functions and is responsible for their own 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 (Aug. 23, 1993)), and any amendments thereto.

CONDITION 38. 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*¹³ (State Water Board 2013), and ongoing amendments during the life of the Project.



Eileen Sobeck
Executive Director

November 13, 2020
Date

Attachments:

- A – Mitigation, Monitoring, and Reporting Program
- B – California Environmental Quality Act Findings and Statement of Overriding Considerations

¹³ Water Quality Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Last accessed November 4, 2020.

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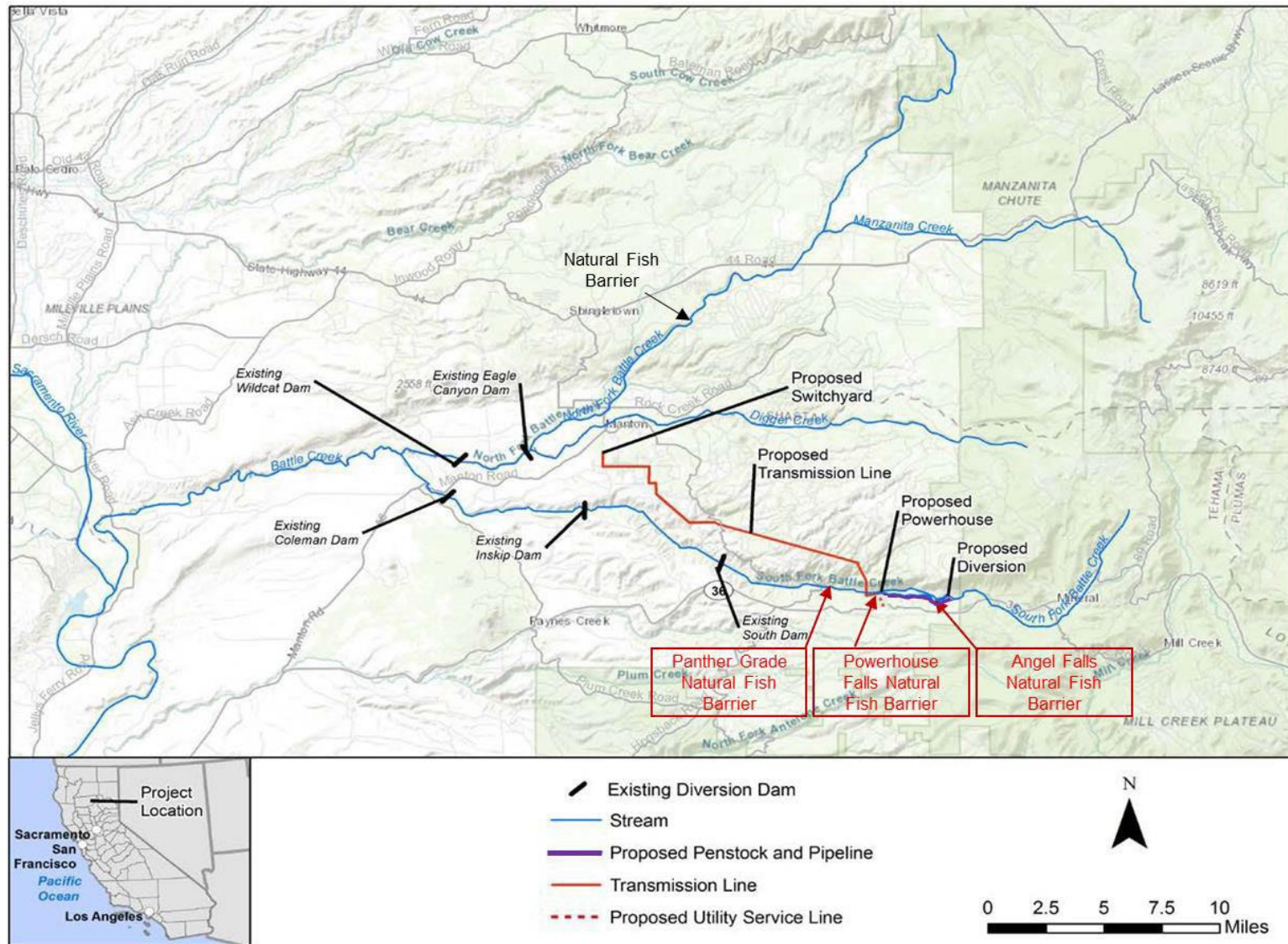


Figure 1. Overview Map of South Fork Battle Creek

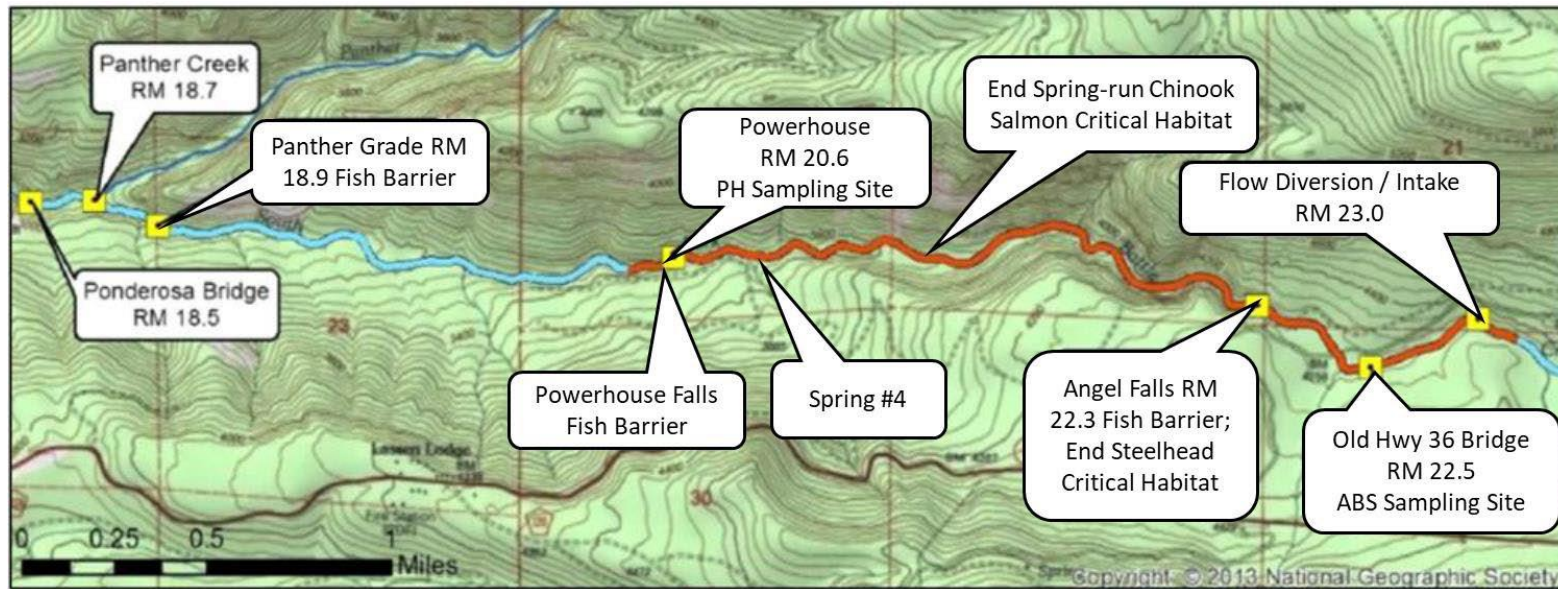


Figure 2. Map Showing Project Diversion and Powerhouse

ATTACHMENT A:
MITIGATION, MONITORING, AND REPORTING PROGRAM
WATER QUALITY CERTIFICATION
FOR
LASSEN LODGE HYDROELECTRIC PROJECT

