

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

In the Matter of Water Quality Certification for

**CALIFORNIA DEPARTMENT OF WATER RESOURCES AND
LOS ANGELES DEPARTMENT OF WATER AND POWER
SOUTH STATE WATER PROJECT HYDROPOWER**

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2426

**SOURCES: Quail Lake, Pyramid Lake, Piru Creek, Cañada De Los Alamos/
Gorman Creek, and Castaic Creek**

COUNTY: Los Angeles

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

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Acronyms and Abbreviations

<i>AF</i>	<i>acre-feet</i>
<i>AIS</i>	<i>aquatic invasive species</i>
<i>Basin Plans</i>	<i>Water Quality Control Plans for the Los Angeles River Basin and the Lahontan River Basin</i>
<i>BMPs</i>	<i>best management practices</i>
<i>CDFW</i>	<i>California Department of Fish and Wildlife</i>
<i>CEQA</i>	<i>California Environmental Quality Act</i>
<i>Certification</i>	<i>water quality certification</i>
<i>cfs</i>	<i>cubic feet per second</i>
<i>Construction General Permit</i>	<i>National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i>
<i>CWA</i>	<i>Clean Water Act</i>
<i>Deputy Director</i>	<i>Deputy Director of the Division of Water Rights</i>
<i>DWR</i>	<i>Department of Water Resources</i>
<i>ECG</i>	<i>Ecological Consultation Group</i>
<i>ELAP</i>	<i>California's Environmental Laboratory Accreditation Program</i>
<i>ESA</i>	<i>Endangered Species Act</i>
<i>FERC</i>	<i>Federal Energy Regulatory Commission</i>
<i>FLA</i>	<i>Final License Application</i>
<i>Forest Service</i>	<i>United States Forest Service</i>
<i>IS</i>	<i>Initial Study</i>
<i>LADWP</i>	<i>Los Angeles Department of Water and Power</i>
<i>Lahontan Regional Board</i>	<i>Lahontan Regional Water Quality Control Board</i>
<i>Lahontan Basin Plan</i>	<i>Water Quality Control Plan for the Lahontan Region</i>
<i>Licensees</i>	<i>Department of Water Resources and Los Angeles Department of Water and Power</i>
<i>Los Angeles Regional Board</i>	<i>Los Angeles Regional Water Quality Control Board</i>
<i>Los Angeles Basin Plan</i>	<i>Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties</i>
<i>LWMMP</i>	<i>Large Woody Material Management Plan</i>
<i>MMRP</i>	<i>Mitigation Monitoring and Reporting Program</i>
<i>MND</i>	<i>mitigated negative declaration</i>
<i>NMFS</i>	<i>National Marine Fisheries Service</i>
<i>NPDES</i>	<i>National Pollutant Discharge Elimination System</i>
<i>NTU</i>	<i>Nephelometric Turbidity Unit</i>
<i>PM&E</i>	<i>Protection, Mitigation, and Enhancement Measures</i>
<i>Regional Water Boards</i>	<i>Regional Water Quality Control Boards</i>

State Water Board

SWP

TMDLs

USEPA

USFWS

USGS

State Water Resources Control Board

California State Water Project

total maximum daily loads

United States Environmental Protection Agency

United States Fish and Wildlife Service

United States Geological Survey

1.0 Project Description

The Department of Water Resources (DWR) and the Los Angeles Department of Water and Power (LADWP) own and operate South State Water Project Hydropower (Project), Federal Energy Regulatory Commission (FERC) Project No. 2426. The existing Project is part of a larger water storage and delivery system, the State Water Project (SWP), which is the largest state-owned and operated water supply project in the United States. The Project is located along the southern end of the West Branch of the SWP in Los Angeles County, California, between the towns of Castaic and Gorman.

The Project has an installed capacity of 1,349,290 kilowatts and includes two developments: (1) the Warne Power Development; and (2) the Castaic Power Development. Facilities and features of the two developments are summarized below.

Warne Power Development

1. Quail Lake, Lake Embankment, Lake Outlet, Lower Quail Canal, and Recreation Facilities;
2. Peace Valley Pipeline Intake, Pipeline Intake Embankment, and Pipeline;
3. Gorman Bypass Channel;
4. William E. Warne Powerplant and Switchyard;
5. Warne Transmission Line; and
6. Project Roads and Trails.

Castaic Power Development

1. Pyramid Dam, Pyramid Lake, and Recreation Facilities;
2. Angeles Tunnel and Surge Chamber;
3. Castaic Penstocks, Powerplant, and Switchyard;
4. Elderberry Forebay Dam, Forebay, and Outlet;
5. Storm Bypass Channel and Check Dams;
6. Castaic Transmission Line; and
7. Project Roads and Trails.

DWR operates and manages the facilities upstream of the Angeles Tunnel and Surge Chamber, which includes the entire Warne Power Development as well as Pyramid Dam, Pyramid Lake, and recreation facilities associated with the Castaic Power Development (see Figure 1). LADWP operates and manages the Angeles Tunnel and Surge Chamber and facilities south of the Angeles Tunnel and Surge Chamber. For additional information regarding water diversion, storage, and power generation throughout the Project, refer to Attachment A.

1.1 Water Rights

Table A lists the water rights held by DWR that are related to the Project.¹

¹ LADWP does not claim water rights related to the Project.

Table A. DWR Water Rights related to Project Diversions*

Application No.	Source Stream	Priority Date	Place of Storage or Diversion	Purposes of Use
A025988	Piru Creek	1979	Storage in Pyramid Lake	Irrigation, domestic, municipal, salinity control, recreation, fish and wildlife enhancement, and power
A026058	Castaic Creek	1983	Storage in Castaic Lake	Irrigation, domestic, municipal, salinity control, recreation, fish and wildlife enhancement, and power

* Information is from the State Water Resources Control Board’s electronic Water Rights Information Management System.

2.0 Regulatory Authority

2.1 Federal Energy Regulatory Commission Proceedings

On January 30, 2020, DWR and LADWP filed a final license application (FLA) with FERC proposing to relicense the Project. On December 2, 2020, FERC issued a Notice of Application Accepted for Filing, Soliciting Motions to Intervene and Protests, Ready for Environmental Analysis, and Soliciting Comments, Recommendations, Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions for the Project. The notice did not include an anticipated release date for FERC’s environmental analysis for the Project under the National Environmental Policy Act (NEPA). The State Water Resources Control Board (State Water Board) submitted a motion to intervene on December 14, 2020, and Preliminary Terms and Conditions on February 1, 2021.

2.2 Water Quality Certification and Related Authorities

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

Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires any applicant for a federal license or permit that may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will comply with specified provisions of the Clean Water Act, including water quality standards promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act section 401 directs the agency responsible for certification to set effluent

limitations and other conditions necessary to ensure compliance with the Clean Water Act and with “any other appropriate requirement of State law.” (33 U.S.C. § 1341(d).) Section 401 further provides that certification conditions shall become conditions of any federal license or permit for the project.

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

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

Procedure, Application, and Noticing. On December 17, 2020, DWR requested a pre-filing meeting for the Project. On January 27, 2021, DWR and LADWP filed a certification application for the Project with the State Water Board under section 401 of the Clean Water Act. On February 19, 2021, State Water Board staff provided public notice of the application, pursuant to California Code of Regulations, title 23, section 3858, by posting information describing the Project on the State Water Board’s website. Comments were received from California Department of Fish and Wildlife (CDFW) on May 12, 2021 and were considered in the development of the draft certification.

On October 29, 2021, the State Water Board released a draft certification for the Project for public comment. The comment period for the draft certification concluded on November 30, 2021. The State Water Board received two comment letters on the draft certification from the National Marine Fisheries Service (NMFS) and CDFW. The State Water Board considered these comments in developing the final certification. Additionally, on January 5, 2022, the State Water Board requested comments from the Lahontan Regional Water Quality Control Board (Lahontan Regional Water Board) and the Los Angeles Regional Water Quality Control Board (Los Angeles Regional Water Board) on the certification (See Cal. Code Regs., tit. 23, § 3855, subd. (b)(2)(B).). No comments were received.

