

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the

**SOUTH FEATHER WATER AND POWER AGENCY
SOUTH FEATHER POWER PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2088

SOURCES: South Fork Feather River, Sly Creek, Lost Creek, and Slate Creek

COUNTIES: Butte, Yuba, and Plumas

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

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SOURCES: South Fork Feather River, Sly Creek, Lost Creek, and Slate Creek

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WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

1.0 Project Description

On March 26, 2007, the South Feather Water and Power Agency (SFWPA)¹, applied to the Federal Energy Regulatory Commission (FERC) for a new license for the South Feather Power Project (Project). The Project is also referred to as FERC Project No. 2088. FERC issued the original Project license on July 21, 1952. The original license expired on March 31, 2009. Since that time, the Project has operated under annual licenses issued by FERC.

The Project is a water supply and hydroelectric power project located on the South Fork Feather River, Lost Creek, Sly Creek, and Slate Creek, in Butte, Yuba, and Plumas counties, California. The Project occupies approximately 1,977 acres of National Forest System federal lands administered by the Plumas National Forest and 10.57 acres of federal lands administered by the United States Bureau of Land Management. The Project can store approximately 172,000 acre-feet (ac-ft) of water (gross storage), and annually generates an average of about 514.1 gigawatt-hours of power. In addition to power generation, Project facilities are used for water storage and delivery to provide: (1) irrigation water to a service area of more than 49,000 acres; and (2) domestic water to approximately 6,500 households. SFWPA proposes no new capacity.

The Project consists of four hydroelectric developments: (1) Sly Creek; (2) Woodleaf; (3) Forbestown; and (4) Kelly Ridge. Collectively, the Project consists of five dams and five reservoirs (Little Grass Valley, Sly Creek, Lost Creek, Ponderosa, and Miners Ranch), three diversion dams (South Fork, Forbestown, and Slate Creek), four powerhouses (Sly Creek,

¹ SFWPA was known as the Oroville-Wyandotte Irrigation District until May 27, 2003, at which time its Board of Directors changed the agency's name.

Woodleaf, Forbestown, and Kelly Ridge), six conduit tunnels, and associated equipment and transmission facilities.

Water generally moves through the Project from one hydroelectric development to another, starting with the Sly Creek Development at the highest elevation, moving to the Woodleaf Development, the Forbestown Development, and finally the Kelly Ridge Development. (Attachment A, Maps 1, 2, 3, and 4.) Water for the Project comes from two watersheds: (1) the Upper Feather River watershed (Sly Creek, Woodleaf, Forbestown, and Kelly Ridge developments); and (2) the Yuba River watershed (Slate Creek, which feeds into the Sly Creek Development). The Project ultimately discharges water into the Thermalito Diversion Pool, which is located in the Lower Feather River watershed. Each development is described further below.

1.1 Sly Creek Development

The Sly Creek Development diverts water from the South Fork Feather River, Slate Creek, Sly Creek, and Lost Creek. Little Grass Valley Reservoir stores and releases water on the South Fork Feather River, which is then diverted into Sly Creek Reservoir via the South Fork Diversion Tunnel at the South Fork Diversion Dam. Water is also diverted from Slate Creek into Sly Creek Reservoir through the Slate Creek Diversion Tunnel at Slate Creek Diversion Dam. Water stored in Sly Creek Reservoir is ultimately released through the Sly Creek Penstock to the Sly Creek Powerhouse and into the Woodleaf Development. Power generated at Sly Creek Powerhouse is delivered from the switchyard to the grid via Pacific Gas and Electric Company's (PG&E's) 115-kilovolt (kV) Sly Creek Transmission Line (FERC Project No. 4851) and 115-kV Woodleaf-Kanaka Junction Transmission Line (FERC Project No. 2281). (See Attachment A, Maps 1, 2, and 3.) The main facilities associated with the Sly Creek Development are:

- Little Grass Valley Dam and Reservoir – The 210-foot (ft) high, 840-ft long, rock-filled Little Grass Valley Dam, located on the South Fork Feather River, has a crest elevation of 5,052 ft. Little Grass Valley Dam includes a 180-ft long spillway controlled by two 14-ft high by 40-ft long steel radial gates. The capacity of Little Grass Valley Reservoir is 89,804 ac-ft. With the spill gates closed, the reservoir covers 1,650 acres at a flood level elevation of 5,047 ft.
- Little Grass Valley Reservoir Recreation Facility – The Little Grass Valley Reservoir Recreation Facility includes nine campgrounds, three boat launches, two day-use beaches, an amphitheater, and a 13.5-mile long fishing trail that includes an 800-ft stretch accessible to persons with disabilities.
- South Fork Diversion Dam – The 60-ft high, 167-ft long, concrete overflow arch South Fork Diversion Dam is located on the South Fork Feather River and has four spillway bays. The lower two bays are located in the center of the dam, with the two higher bays on each side. South Fork Diversion Dam forms an 87 ac-ft impoundment that covers approximately nine acres at a normal maximum water surface elevation of 3,557 ft.
- South Fork Diversion Tunnel – The 14,256-ft long South Fork Diversion Tunnel includes two electric hoist slide gates that control the tunnel diversions. The unpressurized tunnel diverts up to 600 cubic feet per second (cfs) from the impoundment behind South Fork Diversion Dam into Sly Creek Reservoir.

- Slate Creek Diversion Dam – The 62-ft high, 223.5-ft long, concrete overflow arch Slate Creek Diversion Dam, located on Slate Creek, has three spillway bays, with the lower bay in the center of the dam and two higher bays on each side of the dam. Slate Creek Diversion Dam’s original construction design formed an impoundment that held approximately 643 ac-ft².
- Slate Creek Diversion Tunnel – The 13,200-ft long Slate Creek Diversion Tunnel has two manual slide gates that control tunnel diversions. Water from behind Slate Creek Diversion Dam in the Yuba River watershed is diverted to Sly Creek Reservoir in the Upper Feather River watershed. Although the unpressurized tunnel has a maximum capacity of 848 cfs, Project water rights limit flow diversions to 600 cfs³.
- Sly Creek Dam and Reservoir – The 299-ft high, 1,200-ft long, earth-filled Sly Creek Dam, located on Lost Creek, has a crest elevation of 3,546 ft and includes a 649-ft long spillway controlled by one 16-ft high by 54-ft long, bottom-hinged pneumatically operated spill gate. With the spill gates closed, Sly Creek Reservoir can store 63,667 ac-ft and covers 619 acres at a normal maximum water surface elevation of 3,530 ft⁴.
- Sly Creek Reservoir Recreation Facility – The Sly Creek Reservoir Recreation Facility includes two campgrounds, two boat launches, and one day-use beach.
- Sly Creek Penstock – The 1,100-ft long Sly Creek Penstock delivers water from Sly Creek Reservoir to the Sly Creek Powerhouse.
- Sly Creek Powerhouse – The Sly Creek Powerhouse releases water to Lost Creek Reservoir. Sly Creek Powerhouse contains one 17,690 horsepower reaction turbine. The reaction turbine directly connects to a 13,500 kilovolt-amperes (kVA) generator.
- Sly Creek Powerhouse Switchyard – The Sly Creek Powerhouse Switchyard contains one 16,000 kVA transformer. PG&E’s 115-kV Sly Creek Transmission Line and 115-kV Woodleaf-Kanaka Junction Transmission Line deliver power from the switchyard to the grid.

1.2 Woodleaf Development

The Woodleaf Development diverts water from the Sly Creek Development into Lost Creek Reservoir for release through the Woodleaf Power Tunnel and Woodleaf Powerhouse and into the Forbestown Development. Power generated at Woodleaf Powerhouse is delivered from the switchyard to the grid via PG&E’s 115-kV Woodleaf-Kanaka Junction Transmission Line. (See Attachment A, Maps 1 and 3.) The main facilities associated with the Woodleaf Development are:

- Lost Creek Dam and Reservoir – Lost Creek Dam is a 122-ft high, 486-ft long, concrete overflow arch dam. Lost Creek Dam, located on Lost Creek, has a normal maximum water surface elevation of 3,279.05 ft and includes a 251-ft long uncontrolled spillway.

² Due to the accumulation of sediments, the Slate Creek impoundment currently retains negligible storage capacity.

³ Currently, when Sly Creek Reservoir has a large volume of water, diversions are sometimes further limited to 500 cfs due to backwater influence.

⁴ The statistics reflect facilities modifications to Sly Creek Dam made in 2011.

The 4,806 ac-ft Lost Creek Reservoir covers 137 acres at a normal maximum water surface elevation of 3,283 ft.

- Woodleaf Power Tunnel – Woodleaf Power Tunnel is an 18,385-ft long, pressurized conveyance system that includes one electric hoist slide gate that controls tunnel diversions. The tunnel diverts up to 620 cfs from Lost Creek Reservoir into the Woodleaf Penstock.
- Woodleaf Penstock – The 3,519-ft long Woodleaf Penstock delivers water to the Woodleaf Powerhouse located on the South Fork Feather River.
- Woodleaf Powerhouse – The Woodleaf Powerhouse releases water into the South Fork Feather River just upstream of Forbestown Diversion Dam. Woodleaf Powerhouse contains one 80,000-horsepower Pelton turbine that connects directly to a 65,500-kVA generator.
- Woodleaf Powerhouse Switchyard – The Woodleaf Powerhouse Switchyard contains one multiple-power-rated (48.75/65/81.25 megavolt-amperes) transformer, as replaced in 2008. PG&E's 115-kV Woodleaf-Kanaka Junction Transmission Line delivers power from the switchyard to the grid.

1.3 Forbestown Development

The Forbestown Development diverts water from the Woodleaf Development via the Forbestown Diversion Dam on the South Fork Feather River. Water from the Forbestown Diversion Dam is conveyed through the Forbestown Power Tunnel into the Forbestown Powerhouse for release into the Kelly Ridge Development. Power generated at Forbestown Powerhouse is delivered from the Forbestown Powerhouse Switchyard to the grid via PG&E's 115-kV Woodleaf-Kanaka Junction Transmission Line. (See Attachment A, Maps 1 and 3.) The main facilities associated with the Forbestown Development are:

- Forbestown Diversion Dam – Forbestown Diversion Dam is an 80-ft high, 256-ft long, concrete overflow arch dam. The diversion dam is located on the South Fork Feather River and crests at an elevation of 1,783 ft. Diversion dam infrastructure includes five, 46-ft wide, uncontrolled overflow spillway sections with a combined width of approximately 240 ft. Forbestown Diversion Dam and the spillway structure create a 352 ac-ft impoundment that covers approximately 12 acres at a normal maximum water surface elevation of 1,783 ft.
- Forbestown Power Tunnel – The 18,388-ft long Forbestown Power Tunnel diverts up to 660 cfs from the Forbestown impoundment into the Forbestown Penstock.
- Forbestown Penstock – The 1,487-ft long Forbestown Penstock delivers water to the Forbestown Powerhouse.
- Forbestown Powerhouse – The Forbestown Powerhouse releases water to Ponderosa Reservoir (part of Kelly Ridge Development) on the South Fork Feather River. Forbestown Powerhouse contains one 54,500-horsepower vertical Francis turbine, which connects directly to a 40,500-kVA generator.

- Forbestown Powerhouse Switchyard – The Forbestown Powerhouse Switchyard contains one 35,200-kVA transformer. PG&E's 115-kV Woodleaf-Kanaka Junction Transmission Line delivers power from the switchyard to the grid.

1.4 Kelly Ridge Development

The Kelly Ridge Development diverts water from Ponderosa Reservoir on the South Fork Feather River and releases it through Miners Ranch Canal and Tunnel into Miners Ranch Reservoir. From Miners Ranch Reservoir, water is re-diverted into the Kelly Ridge Power Tunnel for release through the Kelly Ridge Powerhouse. The Kelly Ridge Powerhouse discharges into Thermalito Diversion Pool, just below Oroville Dam, which is part of the Oroville Facilities Project (FERC Project No. 2100). The Oroville Facilities Project is owned and operated by the California Department of Water Resources (DWR). Power generated at the Kelly Ridge Powerhouse is delivered from the Kelly Ridge Powerhouse Switchyard to the grid via PG&E's 60-kV Kelly Ridge-Elgin Junction Transmission Line. (See Attachment A, Maps 1, 3, and 4.) The main facilities associated with the Kelly Ridge Development are:

- Ponderosa Dam and Reservoir – Ponderosa Dam is a 160-ft high, 650-ft long, earth-filled dam that releases water into the 3.6 million ac-ft Lake Oroville. The dam has a crest elevation of 985 ft and includes a 352-ft long spillway, and two 7-ft, 7.5-inch high by 51-ft long, steel gates that control the spillway. The dam impounds the 4,178 ac-ft Ponderosa Reservoir, which covers 103 acres at a normal maximum water surface elevation of 960 ft.
- Ponderosa Diversion Tunnel – Ponderosa Diversion Tunnel is 516-ft long and includes one hydraulic gate that controls diversions. The unpressurized tunnel diverts up to 300 cfs from Ponderosa Reservoir into the Miners Ranch Canal.
- Miners Ranch Canal – Miners Ranch Canal diverts water from the Ponderosa Diversion Tunnel into the Miners Ranch Tunnel.
- Miners Ranch Tunnel – Miners Ranch Tunnel is 23,946-ft long and diverts up to 300 cfs from Miners Ranch Canal into Miners Ranch Reservoir.
- Miners Ranch Dam and Reservoir – Miners Ranch Dam is a 55-ft high, 1,650-ft long, earth-filled, off-stream structure. Miners Ranch Dam has a crest elevation of 895 ft and includes a 1,175-ft long uncontrolled spillway. Miners Ranch Dam impounds the 896 ac-ft Miners Ranch Reservoir, which covers 48 acres at a normal maximum water surface elevation of 890 ft.
- Kelly Ridge Power Tunnel – Kelly Ridge Power Tunnel is a 6,736-ft long, 9-ft by 8-ft diameter, pressurized tunnel. Kelly Ridge Power Tunnel includes one 4-ft high by 8-ft long, fixed wheel gate that controls diversions. The tunnel diverts up to 260 cfs from Miners Ranch Reservoir into the Kelly Ridge Penstock.
- Kelly Ridge Penstock – Kelly Ridge Penstock is 6,064-ft long and delivers water to the Kelly Ridge Powerhouse.
- Kelly Ridge Powerhouse – The Kelly Ridge Powerhouse releases water to the Thermalito Diversion Pool, downstream of Oroville Dam, which is part of DWR's Oroville Facilities

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Project. Kelly Ridge Powerhouse contains one 13,000-horsepower vertical Francis turbine that connects directly to an 11,000-kVA generator.

- Kelly Ridge Powerhouse Switchyard – The Kelly Ridge Powerhouse Switchyard contains one 11,000-kVA transformer. PG&E’s 60-kV Kelly Ridge-Elgin Junction Transmission Line delivers power from the switchyard to the grid.

1.5 Water Rights

SFWPA holds three water right licenses for non-consumptive use of water for power generation for the Project, which are summarized in Table A.

Table A. Water Right Licenses Held by SFWPA for the Project

Application No. / License No.	Face Value (ac-ft/year)	Source	Purpose of Use	Diversion (cfs) and Storage (ac-ft)	Points of Re-diversion	Places of Use (Powerhouses)
A013676 / L010939	318,593.3	<ul style="list-style-type: none"> • Lost Creek • South Fork Feather River 	Power	<ul style="list-style-type: none"> • 77,300 ac-ft at Little Grass Valley and Sly Creek reservoirs from South Fork Feather River • 200 cfs at South Fork Feather River • 24,100 ac-ft at Sly Creek Reservoir from Lost Creek • 100 cfs at Lost Creek 	<ul style="list-style-type: none"> • South Fork Diversion Dam • Sly Creek Dam outlet • Lost Creek Dam • Forbestown Diversion Dam • Ponderosa Diversion Dam 	<ul style="list-style-type: none"> • Sly Creek • Woodleaf • Forbestown • Kelly Ridge
A013956 / L010940	251,393.3	<ul style="list-style-type: none"> • Slate Creek 	Power	<ul style="list-style-type: none"> • 300 cfs at Slate Creek • 34,200 ac-ft at Sly Creek Reservoir 	<ul style="list-style-type: none"> • Sly Creek Dam outlet • Lost Creek Dam • Forbestown Diversion Dam • Ponderosa Diversion Dam 	<ul style="list-style-type: none"> • Sly Creek • Woodleaf • Forbestown • Kelly Ridge
A014112 / L010941	217,193.3	<ul style="list-style-type: none"> • Lost Creek • South Fork Feather River 	Power	<ul style="list-style-type: none"> • 100 cfs at South Fork Feather River • 200 cfs at Lost Creek 	<ul style="list-style-type: none"> • Sly Creek Dam outlet • Lost Creek Dam • Forbestown Diversion Dam • Ponderosa Diversion Dam 	<ul style="list-style-type: none"> • Sly Creek • Woodleaf • Forbestown • Kelly Ridge

2.0 Federal Energy Regulatory Commission Proceedings

SFWPA submitted a Notice of Intent and Initial Information to relicense the Project under FERC’s Traditional Licensing Process on September 30, 2003. (18 C.F.R. § 16.8.) On March 26, 2007, SFWPA filed its final license application for the Project with FERC. FERC issued a final Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C § 4321 et seq.) for the Project on June 4, 2009.