Introduction

In accordance with the California Environmental Quality Act (CEQA), the State Water Resources Control Board (State Water Board) has prepared an Environmental Impact Report (EIR) in response to Rugraw, LLC's (Rugraw or Licensee) application for a water quality certification for the construction, operation, and maintenance of the Lassen Lodge Hydroelectric Project (Project) under an original Federal Energy Regulatory Commission (FERC) license. The Final EIR identifies mitigation measures, agreed to by Rugraw, to reduce the Project's potentially significant environmental impacts.

CEQA requires the lead agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) for projects where mitigation measures are a condition of project approval. (Cal. Code Regs., tit. 14, § 15091, subd. (d).) The State Water Board has required compliance with the mitigation, monitoring, and reporting identified in this MMRP as a condition of approving the Project.

Organization

As shown in the following table, each mitigation measure for the Project is listed and categorized by resource area, with identification of:

- 1) Mitigation measure ID;
- 2) Actions required as mitigations; and
- 3) Implementation Schedule – The phase of the Project during which the mitigation measure shall be monitored; relevant phases include pre-construction, construction, and operation and maintenance.

The responsible party for implementing each mitigation measure and providing verification of implementation is Rugraw, the Licensee. Rugraw shall maintain records demonstrating compliance with each mitigation measure. Such records shall be made available to the State Water Board upon request.

Resource Area(s)	Mitigation Measure	Actions Required
Air Quality; Energy	AIR-1	<p><u>Compliance with TCAPCDs GAAQI</u></p> <p>As prescribed in TCAPCDs GAAQI, Sections 6.2 and 6.3, the following measures shall be implemented during Project construction to reduce criteria pollutant emissions.</p> <p><u>Fugitive PM₁₀ Measures</u> <i>Implementation Schedule: During Construction</i></p> <p>Land Clearing/Earth Moving:</p> <p>Water shall be applied by means of truck(s), hoses, and/or sprinklers as needed prior to any land clearing or earth movement to minimize dust emission.</p> <p>Haul vehicles transporting soil into or out of the property shall be covered.</p> <p>Water shall be applied to disturbed areas a minimum of 2 times per day or more as necessary.</p> <p>On-site vehicles shall be limited to a speed that minimizes dust emissions on unpaved roads.</p> <p>A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall ensure corrective action is taken within 24 hours. The telephone number of the District shall also be visible to ensure compliance with District Rule 4:1 and 4:24 (Nuisance and Fugitive Dust Emissions).</p> <p>Visibly Dry Disturbed Soil Surface Areas:</p> <p>All visibly dry disturbed soil surface areas of operation shall be treated with a dust palliative agent and/or watered to minimize dust emission.</p>

		<p>Paved Road Track-Out:</p> <p>Existing roads and streets adjacent to the project will be cleaned at least once per day unless conditions warrant a greater frequency.</p> <p>Visibly Dry Disturbed Unpaved Roads:</p> <p>All visibly dry disturbed unpaved roads surface areas of operation shall be watered to minimize dust emission.</p> <p>Unpaved roads may be graveled to reduce dust emissions.</p> <p>Water shall be applied to disturbed areas a minimum of 2 times per day or more as necessary.</p> <p>On-site vehicles shall be limited to a speed that minimizes dust emissions on unpaved roads.</p> <p>Haul roads shall be sprayed down at the end of the work shift to form a thin crust. This application of water shall be in addition to the minimum rate of application.</p> <p>Vehicles Entering/Exiting Construction Area:</p> <p>Vehicles entering or exiting construction area shall travel at a speed that minimizes dust emissions.</p> <p>Employee Vehicles:</p> <p>Construction workers shall park in designated parking areas(s) to help reduce dust emissions.</p> <p>Soil Piles:</p> <p>Soil pile surfaces shall be moistened if dust is being emitted from the pile(s). Adequately secured tarps, plastic, or other material may be required to further reduce dust emissions.</p>
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Resource Area(s)	Mitigation Measure	Actions Required
		<p><u>Measures for Construction Equipment</u> <i>Implementation Schedule: During Construction</i></p> <p>Maintain all construction equipment in proper tune according to manufacturer’s specifications.</p> <p>Maximize, to the extent feasible, the use of diesel construction equipment meeting current CARB certification standards for off–road heavy–duty diesel engines.</p> <p>All portable equipment, including generators and air compressors rated over 50 brake horse power, registered in the <i>Portable Equipment Registration Program</i>, or permitted through the District as a stationary source.</p> <p>Electrify equipment where feasible.</p> <p>Substitute gasoline–powered for diesel–powered equipment, where feasible.</p> <p>Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.</p> <p>Use equipment that has Caterpillar pre–chamber diesel engines.</p> <p><u>Measures for Construction Equipment</u> <i>Implementation Schedule: Prior to Construction</i></p> <p>Registration in <i>CARB’s DOORS program</i> and meeting all applicable standards for replacement and/or retrofit.</p>
Biological Resources – Aquatics	AQU-1 / WQ-1	<p><u>Water Quality Monitoring and Compliance</u> <i>Implementation Schedule: During Project Operation</i></p>

Resource Area(s)	Mitigation Measure	Actions Required
and Fisheries; Hydrology and Water Quality		The following mitigation measures shall be included in the Project Turbidity and pH Monitoring Plan: <ul style="list-style-type: none"> • Monitoring of turbidity, suspended sediment, settleable material, pH, and dissolved oxygen during construction; • Compliance with the Central Valley Regional Water Quality Control Board’s Basin Plan (CVRWQCB, 2018) water quality criteria for turbidity, suspended sediment, settleable material, pH, and dissolved oxygen during construction; • Stop-work conditions and remedial approaches for water quality non-compliance; and • Reporting of construction water quality monitoring results to CDFW and State Water Board.
Biological Resources – Aquatics and Fisheries	AQU-2	<p><u>Stage Recording</u> <i>Implementation Schedule: During Project Operation</i></p> <p>Project compliance stage monitoring/recording by Rugraw downstream of the diversion dam from May 1 to July 31 must either be located in a cross-section that represents the depositional areas where foothill yellow-legged frog deposit egg masses or in a narrower cross-section (more sensitive to flow changes) that shall be protective (potentially overprotective) of stage changes in foothill yellow-legged frog breeding habitat. The stage monitoring location must be approved by Agencies responsible for foothill yellow-legged frog management (CDFW, USFWS).</p>
Biological Resources – Aquatics and Fisheries	AQU-3	<p><u>Anadromous Fish Monitoring Plan – Instream Flow Study</u> <i>Implementation Schedule: During Project Operation</i></p> <p>The Anadromous Fish Monitoring Plan shall include an additional instream flow study in the event fish are observed in the bypass reach that (1) covers the full range of hydrology, (2)</p>