2.3 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. (Wat. Code, § 13170.) For a specified area, 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. (Wat. Code, §§ 13241, 13050, subds. (h), (j).) The beneficial uses, together with the water quality objectives that are contained in the water quality control plans and state and federal antidegradation requirements, constitute California's water quality standards for purposes of the Clean Water Act.

The Los Angeles Regional Water Board adopted, and the State Water Board and USEPA approved, the *Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, (Los Angeles Basin Plan) (Los Angeles Regional Water Board 2014). The Los Angeles Basin Plan designates the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses. The Los Angeles Basin Plan identifies beneficial uses for Pyramid Lake as: municipal and domestic supply; industrial service supply; agricultural supply; ground water recharge; hydropower generation; warm freshwater habitat; cold freshwater habitat; rare, threatened, or endangered species; wildlife habitat; water contact recreation; and non-contact water recreation. The beneficial use for Piru Creek are identified as: industrial service supply; industrial process supply; agricultural supply; ground water recharge; freshwater replenishment; warm freshwater habitat; cold freshwater habitat; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction and/or early development; migration of aquatic organisms; wetland habitat; water contact recreation; and non-contact water recreation. The beneficial uses for Cañada de Los Alamos/Gorman Creek are identified as: wildlife habitat; and rare, threatened, or endangered species. The beneficial uses for Castaic Creek are identified as: wildlife habitat; migration of aquatic organisms; and non-contact water recreation.

The Lahontan Regional Water Board adopted, and the State Water Board and USEPA approved, the *Water Quality Control Plan for the Lahontan Region* (Lahontan Basin Plan) (Lahontan Regional Water Board 2019). The Lahontan Basin Plan designates the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses. The Lahontan Basin Plan identifies beneficial uses for Quail Lake, a minor surface water of the Neenach hydrologic area, as: municipal and domestic supply; agricultural supply; ground water recharge; water contact recreation; non-contact water recreation; commercial and sport fishing; warm freshwater habitat; cold freshwater habitat; and wildlife habitat.

The State Water Board's Antidegradation Policy, "Statement of Policy with Respect to Maintaining High Quality Waters in California," Resolution No. 68-16, requires that the quality of existing high-quality water be maintained unless any change will be consistent with the maximum benefit to the people of the state, will not unreasonably impact present or anticipated future beneficial uses of such water, and will not result in water quality less than that prescribed in water quality control plans or policies. The Antidegradation Policy further requires best practicable treatment or control of the

discharge necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained. The state Antidegradation Policy incorporates the federal Antidegradation Policy (40 C.F.R. section 131.12 (a)(1)), which requires "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

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

The rare, threatened, or endangered beneficial use is identified as uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered. Species listed as threatened or endangered under the federal ESA that have the potential to occur in the Project area include:

1. Slender-horned spineflower, marsh sandwort², Nevin's barberry*, Gambel's watercress, spreading navarretia, and California Orcutt grass*;
2. Vernal pool fairy shrimp;
3. Steelhead, and unarmored threespine stickleback*;
4. Arroyo toad, California red-legged frog, Foothill yellow-legged frog*; and
5. Yellow-billed cuckoo*, California condor*, costal California gnatcatcher, southwestern willow flycatcher, and least Bell's viereo*.

While not listed under the federal ESA, the Bald eagle also has the potential to occur in the Project area and is listed under the California ESA (DWR 2021).

2.4 Clean Water Act Section 303(d) Listing

In 2018, the State Water Board listed Pyramid Lake under Clean Water Act Section 303(d) as impaired for mercury in fish tissue. USEPA approved the 2018 303(d) list on June 9, 2021. Section 303(d) of the Clean Water Act requires total maximum daily loads (TMDLs) to be developed for impaired waterbodies. TMDLs are control programs that define the maximum amount of a pollutant that a waterbody can receive without exceeding water quality standards and establish waste load allocations and load allocations for point and nonpoint sources of pollution, respectively.

² Species listed with an asterisk are also listed as threatened or endangered under the California ESA.

2.5 Statewide Mercury Provisions

On May 2, 2017, the State Water Board adopted Resolution No. 2017-0027, which approved Part 2 of the ***Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions*** (Provisions)³ (State Water Board 2017a). Resolution No. 2017-0027 provides a consistent regulatory approach throughout the state by setting mercury limits to protect the beneficial uses associated with the consumption of fish by both people and wildlife. The State Water Board also adopted three new beneficial use definitions (tribal traditional culture, tribal subsistence fishing, and subsistence fishing) for use by the State Water Board and Regional Water Boards. The State Water Board also approved one narrative and four numeric mercury objectives to apply to inland surface waters, enclosed bays, and estuaries of the state that have any of the following beneficial use definitions: commercial and sport fishing, tribal traditional culture, tribal subsistence fishing, wildlife habitat, marine habitat, preservation of rare and endangered species, warm freshwater habitat, cold freshwater habitat, estuarine habitat, or inland saline water habitat, with the exception of waterbodies or waterbody segments with site-specific mercury objectives. The Provisions will be implemented through National Pollutant Discharge Elimination System (NPDES) permits, certifications, waste discharge requirements, and waivers of waste discharge requirements.

2.6 Construction General Permit

DWR and LADWP will need to obtain coverage under the State Water Board's ***National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities*** (Construction General Permit)⁴ (State Water Board 2009) for activities that disturb one or more acres of soil, or that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Coverage is required pursuant to Clean Water Action sections 301 and 402 that prohibit certain discharges of stormwater containing pollutants except in compliance with an NPDES permit. (33 U.S.C. §§ 1311, 1342(p); 40 C.F.R. pts. 122, 123, and 124.)

³ The Provisions are available online at:
https://www.waterboards.ca.gov/water_issues/programs/mercury/. Accessed January 25, 2022.

⁴ Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto. Available at:
https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Accessed on January 25, 2022.

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

On April 2, 2019, the State Water Board adopted the [*State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*](#) (Procedures),⁵ which became effective on May 28, 2020. The Procedures provide California's definition of wetland, wetland delineation procedures, and procedures for submitting applications for activities that could result in discharges of dredged or fill material to waters of the state. The Procedures ensure that State Water Board regulatory activities will result in no net loss of wetland quantity, quality, or permanence, compliant with the *California Wetlands Conservation Policy*, Executive Order W-59-93. DWR and LADWP must comply with the Procedures when conducting dredge or fill activities that may impact waters of the state, including wetlands.

2.8 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)⁶ 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.

2.9 California Environmental Quality Act

DWR is the lead agency for the Project for the purpose of compliance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). DWR released a draft Initial Study (IS) and draft Mitigated Negative Declaration (MND) on March 22, 2021 with the comment period concluding on April 21, 2021. The Draft IS/MND did not identify any significant and unavoidable impacts, and incorporated mitigation, where necessary, to reduce all potentially significant impacts to a less than significant level. DWR released the final IS/MND and filed a Notice of Determination with the Office of Planning and Research on June 24, 2021 (DWR 2021). Like the draft, the final IS/MND identifies mitigation measures to reduce the Project's potentially significant environmental impacts to less than significant.

⁵ The Procedures are available online at:
https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp/rs2021_0012.pdf. Accessed on January 25, 2022.

⁶ Water Quality Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at:
https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Accessed on January 25, 2022.

CEQA requires the lead agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) for projects where mitigation measures are a condition of project approval. (Cal. Code Regs., tit. 14, § 15091, subd. (d).) DWR included an MMRP in the final IS/MND.

The State Water Board reviewed and considered the environmental effects described in DWR's IS/MND in developing this certification. As a condition of certifying this Project, the State Water Board has required compliance with the mitigation measures in the IS/MND, as well as compliance with water quality-related monitoring and reporting identified in DWR's MMRP. DWR and LADWP are responsible for implementing each mitigation measure and providing verification of implementation. Mitigation Measure GEO-1: Prevention of Erosion Damage to Infrastructure is incorporated into Condition 2 of this certification. Mitigation Measure MAND-1: Development of Flood Warning Signage is incorporated into Condition 11 of this certification.