2.1 Settlement Agreement

Following construction of DWR’s Oroville Facilities Project in the 1960’s the point of discharge for the Kelly Ridge Powerhouse became the Thermalito Diversion Pool, a feature of the State Water Project, located downstream of Oroville Dam and upstream of the Feather River Fish Hatchery. Discharges to the Thermalito Diversion Pool can impact water temperature in the

downstream reaches of the Feather River and affect DWR's ability to meet certain Feather River water temperature requirements that are stipulated in the March 2006 *Settlement Agreement for Licensing of the Oroville Facilities*⁵. To address this issue and to resolve related litigation, SFWPA, DWR, and State Water Contractors, Incorporated executed a settlement agreement⁶ on October 23, 2012 (Settlement Agreement).

The Settlement Agreement includes the following terms:

- SFWPA will provide DWR with real-time information regarding the temperature of water released from Kelly Ridge Powerhouse.
- DWR may request changes to SFWPA's Kelly Ridge Powerhouse annual outage schedule.
- DWR may request a shutdown (i.e., outage) of the Kelly Ridge Powerhouse. During shutdown, SFWPA will spill into Lake Oroville, which is owned and operated by DWR, the amount of water that would have gone through the Kelly Ridge Powerhouse were it not for the DWR-requested outage. DWR will reimburse SFWPA for lost generation revenue and penalties resulting from a DWR-requested outage.
- Prior to re-starting the Kelly Ridge Powerhouse after an outage, SFWPA will drawdown Miners Ranch Reservoir⁷ to its minimum pool level to remove warm water and refill the reservoir with cool water from Ponderosa Reservoir.

In a letter to FERC dated June 17, 2014, SFWPA requested that FERC incorporate the Settlement Agreement terms into the new license for the Project.

3.0 Regulatory Authority

3.1 Water Quality Certification and Related Authorities

The federal Clean Water Act (33 U.S.C. § 1251 et seq.) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251 (a).) Section 101 of the Clean Water Act (33 U.S.C. § 1251) requires federal agencies to "co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources."

Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires every 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

⁵ The agreement can be found online at:

https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/oroville_ferc2100/oroville2006settlementagreement.pdf. Accessed November 8, 2018.

⁶ *Settlement Agreement by and Among South Feather Water & Power Agency, Department of Water Resources of the State of California and State Water Contractors, Incorporated*. The Settlement Agreement can be found online at:

https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/southfeather_ferc2088/southfeather_agree.pdf. Accessed November 20, 2018.

⁷ Drawdown of Miners Ranch Reservoir may be accomplished by withdrawals at the Miners Ranch Water Treatment Plant and releases to the Bangor Canal from Miners Ranch Reservoir, after the inflow to Miners Ranch Reservoir has been stopped and flows have been discharged to Lake Oroville upstream at Ponderosa Dam.

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 water quality certification (certification) to prescribe effluent limitations and other limitations 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 its Executive Director. (Cal. Code Regs., tit. 23, § 3838, subd. (a).) The State Water Board may add conditions to any certification to “ensure that all activities will comply with applicable water quality standards and other appropriate requirements.” (Cal. Code Regs., tit. 23, § 3859, subd. (a).)

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

SFWPA initially submitted an application for a certification to the State Water Board on May 18, 2008. The application initiated a one-year time period for the Executive Director to act on the request for certification. SFWPA has subsequently withdrawn and simultaneously resubmitted its application for a certification on an annual basis since May 4, 2009. The most recent application was filed with the Executive Director on January 29, 2018.

On June 10, 2008, State Water Board staff provided notice of receipt of a complete application for the Project to the applicable parties pursuant to California Code of Regulations, title 23, section 3835, subdivision (c). State Water Board staff provided public notice of the application, pursuant to California Code of Regulations, title 23, section 3858, by posting information describing the Project on the State Water Board’s website on November 17, 2009.

The State Water Board released a draft certification for the Project on November 17, 2017. A notice soliciting comments on the draft certification for the Project was sent to Project interested parties and the State Water Board’s “Water Rights Water Quality Certification” email subscription list on the same date. In response to the notice, the State Water Board received comment letters from the following stakeholders: American Whitewater and California Sportfishing Protection Alliance; United States Forest Service (Forest Service); California Department of Fish and Wildlife (CDFW); United States Fish and Wildlife Service (USFWS); SFWPA; and members of the public. The comments are posted on the State Water Board Project webpage⁸. On November 20, 2017, State Water Board staff forwarded the draft certification to the Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board) for comment. Central Valley Regional Water Board staff responded with

⁸ The Project webpage is available online at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/southfeather_ferc2088.shtm
l. Accessed November 20, 2018.

comments on September 19, 2018. State Water Board staff addressed comments from the Central Valley Regional Water Board in the final certification.

3.2 Water Quality Control Plans and Related Authorities

The California Regional Water Quality Control Boards (Regional Water Boards) have primary responsibility for the formulation and adoption of water quality control plans for their respective regions, subject to State Water Board and United States Environmental Protection Agency (USEPA) approval, as appropriate. (Wat. Code, § 13240 et seq.) 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.) For a specified area, the 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 or the prevention of nuisance, and a program of implementation to achieve the water quality objectives. (*Id.*, §§ 13241, 13050, subd. (h), and 13050, subd. (j).) The beneficial uses together with the water quality objectives that are contained in the water quality control plans, and state and federal anti-degradation requirements⁹ constitute California's water quality standards.

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)¹⁰. The Basin Plan designates the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses. The Project discharges to both Lake Oroville and the South Fork Feather River between Oroville Dam and Fish Barrier Dam. The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. As the Basin Plan has no listed beneficial uses specifically for the South Fork Feather River, the Central Valley Regional Water Board applies the Lake Oroville designations to the Project. Table 2-1 of the Basin Plan identifies the beneficial uses for Lake Oroville as: municipal and domestic supply; irrigation; hydropower generation; water contact recreation; other non-contact recreation; warm freshwater habitat; cold freshwater habitat; warm and cold freshwater spawning; and wildlife habitat. The Basin Plan has no beneficial uses listed specifically for the portions of the Feather River from downstream of Oroville Dam to Fish Barrier Dam, including for the Thermalito Diversion Pool into which the Project discharges water from the Kelly Ridge Powerhouse. The designations for the Feather River from Fish Barrier Dam to the Sacramento River applies to the Thermalito Diversion Pool¹¹. Table 2-1 of the Basin Plan identifies the beneficial uses for the Feather River from Fish Barrier Dam to the Sacramento River as: municipal and domestic supply; irrigation; contact recreation; canoeing and rafting; other non-contact recreation; warm and cold freshwater habitat; warm and cold migration; warm and cold spawning; and wildlife habitat.

The Project diverts water from the Yuba River watershed at the Slate Creek diversion dam on Slate Creek¹². The Basin Plan identifies beneficial uses for Slate Creek as: municipal and domestic supply; irrigation; stock watering; power; water contact recreation and canoeing and

⁹ State Water Board Resolution No. 68-16 and 40 C.F.R § 131.12, respectively.

¹⁰ *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region for the Sacramento River Basin and the San Joaquin River Basin*. Fifth Edition. Revised May 2018 (with Approved Amendments).

¹¹ Central Valley Regional Water Board Cleanup and Abatement Order R5-2016-0710 for Mineral Resources LLC and MRLLC Investors LP (Morris Ravine Quarry).

¹² Slate Creek is a tributary to the North Yuba River. Water from Slate Creek is diverted into Sly Creek Reservoir, which is a tributary to the South Fork Feather River in the Project area. The beneficial uses listed for "Yuba River - Sources to Englebright Reservoir" (Table 2-1 of the Basin Plan) apply to this reach.

rafting; other non-contact recreation; cold freshwater habitat; cold freshwater spawning; and wildlife habitat.

3.3 Construction General Permit

SFWPA may need to obtain coverage under the *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Water Quality Order No. 2009-0009-DWQ and National Pollutant Discharge Elimination System [NPDES] No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto). Coverage under the Construction General Permit may be required for activities that disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. Construction activity subject to the Construction General Permit includes clearing, grading, and disturbances, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

3.4 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; State Water Board Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by State Water Board Order No. 2014-0078-DWQ), 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.

3.5 California Environmental Quality Act

SFWPA is the lead agency for the Project for the purposes of California Environmental Quality Act (CEQA). (Pub. Resources Code, div. 13 [§ 21000 et seq.]; Cal. Code Regs., tit. 14, div. 6, ch. 3 [§ 15000 et seq.]) The State Water Board is a responsible agency under CEQA. FERC issued the draft EIS on November 7, 2008 and adopted the final EIS on June 4, 2009. The final EIS analyzed Project impacts as required under NEPA. SFWPA issued the Initial Study and Mitigated Negative Declaration (IS/MND) for the Project on February 1, 2010, which incorporated by reference FERC's final EIS. The SFWPA Board of Directors adopted the IS/MND for the Project on March 27, 2012 and filed a Notice of Determination with the State Clearinghouse on April 2, 2012.

State Water Board staff considered the IS/MND in developing this certification. The IS/MND did not identify potentially significant impacts or incorporate mitigation measures under CEQA that pertain to protection of resources within the State Water Board's purview. However, water quality protection measures and associated monitoring and reporting requirements were incorporated into conditions of this certification in accordance with California Code of Regulations, title 23, section 3859, subdivision (a). Table B identifies resource areas within the State Water Board's purview for which the IS/MND analyzed potential impacts and associated certification conditions with water quality protection, monitoring, and reporting requirements.

The State Water Board will file a Notice of Determination for the Project with the Office of Planning and Research within five days of issuance of this certification.

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

IS/MND Resource Area and Section	IS/MND Potential Impacts	Applicable Certification Condition(s)¹³
Geology and Soils Section 5.4.7(b)	Substantial soil erosion or loss of topsoil	Condition 13
Hazards and Hazardous Materials Section 5.4.8(b)	Release of hazardous materials into the environment	Conditions 13 and 35
Hydrology and Water Quality Section 5.4.9(c)	Altered drainage patterns which could result in substantial erosion or siltation	Condition 13
Hydrology and Water Quality Section 5.4.9(f)	Altered water temperatures	Conditions 4 and 18
Recreation Section 5.4.15(b)	Project includes recreation facilities or requires the construction or expansion of recreation facilities that might have an adverse physical effect on the environment	Condition 13

4.0 Rationale for Water Quality Certification Conditions

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

- SFWPA's application for a new hydropower license, submitted to FERC pursuant to 18 C.F.R. Parts 4 and 16;
- Comments submitted to FERC, SFWPA, and the State Water Board in response to the new hydropower license application and issuance of draft NEPA, CEQA, and certification documents;
- Final hydropower license conditions issued by the Forest Service pursuant to section 4(e) of the Federal Power Act (FPA) (Final 4(e) Terms and Conditions);
- FERC's EIS for the Project, prepared pursuant to NEPA;
- SFWPA's application for certification, submitted to the State Water Board pursuant to section 401 of the federal Clean Water Act;
- Recommended license terms and conditions submitted by state and federal agencies pursuant to FPA sections 10(a) and 10(j);

¹³ Monitoring and reporting requirements are included within the referenced certification condition(s).

- Existing and potential beneficial uses, associated water quality objectives, and implementation measures and programs described in the Basin Plan;
- Existing water quality conditions in the Project area and downstream receiving waters;
- SFWPA's IS/MND, prepared pursuant to CEQA;
- Project-related, controllable water quality factors; and
- Other information in the record, including related settlement agreements.

Any conditions that require development of a plan will require review, modification (if necessary), and approval by the Deputy Director. In addition, other regulatory agencies have specific authorities to approve plans and reports. SFWPA will not implement any plans required per this certification until receipt of Deputy Director approval and any other required approvals. The following describes the rationale used to develop the conditions in the certification.

4.1 Rationale for Condition 1: Minimum Instream Flow Requirements

Protection of the instream beneficial uses identified in the Basin Plan requires maintenance of adequate instream flows in the Feather River, Yuba River, and their tributaries. This certification contains minimum instream flow (MIF) requirements by water year type for Project-affected stream reaches. The MIF requirements in this certification are consistent with the MIFs established by the Forest Service in Condition 18 of its Final 4(e) Terms and Conditions. The approach for evaluating and developing MIF requirements for Project-affected stream reaches focused on the needs of aquatic-dependent biota (primarily fish, amphibians, benthic macroinvertebrates [BMI], and riparian vegetation) and included the following steps: (1) an evaluation of ecosystem attributes and their conditions under regulated and unimpaired streamflows; (2) development of a range of MIFs for the protection of aquatic resources in "normal" (or average) water years; and (3) an extensive hydrology evaluation to develop MIFs that mimic the natural hydrograph and further provide for aquatic resources and fluvial geomorphology processes in all water year types¹⁴. In general, emphasis is placed on developing MIFs that follow natural hydrograph patterns for the overall protection of the aquatic ecosystem.

California's history of drought and dry years underscores the importance of contingency planning for sustained extremely dry conditions. It is difficult to anticipate the specific impacts of consecutive dry years, or a long-term drought, and identify where limited water supplies may be best used during times of shortage. Condition 1(L) provides the opportunity, following consultation with State Water Board staff, Forest Service, CDFW, and USFWS, to request Deputy Director approval of a Revised Operations Plan during consecutive Dry water years or drought years. This condition provides flexibility for adaptive management during times of extreme water shortage.

4.2 Rationale for Condition 2: Gaging

Streamflow measurement is necessary to monitor compliance with MIF requirements and for water management. Condition 2 requires SFWPA to operate and maintain the existing streamflow gages and modify or install new gages when necessary, in order to ensure

¹⁴ *Rationale Report for Forest Service Preliminary Section 4(e) Terms and Conditions*, April 14, 2008.

compliance with MIF and ramping rate requirements included in Condition 1 and Condition 3, respectively. Condition 2 also requires SFWPA to provide annual hydrology summary reports to State Water Board staff and the United States Geological Survey (USGS) to ensure the information is both publicly available and properly evaluated for quality assurance and quality control.

4.3 Rationale for Condition 3: Ramping Rates

Project operations can cause rapid changes in streamflow and stream stage that are outside the natural range of variability. The rate at which these fluctuations occur may strand or otherwise impact aquatic species and create hazardous conditions for recreationists in Project-affected stream reaches. This certification requires implementation of interim and long-term ramping rates to facilitate flow fluctuations in a gradual, step-wise manner. General guidelines were used to develop the interim ramp-down rates required in Condition 3(A). However, no general guidelines were identified for interim ramp-up rates. Instead, Condition 3(A) requires certain Project operations, to the extent feasible, to be implemented in a manner that reduces rapid increases in flow. The Long-term Ramping Rates Plan (LTRR Plan) required by Condition 3(B) requires analysis and a proposal of what ramp-down and ramp-up rates, specific to Project operations, may be necessary to protect aquatic species in the long-term.

Condition 3(A) requires SFWPA to implement interim ramp-down rates for Project-affected stream reaches to prevent rapid streamflow and stream stage decreases. Rapid cessation of large flows can strand various life stages of foothill yellow-legged frogs (FYLF, *Rana boylei*)¹⁵ and rainbow trout (*Oncorhynchus mykiss*). Preventing rapid decreases in stream stage by prescribing ramp-down rates for flow releases and avoiding certain Project operations can prevent stranding of FYLF egg masses, tadpoles, juveniles, and rainbow trout. FYLF egg masses, tadpoles, and juveniles are present during the FYLF breeding season, April 16 through July 15. An assessment by Lind and Yarnell (2011)¹⁶ concluded that a ramp-down rate of four inches over seven days during the FYLF breeding season is likely to prevent stranding of FYLF egg masses. A technical report by Hunter (1992)¹⁷ concluded that a ramp-down rate of two inches per hour is likely to prevent stranding of rainbow trout. Interim ramp-down rates for Project-affected stream reaches were designed using these metrics to protect FYLF egg masses, tadpoles, juveniles, and rainbow trout.

Little Grass Valley Dam – The year-round interim ramping rates for the South Fork Feather River below Little Grass Valley Dam (Table 6) are approximately equal to a stage change of two inches per hour, which is expected to prevent stranding of rainbow trout. There are no known FYLF in the Little Grass Valley Dam reach.

South Fork Diversion Dam – The interim ramping rates for the South Fork Feather River below South Fork Diversion Dam (Table 7) are expected to prevent stranding of FYLF egg masses, tadpoles, juveniles, and rainbow trout. During the FYLF breeding season, and when flow is less than or equal to 73 cfs (i.e., the maximum capacity of the low-level outlet), the interim ramp-down rates achieve an approximate stage change of four inches over seven days.

¹⁵ The California Fish and Game Commission determined that the FYLF is a candidate species for listing under the California Endangered Species Act on June 21, 2017.

¹⁶ Lind, A., and S. Yarnell. 2011. Assessment of Risks to Sierra Nevada Populations of Foothill Yellow-Legged Frogs (*Rana boylei*) Under Varying Snow-Melt Hydrograph Recession Rates in Rivers. Placer County Water Agency.

¹⁷ Hunter, Mark A. 1992. Hydropower Flow Fluctuations and Salmonids: A Review of the Biological Effects, Mechanical Causes, and Options for Mitigation. State of Washington Department of Fisheries. Technical Report no. 119.

Outside of the FYLF breeding season, and when flow is less than or equal to 73 cfs, the interim ramp-down rates are approximately equal to a stage change of two inches per hour. When flow is greater than 73 cfs, SFWPA can only effect decreases in streamflow by coarse adjustments (i.e., opening the South Fork Diversion Tunnel). The South Fork Diversion Tunnel can be opened halfway or fully, and has a maximum capacity of 600 cfs. Consequently, ramp-down steps effected by opening the South Fork Diversion Tunnel are limited to increments of 300 cfs.