Resource Area(s)	Mitigation Measure	Actions Required
		addresses habitat related to fish density/carrying capacity, (3) uses accurate fry / juvenile rearing and adult spawning habitat suitability criteria. After the study is completed, Rugraw shall consult with the agencies (CDFW, NMFS, State Water Board) to determine whether revisions to the minimum instream flow are necessary.
Biological Resources – Aquatics and Fisheries	AQU-4	<p><u>Debris and Sediment Management Plan Modifications</u> <i>Implementation Schedule: During Project Operation</i></p> <p>Modification of the DSMP is required to include explicit compliance with Basin Plan turbidity standards and monitoring / reporting of turbidity when the pneumatic gates are lowered below half elevation and flows are less than 418 cfs.</p>
Biological Resources – Aquatics and Fisheries	AQU-5	<p><u>Anadromous Fish Monitoring Plan – Fish Passage Study</u> <i>Implementation Schedule: During Project Operation</i></p> <p>The Anadromous Fish Monitoring Plan shall include a fish passage study in the event fish are observed in the bypass reach to identify the flow range that provides adult upstream passage over the potential barriers in the bypass reach (Cramer et al. 2015; Impact 4.6–2 Fish Passage Barriers) and an analysis of the pulse flow amount, timing, and duration needed to assist juvenile fish out-migration. After the study is completed, Rugraw shall consult with the agencies (CDFW, USFWS, SWRCB, and NMFS) to determine whether the pulse flow should be modified to reduce impacts to anadromous fish passage.</p>
Biological Resources – Terrestrial	BIO-1	<p><u>Protection of Special-Status and Listed Plants during Construction or Routine Vegetation Management Activities</u> <i>Implementation Schedule: During Project Operation</i></p> <p>Rugraw shall revise the Noxious Weed Management and Revegetation Plan to include the following:</p>

Resource Area(s)	Mitigation Measure	Actions Required
		<ul style="list-style-type: none"> • Coleman’s rein orchid: A qualified biologist shall flag the known population of Coleman’s rein orchid. No ground disturbing activities shall occur within 50 feet of the known population of Coleman’s rein orchid during construction of the Project transmission line. • Other special–status plants: A qualified biologist shall conduct targeted surveys for special–status and listed plants potentially occurring in the areas to be cleared of vegetation as part of routine vegetation management over the term of the license. <p>If special–status or listed plants are documented, Rugraw shall develop and implement appropriate avoidance and protection measures considering the species affected and site–specific conditions. Such measures may include, but are not limited to, flagging and avoiding the individuals, or timing vegetation management activities to occur outside the blooming period of the plants (for annual species).</p> <p>The results of the pre–clearance surveys, and proposed avoidance and protection measures, shall be documented in a brief memo and provided to CDFW and USFWS at least seven days prior to implementation of vegetation management.</p>
Biological Resources – Terrestrial	BIO-2	<p><u>Minimize the Potential for Introduction and Spread of Noxious Weeds during Ongoing Operations and Maintenance</u></p> <p><i>Implementation Schedule: During Project Operation</i></p> <p>Rugraw shall revise the Noxious Weed Management and Revegetation Plan to state that the following measures shall be implemented for the license term:</p> <ul style="list-style-type: none"> • Limiting ground–disturbing activities and vegetation clearing to the smallest footprint possible, while allowing for safe construction of the Project. • Preserving vegetation in place to the extent possible.

Resource Area(s)	Mitigation Measure	Actions Required
		<ul style="list-style-type: none"> • Thoroughly cleaning all construction equipment and clothing before entering the Project area to reasonably ensure that seeds and propagules of noxious weeds are not introduced. • Using certified weed-free straw, hay, and mulch for all construction, erosion control, and restoration needs. <p>Restricting travel to established roads and avoid entering areas with existing populations of noxious weeds when possible. Conduct work in un-infested areas first whenever possible. Clean equipment that has been used in weed-infested areas before moving to other areas.</p>
Biological Resources – Terrestrial	BIO-3	<p><u>Protection of Active Bird Nests</u> <i>Implementation Schedule: During Project Operation</i></p> <p>Rugraw shall include the following measure in its Avian Protection Plan:</p> <ul style="list-style-type: none"> • Vegetation removal (i.e., tree or shrub removal, tree limb removal, and brush mastication) shall be conducted between September 1 and February 14 to avoid the general nesting bird season. • If this is not possible, a qualified biologist shall conduct a pre-activity survey for active bird nests within the area proposed for vegetation removal, non-routine maintenance, or construction activity, plus a 300-foot (raptors) and 50-foot (non-raptors) survey area, within 2 weeks of commencement of the activities. • If active bird nests are found within the survey area, a qualified biologist shall determine an appropriate no-work buffer, based on site-specific conditions, including observations of the nesting birds' behavior and sensitivity to human activity; proximity to existing human activity or development (e.g., roads, structures); current site conditions (e.g., screening vegetation, terrain); and site-specific, work-related activities.

Resource Area(s)	Mitigation Measure	Actions Required
		Excepting emergencies, no activities shall be allowed within the buffer until the biologist has determined that the young have fledged and are no longer occupying the nest, or the nesting attempt has failed.
Biological Resources – Terrestrial	BIO-4	<p><u>Protection of Sensitive Habitats</u> <i>Implementation Schedule: During Project Operation</i></p> <p>Rugraw will include the following measure in its Construction Plan (General Construction Measure 1):</p> <ul style="list-style-type: none"> • Rugraw shall obtain all required permits, as appropriate, for work within Waters of the U.S. and State of California, including a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers; and a Lake/Streambed Alteration Agreement from CDFW. • All conditions of the permits, including mitigation requirements for losses of sensitive habitats including wetlands, riparian habitats, and, if applicable, oak woodland habitats, shall be required to be implemented as part of the Project.
Greenhouse Gas Emissions	GHG-1	<p><u>Compliance with CARB Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear</u> <i>Implementation Schedule: Prior to Construction</i></p> <p>If it is determined that Gas Insulated Switchgear is required for the Project, and is not exempt from the SF₆ Regulation (Title 17 of the California Code of Regulations, sections 95350 et seq.), Rugraw shall comply with the requirements of this regulation. This includes reporting annually to CARB that use of the equipment does not exceed the maximum allowable rate of 1 percent.</p>

Resource Area(s)	Mitigation Measure	Actions Required
Hydrology and Water Quality; Hazards and Hazardous Materials	WQ-2	<p><u>Water Quality and Hazardous Material Training</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>Annually, including prior to Project implementation, all contractor and subcontractor personnel shall receive training regarding the appropriate work practices necessary to effectively comply with the applicable environmental laws and regulations, including, water quality compliance and hazardous materials spill prevention and response measures.</p>
Hydrology and Water Quality; Hazards and Hazardous Materials	WQ-3	<p><u>Hazardous Material Business Plan</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>A Hazardous Materials Business Plan shall be prepared and implemented. The plan shall:</p> <ul style="list-style-type: none"> • Identify all hazardous materials, including Portland cement concrete. • Identify spill response materials. • Specify procedures for notification and reporting, including internal management and local agencies (e.g., fire department, Department of Environmental Health), as needed. • Specify measures to manage and remediate waste, as needed.
Hydrology and Water Quality; Hazards and Hazardous Materials	WQ-4	<p><u>Spill Prevention and Countermeasure Plan</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>A Spill Prevention Control and Countermeasure Plan shall be prepared and implemented. The plan shall:</p> <ul style="list-style-type: none"> • Prevent fuel from being stored in or near a floodplain. • Identify fuel storage areas that will prevent spill from being routed off site into waterways.