3.0 Rationale for Water Quality Certification Conditions

This section of the certification provides an explanation of why certification is appropriate, and why the conditions in Section 5.0 are necessary to assure that the Project and its discharges will comply with water quality requirements. This section also includes, as necessary, citations to federal, state, or tribal laws that authorize the condition and sets forth citations to applicable regulatory authority. The explanation and citations should be evaluated in the context of the certification as a whole, but the certification conditions are set forth only in Section 5.0.

As explained in this section, the conditions in the certification are generally required pursuant to the Lahontan Basin Plan and the Los Angeles Basin Plan (Basin Plans), as described in the "Regulatory Authority" section, above.

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

Water Code sections 13267 and 13383 authorize the Regional Water Boards and State Water Board (collectively Water Boards) to establish monitoring and reporting requirements for persons discharging or proposing to discharge to navigable waters, or to discharge waste thereto. Water Code section 13165 authorizes the State Water Board to impose reasonable investigation and reporting requirements regarding water quality control factors on state or local agencies (such as the DWR and LADWP). Water Code section 1051 additionally authorizes the State Water Board to investigate waters diverted for beneficial use. Moreover, this certification ensures continued monitoring, reporting, and assessment of water quality for discharges that may impact waters of the state, including waters listed as impaired under Clean Water Act section 303(d).

The conditions in this certification were developed to ensure compliance with water quality standards and water quality requirements established under the Porter-Cologne Water Quality Control Act, the federal Clean Water Act, including requirements in the Basin Plans, and other appropriate requirements of state law. The conditions in Section 5.0 of this certification are necessary to protect the beneficial uses of waters of the state identified in the water quality control plans, prevent degradation of water quality, and help ensure compliance with state and federal water quality requirements.

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

- DWR and LADWP's application for certification (DWR and LADWP 2020);
- DWR and LADWP's January 30, 2020, FLA and amendments thereto (DWR and LADWP 2020);
- Recommended and preliminary license terms and conditions submitted by state and federal agencies pursuant to Federal Power Act sections 4(e), 10(a), and 10(j):
 - CDFW January 28, 2021, Federal Power Act 10(j) preliminary recommendations and rationale for the Project-specific recommendations found to be necessary for Fish and Wildlife Protection, Mitigation, and Enhancement Measures (PM&Es) (CDFW 2021), which are operation and management activities that protect resources against impacts from the Project, mitigate impacts from the Project, and enhance resources affected by continued Project operations and maintenance;
 - United States Forest Service (Forest Service) January 25, 2021, *Preliminary Terms and Conditions, and Recommendations for the South SWP Hydropower Project*. (Forest Service 2021);
 - National Oceanic and Atmospheric Administration's, National Marine Fisheries Service, West Coast Region §10(j) Conditions, §10(a) Recommendations, and Preliminary §18 Prescriptions (NMFS 2021).
- DWR's March 22, 2021 draft IS/MND (DWR 2021) and June 24, 2021 final IS/MND (DWR 2021);
- CDFW May 12, 2021 letter to the State Water Board providing comments and recommendations for the Project certification (CDFW 2021);
- Comments associated with the aforementioned documents;
- Comments received on the draft certification released on October 29, 2021;
- Existing and potential beneficial uses, associated water quality objectives, and implementation measures and programs described in the Basin Plans;
- Project-related controllable water quality factors; and
- Other information in the record.

The Project application, CEQA review, and other materials assessed in development of this certification, as well as the history of Project operations, demonstrate that the Project can operate to meet water quality standards and other appropriate requirements of state law if it complies with the conditions of this certification. The certification conditions provide a comprehensive framework to assess and address potential

negative impacts to water quality and beneficial uses, and provide for continued compliance over changing conditions throughout the term of the new FERC license for the Project.

3.1 Rationale for Condition 1: Water Quality Monitoring

Project activities, such as operations and maintenance and reservoir maintenance and management, through their associated discharges and stream system modifications, have the potential to violate the Basin Plans' water quality objectives. Major alterations of stream systems can significantly affect biological and chemical processes in the water affecting a host of water quality parameters, including those related to temperature, nutrients, pH, sediments, metals, micro-organisms, and toxins. Changes to water temperatures can adversely impact species occurring in the Project area which may lead to impairment or lethality. Rapid increases to water temperature can reduce dissolved oxygen levels to critically low levels. Further, changes in temperature may lead to unreasonable impacts to beneficial uses.

This condition requires DWR and LADWP to comply with applicable water quality objectives and implement a water quality monitoring plan to prevent water quality objective violations and impacts to beneficial uses, and to identify the need for changes to Project-related activities to avoid them. Water temperature data will identify if Project operations or facilities, including maintaining and operating reservoirs, operating outlets, and affecting flows, are impacting thermal conditions of water in a manner that may impact biota.

Water quality monitoring and reporting conditions are required to help ensure beneficial uses are protected and to comply with Basin Plans' water quality objectives, and other appropriate requirements of state law. These monitoring requirements are consistent with the Water Boards' authority to investigate the waters of the state, including for quality, and to require necessary monitoring and reporting pursuant to Water Code sections 1051, 13165, 13267 and 13383.

Implementation of this condition will help avoid or limit unreasonable impacts to water quality and beneficial uses associated with water temperature and other water quality constituents, which include: wildlife habitat; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; rare, threatened, or endangered species; spawning, reproduction, and/or early development; and water contact recreation.

3.2 Rationale for Condition 2: Erosion and Sediment Control

Erosion and sedimentation can contribute to significant degradation of the waters of the state; therefore, it is necessary to implement actions to limit or eliminate such discharges in order to protect water quality and associated beneficial uses. Project activities, including but not limited to the use of Project roads, and improvements and rehabilitation of the existing recreation developments, have the potential to result in increased erosion that discharge sediment and other materials into waters of the state in the Project area and downstream of the Project area. Sediment and debris are removed from the check-dam basins as needed, and spoils are disposed of onsite on

State-owned lands. Increases in erosion and sedimentation can violate water quality objectives and impact potential and existing beneficial uses including: wildlife habitat; warm freshwater habitat; cold freshwater habitat; rare, threatened, or endangered species; municipal and domestic supply; spawning, reproduction, and/or early development; and water contact recreation. This condition requires DWR and LADWP to implement erosion and sedimentation control measures, including MM GEO-1 as described in DWR's final IS/MND and MMRP, to prevent water quality objective violations and unreasonable impacts to beneficial uses.

3.3 Rationale for Condition 3: Minimum Instream Flows

Minimum instream flows are a key element to protecting the state's water quality. Minimum instream flows directly protect water quality to support beneficial uses, provide for improved ecosystem function that protects water quality and beneficial uses, and provide habitat for fish and wildlife. Beneficial uses that rely on minimum instream flows for protection include: wildlife habitat; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; rare, threatened, or endangered species; municipal and domestic supply; spawning, reproduction, and/or early development; and water contact recreation. Fish and Game Code Section 5937 requires any owner of a dam to allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist downstream. Daily flow alterations that are no greater than 10 percent allow for a high level of ecological protection, which results in minimal changes to ecosystem structure and natural function of the river (Richter 2011). Ensuring instream flows do not greatly differ from natural instream flows ensures protection of biodiversity, ecosystem services,⁷ recreation, and water quality. Condition 3 requires DWR and LADWP to develop a Minimum Instream Flows Plan to ensure protection of water quality and beneficial uses by operating the Project in a way that supports the natural function of the river. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses.

3.4 Rationale for Condition 4: Fish Stocking

Prior to stocking waters of the state with fish, each water of the state must be evaluated to determine if stocking may result in adverse impacts to water quality. Introduction of non-native fish species has the potential to have significant impacts on water quality and aquatic ecosystem health (USEPA 2021). Native fish play an essential role in the formation and maintenance of a healthy ecosystem, including the protection of water quality.

CDFW and DWR executed an Off-License Stocking Agreement on December 7, 2020. The Off-License Agreement is intended to address CDFW concerns regarding potential impacts to resident fish resources and associated recreational opportunities in a manner that is independent of the new FERC license or other permits for the Project. The Off-License Stocking Agreement includes stocking fish at Castaic Lake (DWR and CDFW

⁷ Ecosystem services are benefits to society provided by the environment such as clean water for consumption, regulation of climate, and food.

2020). Condition 4 requires DWR to develop and implement a fish stocking plan if the Off-License Stocking Agreement is dissolved during the term of the new FERC license.