Forbestown Diversion Dam – The interim ramping rates for the South Fork Feather River below Forbestown Diversion Dam (Table 8) are expected to prevent stranding of FYLF egg masses, tadpoles, juveniles, and rainbow trout. During the FYLF breeding season, SFWPA can regulate decreases in flow by changing Woodleaf Powerhouse and Forbestown Powerhouse operations or by using the low-level outlet at Forbestown Diversion Dam. Powerhouse operations can be regulated by diverting up to 600 cfs of water into the Forbestown Power Tunnel or Woodleaf Powerhouse. However, powerhouse operations are not precise enough to accurately ramp between MIFs. This can be achieved only with the low-level outlet at flows less than or equal to 73 cfs (i.e., the maximum capacity of the low-level outlet).

Lost Creek Dam – The interim ramping rates for Lost Creek below Lost Creek Dam (Table 9) are expected to prevent stranding of FYLF egg masses, tadpoles, juveniles, and rainbow trout. During the FYLF breeding season, and when flow is less than or equal to 500 cfs (i.e., approximately the maximum capacity of the Lost Creek Dam regulating valves), the required interim ramp-down rates effect a stage change of approximately four inches over seven days. Outside of the FYLF breeding season, and when flow is less than or equal to 500 cfs, the required interim ramp-down rates effect a stage change of approximately two inches per hour.

Slate Creek Diversion Dam – Sediment accumulation behind Slate Creek Diversion Dam impacts the operability of the low-level outlet, which is the only regulating valve at Slate Creek Diversion Dam. The interim ramping rates for Slate Creek below Slate Creek Diversion Dam (Table 10), which can only be implemented when the low-level outlet is operational, are expected to prevent stranding of FYLF egg masses, tadpoles, juveniles, and rainbow trout. During the FYLF breeding season, and when flow is less than or equal to 73 cfs (i.e., the maximum capacity of the low-level outlet), the required interim ramp-down rates effect a stage change of approximately four inches over seven days. Outside of the FYLF breeding season, and when flow is less than or equal to 73 cfs, the required interim ramp-down rates effect a stage change of approximately two inches per hour. When the low-level outlet is inoperable, SFWPA opens the slide gate to allow run-of-river conditions, which ramp down at the natural rate of recession.

Condition 3(B) requires SFWPA to develop a LTRR Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS to protect aquatic wildlife and provide for safe recreation throughout the FERC license term. The LTRR Plan will consider the need for long-term ramp-down and ramp-up rates, as well as new implementation methods for Project operations with the potential to cause rapid changes in streamflow and stream stage (e.g., stopping diversions through power and/or diversion tunnels to clean grizzly screens).

4.4 Rationale for Condition 4: Water Quality

The Project has the potential to affect water quality, including water temperature, in Project-affected stream reaches. Protection of the instream beneficial uses identified in the Basin Plan requires effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the Feather River, Yuba River, and their tributaries.

Condition 4(A) requires SFWPA to develop and implement a Water Quality Monitoring Plan (Water Quality Plan) to evaluate impacts of the new MIFs and continued Project operations on water quality in Project-affected stream reaches. Condition 4 requires water temperature monitoring at the Kelly Ridge Powerhouse penstock outflow, and instream reaches below Little Grass Valley Dam, South Fork Diversion Dam, Forbestown Diversion Dam, Lost Creek Dam, and Slate Creek Diversion Dam.

South Fork Diversion Dam, Forbestown Diversion Dam, Lost Creek Dam, and Slate Creek Diversion Dam – Water temperature monitoring in the South Fork Diversion Dam, Forbestown Diversion Dam, Lost Creek Dam, and Slate Creek Diversion Dam reaches is necessary to assess potential impacts of new and continued Project operations on water temperature. Water temperature monitoring in these reaches can inform: (1) whether new or continued Project operations, including new MIFs, are impacting water temperature in the Project area; and (2) if any observed changes in water temperature are affecting other water quality parameters (e.g., dissolved oxygen) or beneficial uses (e.g., FYLF breeding season timing).

Little Grass Valley Dam – The South Fork Feather River reach below Little Grass Valley Dam remains unseasonably cold all year (typically less than 10 degrees Celsius [°C]) due to the release of cold water from the low-level outlet at Little Grass Valley Dam. Water temperatures in this reach do not support optimal growth for rainbow trout during the critical growth period (spring and summer), which may be a limiting factor for trout biomass in this reach. Water temperature monitoring in the Little Grass Valley Dam reach is necessary to determine if Project operations are adversely impacting beneficial uses.

Kelly Ridge Powerhouse – Water from Miners Ranch Reservoir (a shallow warm waterbody) feeds Kelly Ridge Powerhouse, which discharges into DWR's Oroville Facilities Project at the Thermalito Diversion Pool. Discharges of warmer water from Kelly Ridge Powerhouse can adversely impact water temperature in the Feather River and affect DWR's ability to meet Feather River water temperature requirements stipulated in the March 2006 *Settlement Agreement for Licensing of the Oroville Facilities*. It is necessary to monitor the temperature of water discharged from the Kelly Ridge Powerhouse to protect beneficial uses (e.g., cold freshwater habitat). Further, Condition 4(A) of this certification requires that the Water Quality Plan include actions that can be feasibly implemented in the event that water discharged from Kelly Ridge Powerhouse exceeds Basin Plan water quality objectives for temperature.

Condition 4(B) requires SFWPA to take additional actions to suspend water diversions from Slate Creek to Sly Creek Reservoir if certain water temperature thresholds are exceeded. Slate Creek Diversion Dam operations may contribute to the occurrence of mean daily water temperatures greater than 20°C in June through September. To support the cold freshwater habitat beneficial use in Slate Creek below the Slate Creek Diversion Dam, Condition 4(B) requires SFWPA to monitor water temperature below Slate Creek Diversion Dam and cease diversions to Sly Creek Reservoir when the mean daily water temperature is greater than or equal to 20°C for three consecutive days.

4.5 Rationale for Condition 5: Slate Creek Diversion Dam Sediment Management

Sediment accumulation behind Slate Creek Diversion Dam can impair the proper functioning of the diversion tunnel and low-level water release valves. On November 28, 2001, the State Water Board issued a certification for a Sediment Pass-Through Plan for the Slate Creek Diversion Dam. The certification allows SFWPA to sluice sediment through the low-level outlet valve in Slate Creek Diversion Dam when flows: (1) exceed 1,000 cfs; and (2) occur on the

ascending limb of the hydrograph at the beginning of a storm event. Implementation of the existing Sediment Pass-Through Plan has not been successful in passing sufficient sediment below Slate Creek Diversion Dam. Condition 5 of this certification requires SFWPA to develop a Slate Creek Sediment Management Plan to manage sediment accumulation behind Slate Creek Diversion Dam.

4.6 Rationale for Condition 6: Geomorphic Flows in Lost Creek

Lack of seasonal high flow events in Lost Creek contribute to the accumulation of fine sediment in spawning gravels, which can adversely affect fish spawning and incubation success, and contribute to the encroachment of riparian vegetation into the stream channel. Because the stream segment below Lost Creek Dam is a depositional reach, Condition 6 requires SFWPA to provide sufficient supplemental streamflows to adequately flush fine sediments from this reach. In order to protect FYLF egg masses, tadpoles, and juveniles from supplemental streamflow events, geomorphic flows will occur between November 1 and February 15, outside of the FYLF breeding season.

4.7 Rationale for Condition 7: Fish

New and continued Project operations have the potential to cause changes to fish populations in Project-affected stream reaches in the Feather River watershed and Slate Creek area of the Yuba River watershed. Monitoring can detect changes in fish populations, help identify additional information needs, and guide adaptive management of Project operations. Condition 7 requires SFWPA to implement a Fish Monitoring Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS.

4.8 Rationale for Condition 8: Amphibians

New and continued Project operations have the potential to cause changes to amphibian populations and/or amphibian habitat in Project-affected stream reaches in the Feather River watershed and Slate Creek area of the Yuba River watershed. Monitoring can detect changes in amphibian populations, help identify additional information needs, and guide adaptive management of Project operations. Condition 8 requires SFWPA to implement an Amphibian Monitoring Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS.

4.9 Rationale for Condition 9: Benthic Macroinvertebrates

New and continued Project operations have the potential to cause changes to BMI assemblages in Project-affected stream reaches in the Feather River watershed and Slate Creek area of the Yuba River watershed. BMI are a vital food source for aquatic wildlife and indicators of aquatic ecosystem health and water quality. Condition 9 requires SFWPA to develop and implement a Benthic Macroinvertebrate Monitoring Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS.

4.10 Rationale for Condition 10: Riparian Vegetation

New and continued Project operations have the potential to cause changes to riparian vegetation in Project-affected stream reaches in the Feather River watershed and Slate Creek area in the Yuba River watershed. Riparian vegetation provides habitat for aquatic wildlife, food web support, thermal cover, and erosion reduction. Condition 10 requires SFWPA to develop and implement a Riparian Vegetation Monitoring and Management Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS.

4.11 Rationale for Condition 11: Entrainment

The Project has the potential to cause entrainment of aquatic species at unscreened diversions. Entrainment monitoring will inform the degree to which aquatic species are entrained as a result of Project operations and guide adaptive management to reduce the severity of entrainment effects, if necessary. Aquatic species entrained by South Fork Diversion Tunnel and Slate Creek Diversion Tunnel are transported inter-basin and/or inter-watershed, from a riverine habitat into the lake environment of Sly Creek Reservoir. Condition 11 requires SFWPA to develop and implement an Entrainment Monitoring Plan to assess the impacts of Project operations on entrainment into the South Fork Diversion Tunnel and the Slate Creek Diversion Tunnel. Year-round monitoring will provide seasonal entrainment estimates for each aquatic species monitored. If monitoring indicates Project operations are causing high levels of entrainment of aquatic species, Condition 11 requires SFWPA to develop and implement an Entrainment Adaptive Management Plan to determine appropriate adaptive management measures to reduce or eliminate entrainment levels, in consultation with State Water Board staff, Forest Service, CDFW, and USFWS.

4.12 Rationale for Condition 12: Road Management

Operation and maintenance of Project roads has 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 SFWPA to develop and implement a Road Management Plan to ensure that Project roads do not cause discharges in violation of water quality standards.

4.13 Rationale for Condition 13: Construction General Permit and Water Quality Monitoring and Protection

Protection of the instream beneficial uses identified in the Basin Plan requires effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the Feather River, Yuba River, and their tributaries. The Project includes replacement and rehabilitation of existing recreation facilities and other activities that may require construction or maintenance. Erosion from Project-related construction and maintenance activities has the potential to result in discharges that violate water quality standards. Condition 13 requires SFPWA to comply with terms of the Construction General Permit, if applicable, or to develop and implement Water Quality Monitoring and Protection Plans (WQMP Plans) to protect water quality and beneficial uses. WQMP Plans will be developed for construction and maintenance activities with the potential to cause erosion, stream sedimentation, release of hazardous materials, or otherwise impair water quality that are not covered by another condition of the certification (e.g., a WQMP Plan would not be required for maintenance of roads covered under the Road Management Plan [Condition 12]).

4.14 Rationale for Condition 14: Water Resources Management for Recreation

The designated beneficial uses for Lake Oroville and the South Fork Feather River include water contact recreation and other non-contact recreation, which includes whitewater and other boating activities. Condition 14 requires SFWPA to manage water resources for recreation, including: maintaining reservoir elevations to accommodate boat launch facilities; providing supplemental streamflows and access for whitewater boating; and disseminating recreation streamflow information to the public. In order to protect FYLF egg masses, tadpoles, and juveniles from supplemental streamflow events, recreation streamflows must occur outside of the FYLF breeding season (April 16 through September 15).

4.15 Rationale for Condition 15: Large Woody Material

Large woody material contributes to productive aquatic ecosystems and is an important component in the formation of complex aquatic habitat units and channel maintenance. Although much of the steep and confined channel network in the Project area offers limited opportunity for the retention of large woody material, it may be retained locally in lower gradient areas or where valley and/or channel width narrows. The number of large woody material pieces per mile is much lower in the stream reaches below Project impoundments (e.g., downstream of Little Grass Valley Dam and Sly Creek Dam) than in reference reaches upstream of Project impoundments. Condition 15 requires the return of large woody material that accumulates in Little Grass Valley Reservoir, Lost Creek Reservoir, and Sly Creek Reservoir to downstream stream reaches. The increased abundance of large woody material in active stream reaches is likely to improve trout habitat.

4.16 Rationale for Condition 16: Annual Consultation

Plans, proposals, and studies required under this certification contain adaptive management provisions which are informed through monitoring and evaluation of actions implemented under this certification. Condition 16 requires SFWPA to conduct annual consultation meetings with State Water Board staff, Forest Service, CDFW, USFWS, and interested stakeholders to review and discuss: monitoring reports; ongoing and forecasted Project operations; and any water quality and/or beneficial use protection items related to the Project, or Project-related impacts detected through evaluation of annual monitoring and certification implementation.

4.17 Rationale for Condition 17: Potential Anadromous Fish Reintroduction

Anadromous fish may be reintroduced into streams above current fish barriers from which they could migrate into Project-affected stream reaches, during the term of the FERC license. On February 29, 2012, the National Marine Fisheries Service (NMFS) issued a jeopardy Biological Opinion¹⁸ for the United States Army Corps of Engineers' Englebright Dam, located on the Yuba River. Additionally, the Yuba Salmon Partnership Initiative¹⁹ (YSPI) is working to develop a program to reintroduce anadromous fish in the North Yuba River upstream of New Bullards Bar Reservoir. If reintroduction of anadromous fish occurs, modified Project operations and associated monitoring may be necessary to protect reintroduced fish species and their habitat. Condition 17 facilitates early consultation between SFWPA and resource agencies that have authorities related to the reintroduction of fish. Early consultation is proposed to facilitate coordination regarding reintroduction and any changes in certification conditions necessary for protection of the cold freshwater habitat and spawning beneficial uses.

4.18 Rationale for Condition 18: Settlement Agreement

SFWPA requested that FERC incorporate the Settlement Agreement terms, described in Section 2.1 of this certification, into the new license for the Project. Condition 18 requires SFWPA to notify the Deputy Director of planned Settlement Agreement actions and relevant information regarding water temperatures and transfers so that the State Water Board can remain informed of Project operations that may impact water quality and beneficial uses.

¹⁸ The Biological Opinion concluded that the impacts of routine dam operations threaten the existence of salmon and steelhead trout in the Yuba River. To remedy the jeopardy and allow salmonids access to high quality historical habitat above Englebright Dam, NMFS recommended fish passage above the dam as a reasonable and prudent measure.

¹⁹ The YSPI includes members from Yuba County Water Agency, NMFS, CDFW, and nonprofit organizations.

6.0 Water Quality Certification Conditions

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT OPERATION OF THE SOUTH FEATHER POWER PROJECT will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of state law, if South Feather Water and Power Agency complies with the following terms and conditions:

CONDITION 1. MINIMUM INSTREAM FLOW REQUIREMENTS

Unless facility modifications are required, the Licensee shall implement minimum instream flows (MIFs) as soon as reasonably practicable but no later than 30 days after license issuance. The Licensee shall implement MIFs in the following South Feather Power Project (Project) reaches: South Fork Feather River below Little Grass Valley Dam; South Fork Feather River below South Fork Diversion Dam; South Fork Feather River below Forbestown Diversion Dam; Lost Creek below Lost Creek Dam; and Slate Creek below Slate Creek Diversion Dam. For compliance purposes, the point of measurement for required MIFs for each stream reach is described in the MIF schedules below. All specified streamflows are reported in cubic feet per second (cfs). The schedules specify MIF by month or other designated period and water year type for each of the specified stream reaches. The Licensee shall report any deviation from the required MIF to the State Water Resources Control Board's (State Water Board) Deputy Director for the Division of Water Rights (Deputy Director) within 24 hours of the deviation. The Licensee shall furnish electronic streamflow records to State Water Board staff upon request.

1(A) Water Year Types

The MIF schedules are separated into four water year types: Wet; Above Normal (AN); Below Normal (BN); and Dry. The Licensee shall determine the water year type based on the water year forecast of unimpaired runoff in the Feather River at Oroville provided by the California Department of Water Resources (DWR) Bulletin 120²⁰. The water year types are defined as follows:

- Wet = greater than or equal to 7.1 million acre-feet (MAF)
- AN = greater than or equal to 4.0 MAF but less than 7.1 MAF
- BN = greater than 2.4 MAF but less than 4.0 MAF
- Dry = less than or equal to 2.4 MAF

The Licensee shall determine the water year type as follows:

- (a) Each February through May, the Licensee shall determine the water year type based on the DWR Bulletin 120 water year forecast (Feather River at Oroville) and shall operate based on that most recent water year determination;
- (b) Each year, the Licensee shall determine the final water year type based on the DWR Bulletin 120 water year forecast (Feather River at Oroville) for May, and shall operate for

²⁰ Bulletin 120 is a publication issued four times a year, in the second week of February, March, April, and May by DWR. It contains forecasts of the volume of seasonal runoff from California's major watersheds, and summaries of precipitation, snowpack, reservoir storage, and runoff in various regions of California.

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the remaining months of the water year (through September 30) based on that final water year determination; and

- (c) Each year, the Licensee shall determine the water year type for the months of October 1 through January 31 based on the DWR’s Full Natural Flow record for the Feather River at Oroville for the preceding water year.

From February through May, the MIFs designated by the water year type shall be implemented within two business days following DWR’s posting of the official Bulletin 120 for that month. Within 30 days of making each February through May water year type determination and the final water year type determination, the Licensee shall provide written notice to the Deputy Director, United States Forest Service (Forest Service), California Department of Fish and Wildlife (CDFW), and United States Fish and Wildlife Service (USFWS) of the February through May water year type determinations and the final water year type determination. No later than October 31 of each year, the Licensee shall provide written notice to the Deputy Director, Forest Service, CDFW, and USFWS of the water year type determination for October through January. Any changes in flows made in response to a change in water year type shall comply with other applicable water quality certification (certification) conditions, including Condition 3 (Ramping Rates).