Resource Area(s)	Mitigation Measure	Actions Required
		<ul style="list-style-type: none"> • Identify measures to limit and control fuel spills, including use of bermed storage areas, equipment inspections, fueling and refueling procedures. • Describe the use and placement of spill kits. • Specify reporting requirements in the event of a spill.
Hydrology and Water Quality Hazards and Hazardous Materials	WQ-5	<p><u>Material Disposal Measure</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Project Operation</i></p> <p>Hazardous materials or other materials that can affect water quality shall not be disposed of or released onto the ground, the underlying groundwater, or any surface water. Totally enclosed containment shall be provided for all trash. All construction and maintenance waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials (including equipment lubricants, solvents, and cleaners), shall be removed to an appropriate waste facility permitted or otherwise authorized to treat, store, or dispose of such materials.</p>
Hydrology and Water Quality; Hazards and Hazardous Materials	WQ-6	<p><u>Hazardous Material Spill Kits</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>Hazardous materials spill kits shall be maintained onsite and in vehicles for small spills. These kits shall include oil-absorbent material and tarps to contain and control any minor releases. During Project activities, emergency spill supplies and equipment shall be kept adjacent to all areas of work and in staging areas and shall be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials shall be provided in the Spill Prevention Control and Countermeasure Plan.</p>
Hydrology and Water Quality	WQ-7	<p><u>SWPPP BMPs</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p>

Resource Area(s)	Mitigation Measure	Actions Required
		<p>The SWPPP shall specify the location, type, and maintenance requirements for best management practices (BMPs) necessary to prevent stormwater runoff from carrying construction-related pollutants that currently are not identified in Rugraw’s SWPPP or Erosion Control and Sedimentation Plan. BMPs shall be implemented to address potential release of fuels, oil, and/or lubricants from operational vehicles and equipment (e.g., drip pans, secondary containment, washing stations), as well as release of fine sediment from material stockpiles (e.g., sediment barriers, soil binders). The SWPPP shall be developed and implemented by a Construction General Permit Qualified SWPPP Practitioner/ Qualified SWPPP Developer and submitted to the RWQCB as part of obtaining regulatory approval for the proposed activities (i.e., the Industrial General Permit).</p>
Hydrology and Water Quality	WQ-8	<p><u>Operational Erosion and Sedimentation Control</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>The Erosion Control and Sedimentation Plan shall include annual reporting and BMPs to address control of erosion and sedimentation related to Project access roads, work areas, and facilities. The plan, including appropriate BMPs, shall be developed in collaboration with the State Water Board and CDFW. Annually Rugraw shall report any Project related erosion or sedimentation issues and remedial actions to address the erosion or sedimentation to the State Water Board and CDFW.</p>
Hydrology and Water Quality; Hazards and Hazardous Materials	WQ-9	<p><u>Pesticide and Herbicide Use</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>A measure shall be developed in collaboration with the State Water Board and CDFW to identify and implement pesticide and herbicide BMPs to protect surface water in the vicinity of the Project during operations and maintenance activities. At a minimum the BMPs shall</p>

Resource Area(s)	Mitigation Measure	Actions Required
		include allowable pesticide/herbicides, buffer areas near surface water, and application methods.
Noise	NOISE-1	<p><u>Implement General Noise Protection and Reduction Measures</u> <i>Implementation Schedule: During Construction</i></p> <p>All noise producing equipment shall be equipped with noise control devices such as mufflers, in accordance with manufacturers’ specifications and shall be maintained in proper operating condition. Equipment not in use shall not be left idling for more than five minutes.</p> <p>NOISE-1 shall apply to areas where construction takes place within 500 feet of nearby residences to minimize construction–related noise. This includes near Rolling Hills Road, Hazen Road, and South Powerhouse Road.</p>
Noise	NOISE-2	<p><u>Limit Period of Construction</u> <i>Implementation Schedule: During Construction</i></p> <p>Project construction shall occur between the hours of 7 AM to 7 PM, Monday through Friday, with the exception of holidays (or otherwise established by Tehama County) when construction activities occur within 500 feet of residences.</p> <p>NOISE-2 shall apply to areas where construction takes place within 500 feet of nearby residences to minimize construction–related noise. This includes near Rolling Hills Road, Hazen Road, and South Powerhouse Road.</p>
Noise	NOISE-3	<p><u>Coordinate with Adjacent Residences</u> <i>Implementation Schedule: During Construction</i></p> <p>At least one week prior to commencement of construction activities near residences, Rugraw’s contractor shall provide written notification to adjacent residences identifying the type, duration, and frequency of construction operations. Notification materials shall also</p>

Resource Area(s)	Mitigation Measure	Actions Required
		<p>identify a mechanism for residents to register noise–related complaints with Tehama County, which generally considers noise–related concerns on a case–by–case basis.</p> <p>NOISE-3 shall apply to areas where construction takes place within 500 feet of nearby residences to minimize construction–related noise. This includes near Rolling Hills Road, Hazen Road, and South Powerhouse Road.</p>
<p>Wildfire; Hazards and Hazardous Materials</p>	<p>FIRE-1</p>	<p><u>Wildfire Mitigation Plan</u> <i>Implementation Schedule: Prior to Construction and Ongoing during Operation and Maintenance</i></p> <p>To minimize the risk of wildfire, prior to Project construction, Rugraw shall submit a Wildfire Mitigation Plan (WMP) in compliance with SB 901 legislation and with direction from the CPUC (Rulemaking 18–10–007 updated December 16, 2019, as clarified December 23, 2019).</p> <p>The WMP shall be reviewed and approved by the CPUC and CAL FIRE.</p> <p>The WMP shall include the following, unless directed otherwise by the CPUC and CAL FIRE:</p> <ul style="list-style-type: none"> • Persons responsible for executing the plan; • Metrics and underlying data; • Baseline ignition probability and wildfire risk exposure; • Inputs to the plan, including current and directional vision for wildfire risk exposure; and • Wildfire mitigation activity for each year of the 3–year WMP term, including expected outcomes of the 3–year plan.

Resource Area(s)	Mitigation Measure	Actions Required
		<p>The objectives of the WMP shall, at a minimum, be consistent with the requirements of Public Utilities Code section 8386, subdivision (a). This includes a description of utility WMP objectives, categorized by each of the following timeframes:</p> <ul style="list-style-type: none"> • Before the upcoming wildfire season, as defined by CAL FIRE; • Before the next annual update; • Within the next 3 years; and • Within the next 10 years. <p>The WMP shall also specifically address the use of South Fork Battle Creek as a source of water for suppression activities.</p>

ATTACHMENT B:

**CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS AND STATEMENT OF
OVERRIDING CONSIDERATIONS**

**WATER QUALITY CERTIFICATION
FOR
LASSEN LODGE HYDROELECTRIC PROJECT**

Introduction

The State Water Resources Control Board (State Water Board) has prepared these California Environmental Quality Act (CEQA) findings and statement of overriding considerations to accompany the certified Final Environmental Impact Report for the Lassen Lodge Hydroelectric Project (Final EIR).