Condition 4 notes that fish stocking shall not result in adverse impacts to native species or water quality. Condition 4 also requires DWR to implement proposed measure AR2, included in the FLA, which requires fish stocking at Pyramid Lake. Evaluation of fish stocking plans and implementation of this condition are necessary to avoid unreasonable impacts to water quality and beneficial uses including recreation.

3.5 Rationale for Condition 5: Ramping Rates

Sudden changes in instream flow can adversely impact a number of water quality parameters and beneficial uses. Aquatic organisms can be stranded as water levels rapidly decrease and expose previously inundated habitat. Project operations can cause abrupt instream flow and stage fluctuations in stream reaches that may strand, wash out, or otherwise impact aquatic species. Rapid changes in instream flow can increase turbidity and increase or decrease water temperature in waters of the state that may result in adverse or lethal effects to species, and that violate applicable water quality objectives. Additionally, abrupt instream flow and stage changes can create dangerous and even lethal conditions for the public engaging in fishing and other water recreation activities.

Ramping rates are necessary for water deliveries made from the Project to United Water Conservation District (UWCD). UWCD receives water as part of the Ventura County Watershed Protection District's long-term water supply contract with DWR. UWCD receives up to 3,150 acre-feet (AF) per year of SWP water through releases by DWR into the Pyramid Reach⁸. SWP water is delivered to UWCD between November 1 and the end of February each water year. Per the water supply contract, these water deliveries may be made over a period of a few days, ramping flows up and down to stimulate the hydrograph of a typical storm event, or they may be released more gradually over a longer period.

Condition 5 requires DWR and LADWP to develop and implement up-ramping and down-ramping rates for discharges associated with water deliveries to UWCD. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses associated with sudden changes in flow related to Project operations. Potentially impacted beneficial uses include: wildlife habitat; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and water contact recreation.

⁸ Pyramid reach refers to the 18.1-mile-long section of Piru Creek, which extends from the spillway or low-level outlet at Pyramid Dam (impounding Pyramid Lake) to the normal maximum water surface elevation of Lake Piru.

3.6 Rationale for Condition 6: Large Woody Material Management

Pyramid Dam blocks downstream movement of woody material from the Upper Piru Creek watershed that would otherwise support habitat for native fish species. Anchored or lodged woody material can create complex in-channel hydraulics that promote zones of scour and deposition, creating accumulations of spawning gravels, providing hydraulic refugia (Bisson et al. 1987), and creating pools by forcing flows to scour channel beds and banks. Woody material enriches native fish species aquatic habitat by supplying nutrients and substrate for aquatic organisms (Anderson et al. 1978). Condition 6 requires DWR and LADWP to develop a Large Woody Materials Management Plan to ensure protection of water quality and beneficial uses by adding large woody material to the Project area in a way that supports the natural function of the river. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses related to fish and habitat, and helps support a dam owner's requirement under Fish and Game Code 5937 to maintain fish in good condition below a dam.

3.7 Rationale for Condition 7: Gravel Enhancement

While Pyramid Dam blocks all downstream movement of spawning gravels from the Upper Piru Creek watershed, the various tributaries to Pyramid Reach not only provide additional flows, but also provide spawning gravels for native fish species. Therefore, it is the first subreach of Piru Creek, below Pyramid Dam downstream to Fish Creek, that is likely to be spawning gravel limited. Placing spawning gravels just downstream of Pyramid Dam in this subreach will help mitigate for the blockage of gravel by the dam. Suitable spawning gravel is necessary below dams to mitigate and minimize direct, indirect, and cumulative impacts of a project's facilities and operations on sediment movement and deposition, river geometry, channel characteristics, and benthic macroinvertebrate communities – a common salmonid food source (Dietrich et al. 1989).

The arroyo toad has specialized breeding habitat requirements that are vulnerable to habitat destruction and alteration due to short- and long-term changes in river hydrology. Piru Creek provides relatively stable reproductive habitat for arroyo toads. Arroyo toad habitat is dominated by silt and sand with patches of gravel (USFWS 2014). Gravel enhancement has the potential to displace arroyo toad habitat by changing the specialized breeding habitat that currently exists in Piru Creek. The condition allows for modifications if implementation of the Gravel Enhancement Plan has or will result in negative effects to arroyo toads or their habitat.

Condition 7 requires DWR and LADWP to develop a Gravel Enhancement Plan to ensure the protection of water quality and beneficial uses by enhancing gravel in the Project area in a way that supports the natural function of the river while protecting native aquatic species, including the arroyo toad. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses.

3.8 Rationale for Condition 8: Pyramid Lake Levels

Reservoir level monitoring and reporting are required at Pyramid Lake to confirm that the requirements of this certification are sufficient to protect water quality objectives and beneficial uses identified in the Basin Plans, and other appropriate requirements of state law. These monitoring requirements are consistent with the Water Boards' authority to investigate the quality of any waters of the state and require necessary monitoring and reporting pursuant to Water Code sections 1051, 13165, 13267 and 13383.

Water levels in Pyramid Lake may adversely impact water quality, aquatic species, and recreation. Changes in reservoir levels can cause an increase in temperature and decreased dissolved oxygen levels which may lead to unreasonable impacts to beneficial uses, including: wildlife habitat; warm freshwater habitat; cold freshwater habitat; and water contact recreation. Condition 8 requires DWR and LADWP to implement requirements related to surface water elevations in Pyramid Lake to ensure protection of water quality and beneficial uses.

3.9 Rationale for Condition 9: Hazardous Materials Management

Site management requires implementation of best practices to prevent, minimize, and clean up potential spills associated with ongoing operation, maintenance, and construction during the term of the new FERC license. For instance, fuels and lubricants associated with the use of mechanized equipment have the potential to result in toxic discharges to waters of the state in violation of water quality standards, including toxicity and floating material water quality objectives. This condition is also required pursuant to Water Code section 13264, which prohibits any discharge that is not specifically authorized.

The Basin Plans include narrative water quality objectives for oil, grease, and other hazardous materials. Waters must be free of hazardous materials in concentrations that cause nuisance or "detrimental physiological responses in human, plant, animal, or aquatic life." (Los Angeles Regional Water Board 2019). Condition 9 requires development and implementation of a hazardous materials management program to prevent hazardous material spills into waters of the state, including containment criteria pursuant to California Code of Regulations, title 27, section 20320. Implementation of this condition will avoid unreasonable impacts to water quality and beneficial uses including: wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and/or early development; and water contact recreation.

3.10 Rationale for Condition 10: Aquatic Invasive Species Management

Aquatic invasive species (AIS) have the potential to cause adverse impacts to water quality and native species in Project areas. Floating and submerged invasive aquatic vegetation can degrade water quality by supporting non-native predators. In addition to the increase of predation pressure by non-native species, invasive species can compete against native species for limited resources. AIS have the potential to be introduced and flourish in the Project area via Project-related flow releases, Project operation and maintenance, Project alterations to habitat, and recreational activities. Implementation

of AIS management activities will minimize and prevent the introduction, establishment, and spread of AIS into and throughout the Project area. AIS can result in violations of water quality objectives and impact potential and existing beneficial uses. Condition 10 requires DWR and LADWP to develop and implement a monitoring and corrective action AIS Plan to minimize and prevent the introduction and establishment of AIS, and reduce the spread of existing AIS including quagga mussels and zebra mussels. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses, including: wildlife habitat; warm freshwater habitat; cold freshwater habitat; rare, threatened, or endangered species; spawning, reproduction, and/or early development.