1(B) South Fork Feather River below Little Grass Valley Dam

The Licensee shall maintain the MIFs specified in Table 1 for the South Fork Feather River below Little Grass Valley Dam based on the month or period of the month and water year type. MIF shall be measured at the United States Geological Survey (USGS) gage no. 11395030 unless otherwise approved in writing by the Deputy Director.

Table 1. MIF Requirements for South Fork Feather River below Little Grass Valley Dam

Period	MIF (cfs) by Water Year Type			
	Wet	Above Normal	Below Normal	Dry
October	19	15	10	10
November	19	15	10	10
December	19	15	10	10
January	19	15	10	10
February	19	15	10	10
March	19	19	19	19
April 1 – 7	46	46	28	26
April 8 – 14	73	46	36	26
April 15 – 21	99	46	36	26
April 22 – 30	126	46	36	26
May 1 – 15	126	99	36	26
May 16 – 31	126	46	28	26
June	53	46	28	19
July	19	19	15	10
August	19	19	10	10
September	19	19	10	10

1(C) South Fork Feather River below South Fork Diversion Dam

The Licensee shall maintain the MIFs specified in Table 2 for the South Fork Feather River below South Fork Diversion Dam based on the month or period of the month and water year

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type. MIF shall be measured at USGS gage no. 11395200 unless otherwise approved in writing by the Deputy Director.

Table 2. MIF Requirements for South Fork Feather River below South Fork Diversion Dam

MIF (cfs) by Water Year Type				
Period	Wet	Above Normal	Below Normal	Dry
October	19	15	10	10
November	19	15	10	10
December	19	15	10	10
January	19	15	10	10
February	19	15	10	10
March	19	19	19	19
April 1 – 7	46	46	28	26
April 8 – 14	73	46	36	26
April 15 – 21	99	46	36	26
April 22 – 30	126	46	36	26
May 1 – 15	126	99	36	26
May 16 – 31	126	46	28	26
June	53	46	28	19
July	19	19	15	10
August	19	19	10	10
September	19	19	10	10

1(D) South Fork Feather River below Forbestown Diversion Dam

The Licensee shall maintain the MIFs specified in Table 3 for the South Fork Feather River below Forbestown Diversion Dam based on the month or period of the month and water year type. MIF shall be measured at USGS gage no. 11396200 unless otherwise approved in writing by the Deputy Director.

Table 3. MIF Requirements for South Fork Feather River below Forbestown Diversion Dam

MIF (cfs) by Water Year Type				
Period	Wet	Above Normal	Below Normal	Dry
October	19	15	10	10
November	19	15	10	10
December	19	15	10	10
January	19	15	10	10
February	19	15	10	10
March	19	19	19	19
April 1 – 7	46	46	28	26
April 8 – 14	73	46	36	26
April 15 – 21	99	46	36	26
April 22 – 30	126	46	36	26
May 1 – 15	126	99	36	26
May 16 – 31	126	46	28	26
June	53	46	28	19
July	19	19	15	10
August	19	19	10	10
September	19	19	10	10

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1(E) Lost Creek below Lost Creek Dam

The Licensee shall maintain the MIFs specified in Table 4 for Lost Creek below Lost Creek Dam based on the month and water year type. MIF shall be measured at USGS gage no. 11396000 unless otherwise approved in writing by the Deputy Director.

Table 4. MIF Requirements for Lost Creek below Lost Creek Dam

MIF (cfs) by Water Year Type				
Month	Wet	Above Normal	Below Normal	Dry
October	8	8	8	8
November	8	8	8	8
December	8	8	8	8
January	8	8	8	8
February	20	20	16	12
March	60	45	40	30
April	30	30	25	20
May	30	20	20	15
June	20	16	12	12
July	10	8	8	8
August	8	8	8	8
September	8	8	8	8

1(F) Slate Creek below Slate Creek Diversion Dam

The Licensee shall maintain the MIFs specified in Table 5 for Slate Creek below Slate Creek Diversion Dam based on the month and water year type. MIF shall be measured at USGS gage no. 11413300 unless otherwise approved in writing by the Deputy Director.

Table 5. MIF Requirements for Slate Creek below Slate Creek Diversion Dam

MIF* (cfs) by Water Year Type				
Month	Wet	Above Normal	Below Normal	Dry
October	10	10	10	10
November	10	10	10	10
December	10	10	10	10
January	10	10	10	10
February	10	10	10	10
March	49†	49†	49†	49†
April	32	32	32	32
May	32	32	32	32
June	10	10	10	10
July	10	10	10	10
August	10	10	10	10
September	10	10	10	10

* MIF should be either the natural inflow to Slate Creek Diversion Dam impoundment or the specified release in this table, whichever is less.
 † 49 cfs or outlet capacity, whichever is less, but no less than 40 cfs.

1(G) Facility Modification

Where facility modification is required to implement the specified MIFs, the Licensee shall complete such modifications as soon as reasonably practicable but no later than three years after license issuance, unless an alternate timeframe is approved by the Deputy Director.

Within three months of license issuance the Licensee shall notify the Deputy Director, in writing, of any necessary facility modifications and the planned schedule for implementation of the facility modifications. Prior to facility modifications, the Licensee shall provide the MIFs specified in Tables 1 through 5 to the extent possible, within the capability of the existing facilities. In order for the Licensee to adjust operations to meet the required MIFs where facility modification is required, the Licensee shall have two years after the FERC license is issued or two years after completion of the necessary facility modifications, whichever occurs later, in which daily mean streamflows may vary up to 10 percent below the amounts specified in the MIF schedules, provided the average monthly streamflow in any given month or period equals or exceeds the required MIF for that month or period. After the applicable modification and adjustment period, the Licensee shall meet all MIF requirements as set forth in Tables 1 through 5.

1(H) Measuring Minimum Instream Flows

MIFs 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. 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. The Licensee shall record instantaneous (at least every 15-minutes) flows as required by the USGS standards at all gages.

1(I) Planned Temporary Minimum Instream Flow Modifications

The Licensee may request temporary MIF variances for non-emergency facility construction, modification, or maintenance. Non-emergency variance requests shall be submitted to the Deputy Director for approval as far in advance as practicable, but no less than four months in advance of the desired effective date. The Licensee shall notify the Forest Service, CDFW, and USFWS of the proposed temporary MIF variance. The request shall include: a description of the proposed construction, modification, or maintenance; the planned duration and magnitude of the MIF variance; documentation of notification to the Forest Service, CDFW, and USFWS, and any comments received; measures that will be implemented to protect water quality and beneficial uses; and a schedule for the proposed construction, modification, or maintenance. The Deputy Director may require modifications as part of approval. Upon Deputy Director approval, the Licensee shall provide public notice of the MIF variance, in accordance with Condition 1(M). The Licensee shall file with the Federal Energy Regulatory Commission (FERC) the Deputy Director-approved modifications to MIF requirements and any approved amendments thereto.

1(J) Unplanned Temporary Minimum Instream Flow Modifications

The MIFs specified in Conditions 1(B) through 1(F) 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. For the purposes of this condition, an "emergency" is defined as an unforeseen event that is reasonably out of the control of the Licensee and requires the Licensee to take immediate action, either unilaterally or under instruction by law enforcement or other regulatory agency staff, to prevent imminent loss of human life or substantial property damage. An emergency may include, but is not limited to: natural events,

such as landslides, storms or wildfires; malfunction or failure of Project works²¹; and recreation accidents. Extremely dry conditions, including a drought for which the Governor of the State of California (Governor) declares a drought emergency, shall not be considered an emergency for purposes of this condition.

To the extent possible, the Licensee shall notify the Deputy Director prior to any unplanned temporary MIF modification. In all instances, the Licensee shall notify the Deputy Director within 24 hours of the beginning of any unplanned temporary MIF modification. Within 96 hours of the unplanned temporary MIF 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 reasons for its necessity; (2) photo documentation of the incident and any resulting impacts; (3) a timeline for ending the MIF modification and returning to the required MIF; and (4) a plan to prevent a similar incident in the future or, if a similar incident cannot be avoided, a reason why such an incident cannot be avoided.

1(K) Valve Maintenance

Unless otherwise required by DWR's Division of Safety of Dams (DSOD) or FERC's Division of Dam Safety and Inspection (D2SI), the Licensee shall perform all valve maintenance activities between July 16 and April 15, outside of the foothill yellow-legged frog (FYLF, *Rana boylei*) breeding season. The Licensee shall consult with State Water Board staff, Forest Service, CDFW, and USFWS regarding the anticipated date(s) of valve maintenance activities as part of annual consultation meetings (Condition 16). If the Licensee determines that performing valve maintenance activities outside the FYLF breeding season is not feasible, the Licensee shall notify the Deputy Director of the determination and provide supporting documentation (i.e., documentation from DSOD or D2SI).

1(L) Extremely Dry Conditions

In the event of extremely dry conditions, which may include a year in which the Governor declares a drought emergency for Butte, Yuba, and/or Plumas Counties, or two or more consecutive Dry water years, the Licensee may request modification of the requirements of this certification for MIFs (Conditions 1(B) through 1(F)) and/or ramping rates (Condition 3). If the Licensee anticipates that it may request modification pursuant to this condition, the Licensee shall notify the Deputy Director, Forest Service, CDFW, and USFWS of the Licensee's concerns related to flows as early as possible, and no later than March 15 of the year in which a request is submitted.

If the Licensee requests modification pursuant to this condition, the Licensee shall develop a Revised Operations Plan in consultation with State Water Board staff, Forest Service, CDFW,

²¹ Project works must be inspected and maintained to manufacturers' specified schedule or at least annually. The inspection schedule default is the most rigorous schedule. Upon State Water Board staff, Forest Service, CDFW, or USFWS's request, the Licensee shall provide documentation of all inspections, results, staff performing inspections, recommended maintenance, maintenance performed, schedule for performing maintenance, and the date(s) maintenance was performed. Lack of appropriate inspections, maintenance, or documentation may remove events from the "emergency" classification category, as determined by the Deputy Director.

and USFWS for flows (including ramping rates, as necessary), during the extremely dry conditions. The Licensee shall submit the proposed Revised Operations Plan to the Deputy Director for review and approval, and shall include with the request: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the Revised Operations Plan; and a description of how the Revised Operations Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Revised Operations Plan, and any approved amendments thereto. The Licensee shall implement the Revised Operations Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

The objectives of the Revised Operations Plan shall be to: (1) outline the proposed temporary variances to flows and/or ramping rates; (2) explain the need for the temporary variance(s) to flows and/or ramping rates; (3) identify conservation measures to be implemented during the extremely dry conditions; (4) establish methods and a schedule for monitoring water quality and beneficial uses during the revised operations; and (5) identify potential impacts that may be caused by the variance.

At a minimum, the Revised Operations Plan shall include:

- (a) A summary of the proposed operations, including the requested temporary variance(s) and need for such variance(s);
- (b) An estimate of water to be saved and the alternative beneficial uses for which the water will be conserved;
- (c) A timeline for the Project to return to regular operations;
- (d) Monitoring of the revised operations, including any impacts of the revised operations on water quality and any beneficial uses of water; and
- (e) Proposed conservation measures²². If conservation measures are not applicable, the Licensee shall describe the circumstances and provide justification for not implementing conservation measures.

The Licensee shall provide notice of the proposed Revised Operations Plan to interested parties at least seven days prior to submittal to the Deputy Director.

1(M) Public Availability of Streamflow and Reservoir Level Information

The Licensee shall, beginning as soon as reasonably feasible, but no later than one year after license issuance, make streamflow and reservoir elevation information available to the public as described below. Public information shall include:

- (a) Reservoir level information, including:

²² At a minimum, conservation shall include the following: an overall reduction in water use of not less than 20 percent or, if the Governor declares a drought emergency, the reduction in water use ordered by the Governor or required by a state agency implementing the Governor's order; restrictions on outdoor uses of raw and potable water (e.g., water for pools, landscaping, ornamental functions); restrictions on resale of conserved water for uses other than public health and safety; any other applicable water conservation measures required by law; and public notification of the conservation measures.

- (i) Monthly reservoir level forecasts from June through September for Little Grass Valley Reservoir during Dry water years (see Condition 14(A)); and
- (ii) Temporary reservoir level variances (see Condition 14(F));
- (b) By April 10, a preliminary forecast of the water year type and the initiation date and duration of anticipated releases in excess of MIF at Little Grass Valley Dam and Lost Creek Dam. The information shall be updated no later than May 15 (based on final water year type), and shall be updated monthly, thereafter, through November 30;
- (c) From March 20 through April 15, recreation streamflow (see Condition 14) data updated in 15-minute (or more frequent) intervals for the South Fork Feather River below South Fork Diversion Dam (USGS gage no. 11395200) and Forbestown Diversion Dam (USGS gage no. 11396200);
- (d) From May 1 through November 30, the daily average streamflow for:
 - (i) South Fork Feather River – Downstream of Little Grass Valley Dam²³ (USGS gage no. 11395030), South Fork Diversion Dam (USGS gage no. 11395200), and Forbestown Diversion Dam (USGS gage no. 11396200);
 - (ii) Lost Creek – Downstream of Lost Creek Dam (USGS gage no. 11396000); and
 - (iii) Slate Creek – Downstream of Slate Creek Diversion Dam (USGS gage no. 11413300); and
- (e) A description of any planned temporary MIF variance(s) (see Condition 1(I)), including the planned duration and magnitude of the variance(s).

Streamflow data shall be available to the public via the internet and the California Data Exchange Center (CDEC). If CDEC is no longer viable, the Licensee shall make streamflow data available via another publicly available source of similar information agreed upon by State Water Board staff, Forest Service, CDFW, and USFWS. Reservoir elevation data shall be made available to the public via the internet. The Licensee shall provide the internet web address to State Water Board staff, Forest Service, CDFW, and USFWS. As appropriate, data, including any plots and tables, shall be labeled: "These provisional data have not been reviewed or edited and may be subject to significant change," or other similar language approved by the Deputy Director.

The terms of public notification may be modified upon mutual agreement of the Licensee, State Water Board staff, Forest Service, CDFW, and USFWS, and approval of the updated terms by the Deputy Director and any other required approvals.

CONDITION 2. GAGING

Within six months of license issuance, the Licensee shall develop a Gaging Plan. The objective of the Gaging Plan shall be to outline the Licensee's gaging program for the Project and ensure gaging is sufficient to document compliance with MIF (Condition 1) and ramping rate (Condition 3) requirements. The Licensee shall develop the Gaging Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS, and shall submit the plan to the Deputy Director for review and approval. The Licensee shall include with the Gaging Plan:

²³ Streamflow data shall be updated in 15-minute (or more frequent) intervals when the Licensee is providing recreation streamflows below Little Grass Valley Dam (Condition 14(B)).

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documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; 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 of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. 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 approval and any other required approvals, in accordance with the schedule and requirements specified therein.

Modification or installation of gages necessary to demonstrate compliance with flow requirements of this certification shall be completed within 18 months of license issuance, unless an alternate schedule is approved by the Deputy Director.

At a minimum, the Gaging Plan shall include:

- (a) Locations and general information (e.g., ownership, maintenance agreement, etc.) for existing and proposed gaging stations in each reach, including:
 - (i) USGS gage no. 11395030 (South Fork Feather River below Little Grass Valley Dam);
 - (ii) USGS gage no. 11395200 (South Fork Feather River below South Fork Diversion Dam);
 - (iii) USGS gage no. 11396200 (South Fork Feather River below Forbestown Diversion Dam);
 - (iv) USGS gage no. 11396000 (Lost Creek below Lost Creek Dam); and
 - (v) USGS gage no. 11413300 (Slate Creek below Slate Creek Diversion Dam);
- (b) Specifications for monitoring, maintenance, and modification of existing gages and installation of new gages, as necessary;
- (c) Type of equipment, calibration techniques, frequency of data collection, and procedures for installation and gathering data at each station;
- (d) Best management practices and measures that will be used to avoid or minimize water quality impacts during instream or stream bank work necessary to install, operate, or maintain the gages;
- (e) Quality assurance and quality control (QA/QC) protocols. Flow data collected by the Licensee from the stream gages shall be reviewed by hydrographers as part of the QA/QC protocol. Upon completion of the QA/QC process, the data shall be catalogued and made available to USGS in annual hydrology summary reports. The instantaneous (at least 15-minute interval) flow data used to construct the 24-hour average flow estimations shall be made available, in electronic format, to State Water Board staff, Forest Service, CDFW, and USFWS upon request; and
- (f) Information on how the Licensee will provide real-time streamflow and reservoir elevation information to the public via a toll-free telephone number, internet, or other appropriate easily accessible technology (see Condition 1(M)).

Any revisions to the Gaging Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 3. RAMPING RATES

3(A) Interim Ramping Rates

Within 60 days of license issuance, the Licensee shall implement interim ramping rates in the South Fork Feather River, Lost Creek, and Slate Creek as described in Tables 6 through 10. Unless otherwise specified, ramp-down rates apply to all controlled flow decreases, including MIF changes, discretionary releases, and when the Licensee has control after a spill. The final step when ramping down may be up to 10 percent greater than the specified ramp-down rate.

From April 16 through July 15, during the FYLF breeding season, Project operations shall be conducted as follows:

- (a) To the extent feasible, the Licensee shall not close the South Fork Diversion Tunnel and Forbestown Power Tunnel or schedule discretionary outages of Project facilities and equipment; and
- (b) All foreseeable mandatory maintenance (e.g., grizzly screen cleaning) shall be performed as early in the year as possible, and shall be completed as quickly as possible.