The Lassen Lodge Hydroelectric Project (Project) is a new hydroelectric project located on South Fork Battle Creek. The Project will be owned and operated by Rugraw, LLC (Rugraw). The underlying purpose of the Project is to provide hydroelectric power. The three objectives to be accomplished through the Project are:

- 1) Generate electricity for the term of the original license to produce electric power;
- 2) Provide renewable hydropower to help California meet its Renewables Portfolio Standard; and
- 3) Identify and implement measures to avoid or mitigate damage to the environment, including fish and wildlife, and protect beneficial uses of South Fork Battle Creek.

A more detailed description of the Project is provided in Chapter 2 of the Final EIR.

In accordance with Public Resources Code section 21100 and CEQA Guidelines section 15126.6, the State Water Board considered and evaluated alternatives to the Proposed Project.¹⁴ The Final EIR identifies the No Project Alternative as the Environmentally Superior Alternative, but the State Water Board has determined that the No Project Alternative would not achieve the Project objectives. The Final EIR identifies Alternative 2 as the Environmentally Superior Alternative among the other Project alternatives, and determines that Alternative 2 would avoid a significant impact that the Proposed Project would not. Accordingly, the State Water Board's issuance of a water quality certification for the Project includes Alternative 2. These findings and statement of overriding considerations document the State Water Board's issuance of a water quality certification for the Project, including Alternative 2 and all identified mitigation measures.

CEQA Background

The State Water Board is the lead agency for the Project under CEQA. The State Water Board issued a draft EIR in September 2020 and the Final EIR in November 2020.

CEQA includes a declaration of policy that public agencies should not approve projects that will result in significant environmental effects if there are feasible means of mitigating such effects or feasible project alternatives that would substantially lessen the

¹⁴ The Proposed Project is defined the Final EIR's Executive Summary.

significance of such effects. (Pub. Resources Code, § 21002.) Section 21081, subdivision (a) of the Public Resources Code and section 15091, subdivision (a) of the CEQA guidelines set out three possible written findings a public agency must make (with accompanying rationale) in order to approve or carry out a project when the project EIR identifies one or more significant environmental effects.

The possible findings are:

- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
- 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- 3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

In other words, for each significant impact identified in the Final EIR, the agency must find that the impact has been mitigated or avoided, that the ability to require mitigation or avoidance lies with another agency (which has required or should require the same), or that specific considerations make mitigation or avoidance infeasible.

However, if feasible mitigation measures or project alternatives that avoid or substantially lessen the significant impacts are not available or cannot be implemented, CEQA permits a public agency to balance the benefits of a proposed project against the project's unavoidable environmental risks and to approve or carry out the project if the risks are considered acceptable. (Cal. Code Regs., tit. 14, § 15093, subd. (a).) In these circumstances, subdivision (b) of section 15093 of the CEQA Guidelines requires the agency to make a statement of overriding considerations by stating in writing "the specific reasons to support its action based on the Final EIR and/or other information in the record."

Findings

In accordance with section 21081.6, subdivision (a)(1) of the Public Resources Code and section 15097, subdivision (a) of the CEQA Guidelines, the State Water Board has adopted a Mitigation Monitoring and Reporting Program (MMRP). The MMRP is attached to the Project water quality certification and is incorporated by reference into this document. All mitigation measures discussed below are set forth in the MMRP.

As set forth below, based on the Final EIR and the record, the State Water Board finds that each of the Project's potentially significant impacts has been mitigated by Alternative 2 and mitigation measures to less than significant or is unavoidable.

Potentially Significant Impacts Mitigated to Less than Significant

Impact 4.5-2

The State Water Board finds that the potential increase in criteria pollutants due to Project construction activities is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.5.4.2 of the Final EIR explains that engine exhaust during on-road vehicle and haul trips, off-road construction equipment, helicopter operations, and fugitive dust generated during earthmoving activities and traveling on unpaved roads have the potential to adversely affect air quality. These Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure AIR-1, which Rugraw has agreed to implement, would reduce the impact of criteria pollutant emissions due to Project construction activities to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure AIR-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.5-3

The State Water Board finds that the potential exposure of sensitive receptors to substantial pollutant concentrations due to Project construction activities is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.5.4.3 of the Final EIR explains that residences located near the transmission line route may be exposed to air pollutants during Project construction activities. Although construction near residences will be short in duration and a vegetative buffer may reduce the impacts on nearby residents, Project construction activities could expose sensitive receptors to substantial pollutant concentrations, resulting in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure AIR-1, which Rugraw has agreed to implement, would reduce impacts on sensitive receptors due to construction activities to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure AIR-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.6-1

The State Water Board finds that direct and indirect impacts to special status aquatic species due to Project activities are a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project

which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.6.6.1 of the Final EIR explains that the Project area is within the range of or potential habitat for multiple special status aquatic species. Project construction and operational activities have the potential to directly or indirectly affect special status species, including amphibians, aquatic reptiles, and fish. Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures AQU-1, AQU-2, AQU-3 and AQU-4 would reduce Alternative 2's impacts to special status aquatic species to a less than significant level. Rugraw has agreed to implement Mitigation Measures AQU-1, AQU-2, AQU-3 and AQU-4. Mitigation Measure AQU-1, Water Quality Monitoring and Compliance, would reduce the direct impacts of Project construction activities on aquatic species. Mitigation Measure AQU-2, Stage Recording, would reduce the indirect impacts of Project operational activities on special status amphibious species. Mitigation Measure AQU-3, Anadromous Fish Monitoring Plan—Instream Flow Study, would reduce the indirect impacts of Project operational and maintenance activities on special status fish species. Mitigation Measure AQU-4, Debris and Sediment Management Plan Modifications, would reduce the indirect impacts of Project operational and maintenance activities on aquatic species. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures AQU-1, AQU-2, AQU-3 and AQU-4 have been included in the MMRP adopted concurrently with these findings.

Impact 4.6-2

The State Water Board finds that the Project's potential to impact the movement of migratory fish species is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.6.6.2 of the Final EIR explains that although special status salmonids are not currently present in the Project's bypass reach, they may be able to enter the bypass reach under certain conditions. The Final EIR also acknowledges that the bypass reach includes designated critical habitat. If special status salmonids are able to access the bypass reach, the potential for Project activities to impact their movement could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure AQU-5, which Rugraw has agreed to implement, would reduce Project impacts on the movement of special status fish species to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure AQU-5 has been included in the MMRP adopted concurrently with these findings.