3.11 Rationale for Condition 11: Recreation Management

Operations and maintenance activities associated with the Project's recreation facilities have the potential to impact water quality. Construction of new recreation facilities, modification of existing recreation facilities, or other ground-disturbing activities could increase soil erosion and sediment delivery to surface waters. Erosion can adversely impact water quality and associated aquatic habitat by increasing turbidity and limit habitat suitability for many aquatic invertebrates. Flashy instream flows can contribute to safety risks for recreators using waters of the state; therefore, it is necessary to implement a warning system to alert recreators of sudden high instream flows to eliminate or avoid risk of harm or death. Warning systems are an affordable solution that allows for hydropower generation and protection of public health and safety during the beneficial use of water contact recreation. Thus, a warning system is required under California Constitution, Article X, section 2's requirements requiring reasonable use and the use of water for multiple purposes in the state, as determined by the State Water Board pursuant to Water Code, section 100, and is further required in the public interest, under Water Code, section 105. Condition 11 requires DWR and LADWP to develop a recreation plan that includes management and operations of Project recreational facilities, modifications of Project recreation facilities, and a schedule for implementing the modifications. Implementation of this condition will help avoid unreasonable impacts to water quality and beneficial uses, including: wildlife habitat; warm freshwater habitat; cold freshwater habitat; rare, threatened, or endangered species; spawning, reproduction, and/or early development; water contact recreation; and non-contact water recreation.

3.12 Rationale for Condition 12: Extremely Dry Conditions

California's history of drought illustrates the importance of planning for multiple dry years or drought. It is difficult to anticipate the specific impacts of consecutive dry years or a long-term drought and identify where limited water supplies may be best used during times of shortage during the extended term of a FERC license. Drought conditions combined with the Project may adversely impact water quality through decreased instream flow and lower reservoir levels which can result in increased water temperatures, decreased dissolved oxygen levels, algal blooms, and increased amounts of aquatic invasive species. Drought conditions can cause normal Project operations to exceed water quality objectives and adversely impact beneficial uses. Condition 12 provides DWR and LADWP with the ability to request modifications to

certification terms, thereby providing flexibility for adaptive management during times of extreme water shortage.

Implementation of this condition will avoid unreasonable impacts to water quality and beneficial uses, including: municipal and domestic supply; industrial service supply; agricultural supply; ground water recharge; hydropower generation; wildlife habitat; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; rare, threatened, or endangered species; spawning, reproduction, and/or early development; water contact recreation; and non-contact water recreation.

3.13 Rationale for Condition 13: Sensitive Species Management

Project operation and maintenance activities have the potential to interfere with native aquatic and terrestrial species that depend heavily on aquatic food or live in riparian or wetland habitats, and to adversely impact habitat use. Species listed as threatened or endangered under the federal ESA and the California ESA that have the potential to occur in the Project area are listed under Section 2.3 of the certification.

Condition 13 requires DWR and LADWP to develop a plan that when implemented will minimize impacts from Project operations and maintenance to sensitive species and sensitive habitats that are aquatic, riparian, littoral, or otherwise have a particular aquatic nexus and that are listed as threatened or endangered under the federal ESA or California ESA and that have the potential to occur in the Project area. DWR monitored for the presence of and operational impacts to sensitive species under the Re-operation of Pyramid Dam for the California Aqueduct Hydroelectric Project certification issued on August 4, 2009 (Order WQ 2009-0007), and Project-related impacts to species were not identified. Monitoring for sensitive species impacts from facilities operation is not initially required under the plan, but may become required after consultation and under changed circumstances during the term of the new FERC license for the Project.

Implementation of this condition will avoid unreasonable impacts to water quality and the beneficial uses including: wildlife habitat; rare, threatened, or endangered species; and spawning, reproduction, and/or early development.

3.14 Rationale for Condition 14: Annual Ecological Consultation Group Meeting

Monitoring and management plans required by this certification will assist the Forest Service, United States Fish and Wildlife Service (USFWS), CDFW, NMFS, the State Water Board, and other interested agency representatives in evaluating impacts, including water quality, associated with the implementation of new FERC license conditions on hydrologic, biologic, and geomorphologic resources in the Project area throughout the term of the new FERC license. Annual consultation meetings bring the relicensing participants and interested parties together to discuss monitoring results and resource trends, and develop adaptive management actions, if necessary, to protect water quality and beneficial uses. Condition 14 requires the creation of an Ecological Consultation Group comprised of DWR and LADWP, agencies, and shall be open to other interested persons. The Ecological Consultation Group will meet annually to

review and discuss efforts completed in the previous year and those planned for the coming year to inform the ongoing protection of water quality and beneficial uses.

3.15 Rationale for Conditions 15-37

This certification imposes additional conditions regarding Project approvals, monitoring, enforcement, and potential future revisions.

Fish passage studies have begun at the Santa Felicia Hydroelectric Dam Project (FERC Project No. 2153), which is downstream of the Project on Lower Piru Creek.

Condition 15 is a reopener that allows for fish passage studies and related fish passage implementation activities if a determination is made that it is reasonably foreseeable that listed anadromous fish species will be reintroduced into Project-impacted areas.

Condition 16 is necessary to comply with Water Code section 13167 and Conditions 17 through 20 contain important clarifications concerning the scope and legal effect of this certification, and other legal requirements that may apply to the Project.

Monitoring, reporting, and assessment actions, and the information developed through such actions, must be readable, shared, and coordinated with other appropriate entities, and accessible to ensure that a discharge activity complies with water quality requirements. Water Code section 13167 requires the Water Boards to ensure that monitoring data and assessment information are available in a single location and that the information is presented in a manner easily understandable by the public. To fulfill this legislative mandate, Condition 16 requires electronic data submittal in a compatible format with existing system specifications. Compliance with this condition enhances the accessibility of data and transparency of regulatory actions. This allows regulatory agencies and the public to better assess compliance and understand water quality trends or data anomalies by compiling data and making it readily available.

Pursuant to the California ESA (Fish & G. Code, § 2050 et seq.) and federal ESA (16 U.S.C. § 1531 et seq.), the certification does not authorize any act which results in the taking of a threatened, endangered, or candidate species. An applicant for certification is required to identify other licenses, permits, and agreements in the application. In the event an applicant for certification needs authorization from the state or federal authorities, California Code of Regulations, title 23, section 3856, subdivision (e), requires that the applicant provide copies of “any final and signed federal, state, and local licenses, permits, and agreements (or copies of the draft documents, if not finalized) that will be required for any construction, operation, maintenance, or other actions associated with the activity. If no final or draft document is available, a list of all remaining agency regulatory approvals being sought shall be included.” To help ensure the integrity of the certification process and its focus on the activity resulting in discharge, Condition 17 serves to notify applicants that there may be additional applicable federal, state, or local laws or ordinances with which they must comply, including the state and federal ESAs.

Water Code section 13160, subdivision (b)(1) allows the State Water Board to issue a certification when there is “reasonable assurance that an activity of any person subject to the jurisdiction of the state board will comply with applicable requirements” of state and federal law. Also, as noted in the rationale for Condition 17 above, to help ensure the integrity of the certification process and its focus on the activity resulting in discharge, Condition 18 serves to notify applicants that there may be additional applicable federal, state, or local laws or ordinances with which they must comply. Because agency organization and authorities change over time, Condition 19 provides direction for continuity of oversight in the event an agency’s authority or responsibility is transferred to or subsumed by another agency.

The State Water Board is responsible for the water right, water quality, and drinking water functions of the California state government. (Wat. Code, § 174.) Certain certifications, including this one, involve an appropriation of water subject to part 2 of division 2 of the Water Code or the diversion of water for certain beneficial uses under the State Water Board’s authorities over water rights. (See, e.g., Cal. Code Regs., tit. 23, § 3855, subd. (b)(1)(A).) Condition 20 clarifies that the State Water Board is not adjudicating or approving the validity of water rights involved with the Project subject to certification. It also recognizes the State Water Board’s authority, independent of its certification authority, to prevent unauthorized or threatened unauthorized diversions of water. This helps to ensure that an applicant for a federal license or permit that involves a discharge to navigable waters understands that, except as specified in the certification, the certification does not constitute, or excuse the applicant from obtaining any other State Water Board approvals required for the activity.

Conditions 21 through 23 are necessary to assure that any discharge authorized under the general license or permit will comply with water quality requirements. Water quality requirements include state regulatory requirements for point source discharges into waters of the United States. California Code of Regulations, title 23, chapter 28 sets forth regulations pertaining to certifications for point source discharges to waters of the United States. These conditions were included to comply with section 3860, which sets forth conditions that must be included in all certifications.