If the Licensee determines it is not possible to operate the Project as outlined above, or that foreseeable mandatory maintenance must be performed during the FYLF breeding season, the Licensee shall notify the Deputy Director, Forest Service, CDFW, and USFWS within 96 hours of such a determination and provide documentation supporting the Licensee’s determination.

Table 6. Interim Ramp-down Rates for South Fork Feather River below Little Grass Valley Dam

When	Flow*	Ramp-down Rate
Recreation streamflows [‡]	≤500 [†] – ≥126 cfs	50 cfs per hour
	≤125 – ≥50 cfs	20 cfs per hour
	≤ 49 [‡] cfs	10 – 15 cfs per hour
Controlled flow decreases	≤500 [†] – ≥126 cfs	50 cfs per hour
	≤125 – ≥50 cfs	20 cfs per hour
	≤ 49 [‡] cfs	10 – 15 cfs per hour

* As measured at USGS gage no. 11395030.
[‡] All recreation streamflows are released at Little Grass Valley Dam. The ramp-down rates apply to recreation streamflows throughout the South Fork Feather River. Recreation streamflows shall be implemented consistent with the schedules outlined in Condition 14.
[†] Controlled releases cannot be made from Little Grass Valley Dam when flows are above 500 cfs.
[‡] Flow shall never be less than the required MIF (see Condition 1).

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Table 7. Interim Ramp-down Rates for South Fork Feather River below South Fork Diversion Dam

When	Flow*	Ramp-down Rate
April 16 through July 15 (FYLF Breeding Season)	$\leq 600 - \geq 73^{**}$ cfs	Open South Fork Diversion Tunnel 50 percent (of total diameter) over four days until South Fork Diversion Tunnel is fully open (over total of eight days) [†]
	$\leq 73^{\dagger} - \geq 50$ cfs	20 cfs over four days
	$\leq 49^{\ddagger}$ cfs	10 – 15 cfs over four days
July 16 through April 15	$\leq 600 - \geq 73^{**}$ cfs	Open South Fork Diversion Tunnel 50 percent (of total diameter) over one hour until South Fork Diversion Tunnel is fully open (over total of two hours) [†]
	$\leq 73^{\dagger} - \geq 50$ cfs	20 cfs per hour
	$\leq 49^{\ddagger}$ cfs	10 – 15 cfs per hour
<p>* As measured at USGS gage no. 11395200. ** 73 cfs or the capacity of the low-level outlet, whichever is less. † The Licensee shall incrementally open the South Fork Diversion Tunnel over the specified timeframe unless existing facilities prohibit incremental opening. If existing facilities prohibit incremental opening, the South Fork Diversion Tunnel shall be opened 50 percent for the specified timeframe and then fully opened at the conclusion of the specified timeframe. ‡ Flow shall never be less than the required MIF (see Condition 1).</p>		

Table 8. Interim Ramp-down Rates for South Fork Feather River below Forbestown Diversion Dam

When	Flow*	Ramp-down Rate
April 16 through July 15, (FYLF Breeding Season) when operating Woodleaf Powerhouse or Forbestown Powerhouse	$\leq 600 - \geq 100$ cfs	50 cfs over four days
	$\leq 99 - \geq 50$ cfs	20 cfs over four days
	$\leq 49^{\ddagger}$ cfs	10 – 15 cfs over four days
April 16 through July 15, (FYLF Breeding Season) when making MIF changes	$\leq 73^{\dagger} - \geq 50$ cfs	20 cfs over four days
	$\leq 49^{\ddagger}$ cfs	10 – 15 cfs over four days
July 16 through April 15	$\leq 600 - \geq 100$ cfs	50 cfs per hour
	$\leq 99 - \geq 50$ cfs	20 cfs per hour
	$\leq 49^{\ddagger}$ cfs	10 – 15 cfs per hour
<p>* As measured at USGS gage no. 11396200. † Flow shall never be less than the required MIF (see Condition 1). ‡ 73 cfs or the capacity of the low-level outlet, whichever is less.</p>		

Table 9. Interim Ramp-down Rates for Lost Creek below Lost Creek Dam*

When	Flow**	Ramp-down Rate
April 16 through July 15 (FYLF Breeding Season)	≤500 [†] – ≥100 cfs	50 cfs over four days
	≤99 – ≥50 cfs	20 cfs over four days
	≤ 49 [‡] cfs	10 – 15 cfs over four days
July 16 through April 15	≤500 [†] – ≥100 cfs	50 cfs per hour
	≤99 – ≥50 cfs	20 cfs per hour
	≤ 49 [‡] cfs	10 – 15 cfs per hour

* Interim ramping rates for geomorphic flows in Lost Creek are outlined in Condition 6.
 ** As measured at USGS gage no. 11396000.
[†] Controlled releases cannot be made from Lost Creek Dam when flows are greater than 500 cfs.
[‡] Flow shall never be less than the required MIF (see Condition 1).

Table 10. Interim Ramp-down Rates for Slate Creek below Slate Creek Diversion Dam*

When	Flow [†]	Ramp-down Rate
April 16 through July 15 (FYLF Breeding Season)**	≤73 [‡] – ≥50 cfs	20 cfs over four days
	≤ 49 [¥] cfs	10 – 15 cfs over four days
July 16 through April 15	≤73 [‡] – ≥50 cfs	20 cfs per hour
	≤ 49 [¥] cfs	10 – 15 cfs per hour

* Ramp-down rates for Slate Creek below Slate Creek Diversion Dam shall be implemented when the low-level outlet is functional (i.e., when sediment accumulation behind the dam does not interfere with operability of the low-level outlet).
 ** When ceasing diversions from Slate Creek per Condition 4(B) (Slate Creek Diversion Dam Operations), the Licensee shall close the Slate Creek Diversion Tunnel as gradually as the Licensee’s water right (Application no. A013956, License no. L010940) allows.
[†] As measured at USGS gage no. 11413300.
[‡] 73 cfs or the capacity of the low-level outlet, whichever is less.
[¥] Flow shall never be less than the required MIF (see Condition 1).

Upon request, the Licensee shall provide streamflow gage data to State Water Board staff.

3(B) Long-term Ramping Rates

Within one year of license issuance, the Licensee shall develop a Long-term Ramping Rates Plan (LTRR Plan). The objective of the LTRR Plan shall be to identify a plan to develop long-term ramping rates for the protection of aquatic wildlife and safe whitewater boating recreation. The Licensee shall develop the LTRR Plan in consultation with State Water Board staff, Forest Service, CDFW, and USFWS, and shall submit the LTRR Plan to the Deputy Director for review and approval. The Licensee shall include with the LTRR Plan: documentation of consultation with Forest Service, CDFW, USFWS, and State Water Board staff; comments and recommendations made in connection with the LTRR Plan; and a

description of how the LTRR Plan incorporates or addresses the comments and recommendations of Forest Service, CDFW, USFWS, and State Water Board staff. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved LTRR Plan, and any approved amendments thereto.

At a minimum, the LTRR Plan shall include:

- (a) An assessment of which flows, including MIFs (Condition 1) and recreation streamflows (Condition 14), and Project operations should have long-term ramping rates. The assessment shall include evaluation of the following Project-affected stream reaches:
 - (i) South Fork Feather River below Little Grass Valley Dam;
 - (ii) South Fork Feather River below South Fork Diversion Dam;
 - (iii) South Fork Feather River below Forbestown Diversion Dam;
 - (iv) Lost Creek below Lost Creek Dam, including geomorphic flows (Condition 6); and
 - (v) Slate Creek below Slate Creek Diversion Dam, including Slate Creek Diversion Dam operations (Condition 4(B)).
- (b) Methods for determining long-term ramping rates (e.g., studies, tests, monitoring, etc.);
- (c) Criteria for evaluating the effectiveness of the interim ramping rates (Condition 3(A)) and any test ramping rates;
- (d) Format and schedule for reporting study and/or monitoring results to State Water Board staff, Forest Service, CDFW, and USFWS;
- (e) Locations where streamflow and/or stream stage will be measured (including USGS gage numbers if applicable);
- (f) Timeframe for implementing the LTRR Plan and submitting a Long-term Ramping Rates Report (LTRR Report) to the Deputy Director; and
- (g) Identification of circumstances under which the Licensee may manage flows to provide whitewater recreation opportunities below the South Fork Diversion Dam and Forbestown Diversion Dam outside the required recreation streamflow period (March 20 through April 15).

The Licensee shall begin implementation of the LTRR Plan within six months of Deputy Director approval of the LTRR Plan and any other required approvals. Any revisions to the LTRR Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

Within one year of completing implementation of the LTRR Plan, the Licensee shall submit the LTRR Report to the Deputy Director for review and approval. The LTRR Report shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. At a minimum, the LTRR Report shall include:

- (a) Data results and analysis of data and information gathered pursuant to implementation of the LTRR Plan;
- (b) Proposed long-term ramping rates and associated compliance points;

- (c) Copies of comments and recommendations made in connection with the LTRR Report development, and a description of how the report incorporates or addresses the comments and recommendations;
- (d) Description of facility operations and modifications necessary to implement proposed long-term ramping rates; and
- (e) Schedule for completing facility modifications necessary to provide the proposed long-term ramping rates, if applicable.

Where facility modifications are not required for implementation, the Licensee shall implement the approved long-term ramping rates within 30 days of Deputy Director approval and any other required approvals. Where facility modifications are required for implementation of the approved long-term ramping rates, the Licensee shall implement the long-term ramping rates within 30 days of completing facility modifications.

CONDITION 4. WATER QUALITY

4(A) Water Quality Monitoring

Within one year of license issuance, the Licensee shall submit a Water Quality Monitoring Plan (Water Quality Plan) to the Deputy Director for review and approval. The objective of the Water Quality Plan is to evaluate impacts of new MIFs and Project operations on water temperature and other water quality parameters in the South Fork Feather River, Lost Creek, and Slate Creek. The Water Quality Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, USFWS, and DWR²⁴. The Licensee shall include with the Water Quality Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, USFWS, and DWR; 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 of State Water Board staff, Forest Service, CDFW, USFWS, and DWR. The Deputy Director may require modifications as part of any approval. 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 approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Water Quality Plan shall include:

- (a) Monitoring locations, including:
 - (i) South Fork Feather River – Below Little Grass Valley Dam, below South Fork Diversion Dam, below Forbestown Diversion Dam, and above the Ponderosa Dam impoundment;
 - (ii) Kelly Ridge Powerhouse – At penstock outflow;
 - (iii) Lost Creek – Below Lost Creek Dam; and
 - (iv) Slate Creek – Above the confluence of Slate Creek and the North Yuba River, and below Slate Creek Diversion Dam;

²⁴ The scope of DWR's participation is limited to components of the Water Quality Plan associated with the Kelly Ridge Powerhouse.

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- (b) Water quality monitoring parameters. At a minimum, parameters shall include: water temperature, dissolved oxygen, turbidity, suspended sediment, settleable solids, conductivity, pH, methylmercury, and *Escherichia coli* (*E. coli*);
- (c) Timeframe and frequency for monitoring water quality parameters (see *Water Temperature Monitoring Timeframe and Frequency* section below for more details);
- (d) Type of equipment that will be used, along with reference to calibration and maintenance procedures;
- (e) QA/QC protocols;
- (f) Schedule for installation of monitoring equipment, to be completed no later than six months after Deputy Director approval of the Water Quality Plan;
- (g) Actions to be implemented in the event that water discharged from Kelly Ridge Powerhouse exceeds water quality objectives for temperature identified in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Basin Plan)²⁵ and any amendments thereto; and
- (h) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee shall propose any updates to the Water Quality Plan or Project operations based on the monitoring results. Reports shall be submitted to State Water Board staff, Forest Service, CDFW, USFWS, and DWR.

Water Temperature Monitoring Timeframe and Frequency. At a minimum, water temperature monitoring shall include:

- (a) Water temperature monitoring at the Kelly Ridge Powerhouse penstock outflow, below Little Grass Valley Dam (USGS gage no. 11395030), below South Fork Diversion Dam (USGS gage no. 11395200), below Forbestown Diversion Dam (USGS gage no. 11396200), below Lost Creek Dam (USGS gage no. 11396000), and below Slate Creek Diversion Dam (USGS gage no. 11413300)²⁶. Water temperature monitoring shall begin in Year 1²⁷ and be conducted continuously throughout the term of the FERC license and any extensions;
- (b) Water temperature monitoring above the Ponderosa Dam impoundment and in Slate Creek above the confluence with the North Yuba River shall be monitored during the first three differing water year types (i.e., the first Dry water year, the first BN water year, and the first AN or Wet water year as defined in Condition 1) that occur after license issuance. Water temperature shall be monitored continuously between the final water year type determination (in May) and October 20; and
- (c) Additional temperature monitoring shall occur during years in which the Licensee conducts representative amphibian surveys (Condition 8). During representative amphibian survey years, water temperature shall be recorded throughout the amphibian monitoring period (as defined in the Amphibian Monitoring Plan) at each representative survey site.

²⁵ *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region for the Sacramento River Basin and the San Joaquin River Basin*. Fifth Edition. Revised May 2018 (with Approved Amendments).

²⁶ The cited USGS gages shall be used as temperature monitoring locations unless otherwise approved in writing by the Deputy Director.

²⁷ Year 1 shall be the first full calendar year (January 1 through December 31) after license issuance.

When reporting monitoring results, the Licensee shall analyze how results of water quality monitoring interrelate with results of fish, benthic macroinvertebrate (BMI), amphibian, and/or vegetation monitoring. Any revisions to the Water Quality Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

4(B) Slate Creek Diversion Dam Operations

If at any time from June 1 through September 15 the mean daily water temperature at the Slate Creek temperature monitoring station²⁸ is greater than 20 degrees Celsius (°C) for three consecutive days, by no later than noon (12:00 PM) on the fourth day the Licensee shall cease water diversions through the Slate Creek Diversion Tunnel to Sly Creek Reservoir.

The Licensee may recommence diversions on September 16, or prior to September 16 if the mean daily water temperature at the Slate Creek temperature monitoring station is less than 20°C for 10 consecutive days. When recommencing diversions, the Licensee shall implement the applicable ramping rates specified in Condition 3 (i.e., interim ramping rates in Table 10 until long-term ramping rates are established).

For each calendar year, the Licensee shall maintain a record of mean daily water temperatures at the Slate Creek temperature monitoring station, and periods when diversions from Slate Creek Diversion Dam were suspended due to water temperature. No later than January 31 of each calendar year, the Licensee shall provide FERC and State Water Board staff with the Slate Creek temperature monitoring records, including periods when diversion from Slate Creek Diversion Dam were suspended.

CONDITION 5. SLATE CREEK DIVERSION DAM SEDIMENT MANAGEMENT

Within two years of license issuance, the Licensee shall submit a Slate Creek Sediment Management Plan (Sediment Plan) to the Deputy Director for review and approval. The objective of the Sediment Plan shall be to manage the sediment accumulation behind Slate Creek Diversion Dam. The Sediment Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the Sediment Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the Sediment Plan; and a description of how the Sediment Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Sediment Plan, and any approved amendments thereto. The Licensee shall implement the Sediment Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Sediment Plan shall include:

- (a) Proposed management measures to address sediment in the Slate Creek Diversion Dam impoundment (e.g., dredging) and the goals of the measures;
- (b) Proposed trigger(s), frequency, and notification process for implementation of proposed sediment management measures;

²⁸ Unless otherwise approved in writing by the Deputy Director, the Slate Creek temperature monitoring location shall be USGS gage no. 11413300, on Slate Creek below Slate Creek Diversion Dam.

- (c) Criteria for evaluating the effectiveness of the proposed sediment management measures;
- (d) Identification of potential impacts to water quality and aquatic species from implementation of the Sediment Plan and appropriate measures to reduce or eliminate such impacts. If potential impacts are identified, include water quality and/or aquatic species monitoring protocols, locations, parameters, and monitoring timeframe and frequency;
- (e) Format and schedule for reporting results associated with implementation of sediment management measures to State Water Board staff, Forest Service, CDFW, and USFWS. At a minimum, the reporting results shall include information about the sediment management measure implemented, timing, amount of sediment removed, any measures implemented to address potential impacts to water quality and aquatic species, monitoring results, and any proposed updates to the Sediment Plan or Project operations based on an evaluation of the effectiveness of the measure(s) implemented and/or monitoring results; and
- (f) Identification of, and schedule for, any facility modifications necessary to implement the Sediment Plan.

Any revisions to the Sediment Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 6. GEOMORPHIC FLOWS IN LOST CREEK

The Licensee shall provide geomorphic flows between November 1 and February 15 (outside the FYLF breeding season) in Lost Creek downstream of Lost Creek Dam to flush accumulated fine sediment. No more than four years shall elapse between geomorphic flow events. A geomorphic flow is defined as one continuous 24-hour period when the mean streamflow is no less than 390 cfs, as measured at the USGS gage no. 11396000. The geomorphic flow requirement may be met by any combination of spill over Lost Creek Dam, releases through the dam's outlets, and accretion flows. The Licensee shall notify the Deputy Director, Forest Service, CDFW, and USFWS at least 14 days prior to initiating a scheduled geomorphic flow. If the geomorphic flow is initiated via spill, the Licensee shall notify the Deputy Director, Forest Service, CDFW, and USFWS within two business days of the flow event.

The Licensee, within its ability to control flows, shall implement interim ramping rates for geomorphic flow events as follows: ramp up to the geomorphic flow at a rate of no more than 400 percent of the previous mean daily streamflow, as measured at USGS gage no. 11396000; and ramp down from the geomorphic flow at a rate of no more than 50 percent of the previous mean daily streamflow, as measured at USGS gage no. 11396000. The Licensee shall implement long-term ramping rates for geomorphic flow events (in lieu of interim ramping rates) once established in accordance with Condition 3.