Impact 4.7-1

The State Water Board finds that impacts to special status plants and terrestrial wildlife due to Project activities are a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.7.5.1 of the Final EIR explains that Project activities such as vegetation management, the ongoing use of vehicles and equipment brought in from outside the Project area and foot traffic have the potential to adversely affect special status plants. Section 4.7.5.1 also explains that the Project's transmission line and vegetation management activities have the potential to adversely affect special status raptors and other birds. These Project activities and facilities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures BIO-1 and BIO-2, which Rugraw has agreed to implement, would reduce impacts to special status plants to a less than significant level. Mitigation Measure BIO-3, which Rugraw has also agreed to implement, would reduce the impact of Project operational and maintenance activities on special status raptors and other birds to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures BIO-1, BIO-2, and BIO-3 have been included in the MMRP adopted concurrently with these findings.

Impact 4.7-2

The State Water Board finds that the Project's impacts on sensitive riparian, wetland, and oak woodland habitats are a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.7.5.2 of the Final EIR explains that construction of Project facilities would result in the permanent loss of riparian habitat, wetland habitat, and oak woodland habitat. Although the Project's general construction measures would restore disturbed habitat and limit ground disturbance and vegetation clearing, some losses would still occur. Project construction could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure BIO-4, which Rugraw has agreed to implement, would reduce impacts on riparian and other sensitive habitat to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure BIO-4 has been included in the MMRP adopted concurrently with these findings.

Impact 4.7-4

The State Water Board finds that loss of wetland habitat is a potentially significant environmental effect in light of Tehama County's compensation requirement, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.7.5.4 of the Final EIR explains that construction of Project facilities would result in the permanent loss of wetland habitat. Tehama County's General Plan requires the development of a compensation plan prior to the removal of wetland habitat. Although the Project would avoid streams, wetlands, and pond habitats to the extent possible, wetland loss would still occur. Given the potential conflict with Tehama County's compensation requirement, Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure BIO-4, which Rugraw has agreed to implement, would reduce impacts related to the loss of wetlands to a less than significant level. Mitigation Measure BIO-4 requires Rugraw to obtain all required permits, as appropriate, for work within waters of the United States and California, as well as a Lake/Streambed Alternation Agreement from the California Department of Fish and Wildlife. Mitigation Measure BIO-4 also requires Rugraw to implement all conditions of these permits and agreements. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure BIO-4 has been included in the MMRP adopted concurrently with these findings.

Impact 4.9-2

The State Water Board finds that the use of construction vehicles and equipment is a potentially significant environmental effect in light of the California Air Resources Board's (CARB) engine emissions standards, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Project construction activities will use construction vehicles and equipment. Section 4.9.4.2 of the Final EIR explains that CARB has set engine emissions standards applicable to these vehicles and equipment. Given CARB's standards, Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure AIR-1, which Rugraw has agreed to implement, would reduce impacts to state energy efficiency plans to a less than significant level. Mitigation Measure AIR-1 requires Rugraw to register in CARB's DOORS program, an online reporting tool that ensures off-road diesel equipment complies with emissions standards. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure AIR-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.11-2

The State Water Board finds that the Project's potential use of Gas Insulated Equipment (GIE) and associated greenhouse gas emissions is a potentially significant environmental effect in light of the implementation of Assembly Bill 32 (AB 32), but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.11.4.2 of the Final EIR explains that Rugraw is not planning to use GIE at this time, but the use of GIE may be required in the future. The use of GIE emits sulfur hexafluoride (SF₆), a potent greenhouse gas. If Rugraw uses GIE, the Project could conflict with the implementation of AB 32 and release significant amounts of SF₆, resulting in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure GHG-1, which Rugraw has agreed to implement, requires compliance with SF₆ regulations, and would reduce conflicts with state greenhouse gas plans, policies, or regulations to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure GHG-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.12-5

The State Water Board finds that the potential impairment of an emergency response plan or emergency evacuation plan is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.12.6.5 of the Final EIR explains that Project construction activities could delay or impair emergency vehicle access and evacuation routes. This could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure FIRE-1, which Rugraw has agreed to implement, requires the implementation of a Wildfire Mitigation Plan (WMP) for all stages of the Project, which would address coordination with emergency providers and ensure access if road closures are required. Mitigation Measure FIRE-1 would reduce impacts relating to the impairment of an adopted emergency response plan or emergency evacuation plan to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure FIRE-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.12-6

The State Water Board finds that the potential for Project activities to increase the risk of wildland fires is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the

potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.12.6.6 of the Final EIR explains that the Project area is in a Very High Fire Hazard Severity Zone, and any wildfire in the area could threaten people or structures in the vicinity. The Project includes vegetation management to maintain appropriate clearance distances between vegetation and the Project's transmission line. However, Project activities, such as the use of diesel and fuel powered vehicles, welding, or cutting, could provide a source of ignition for a fire and therefore increase the risk of wildland fires. These Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure FIRE-1, which Rugraw has agreed to implement, requires the implementation of a WMP, which would ensure that Project activities are conducted in a manner to prevent the ignition or spread of wildland fires, and guide the response should such a fire occur. Mitigation Measure FIRE-1 would reduce the Project's impact on risks due to wildland fires to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure FIRE-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.13-1

The State Water Board finds that the potential violation of water quality standards is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.13.5.1 of the Final EIR explains that several Project construction activities, including clearing, road work, and instream work, have the potential to result in a violation of water quality objectives specified in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Basin Plan). These construction activities could also negatively impact the beneficial uses of South Fork Battle Creek, resulting in a violation of water quality standards. Operational and maintenance activities could result in erosion, sedimentation, and runoff, which may impact water quality. In addition, Project activities involve the use and storage of hazardous materials such as fuel and oil, which could accidentally spill and degrade water quality. Pesticide and herbicide use also has the potential to release hazardous materials into surface waters. Thus, Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, and WQ-7, which Rugraw has agreed to implement, would reduce the impacts of Project construction activities on water quality to a less than significant level. Mitigation Measure WQ-1 (also referred to as AQU-1) requires water quality monitoring, compliance, stop-work conditions, and reporting. Mitigation Measure WQ-2 requires Project personnel to be trained on water quality compliance and hazardous materials spill prevention and response. Mitigation Measure WQ-3 requires a plan identifying

hazardous materials, spill response materials, and procedures and measures in the event of a spill. Mitigation Measure WQ-4 requires a plan to prevent and control the spill of hazardous materials. Mitigation Measure WQ-5 requires containment and removal of all construction and maintenance waste, including potentially hazardous materials. Mitigation Measure WQ-6 requires hazardous material spill kits to be maintained onsite for the containment and control of releases. Mitigation Measure WQ-7 requires the development and implementation of best management practices to prevent stormwater runoff of construction-related pollutants.

As discussed in the Final EIR, Mitigation Measures WQ-8 and WQ-9, which Rugraw has also agreed to implement, would reduce the impacts of Project operational and maintenance activities on water quality to a less than significant level. Mitigation Measure WQ-8 requires the development and implementation of a plan to address control of erosion and sedimentation related to Project access roads, work areas, and facilities. Mitigation Measure WQ-9 requires pesticide and herbicide best management practices.

In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, WQ-7, WQ-8, and WQ-9 have been included in the MMRP adopted concurrently with these findings.