Condition 21 is a standard condition that “shall be included as conditions of all certification actions” pursuant to California Code of Regulations, title 23, section 3860, subdivision (a). This condition places the applicant on notice that the certification action may be modified or revoked following administrative or judicial review. Condition 22 is a standard condition that “shall be included as conditions of all water quality certification actions” pursuant to California Code of Regulations, title 23, section 3860(b). This condition clarifies the scope of the certification’s application and ensures that any applicant for a federal license or permit, which may result in a discharge into navigable waters, is subject to the appropriate State certification. The application here meets the requirements for applicability to a hydroelectric facility. Condition 23 is a standard condition that “shall be included as conditions of all water quality certification actions” (California Code of Regulations section 3860(a)). This fee requirement condition is also required pursuant to California Code of Regulations section 3833(b), which requires payment of fees by project proponents applying for certification. Fees are essential to support the Water Boards certification program, which includes the development of

certifications and related inspections to ensure the protection of water quality and beneficial uses that may be impacted by a project's discharge.

Conditions 24 through 33 are necessary to ensure that the Project operates to meet water quality standards and other appropriate requirements of state law, or that adjustments are made to ensure continued compliance with water quality standards in light of new information, changes to the Project, determination of invalidity or waiver, or changes to the standards themselves.

This certification requires monitoring, reporting, and analysis as important elements to ensure that the Project, including discharges, will comply with state and federal water quality requirements and other appropriate requirements of state law. These requirements include, for example, Water Code sections 13267 and 13383, which authorize the Water Boards to establish monitoring and reporting requirements for persons discharging or proposing to discharge to the waters of the state, including discharges of waste. Condition 26 sets reporting requirements that are essential to ensuring that the Project will comply with water quality requirements. Conditions 25, 26, and 27 ensure compliance and prevent violations of water quality standards over the long period of Project operations, including accounting for changes in technology, water quality requirements, and the Project itself. In the event of non-compliance, modified conditions may be necessary to return the discharger to compliance and prevent violation of water quality standards. Conditions 27 and 28 require the DWR and LADWP to take reasonable measures to protect water quality and beneficial uses, in accordance with plans adopted pursuant to state and federal water laws. Condition 29 provides notice of the State's rights to levee penalties as allowed by State law in order to protect water quality. Condition 30 requires reports that are necessary to ensure compliance with water quality standards. Water Code sections 1051, 13165, 13267, and 13383 authorize the Water Boards to establish monitoring and reporting requirements for persons discharging or proposing to discharge to the waters of the state, including discharges of waste.

Condition 31, related to site access requirements, is authorized pursuant to the Water Boards' authority to investigate the quality of the waters of the state, including specific site access authorization under Water Code sections 13267 and 13383. Site access is needed to ensure compliance with the certification and associated protection of water quality and beneficial uses. Condition 32 requires site personnel and agencies to be familiar with the content of the certification and availability of the document at the Project site. This condition is required to assure that site personnel are familiar with the conditions needed to protect water quality and any authorized discharge will comply with the terms and conditions of this certification, which requires compliance with water quality objectives and beneficial uses adopted or approved under sections 13170 or 13245 of the Water Code, and with other appropriate requirements of state law.

In the event that any provision of this certification is found invalid, Condition 33 ensures that all other provisions will remain effective and water quality will still be protected. Condition 34 provides clarification that the provisions allowing for addition or modification of the terms of this condition shall include notice and the opportunity to be heard.

Condition 35 provides protection to wetlands, in conformance with State wetland protection requirements. Project infrastructure and operations of the Gorman Bypass Channel have the potential to degrade or eliminate wetlands (DWR 2021). California has had especially profound historical losses of wetlands. Avoidance, restoration, or replacement of impacted wetlands and riparian areas, and other actions in conformance with the Procedures (State Water Board 2019) and the California Wetlands Conservation Policy (Governor's Executive Order W-59-93 (Aug. 23, 2003), and any amendments thereto, provides adequate protection for the water decontamination and nutrient recycling functions of wetlands and riparian areas, as well as the habitat functions.

The CWA prohibits a point source discharge of pollutants into waters of the United States, unless authorized by a NPDES or other appropriate permit. Condition 36 ensures waters of the United States will be protected from discharges by requiring DWR and LADWP to obtain a NPDES permit for applicable activities that may adversely affect water quality. Condition 37 requires that the laboratory methods used to assess compliance with the certification meet approved methods and are assessed by certified laboratories, to the extent possible, in order to allow for quality assurance.

4.0 Conclusion

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

5.0 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 STATE WATER PROJECT HYDROPOWER (Project) will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of state law, under the following terms and conditions.

CONDITION 1. Water Quality Monitoring

No later than three months following issuance of the Federal Energy Regulatory Commission (FERC) license, the Department of Water Resources (DWR) and the Los Angeles Department of Water and Power (LADWP) (collectively, Licensees) shall submit a Water Quality Monitoring Plan to the Deputy Director of the Division of Water Rights (Deputy Director) for review and consideration of approval. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Water Quality Monitoring Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Water Quality Monitoring Plan upon Deputy Director and any other required approvals. Any changes to the Water Quality Monitoring Plan shall be approved by the Deputy Director prior to implementation.

At a minimum, the purpose of the Water Quality Monitoring Plan shall be to monitor and evaluate water quality related to Project operation and provide for adaptive management to ensure the protection of water quality and beneficial uses associated with the Project. The water quality monitoring performed by the Licensees during their previous FERC Project license may be used as a starting point for the Water Quality Monitoring Plan. The Water Quality Monitoring Plan shall be developed in consultation with the United States Forest Service (Forest Service), the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), Los Angeles Regional Water Quality Control Board (Los Angeles Regional Water Board), and State Water Resources Control Board (State Water Board) staff. At a minimum, the Water Quality Monitoring Plan shall include:

- Purpose of the plan;
- Proposed monitoring locations. The locations shall include the Project reservoirs and Project-impacted stream reaches. Monitoring sites shall be selected to provide representative water quality samples and data to assess potential impacts to water quality that may be associated with Project facilities and operations;
- Frequency of proposed water quality monitoring. Monitoring shall occur at intervals throughout the license term to document trends over time and changes in water quality associated with Project-related activities including operation and maintenance of the Project and its facilities;
- Constituents to be monitored. A list of water quality parameters that will be analyzed and associated sampling protocols. At a minimum, the parameters shall include those monitored for under the previous FERC license period, unless otherwise approved by the Deputy Director. These parameters include:

alkalinity, aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chloride, chromium, copper, fluoride, iron, lead, magnesium, manganese, mercury, nitrate, selenium, silver, sodium, dissolved solids, specific conductance, sulfate, turbidity, zinc, nutrients, total and dissolved organic carbon, bromide, pH, dissolved oxygen, depth, temperature, and electrical conductivity. Additional parameters that shall be assessed for inclusion in the plan include: harmful algal blooms, including cyanobacteria, and fecal coliform (at recreation sites). The Licensees may request Deputy Director approval to discontinue monitoring following sufficient data to support such a request – namely, information indicating that the Project does not influence the parameter in a manner that causes or contributes to (or threatens to cause or contribute to) an exceedance of water quality objectives or that fails to comply with state or federal Antidegradation Policies. The Licensees shall provide any such request to the Deputy Director for review and consideration of approval as an update to the Water Quality Monitoring Plan and shall provide sufficient evidence to support the request;

- Water temperature monitoring. Identify and monitor an adequate number of sites to track the changes in water temperature entering, stored in, and released below Pyramid Lake. In flowing water, the Licensees shall install and anchor appropriate devices to continuously record water temperature throughout the year. In Pyramid Lake, the Licensees shall monitor water temperature and thermocline depth by profile sampling near Pyramid Dam to determine reservoir stratification depths. The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Los Angeles Regional Water Board and State Water Board, that such alteration in temperature does not adversely impact beneficial uses;
- Quality assurance and control. Description of quality assurance and quality control procedures that will be used for collection and handling of samples and data validation;
- Reporting and adaptive management. Format, schedule, and reporting to document, summarize, and analyze water quality monitoring results. The reporting shall include an evaluation of the water quality monitoring results and recommendation regarding whether additional monitoring is needed in future years, beyond what is required as part of Deputy Director-approved Water Quality Monitoring Plan, for some or all constituents. The Licensees may propose any updates or adaptive management measures to the Water Quality Monitoring Plan based on the monitoring results or new information related to water quality that may be impacted by Project operations. Monitoring reports shall be submitted to USFS, USFWS, CDFW, Los Angeles Regional Water Board, and the State Water Board. The Deputy Director may require additional monitoring or actions to protect water quality and beneficial uses based on monitoring results; and
- Consultation documentation. Documentation of consultation with USFS, USFWS, CDFW, Los Angeles Regional Water Board, and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

CONDITION 2. Erosion and Sediment Control

No later than six months following issuance of the FERC license, the Licensees shall submit an Erosion and Sediment Control Plan to the Deputy Director for review and consideration of approval. At a minimum, the purpose of the Erosion and Sediment Control Plan is to identify potential sites that may result in erosion and sediment control and ensure measures are implemented to protect water quality and beneficial uses. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Erosion and Sediment Control Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Erosion and Sediment Control Plan upon Deputy Director and any other required approvals. Any changes to the Erosion and Sediment Control Plan shall be approved by the Deputy Director prior to implementation. The Erosion and Sediment Control Plan shall be developed in consultation with the Forest Service, CDFW, and State Water Board staff.