Where facility modification is required to provide the geomorphic flow, the Licensee shall complete such modifications as soon as reasonably practicable and no later than three years following license issuance. Prior to required facility modifications, the Licensee shall provide the geomorphic flow to the extent possible, within the capability of existing facilities.

The Licensee shall not schedule discretionary outages of Project facilities and equipment in conflict with providing geomorphic flows. The Licensee shall notify the Deputy Director as soon

as practicable if required geomorphic flow cannot be provided due to equipment failure from natural events or unforeseen circumstances out of the control of the Licensee.

CONDITION 7. FISH

Within six months of license issuance, the Licensee shall submit a Fish Monitoring Plan (Fish Plan) to the Deputy Director for review and approval. The objective of the Fish Plan shall be to evaluate the impacts of new MIF requirements and continued Project operations on fish abundance, health, species composition, and distribution. The Fish Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the Fish Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the Fish Plan; and a description of how the Fish Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Fish Plan, and any approved amendments thereto. The Licensee shall implement the Fish Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Fish Plan shall include:

- (a) Monitoring locations, including: (1) the South Fork Feather River between South Fork Diversion Dam and Woodleaf Powerhouse; (2) the South Fork Feather River between Woodleaf Powerhouse and Forbestown Powerhouse; and (3) Lost Creek between Lost Creek Dam and the confluence of Lost Creek and the South Fork Feather River;
- (b) Frequency of fish monitoring at each location;
- (c) Monitoring methods (e.g., snorkel, electrofishing, etc.) and equipment that will be used to monitor;
- (d) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee shall analyze how results of fish monitoring interrelate with results of water quality and BMI monitoring. The Licensee shall propose any updates to the Fish Plan or Project operations based on the monitoring results. Reports shall be submitted to State Water Board staff, Forest Service, CDFW, and USFWS; and
- (e) Criteria for evaluating the impacts of new MIFs and continued Project operations on fish abundance, health, species composition, and distribution.

The Licensee shall use the same monitoring methods and locations used during relicensing surveys, unless alternative methods or locations are approved by the Deputy Director. Fish surveys shall be implemented in each survey reach in Year 1 and Year 2 of the license²⁹, and then for two consecutive years every five years thereafter throughout the term of the FERC license (i.e., Years 7, 8, 13, 14, 19, 20, etc.) and any extensions. The Licensee may propose an alternate monitoring schedule for Deputy Director approval.

If surveys are scheduled in years with high peak flows, monitoring may be postponed up to two years to avoid the potential confounding effect of high peak flows on fish recruitment and populations. The postponement of monitoring to subsequent years shall be agreed upon in

²⁹ Year 1 as defined in footnote 27.

consultation with State Water Board staff, Forest Service, CDFW, and USFWS, and approved by the Deputy Director. Any revisions to the Fish Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 8. AMPHIBIANS

Within six months of license issuance, the Licensee shall submit an Amphibian Monitoring Plan (Amphibian Plan) to the Deputy Director for review and approval. The objectives of the Amphibian Plan shall be to: (1) determine population status, distribution, and reproductive success of FYLFs and other state- or federally-listed and protected amphibian species with potential to be in the Project area; and (2) evaluate the impacts of new MIFs and Project operations on these species and their habitat. The Amphibian Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the Amphibian Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; 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 of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Amphibian Plan, and any approved amendments thereto. The Licensee shall implement the Amphibian Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Amphibian Plan shall include:

- (a) Minimum professional qualifications for individuals that will conduct amphibian assessment surveys;
- (b) Proposed monitoring frequency and locations for extensive and representative surveys;
- (c) Protocols and equipment that will be used to monitor;
- (d) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee shall analyze how results of amphibian monitoring interrelate with results of water quality monitoring. The Licensee shall propose any updates to the Amphibian Plan or Project operations based on the monitoring results. Reports shall be submitted to State Water Board staff, Forest Service, CDFW, and USFWS;
- (e) Criteria for evaluating impacts of new MIFs and Project operations on population status, distribution, and reproductive success of state- and federally-listed or protected amphibians; and
- (f) Habitat features to be recorded during each amphibian survey, including, but not limited to:
 - (i) Water temperature;
 - (ii) Riparian vegetation establishment, encroachment, and scouring;
 - (iii) Habitat conditions (e.g., water depths, velocities, bank slopes, etc.); and
 - (iv) River bar formation/loss.

The Licensee shall conduct both extensive surveys (i.e., surveys conducted at the top, middle, and bottom of each reach) and representative surveys (i.e., surveys conducted at one location in a reach) periodically throughout the term of the FERC license. The Licensee shall conduct

surveys as follows until two years prior to the Licensee's submission of a pre-application document (PAD)³⁰ for the Project:

- (a) **Extensive surveys** shall be conducted in Year 1, Year 10, and every tenth year of the license³¹ thereafter (i.e., Year 20, 30, etc.), and the year in which the Licensee submits the PAD; and
- (b) **Representative surveys** shall be conducted annually in Year 2 through Year 6 (for a total of five consecutive years) and in every fifth year thereafter (i.e., Year 11, 16, 21, etc.). Representative surveys shall be conducted in the two years prior to the year in which the Licensee submits the PAD, and the year in which the Licensee submits the PAD (for a total of three consecutive years).

If the Licensee chooses to pursue a different FERC licensing process or the Code of Federal Regulations is amended such that the Licensee is no longer required to submit a PAD five to five and a half years prior to the end of the FERC license term, the Deputy Director may require the Licensee to conduct amphibian monitoring in alternative years equivalent to the monitoring required per this condition. Additionally, throughout the term of the FERC license, regardless of when or if the Licensee is to submit a PAD, the Licensee may propose an alternate monitoring schedule for Deputy Director approval.

If surveys are scheduled in years with high peak flows, monitoring may be postponed up to two years to avoid the potential confounding effect of high peak flows. The postponement of monitoring to subsequent years shall be agreed upon in consultation with State Water Board staff, Forest Service, CDFW, and USFWS, and approved by the Deputy Director. Any revisions to the Amphibian Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 9. BENTHIC MACROINVERTEBRATES

Within six months of license issuance, the Licensee shall submit a Benthic Macroinvertebrate Monitoring Plan (BMI Plan) to the Deputy Director for review and approval. The objective of the BMI Plan shall be to evaluate the impacts of new MIFs and Project operations on BMI species composition and relative abundance. The BMI Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the BMI Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the BMI Plan; and a description of how the BMI Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved BMI Plan, and any approved amendments thereto. The Licensee shall implement the BMI Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

³⁰ The PAD initiates the relicensing process for the Project. The Licensee is required to submit a PAD to FERC at least five years, but no more than five and a half years, prior to the end of the FERC license term. (18 C.F.R §§ 5.5(d) and 5.6(a)(1), as revised July 26, 2010.)

³¹ Year 1 as defined in footnote 27.

At a minimum, the BMI Plan shall include:

- (a) Monitoring locations and frequency. BMI monitoring shall be conducted in the same years and in the same monitoring locations as fish population monitoring (see Condition 7) following implementation of the new MIFs, unless an alternate monitoring schedule or monitoring locations are approved by the Deputy Director;
- (b) Protocols and equipment that will be used to monitor. BMI monitoring shall be conducted following Surface Water Ambient Monitoring Program protocols or other protocols approved by the Deputy Director;
- (c) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee shall analyze how results of BMI monitoring interrelate with results of water quality and fish monitoring. The Licensee shall propose any updates to the BMI Plan or Project operations based on the monitoring results. Reports shall be submitted to State Water Board staff, Forest Service, CDFW, and USFWS; and
- (d) Criteria for evaluating impacts of new MIFs and Project operations on BMI abundance, health, species composition, and distribution.

If surveys are scheduled in years with high peak flows, monitoring may be postponed up to two years to coordinate with fish monitoring efforts. The postponement of monitoring to subsequent years shall be agreed upon in consultation with State Water Board staff, Forest Service, CDFW, and USFWS, and approved by the Deputy Director. Any revisions to the BMI Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 10. RIPARIAN VEGETATION

Within six months of license issuance, the Licensee shall submit a Riparian Vegetation Monitoring and Management Plan (Vegetation Plan) to the Deputy Director for review and approval. The objective of the Vegetation Plan shall be to evaluate the impacts of new MIFs and continued Project operations on riparian vegetation. The Vegetation Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the Vegetation Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the Vegetation Plan; and a description of how the Vegetation Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Vegetation Plan, and any approved amendments thereto. The Licensee shall implement the Vegetation Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Vegetation Plan shall include:

- (a) Proposed monitoring years, locations, and timing;
- (b) Protocols and equipment that will be used to monitor;
- (c) Format, schedule, and reporting to document, summarize, and analyze monitoring results. The Licensee shall analyze how results of riparian vegetation monitoring interrelate with results of water quality monitoring, any incidental observations of aquatic invasive weeds, and areas of degraded riparian vegetation (see *Riparian Vegetation Evaluation and Actions* section below for more details). The Licensee shall propose any

updates to the Vegetation Plan or Project operations based on the monitoring results. Reports shall be submitted to State Water Board staff, Forest Service, CDFW, and USFWS; and

- (d) Criteria for evaluating impacts related to new MIFs and Project operations on riparian vegetation composition, distribution, health, and resilience.

Riparian Vegetation Evaluation and Actions. If areas of riparian vegetation are found to be degraded due to Project operations, the Licensee shall consult with State Water Board staff, Forest Service, CDFW, and USFWS to determine if management measures are necessary to address the riparian habitat degradation. Following consultation, the Licensee shall submit a proposal to the Deputy Director for review and approval that outlines proposed management measures. If riparian vegetation requiring management action is discovered within or adjacent to special-status wildlife³² habitat, the proposal shall include measures to protect species of concern. In the event chemical vegetation control is proposed to control algae or aquatic weeds, the Licensee shall, at a minimum, comply with the State Water Board's Aquatic Weed Control Permit³³ and any amendments thereto. Riparian habitat management measures shall be implemented upon receipt of Deputy Director approval and any other required approvals.

If surveys are scheduled in years with high peak flows, monitoring may be postponed up to two years to avoid the potential confounding effect of high peak flows. The postponement of monitoring to subsequent years shall be agreed upon in consultation with State Water Board staff, Forest Service, CDFW, and USFWS, and approved by the Deputy Director. Any revisions to the Vegetation Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 11. ENTRAINMENT

11(A) Entrainment Monitoring

Within two years of license issuance, the Licensee shall submit an Entrainment Monitoring Plan (Entrainment Plan) to the Deputy Director for review and approval. The objective of the Entrainment Plan shall be to assess the impacts of Project facilities (specifically South Fork Diversion Tunnel and Slate Creek Diversion Tunnel) and operations on entrainment of aquatic species. The Entrainment Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the Entrainment Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the Entrainment Plan; and a description of how the Entrainment Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Entrainment Plan, and any approved amendments thereto. The

³² Special-status wildlife includes: species that are federally endangered or threatened, or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA); Forest Service sensitive species or Forest Service species of conservation concern; species that are threatened or endangered, or candidate species for listing under the California ESA; state species of special concern; state fully-protected species; and state rare plants.

³³ *Statewide National Pollutant Discharge Elimination System Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications.* State Water Board Order No. 2013-0002-DWQ and National Pollutant Discharge Elimination (NPDES) System No. CAG990005, as amended by State Water Board Order No. 2014-0078-DWQ on May 20, 2014.

Licensee shall implement the Entrainment Plan upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Entrainment Plan shall include:

- (a) Identification of aquatic species to be monitored;
- (b) Proposed locations, timeframe, frequency, and protocols for monitoring;
- (c) Overall schedule for completion of entrainment monitoring and reporting, including submittal of the Entrainment Report (see *Entrainment Report* section below) to the Deputy Director for review and approval; and
- (d) Criteria for evaluating the severity of entrainment impacts.

Any revisions to the Entrainment Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

Entrainment Report. Within six months of completing monitoring, the Licensee shall provide a draft Entrainment Report to State Water Board staff, Forest Service, CDFW, and USFWS for a 30-day comment period. The Entrainment Report shall present an analysis of the entrainment monitoring data and recommended measures to reduce or eliminate entrainment, if necessary. Within nine months of completing monitoring, the Licensee shall submit a final Entrainment Report to the Deputy Director for review and approval. The Licensee shall also provide the final Entrainment Report to the Forest Service, CDFW, and USFWS.

At a minimum, the Entrainment Report shall include:

- (a) Raw data and a summary of entrainment monitoring results;
- (b) Evaluation of the entrainment monitoring data that includes:
 - (i) Criteria used to evaluate severity of entrainment associated with Project operations;
 - (ii) An analysis of entrainment associated with continued Project operations; and
 - (iii) A determination of whether severity of entrainment impacts warrants implementation of protection measures;
- (c) Proposed measures to reduce or eliminate entrainment impacts, if necessary; and
- (d) Comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS on the draft Entrainment Report, and a description of how the final Entrainment Report incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS.

11(B) Entrainment Adaptive Management

As part of approving the final Entrainment Report the Deputy Director may require the Licensee to develop an Entrainment Adaptive Management Plan (EAM Plan) to address entrainment impacts associated with the Project. The objective of the EAM Plan shall be to identify measures that will reduce or eliminate Project-related entrainment. Within six months of Deputy Director direction to prepare an EAM Plan, the Licensee shall submit an EAM Plan to the Deputy Director for review and approval. The EAM Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with

the EAM Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; comments and recommendations made in connection with the EAM Plan; and a description of how the EAM Plan incorporates or addresses the comments and recommendations of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved EAM Plan, and any approved amendments thereto. The Licensee shall implement the EAM Plan upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the EAM Plan shall include:

- (a) Proposed measures to reduce or eliminate entrainment impacts;
- (b) A timeline for implementing the proposed measures, including:
 - (i) A description of and schedule for completing facility modifications necessary to implement the proposed measures, if necessary; and
 - (ii) Ongoing operations and maintenance related to the proposed measures that the Licensee will implement over the term of the FERC license and any extensions, if applicable;
- (c) An entrainment monitoring plan following implementation of the proposed measures, if appropriate;
- (d) Potential impacts to water quality and beneficial uses associated with the proposed measures, and how the Licensee will reduce or eliminate those impacts; and
- (e) Format, schedule, and reporting to document and summarize implementation of the EAM Plan.

Any revisions to the EAM Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 12. ROAD MANAGEMENT

Within one year of license issuance, the Licensee shall submit a Road Management Plan to the Deputy Director for review and approval. The objective of the Road Management Plan shall be to identify measures that will be implemented to reduce or eliminate impacts to water quality from road management. The Road Management Plan shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Licensee shall include with the Road Management Plan: documentation of consultation with State Water Board staff, Forest Service, CDFW, and USFWS; 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 of State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. 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 approval and any other required approvals, in accordance with the schedule and requirements specified therein.

At a minimum, the Road Management Plan shall include:

- (a) An inventory and map of all roads associated with the Project, including ownership, locations of drainage structures, streams, and surface water bodies;

- (b) An assessment of Project roads to determine if any drainage structures or road segments are impacting or have the potential to impact water quality;
- (c) Proposed measures and an implementation schedule to rehabilitate existing damage and minimize erosion from Project roads. Proposed measures designed to improve drainage should be consistent with the most current United States Department of Agriculture (USDA), Forest Service *National Best Management Practices for Water Quality Management on National Forest System Lands*³⁴ or other appropriate documents; and
- (d) A schedule and plan for inspection and maintenance of Project roads, and associated reporting on implementation of the Road Management Plan, throughout the term of the FERC license and any extensions.

Any revisions to the Road Management Plan must be approved by the Deputy Director and filed with FERC prior to implementation.

CONDITION 13. CONSTRUCTION GENERAL PERMIT AND WATER QUALITY MONITORING AND PROTECTION

When applicable, the Licensee shall comply with the State Water Board's Construction General Permit³⁵, and amendments thereto. For construction and maintenance activities with the potential to impact water quality or beneficial uses, including construction or maintenance of recreation facilities, that are not subject to the Construction General Permit, site-specific Deputy Director-approved Water Quality Monitoring and Protection Plans (WQMP Plans) shall be prepared and implemented. WQMP Plans must demonstrate compliance with sediment and turbidity water quality objectives in the Basin Plan. The WQMP Plans shall be consistent with the most current USDA, Forest Service *National Best Management Practices for Water Quality Management on National Forest System Lands* or other appropriate documents.

The Licensee shall submit the WQMP Plans to the Deputy Director for review and approval at least four months prior to the desired start date of the applicable construction or maintenance activity. 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.

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.

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

³⁴ *National Best Management Practices for Water Quality Management on National Forest System Lands*. Volume 1: National Core BMP Technical Guide (FS-990a). April 2012.

³⁵ *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities*. Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ.

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

CONDITION 14. WATER RESOURCES MANAGEMENT FOR RECREATION

Within three months of license issuance, the Licensee shall manage water resources for recreation resources as follows:

14(A) Little Grass Valley Reservoir Level

In all water years, except Dry water years, the Licensee shall maintain a surface water elevation in Little Grass Valley Reservoir of no lower than 5,022 feet from May 21 through September 15 to facilitate the use of boat launch facilities. In Dry water years, the Licensee shall maintain Little Grass Valley Reservoir as high as possible through Labor Day weekend. By May 31 of each Dry water year, the Licensee shall submit to State Water Board staff a four-month forecast, for the months of June through September, of the Little Grass Valley Reservoir elevation. The Licensee shall update the forecast at least monthly and report any changes to State Water Board staff. The forecast shall be available to the public in accordance with Condition 1(M).