Impact 4.13-3(i)

The State Water Board finds that the potential increase in erosion or siltation due to Project maintenance activities is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.13.5.3 of the Final EIR explains that long-term use of Project access roads will require road maintenance activities, including grading and culvert installation, which could result in an increase in erosion or siltation. These Project activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure WQ-8, which Rugraw has agreed to implement, would reduce the impact of increased erosion or siltation to a less than significant level. Mitigation Measure WQ-8 requires the development and implementation of a plan to address control of erosion and sedimentation related to Project access roads, work areas, and facilities. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure WQ-8 has been included in the MMRP adopted concurrently with these findings.

Impact 4.13-3(iii)

The State Water Board finds that potential additional sources of polluted runoff are a potentially significant environmental effect, but that changes or alterations have been

required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.13.5.3 of the Final EIR explains that Project activities have the potential to create additional sources of polluted runoff through the spill of hazardous materials. Additionally, Project facilities, such as the powerhouse, substation, and new access roads, would be impermeable surfaces contributing to surface runoff. There are no existing or planned stormwater drainage systems in the Project area. Project activities and facilities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, WQ-7 and WQ-8, which Rugraw has agreed to implement, would reduce the impacts of Project activities and facilities on polluted runoff to a less than significant level. Mitigation Measure WQ-1 (also referred to as AQU-1) requires water quality monitoring, compliance, stop-work conditions, and reporting. Mitigation Measure WQ-2 requires Project personnel to be trained on water quality compliance and hazardous materials spill prevention and response. Mitigation Measure WQ-3 requires a plan identifying hazardous materials, spill response materials, and procedures and measures in the event of a spill. Mitigation Measure WQ-4 requires a plan to prevent and control the spill of hazardous materials. Mitigation Measure WQ-5 requires containment and removal of all construction and maintenance waste, including potentially hazardous materials. Mitigation Measure WQ-6 requires hazardous material spill kits to be maintained onsite for the containment and control of releases. Mitigation Measure WQ-7 requires the development and implementation of best management practices to prevent stormwater runoff of construction-related pollutants. Mitigation Measure WQ-8 requires the development and implementation of a plan to address control of erosion and sedimentation related to Project access roads, work areas, and facilities. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, WQ-7, and WQ-8 have been included in the MMRP adopted concurrently with these findings.

Impact 4.13-4

The State Water Board finds that the potential release of pollutants due to flooding is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.13.5.4 of the Final EIR explains that although the Project is located in an area with minimal flood hazards, a flooding event could result in the release of pollutants due to the flooding of fuel storage or an accidental spill of hazardous materials. The Project could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, and WQ-7, which Rugraw has agreed to implement, would reduce the impact of pollutants released due to flooding to a less than significant level. Mitigation Measure WQ-2 requires Project personnel to be trained on water quality compliance and

hazardous materials spill prevention and response. Mitigation Measure WQ-3 requires a plan identifying hazardous materials, spill response materials, and procedures and measures in the event of a spill. Mitigation Measure WQ-4 requires a plan to prevent and control the spill of hazardous materials. Mitigation Measure WQ-5 requires containment and removal of all construction and maintenance waste, including potentially hazardous materials. Mitigation Measure WQ-6 requires hazardous material spill kits to be maintained onsite for the containment and control of releases. Mitigation Measure WQ-7 requires the development and implementation of best management practices to prevent stormwater runoff of construction-related pollutants. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, and WQ-7 have been included in the MMRP adopted concurrently with these findings.

Impact 4.13-5

The State Water Board finds that potential conflicts with water quality control plans are a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

As the Final EIR explains, the Basin Plan designates the beneficial uses of water to be protected in South Fork Battle Creek and water quality objectives necessary to protect those uses. Section 4.13.5.5 of the Final EIR explains that water quality objectives in the Basin Plan include temperature, dissolved oxygen, pH, and turbidity. Project construction activities in and adjacent to South Fork battle Creek have the potential to result in a violation of these water quality objectives. Project operational and maintenance activities could result in erosion or sedimentation which may lead to a violation of water quality objectives. In addition, the Project will use and store hazardous materials such as fuel and oil, which could accidentally spill and result in a violation of water quality objectives. Pesticide and herbicide use also has the potential to result in a violation of water quality objectives. The Project could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, WQ-7, WQ-8, and WQ-9, which Rugraw has agreed to implement, would reduce the impacts of conflicts with water quality control plans to a less than significant level. Mitigation Measure WQ-1 (also referred to as AQU-1) requires water quality monitoring, compliance, stop-work conditions, and reporting. Mitigation Measure WQ-2 requires Project personnel to be trained on water quality compliance and hazardous materials spill prevention and response. Mitigation Measure WQ-3 requires a plan identifying hazardous materials, spill response materials, and procedures and measures in the event of a spill. Mitigation Measure WQ-4 requires a plan to prevent and control the spill of hazardous materials. Mitigation Measure WQ-5 requires containment and removal of all construction and maintenance waste, including potentially hazardous materials. Mitigation Measure WQ-6 requires hazardous material spill kits to be maintained onsite for the containment and control of releases. Mitigation Measure WQ-7 requires the development and implementation of best management practices to

prevent stormwater runoff of construction-related pollutants. Mitigation Measure WQ-8 requires the development and implementation of a plan to address control of erosion and sedimentation related to Project access roads, work areas, and facilities. Mitigation Measure WQ-9 requires pesticide and herbicide best management practices. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, WQ-5, WQ-6, WQ-7, WQ-8, and WQ-9 have been included in the MMRP adopted concurrently with these findings.

Impact 4.15-1

The State Water Board finds that the potential increase in noise due to Project construction activities is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.15.5.1 of the Final EIR explains that the Project is in a rural area with a generally low ambient noise level. Project construction activities, which require the use of heavy equipment for clearing, excavating, and construction of Project facilities, will increase ambient noise levels. While most of the construction activities would occur in areas with no adjacent sensitive receptors, a portion of the transmission line is near existing residences, and transmission line construction will involve heavy equipment and helicopter use. Although construction is estimated to take six months, Project construction activities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measures NOISE-1, NOISE-2 and NOISE-3, which Rugraw has agreed to implement, would reduce noise impacts to a less than significant level. Mitigation Measure NOISE-1 implements general noise protection and reduction measures by requiring noise control devices such as mufflers and limiting the idle time of construction equipment. Mitigation Measure NOISE-2 limits the hours of Project construction activities occurring within 500 feet of residences. Mitigation Measure NOISE-3 requires notification to nearby residents prior to the start of construction activities near residences. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measures NOISE-1, NOISE-2, and NOISE-3 have been included in the MMRP adopted concurrently with these findings.