At a minimum, the Erosion and Sediment Control Plan shall include:

- Purpose of the plan;
- Initial and periodic inventory and monitoring of potential erosion and sediment control treatment sites. Inventory and monitoring shall include, but is not limited to, assessment of landslide hazard and slope stability by a qualified geologist for slopes above and below sections of dam abutments that may cause the structure to breach;
- Criteria for prioritizing and ranking erosion sites for treatment, and an associated schedule for each treatment site;
- Identification of proposed dredging locations, including but not limited to Elderberry Forebay;
- Identification of best management practices (BMPs) that will be implemented to control erosion and sedimentation, which at a minimum shall include the most current *Forest Service National Best Management Practices for Water Quality Management on National Forest System Lands* (Forest Service 2012) and other appropriate documents;
- Performance metrics to assess the effectiveness of erosion and sediment control BMPs at preventing and reducing Projects-related erosion and sedimentation;
- Format and schedule for reports to document, summarize, and analyze monitoring results and ensure performance metrics are met. Reports shall include identification of any potential concerns, an assessment of the effectiveness of erosion and sediment control measures, and any proposed modifications to erosion control BMPs to better address Projects-related impacts. Reports shall be submitted to the Forest Service, CDFW, and the State Water Board. The Deputy Director may require implementation of additional monitoring or other actions in response to the information provided in the monitoring reports in order to protect water quality and beneficial uses; and
- Documentation of consultation with the Forest Service, CDFW, and State Water Board staff, comments and recommendations made as part of consultation, and

a description of how the plan incorporates or addresses the comments and recommendations;

- An engineering analysis to determine the potential for expected releases to damage Old Highway 99, the Old Highway 99 bridges, utilities, and other infrastructure in or adjacent to the channel. The engineering analysis shall be used as a basis for establishing procedures and guidelines for monitoring erosion at infrastructure sites during flood releases. Monitoring at key potential infrastructure damage areas during large flow releases and temporary curtailment of releases if monitoring determine the infrastructure to be at risk. If risk to the infrastructure's stability or water quality is determined to be an issue, the Licensees shall install engineered erosion protection to prevent or limit erosion in the areas determined to be at risk. The Licensees shall maintain records demonstrating compliance with Mitigation Measure GEO-1 as described in DWR's California Environmental Quality Act (CEQA) Mitigation Monitoring and Reporting Program (MMRP). These records shall be made available to State Water Board staff upon request; and
- Compliance with the Construction General Permit or Water Quality Monitoring and Protection Plans as described in the Construction and Maintenance section below.

Construction and Maintenance. When applicable, the Licensee shall comply with the State Water Board's *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit)⁹ (State Water Board 2009), and amendments thereto. For construction and maintenance activities with the potential to impact water quality or beneficial uses that are not subject to the Construction General Permit and/or that are not covered by another condition of this certification, the Licensees shall prepare and implement site-specific Water Quality Monitoring and Protection Plans (WQMP Plans) for Deputy Director review and consideration of approval. At a minimum, the WQMP Plans must demonstrate compliance with sediment and turbidity water quality objectives in the applicable water quality control plan: *Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, (Los Angeles Basin Plan) (Los Angeles Regional Water Board 2014); or *Water Quality Control Plan for the Lahontan Region* (Lahontan Basin Plan) (Lahontan Regional Water Board 2019). For purposes of this water quality certification (certification), the Los Angeles Basin Plan and Lahontan Basin Plan are collectively referred to as Basin Plans. The WQMP Plans shall also include the delineation of riparian and wetland areas and a description of avoidance and minimization measures that will be implemented consistent with those approved as part of the Sensitive Species Plan (Condition 13) and wetland provisions (Condition 35).

The Licensees shall submit WQMP Plans to the Deputy Director for review and consideration of approval at least 120 days prior to the desired start date of the applicable construction or maintenance activity. The objective of the WQMP Plans

⁹ Water Quality Order No. 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and amendments thereto.

shall be to identify and implement control measures for construction, maintenance, or other activities with the potential to cause erosion, stream sedimentation, fugitive dust, soil mass movement, release of hazardous materials, or other water quality impairment. WQMP Plans shall be based on actual site geologic, soil, and groundwater conditions, and at a minimum shall include:

- A description of site conditions and the proposed activity;
- Detailed descriptions, design drawings, and specific topographic locations of all control measures in relation to the proposed activity, which may include:
 - Measures to divert runoff away from disturbed land surfaces;
 - Measures to collect and filter runoff from disturbed land surfaces, including sediment ponds; and
 - Measures to dissipate energy and prevent erosion;
- Revegetation measures for disturbed areas, which shall include use of native plants and locally-sourced plants and seeds; and
- A monitoring, maintenance, and reporting schedule. The Deputy Director may require modifications as part of any approval. The Licensees shall file with FERC the Deputy Director-approved WQMP Plans, and any approved amendments thereto. The Licensees shall implement the WQMP Plans upon receipt of Deputy Director and any other required approvals, in accordance with the schedule and requirements specified therein.

CONDITION 3. Minimum Instream Flows

Unless otherwise approved by the Deputy Director, from FERC license issuance until the Minimum Instream Flows Plan has received all necessary approvals, outflows from Pyramid Dam to Pyramid reach, as measured by United States Geological Survey (USGS) gage no. 11109525¹⁰, are required to match the natural inflow into Pyramid Lake to the extent operationally feasible, consistent with safety requirements and in accordance with the authorizations provided by FERC on October 28, 2009 (FERC 2009). At a minimum, the purpose of the Minimum Instream Flows Plan is to ensure that the methodology for measuring minimum instream flows is clear and the flows are met in order to protect water quality and beneficial uses.

No later than three months following issuance of the FERC license, the Licensees shall submit a Minimum Instream Flows Plan to the Deputy Director for review and consideration of approval. The Licensees shall file the Deputy Director-approved Minimum Instream Flows Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Minimum Instream Flows Plan upon Deputy Director and any other required approvals. Any changes to the Minimum Instream Flows Plan shall be approved by the Deputy Director prior to implementation. The Minimum Instream Flows Plan shall be developed in consultation with the Forest Service, USFWS, CDFW, and State Water Board staff. Minimum instream flows shall be set to protect water quality and the beneficial uses by waterway reach and

¹⁰ USGS gage no. 11109525 is located on Piru Creek below Pyramid Lake near Gorman, California.

waterbody. At a minimum, minimum instream flows shall be established for outflow from Pyramid Lake into Piru Creek. Minimum instream flows may vary by water year type, quantity, and timeframe. At minimum, the Minimum Instream Flows Plan shall include:

- Purpose of the plan;
- Quantifiable instantaneous and daily averaged instream flow thresholds that will be met or exceeded and identified compliance locations;
- Detailed description of how and where minimum instream flows from the natural watersheds upstream of Pyramid Lake will be measured or calculated;
- Equipment that will be used by the Licensees to monitor instream flows in compliance with requirements of this certification. Information on how the equipment will be deployed, set (e.g., frequency of data collection), operated, calibrated, and maintained;
- Detailed description of how, where, and when minimum instream flows will be released from Pyramid Dam to ensure releases match the timing and volume, within 90 percent, of all-natural sources of inflow into Pyramid Lake.
 - During non-storm times, use a time-step of two hours or less during the day and 12 hours or less during the night for volume matching.
 - During storm events, use a time-step of two hours or less for volume matching;
- Evaluation of the feasibility of upgrading existing stream flow gages to ensure instantaneous stream flow measurements occur at 15-minute intervals consistent with USGS standards and provide a recommendation for the upgrade and installation of gages based on the evaluation. Identify locations for and timeline for installation of additional stream flow telemetry gages to improve the accuracy and timing of flows released at Pyramid Dam. Ensure all stream flow gages are calibrated for the full range of possible unimpaired flows; and
- Description of un-gaged flow modeling methodology that will be used for overland water flows into Pyramid Lake from all un-gaged sources during rain events, which includes different terrain types. The methodology should provide for adjustments to account for terrain changes (e.g., post-wildfire).