14(B) Recreation Streamflow below Little Grass Valley Dam

In all water years, the Licensee shall provide a recreation streamflow in the South Fork Feather River downstream of Little Grass Valley Dam for whitewater boating. (See Condition 14(F) for provisions related to delaying or not providing a recreation streamflow due to dam safety considerations.) The recreation streamflow shall be implemented from September 16 of each year until the Little Grass Valley Reservoir elevation is drawn down to 5,017 feet. For the purpose of this requirement, a recreation streamflow is defined as a streamflow of at least 180 cfs, but not more than 460 cfs, which occurs continuously over a 24-hour period, as measured at USGS gage no. 11395030. Instantaneous streamflow may vary by up to 15 percent from the streamflow requirement but may not average less than 180 cfs over a continuous 24-hour period. To the extent feasible, the Licensee shall provide the required recreation streamflow throughout the recreation streamflow period (September 16 until the elevation at Little Grass Valley Reservoir is 5,017 feet).

On September 1 or as soon as reasonably feasible, the Licensee shall provide notice to the public and the Deputy Director of the planned recreation streamflow, including the anticipated date and flow magnitude. Public notification shall be provided in accordance with Condition 1(M).

Where facility modification is required to provide the recreation streamflow, the Licensee shall complete such modifications as soon as reasonably practicable but no later than three years after license issuance. Prior to such required facility modifications, the Licensee shall provide the recreation streamflow within the capabilities of the existing facilities.

14(C) Recreation Streamflow below South Fork Diversion Dam

In Above Normal and Wet water years, the Licensee shall provide a recreation streamflow in the South Fork Feather River downstream of South Fork Diversion Dam. The recreation streamflow shall be implemented between March 20 and April 15. For the purpose of this requirement, a recreation streamflow is defined as a streamflow of at least 190 cfs, but not more than 700 cfs, which occurs continuously for two consecutive weekend days (i.e., Saturday and Sunday) as measured at USGS gage no. 11395200. The recreation streamflow may be comprised of any combination of spill over South Fork Diversion Dam, releases through the dam's outlets, and accretion flows. The Licensee shall not alter diversions from the South Fork Feather River at the South Fork Diversion Dam while providing a recreation streamflow in this reach.

During years in which the Licensee plans to supplement flow to meet the recreation streamflow requirement, the Licensee shall provide notice to the public and the Deputy Director of the anticipated date and magnitude of the recreation streamflow by March 10, or as soon as reasonably feasible. Public notification shall be provided in accordance with Condition 1(M). During years in which recreation streamflow requirements will be met via natural flow, the Licensee shall notify the public of the anticipated recreation streamflow date(s) in accordance with Condition 1(M). After the flow event, the Licensee shall document the date, duration, and magnitude of the flow and submit the flow information to the Deputy Director within two business days of the end of the flow event.

Where facility modification is required to provide the recreation streamflow, the Licensee shall complete such modifications as soon as reasonably practicable but no later than three years after license issuance. Prior to such required facility modifications, the Licensee shall provide the specified recreation streamflow within the capabilities of the existing facilities.

14(D) Recreation Streamflow below Forbestown Diversion Dam

In Above Normal and Wet water years, the Licensee shall provide a recreation streamflow in the South Fork Feather River below the Forbestown Diversion Dam. The recreation streamflow shall be implemented between March 20 and April 15. For the purpose of this requirement, a recreation streamflow is defined as a streamflow of at least 215 cfs, but not more than 400 cfs, which occurs continuously for two consecutive weekend days (i.e., Saturday and Sunday), as measured at USGS gage no. 11396200. The recreation streamflow may be comprised of any combination of spill over Forbestown Diversion Dam, releases through the dam's outlets, and accretion flows. The Licensee shall not alter diversions from the South Fork Feather River at the Forbestown Diversion Dam while providing a recreation streamflow in this reach.

During years in which the Licensee plans to supplement flow to meet recreation streamflow requirement, the Licensee shall provide notice to the public and the Deputy Director of the anticipated date and magnitude of the recreation streamflow by March 10, or as soon as reasonably feasible. Public notification shall be provided in accordance with Condition 1(M). During years in which recreation streamflow requirements will be met via natural flow, the Licensee shall notify the public of the anticipated recreation streamflow date(s) in accordance with Condition 1(M). After the flow event, the Licensee shall document the date, duration, and

magnitude of the flow and submit the flow information to Deputy Director within two business days of the end of the flow event.

Where facility modification is required to provide the recreation streamflow, the Licensee shall complete such modifications as soon as reasonably practicable but no later than three years after license issuance. Prior to such required facility modifications, the Licensee shall provide the specified recreation streamflow within the capabilities of the existing facilities.

14(E) Recreation Streamflow Consultation

The Licensee shall consult with State Water Board staff, Forest Service, CDFW, USFWS, and American Whitewater (AW) regarding the following elements of recreation streamflow management for the year: target recreation streamflow magnitude; recreation streamflow schedule; anticipated method for providing recreation streamflows (i.e., supplemental flows, natural flows, or a combination of both); and any changes to whitewater boating access locations. The Licensee shall initiate consultation as follows:

- (a) Downstream of Little Grass Valley Dam – No later than August 1 of each year; and
- (b) Downstream of South Fork Diversion Dam and Forbestown Diversion Dam – No later than February 15 in Above Normal and Wet water years.

If the Licensee, State Water Board staff, Forest Service, CDFW, USFWS, and AW decide that consultation is no longer necessary, the Licensee may submit a request to the Deputy Director to suspend annual recreation streamflow consultation for one or all of the consultation items. The Deputy Director may require modifications as part of any approval. The request shall include: recreation streamflows to be implemented throughout the term of the FERC license and any extensions; and the process for reporting recreation streamflow schedules and changes to whitewater boating access locations to State Water Board staff, Forest Service, CDFW, USFWS, and AW. The Deputy Director may reinstate the recreation streamflow consultation requirement if the need for such consultation subsequently occurs.

14(F) Temporary Reservoir Level and Recreation Streamflow Variances

The Licensee shall maintain Project facilities and equipment necessary to provide the specified reservoir elevation and recreation streamflows, and shall not schedule discretionary outages of Project facilities and equipment in conflict with providing required reservoir elevation and recreation streamflows.

Emergency Temporary Variances. The Licensee may temporarily modify the reservoir elevation specified in Condition 14(A) or be relieved from providing the recreation streamflows specified in Conditions 14(B) through 14(D) if required by equipment malfunction reasonably beyond the control of the Licensee, as directed by law enforcement authorities or in emergencies³⁶. Unless extenuating circumstances exist, the Licensee shall notify the Deputy Director prior to any temporary reservoir elevation or recreation streamflow variance. In all instances, the Licensee shall notify the Deputy Director, Forest Service, CDFW, USFWS, and AW of any reservoir elevation or recreation streamflow requirement variance as soon as reasonably practicable, but no later than 24 hours after such incidents, and shall provide an update of the conditions

³⁶ Emergency as defined in Condition 1(J).

associated with the reservoir elevation or recreation streamflow variance within 96 hours of the incident.

Within 30 days of any unplanned reservoir elevation or recreation streamflow variance, the Licensee shall provide the Deputy Director with: (1) a written description of the variance and reason(s) for its necessity; (2) photo documentation of the incident and any resulting impacts; (3) a timeline for ending the reservoir elevation variance or providing the recreation streamflow after the incident, if feasible; and (4) a plan to prevent a similar incident in the future or, if a similar incident cannot be avoided, a reason why such an incident cannot be avoided.

Little Grass Valley Dam Recreation Streamflows. If the Licensee determines that recreation streamflows cannot be provided because the Little Grass Valley Dam spill gates must remain open throughout the recreation streamflow implementation period (due to mandates imposed by DSOD or D2SI), the Licensee shall notify the Deputy Director, Forest Service, CDFW, USFWS, and AW within one business day of making such a determination. If feasible, the Licensee shall provide recreation streamflows as soon as possible following DSOD or D2SI clearance to close the spill gates or after the recreation streamflow implementation period, as outlined in the LTRR Plan (Condition 3(B)).

Non-Emergency Temporary Variances. The Licensee may request temporary reservoir elevation variances for non-emergency facility construction, modification, or maintenance. Non-emergency variance requests shall be submitted to the Deputy Director for approval as far in advance as practicable, but no less than three months in advance of the desired effective date. The Licensee shall notify the Forest Service, CDFW, and USFWS of the proposed temporary reservoir elevation variance. The request shall include: (1) a description of the proposed construction, modification, or maintenance; (2) the planned duration and magnitude of the reservoir elevation variance; (3) documentation of notification to the Forest Service, CDFW, and USFWS, and any comments received; (4) measures that will be implemented to protect water quality and beneficial uses; and (5) a schedule for the proposed construction, modification, or maintenance. The Deputy Director may require modifications as part of any approval. Upon Deputy Director approval, the Licensee shall provide public notice of the reservoir elevation variance in accordance with Condition 1(M). The Licensee shall file with FERC the Deputy Director-approved modifications to reservoir elevation requirements and any approved amendments thereto.

14(G) Whitewater Recreation Access Locations

The Licensee shall maintain current access locations and roads for whitewater boating recreation in the Project area, which include:

- (a) Downstream of Little Grass Valley Dam – A put-in for this reach is at the base of Little Grass Valley Dam, accessible from County Road 514. A take-out is on the left bank of the South Fork Diversion Dam impoundment, accessible from the west via Lumpkin Ridge Road and Forest Service Roads 22N24, 21N16, and 21N11Y;
- (b) Downstream of South Fork Diversion Dam – A put-in for this reach is at the base of the South Fork Diversion Dam, accessible from LaPorte Road via Forest Service Roads 20N05, 21N16, and 22N24. A take-out is at the New Golden Trout Crossing, where Forest Service Road 22N24 crosses the South Fork Feather River; and
- (c) Downstream of Forbestown Diversion Dam – A put-in for this reach is at the base of Forbestown Diversion Dam, accessible from Forbestown Road via Forest Service Road

20N29. A take-out is at the right bank of Ponderosa Reservoir just below Forbestown Powerhouse, accessible from Lower Forbestown Road to Forest Service Road 20N24.

The Licensee shall keep the above access locations and roads in good condition and open for river access³⁷ throughout the term of the FERC license and any extensions. If an access location or road becomes inaccessible for reasons unrelated to the presence of snow, the Licensee shall notify State Water Board staff, Forest Service, CDFW, USFWS, and AW and propose an alternate access location or road of similar quality and location to be used and maintained until such a time as the original access location is once again accessible. If there is no suitable alternate access location or road, the Licensee shall provide, with its notification, an explanation of why no suitable alternative exists.

CONDITION 15. LARGE WOODY MATERIAL

Annually, beginning the first full calendar year after license issuance, the Licensee shall return large woody material to the South Fork Feather River immediately downstream of Little Grass Valley Dam, and to Lost Creek immediately downstream of Lost Creek Dam by allowing large woody material to pass over the spillways at Little Grass Valley Dam, Sly Creek Dam, and Lost Creek Dam during spill events. For purposes of this condition, large woody material refers to downed, dead or dying wood that is at least 20 feet long³⁸ with root wads attached when possible.

The Licensee shall submit a report to the Deputy Director, on an annual basis by January 31, which describes the large woody material returned to stream reaches during the previous calendar year. At a minimum, the annual report shall include: (1) the amount of large woody material that was returned, both estimated volume and the estimated count of pieces, to each stream reach in each month; (2) the duration and flow range of the spill event or operational release that was used to pass the large woody material to each stream reach in each month; and (3) if necessary, a determination that spills are not adequate to pass large woody material at a given dam(s) and notice that a proposal to identify alternative means of returning large woody material to the stream reach(es) below the dam(s) will be submitted in accordance with this condition.

If the Licensee determines that spills are not adequate to pass the large woody material over the spillways at Little Grass Valley Dam, Sly Creek Dam, or Lost Creek Dam, the Licensee shall collect the large woody material from Little Grass Valley Reservoir, Sly Creek Reservoir, or Lost Creek Reservoir, as applicable, and prepare a proposal that: (1) evaluates the feasibility and proposes an alternative means of returning large woody material to the reach(es) below the dam(s); and (2) includes a schedule to return the large woody material to the stream reach(es) below the dam(s) using the proposed alternative means. The Licensee shall submit the proposal to the Deputy Director for review and approval within six months of determining that spills are not adequate to pass large woody material at a given dam(s). The proposal shall be developed in consultation with State Water Board staff, Forest Service, CDFW, and USFWS. The Deputy Director may require modifications as part of any approval. The Licensee shall file with FERC the Deputy Director-approved proposal, and any approved amendments thereto.

³⁷ Maintenance of access roads does not include snow plowing for the purpose of public access.

³⁸ Assumes a piece of wood that would be at least one-half bank full in length if it occurred in the river below the dams.

The Licensee shall implement the proposal upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

If the Licensee is unable to meet the requirements of this condition in a given year at one or more of the dam locations, the Licensee may submit a written request to the Deputy Director for approval of a temporary variance.

CONDITION 16. ANNUAL CONSULTATION

The Licensee shall conduct an annual consultation meeting that is open to the public, and which at a minimum includes:

- (a) Review of the status of implementing the FERC license and certification conditions;
- (b) Review of monitoring data, including any observations of aquatic invasive species or degraded riparian habitat (see Condition 10);
- (c) Review of elements of current year maintenance plans and any non-routine maintenance;
- (d) Discussion of foreseeable changes to Project facilities or features;
- (e) Discussion of necessary revisions or modifications to plans approved as part of this certification; and
- (f) Discussion of species listing implications, including:
 - (i) Needed protection measures for species newly listed as threatened, endangered, or sensitive;
 - (ii) Changes to existing plans for actions that may no longer be necessary due to delisting of a species; and
 - (iii) Changes to existing plans to incorporate new information about species requiring protection.

At least 30 days prior to each annual consultation meeting, the Licensee shall: notify State Water Board staff, Forest Service, CDFW, USFWS, Tribes, and known interested stakeholders of the date, time, and location of the meeting; and ensure that State Water Board staff, Forest Service, CDFW, USFWS, Tribes, and known interested stakeholders receive all monitoring reports and other information appropriate to inform discussions at the annual consultation meeting. Within 60 days after the annual consultation meeting, the Licensee shall submit a report to the Deputy Director that summarizes the consultation.

CONDITION 17. POTENTIAL ANADROMOUS FISH REINTRODUCTION

The State Water Board reserves authority to require additional conditions and/or revise existing conditions of this certification if it is reasonably foreseeable that state- or federally-listed anadromous fish species will be reintroduced into Project-affected streams (e.g., anadromous fish in Slate Creek), to ensure adequate protection of Basin Plan objectives and beneficial uses. For this condition, “reasonably foreseeable” includes, but is not limited to, a reintroduction effort or plan that has a reasonable likelihood of implementation within the following 18 months. The State Water Board also reserves authority to require the Licensee to develop and conduct studies in consultation with State Water Board staff, Forest Service, CDFW, USFWS, and the National Marine Fisheries Service, if it is reasonably foreseeable for listed anadromous fish to

be reintroduced into Project-affected streams. Such studies shall be designed to provide information to determine and recommend appropriate measures to prevent or minimize impacts to listed anadromous species in the Project-affected area.

CONDITION 18. SETTLEMENT AGREEMENT

The Licensee requested that FERC incorporate the terms of the October 23, 2012 Settlement Agreement³⁹ between the Licensee, DWR, and State Water Contractors, Incorporated into the new Project license. In order for the State Water Board to be kept apprised of operational changes made per the Settlement Agreement with the potential to impact water quality or beneficial uses, the Licensee shall submit notifications and information as follows:

- (a) If DWR requires shutdown of Kelly Ridge Powerhouse, the Licensee shall notify the Deputy Director within 96 hours;
 - (i) Following a required shutdown, the Licensee shall report the amount of water spilled into Lake Oroville that would have otherwise been run through the Kelly Ridge Powerhouse;
- (b) If DWR requires changes to the Kelly Ridge Powerhouse annual outage schedule, the Licensee shall notify the Deputy Director of such scheduling changes within 96 hours of the mandate;
- (c) If the Licensee plans to draw down Miners Ranch Reservoir to minimum pool level (in order to remove warm water), the Licensee shall notify the Deputy Director as soon as reasonably practicable;
 - (i) Within 30 days following such a drawdown, the Licensee shall report the amount of water drawn down from Miners Ranch Reservoir and refilled from Ponderosa Reservoir;
- (d) The Licensee shall keep the Deputy Director apprised of any potential modifications or amendments to the Settlement Agreement;
 - (i) If modifications or amendments to the Settlement Agreement have potential to impact water quality or beneficial uses, the Licensee shall submit a report to the Deputy Director that includes: (1) the modifications or amendments to be made; (2) potential impacts to water quality and beneficial uses; and (3) measures the Licensee will implement to reduce or eliminate those impacts; and
 - (ii) Upon modification or amendment of the Settlement Agreement, the Licensee shall submit a request to the Executive Director of the State Water Board to update this certification in accordance with the changes, as applicable. The State Water Board may require modifications to proposed protection measures as a part of any updates to this certification; and
- (e) Upon request by State Water Board staff, the Licensee shall provide water temperature data collected for compliance with the Settlement Agreement.

³⁹ *Settlement Agreement By and Among South Feather Water & Power Agency, Department of Water Resources of the State of California and State Water Contractors, Incorporated.* The Settlement Agreement can be found online at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/southfeather_ferc2088/southfeather_agree.pdf. Accessed November 20, 2018.

CONDITIONS 19 – 40

CONDITION 19. 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.

CONDITION 20. 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 the South Fork Feather River, its tributaries, and Slate Creek.

CONDITION 21. Future changes in climate projected to occur during the FERC license term may significantly alter the baseline 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 22. 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 23. This certification is contingent on compliance with all applicable requirements of the Basin Plan.