Impact 4.19-1

The State Water Board finds that the potential impairment of an emergency response plan or emergency evacuation plan is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.19.5.1 of the Final EIR explains that roads used to access the Project area are also used by emergency fire vehicles, and that Project construction traffic could

delay or impair emergency vehicle access and evacuation routes. This could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure FIRE-1, which Rugraw has agreed to implement, requires the implementation of a WMP reviewed and approved by the California Public Utilities Commission (CPUC) and California Department of Forestry and Fire Protection (CAL FIRE). Mitigation Measure FIRE-1 would reduce impacts relating to the impairment of an adopted emergency response plan or emergency evacuation plan to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure FIRE-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.19-2

The State Water Board finds that the potential for Project activities and facilities to exacerbate wildfire risks and expose people nearby to fire-related pollutants is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.19.5.2 of the Final EIR explains that Project activities require the use of equipment with the potential to ignite vegetation or construction materials and cause a wildfire, thereby exposing people nearby to fire-related pollutant concentrations. The Final EIR also explains that transmission lines have been a source of fires in California. Project activities and facilities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure FIRE-1, which Rugraw has agreed to implement, requires the implementation of a WMP for all stages of the Project, which must be consistent with state laws and regulations for fire prevention and protection. The WMP must also identify fire safety measures and include fire prevention and control requirements. Mitigation Measure FIRE-1 would reduce the Project's impact on wildfire risks and fire-related pollutants to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure FIRE-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.19-3

The State Water Board finds that the potential for the Project's installation of infrastructure to exacerbate fire risk is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.19.5.3 of the Final EIR explains that the Project area is in a Very High Fire Hazard Severity Zone, and Project activities, such as the use of diesel and fuel powered vehicles, welding, or cutting, could ignite a fire. The Final EIR also explains that the Project requires the installation of infrastructure, including a transmission line, which

could be a source of fire. Although vegetation management would reduce the risk of ignition and rights of way for the transmission line, service station line, and pipeline/penstock would serve as fire breaks, Project activities and facilities could exacerbate fire risk. These activities and facilities could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure FIRE-1, which Rugraw has agreed to implement, requires the implementation of a WMP consistent with state laws and regulations for fire prevention and protection and reviewed and approved by the CPUC and CAL FIRE. Mitigation Measure FIRE-1 would reduce the Project's impact on fire risks due to infrastructure to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure FIRE-1 has been included in the MMRP adopted concurrently with these findings.

Impact 4.19-4

The State Water Board finds that the Project's potential to increase fire risks and result in post-slope fire instability is a potentially significant environmental effect, but that changes or alterations have been required in, or incorporated into, the Project which will reduce the potential impact to less than significant. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

Section 4.19.5.4 of the Final EIR explains that the Project would not increase the risks of downstream flooding or landslides. This section also explains that the Project's transmission line could increase fire risks in the area, resulting in post-slope fire instability. Therefore, the Project could result in a significant impact without mitigation.

As discussed in the Final EIR, Mitigation Measure FIRE-1, which Rugraw has agreed to implement, requires the implementation of a WMP, which identifies methods used to treat post-fire areas and ensures slopes are adequately stabilized. Mitigation Measure FIRE-1 would reduce the Project's impact on post-slope fire instability to a less than significant level. In accordance with CEQA Guidelines section 15091, subdivision (d), Mitigation Measure FIRE-1 has been included in the MMRP adopted concurrently with these findings.

Significant and Unavoidable Impacts

Impact 4.3-3/6.3.13¹⁵

The State Water Board finds that the Project's transmission line and associated poles and towers would result in significant adverse impacts to visual character or the quality of public views and that it is not feasible¹⁶ to mitigate or avoid this impact. (Cal. Code Regs., tit. 14, § 15091, subd. (a)(3).)

The Project includes construction of 12 miles of transmission line, two miles of which would be located on Hazen Road and South Powerhouse Road. The transmission line would be supported by both composite poles and 'H' towers. The transmission line, poles and towers would be new man-made structures added to the existing rural visual environment currently experienced by residents. Residents located along Hazen Road and South Powerhouse Road would have near-distance views of the transmission line and associated poles and towers. In response to concerns expressed by residents of Manton related to the transmission line, Rugraw relocated the originally proposed alignment, limiting the number of residents who would be affected. Although views of the transmission line would be partially screened, the visibility of the transmission line would be high due to residences located within 200 feet of the transmission line.

An underground transmission line is not a feasible project alternative due to economic and other considerations. The increased costs of installing 12 miles of necessary transmission line underground are prohibitive. In addition, an underground transmission line would have considerable adverse environmental impacts. For example, installing an underground transmission line would require significantly more land clearing and earth moving and result in substantially greater air pollution (due to engine exhaust and dust) and noise compared to installing an above-ground transmission line. Moreover, the difficulty of identifying and repairing damage to an underground transmission line could pose challenges during Project operations, which may impact the Project's ability to reliably deliver power to the electric grid and in turn satisfy the objectives of helping to meet California's power requirements and Renewables Portfolio Standard requirements.

¹⁵ As noted in the Final EIR, the Project could contribute to significant cumulative aesthetic impacts based on the Project itself causing a significant and unavoidable change in the visual environment. Any significant and unavoidable cumulative impacts are solely due to the Project's own significant and unavoidable impacts and are not expected to be separately cumulatively considerable, i.e., they are the same impact.

¹⁶ CEQA defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." (Cal. Code Regs., tit. 14, § 15364.)

Therefore, the addition of the transmission line and associated poles and towers would be a significant and unavoidable impact of the Project. There are no feasible measures available that would reduce the impact to less than significant.

Analysis of alternatives shows that any alternative that involves the construction and operation of the Project (i.e., every alternative other than the No Project alternative, which would not achieve the Project objectives) would result in significant and unavoidable impacts to visual character or the quality of public views. The Proposed Project, Alternative 1, Alternative 2, and Alternative 3 would all result in the same significant and unavoidable impact. Under the No Project Alternative, this impact would be avoided because there would be no transmission line or associated poles and towers; however the No Project Alternative would not achieve the Project's objectives, including providing a new source of renewable energy.

Statement of Overriding Considerations

The Project will result in the construction of 12 miles of transmission line as well as poles and towers necessary to support the transmission line. The transmission line and associated poles and towers will have a significant and unavoidable impact on the visual character or public views of the site and its surroundings.

The specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of the Project include:

- 1) The Project is expected to generate an average of 25,000 MWh of additional renewable energy annually, and contribute to California's Renewable Portfolio Standard program, which requires that a specific percentage of electricity retail sales must come from renewable energy resources.
- 2) The Project would generate electricity to help meet California's power requirements and therefore contribute to stabilization of the electric grid.
- 3) The Project would provide short-term benefits to the economy by hiring employees during construction. The Project would provide long-term benefits to the economy by hiring employees for operations and routine maintenance.

As discussed in sections 3.4.2.2, 4.6, and 5.4.1.3 of the Final EIR, Alternative 2 is more protective of foothill yellow-legged frog egg masses and early tadpoles than the other project alternatives, and therefore better meets the Project's third objective. The Final EIR identifies Alternative 2 as the Environmentally Superior Alternative among the Project alternatives. There is no difference between Alternative 2 and the Proposed Project with respect to the identified significant and unavoidable aesthetics impact.

The Project's social, economic, and other benefits support the State Water Board's issuance of a water quality certification for approval of Alternative 2 despite the significant and unavoidable impact due to the Project's transmission line and associated poles and towers.

Conclusion

The State Water Board recognizes that the Project would have a significant and unavoidable impact on aesthetics, as addressed above and discussed in the Final EIR. The benefits of the Project must be balanced against any adverse impacts. In balancing these considerations, the State Water Board has determined that the social, economic, and other benefits of the Project outweigh its significant and unavoidable impact on aesthetics. Based on the Final EIR and the record, the State Water Board finds that in light of the Project's benefits, its significant and unavoidable environmental impact is acceptable.