CONDITION 24. 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 must take all reasonable measures to protect the beneficial uses of the South Fork Feather River, its tributaries, and Slate Creek.

CONDITION 25. 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 26. 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 &

Game 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 27. The Licensee shall submit any change to the Project, including operations, 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.

CONDITION 28. 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.

CONDITION 29. In response to a suspected violation of any condition of this certification, the State Water Board or Central Valley Regional Water Quality Control Board (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 30. 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 31. 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 32. 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 33. The Deputy Director and the Executive Officer of the Central Valley Regional Water Board (Executive Officer) shall be notified one week prior to the commencement of ground disturbing activities with the potential to adversely affect water quality. Upon request, a construction schedule shall be provided to agency staff. The Licensee shall provide State Water Board and Central Valley Regional Water Board staffs access to Project sites to document compliance with this certification.

WATER QUALITY CERTIFICATION FOR SOUTH FEATHER POWER PROJECT

CONDITION 34. 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 35. 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.

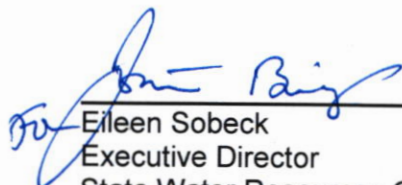
CONDITION 36. Activities associated with operation and maintenance of the Project that threaten or potentially threaten water quality shall be subject to further review by the Deputy Director and Executive Officer.

CONDITION 37. Nothing in this certification shall be construed as State Water Board approval of the validity of any water rights, including pre-1914 claims. The State Water Board has separate authority under the Water Code to investigate and take enforcement action if necessary to prevent any unauthorized or threatened unauthorized diversions of water.

CONDITION 38. This certification is subject to modification or revocation upon administrative or judicial review, including 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 39. 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 40. This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, division 3, chapter 28.



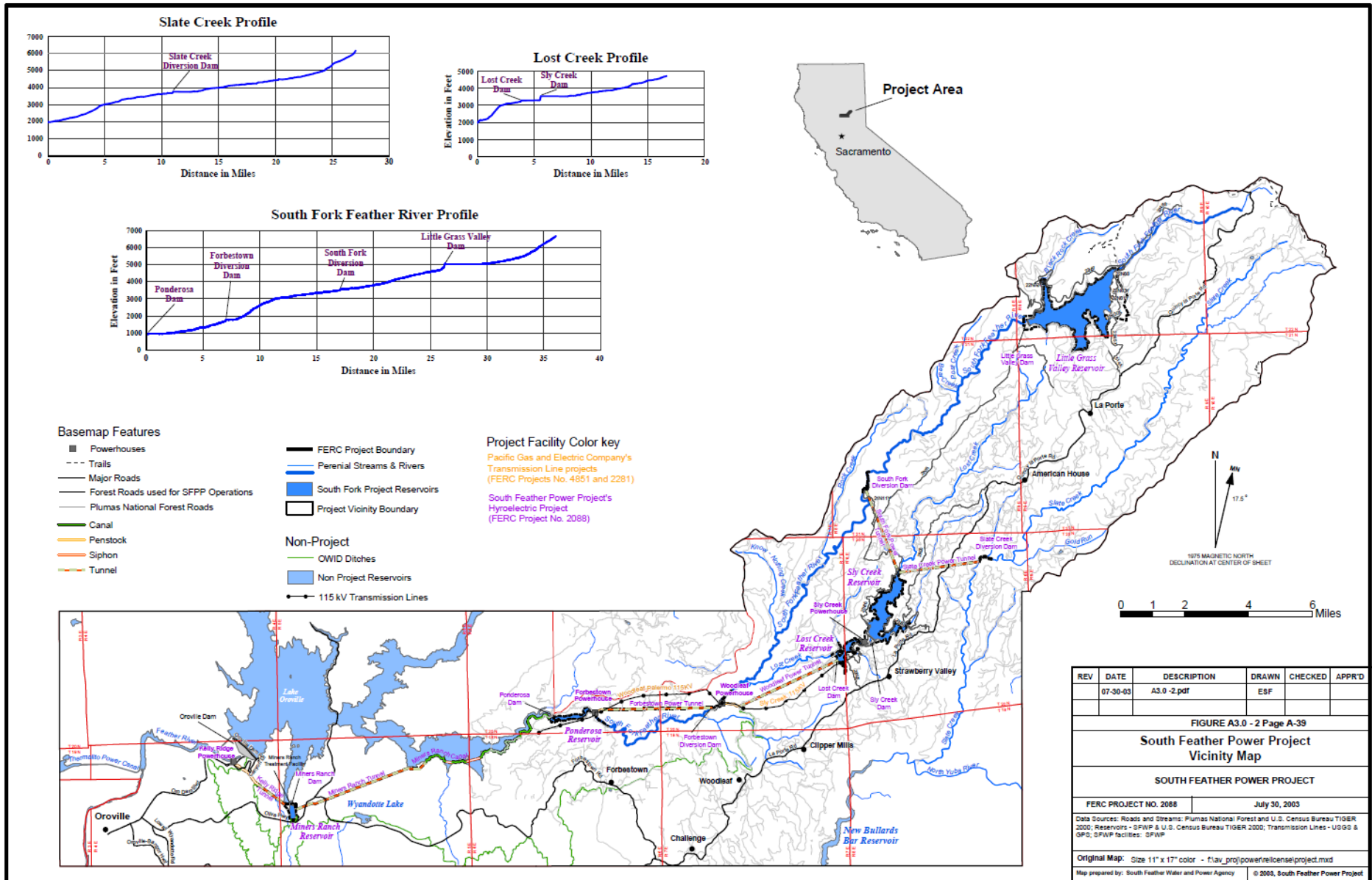
Eileen Sobeck
Executive Director
State Water Resources Control Board

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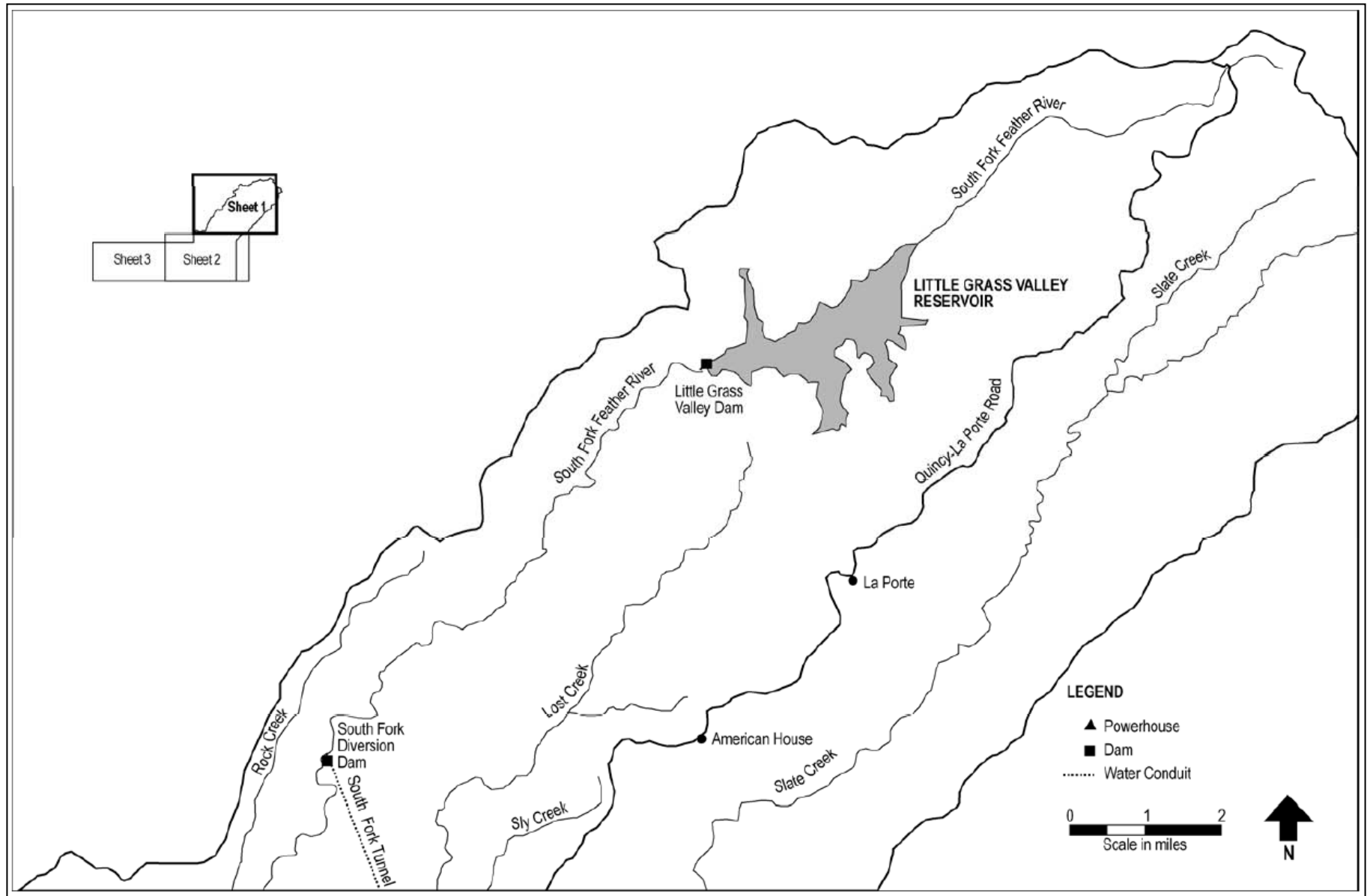
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Enclosure: Attachment A: Project Maps

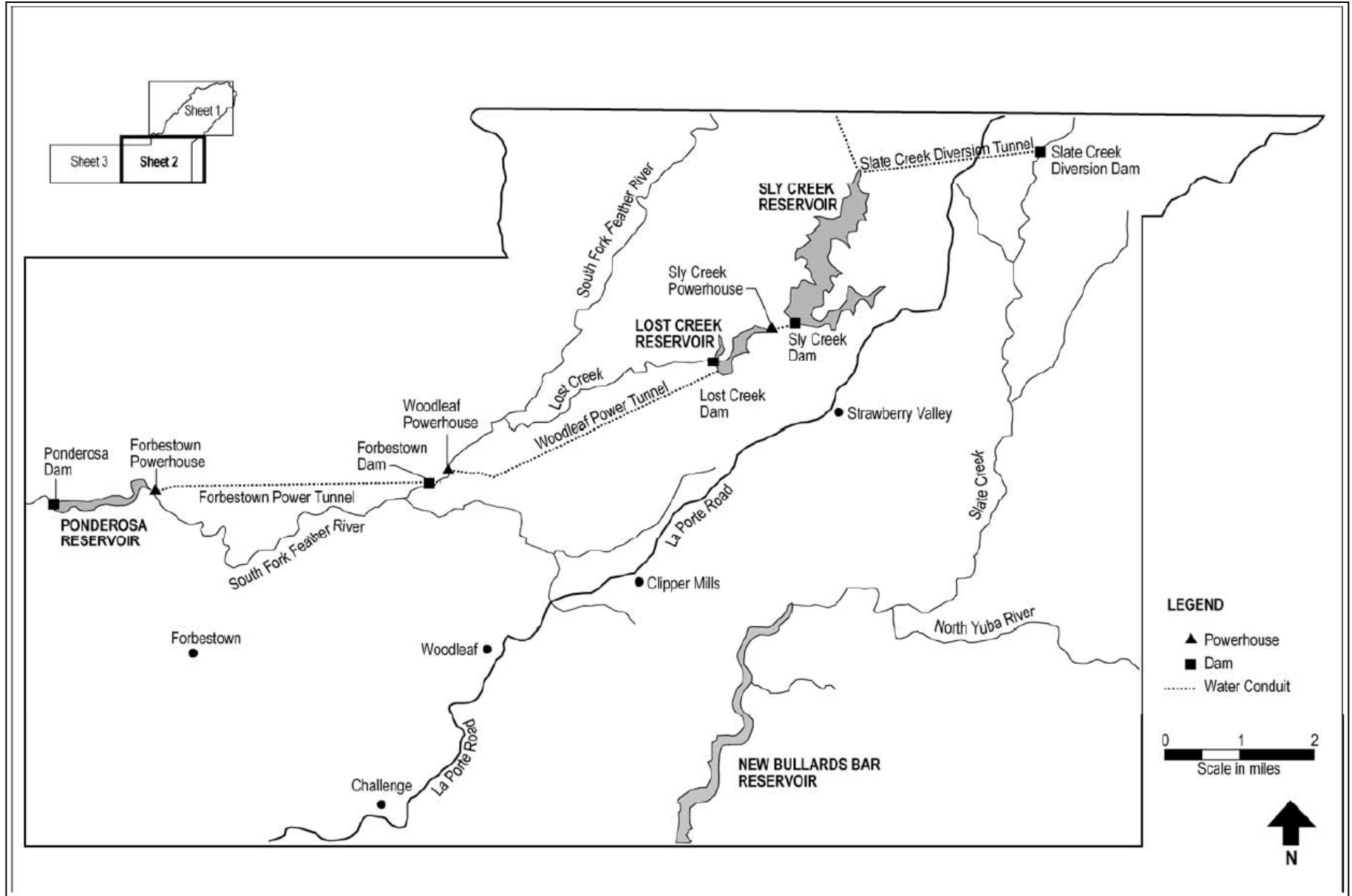
Attachment A:
Project Maps



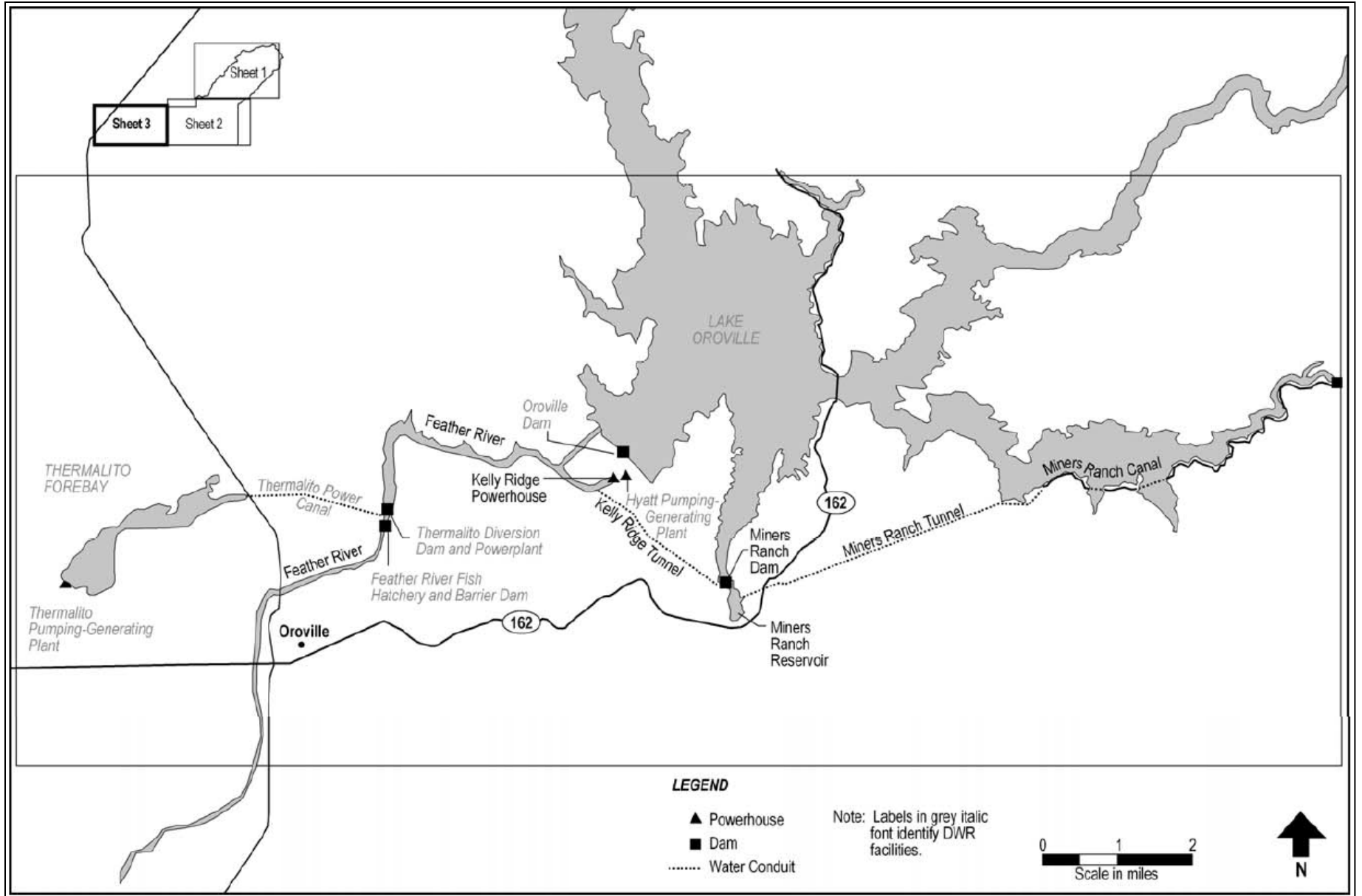
Map 1. South Feather Power Project Vicinity Map (Excerpted from license application.)



Map 2. South Feather Power Project, system map inset 1 of 3 (Excerpted from final EIS by FERC, sheet 1 of 3.)



Map 3. South Feather Power Project, system map inset 2 of 3 (Excerpted from final EIS by FERC, sheet 2 of 3.)



Map 4. South Feather Power Project, system map inset 3 of 3 (Excerpted from final EIS by FERC, sheet 3 of 3.)