The Licensees shall post all flow and other applicable water data to the California Data Exchange Center or successor website, within 24-hours of flow measurement, unless otherwise approved by the Deputy Director.

CONDITION 4. Fish Stocking

Fish stocking shall not result in adverse impacts to water quality or native species.

Castaic Lake. CDFW and the DWR executed an Off-License Stocking Agreement for Castaic Lake on December 7, 2020 (DWR and CDFW 2020). If the Off-License Stocking Agreement is dissolved, the Licensees shall submit a Castaic Lake Fish Stocking Plan to the Deputy Director for review and consideration of approval. The Deputy Director may require modifications as part of any approval. The Castaic Lake Fish Stocking Plan shall be developed in consultation with the Forest Service, USFWS, CDFW, and State Water Board staff. At a minimum, the Castaic Lake Fish Stocking

Plan shall provide for fish stocking of Castaic Lake. The Licensees shall file the Deputy Director-approved Castaic Lake Fish Stocking Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Castaic Lake Fish Stocking Plan upon Deputy Director and any other required approvals. Any changes to the Castaic Lake Fish Stocking Plan shall be approved by the Deputy Director prior to implementation.

Pyramid Lake. No later than nine months following FERC license issuance, the Licensees shall submit a Pyramid Lake Fish Stocking Plan to the Deputy Director for review and consideration for approval. At a minimum, the Pyramid Lake Fish Stocking Plan shall identify how fish stocking will be implemented and ensure the protection of water quality and beneficial uses. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Pyramid Lake Fish Stocking Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Pyramid Lake Fish Stocking Plan upon Deputy Director and any other required approvals. Any changes to the Pyramid Lake Fish Stocking Plan shall be approved by the Deputy Director prior to implementation. The Pyramid Lake Fish Stocking Plan shall be developed in consultation with the Forest Service, NMFS, CDFW, USFWS, and State Water Board staff. At a minimum, the Pyramid Lake Fish Stocking Plan shall include:

- Purpose of the plan;
- Details on implementation of stocking rainbow trout at Pyramid Lake;
- An annual fish stocking schedule;
- A schedule of angler surveys; and
- Reporting on fish stocking and surveys.

CONDITION 5. Ramping Rates

Upon License issuance, the Licensees shall implement up- and down-ramping rates for Project water releases from Pyramid Dam to support water deliveries to United Water Conservation District.

The Licensees, in releasing water for United Water Conservation District (UWCD) down Pyramid Reach (stretch of Piru Creek from Pyramid Lake to Lake Piru), shall follow the requirements outlined below, unless otherwise approved by the Deputy Director:

- The released water shall not adversely affect listed species;
- Releases shall follow the following ramping rate schedules:
 - Schedule A. For a one-day release starting Saturday, 100 cubic feet per second (cfs) from 04:00 am-07:00 am, then 300 cfs from 08:00 am-17:00 pm, then 200 cfs from 18:00 pm-0100 am Sunday, then 100 cfs from 02:00 am - 07:00 am, then return to base condition¹¹;
 - Schedule B. For a two-day release starting Saturday, 100 cfs from Day 1 04:00 am -07:00 am, followed by 300 cfs from 08:00 am to Sunday 16:00

¹¹ Base conditions refers to flows in place prior to the start of water deliveries.

pm, then 200 cfs from Sunday 17:00 pm - 24:00 (midnight), then 100 cfs Monday 01:00 am - 07:00 am, then return to base condition;

- Alternative Schedule. Temporary changes to the ramping rates in Schedule A and Schedule B may be implemented if the Licensees get written approval from the Forest Service and Deputy Director to adjust the schedules to address operational, safety, and endangered species protection needs;
- The Licensees shall inform the Forest Service and State Water Board staff of the planned release at least four days prior to release implementation;
- The Licensees shall make a good faith effort to secure agreement as needed from UWCD to ensure the water delivery release schedule will meet the requirements above. If agreement with UWCD cannot be reached, the Licensees shall meet with the Forest Service, State Water Board staff, other interested agencies, and stakeholders to discuss alternatives. Any alternative that does not meet the schedule outlined in Schedule A or Schedule B of this condition, shall comply with the approvals required in the Alternative Schedule of this condition.

CONDITION 6. Large Woody Material Management

No later than one year following FERC license issuance, the Licensees shall submit a Large Woody Material Management Plan (LWMMP) to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. Unless otherwise approved by the Deputy Director as part of LWMMP approval, the goal for LWMMP shall be: (1) to achieve an average of 50 pieces of large woody material per river mile in Pyramid Reach between Pyramid Dam and Fish Creek; and (2) that 70 percent of the large woody material shall be between 10- and 18-foot-long (with 20 percent of that having rootwads) and 30 percent shall be between 12- and 24-inches in diameter, as measured four feet from the larger end (with 20 percent of that having rootwads). The Licensees shall file the Deputy Director-approved LWMMP, together with any required plan modifications, with FERC. The Licensees shall implement the LWMMP upon Deputy Director and any other required approvals. Any changes to the LWMMP shall be approved by the Deputy Director prior to implementation. The LWMMP shall be developed in consultation with the Forest Service, NMFS, CDFW, USFWS, and State Water Board staff. At a minimum, the LWMMP shall include:

- Purpose of the plan;
- A monitoring and reporting program that describes how the Licensees will evaluate and report on the performance of management efforts related to large woody material. The monitoring and reporting program shall include evaluation of the amount of large woody material entering the Project and the criteria that will be used to evaluate plan implementation, including the need for adaptive management as outlined below);
- Placement of large woody material within the active channel, side channels, and on floodplain benches;
- An implementation schedule;

- Alternatives for transporting large woody material below Project facilities to the reach downstream of Pyramid Dam;
- An adaptive management program that describes how the Licensees plan to adjust large woody material management and monitoring methods based on evaluation of information and monitoring results. The program shall identify what triggers may result in implementation of the adaptive management program, for example when the goal of the plan is not being met. The adaptive management process shall include consultation with staff from the State Water Board, NMFS, Forest Service, USFWS, and CDFW; and
- Documentation of consultation with Forest Service, NMFS, CDFW, USFWS, and State Water Board staff, including comments and recommendations made in connection with the LWMMP, and a description of how the LWMMP incorporates or addresses the comments and recommendations.

CONDITION 7. Gravel Enhancement

No later than three years following FERC license issuance, the Licensees shall submit to the Deputy Director for review and consideration for approval a Gravel Enhancement Plan for annual placement of salmonid spawning gravel in Piru Creek to address the reduced gravel availability in this reach. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Gravel Enhancement Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Gravel Enhancement Plan upon Deputy Director and any other required approvals. Any changes to the Gravel Enhancement Plan shall be approved by the Deputy Director prior to implementation. The Gravel Enhancement Plan shall be developed in consultation with the Forest Service, USFWS, NMFS, CDFW, and State Water Board staff. At a minimum, the Gravel Enhancement Plan shall include:

- Purpose of the plan;
- An assessment of potential impacts to arroyo toad that may result from gravel enhancement, including identification of any measures to avoid any identified potential impacts or identification of limitations on gravel enhancement efforts needed to protect the arroyo toad;
- Identification of gravel sizes to be used for gravel placement;
- Identification of gravel sources and storage sites;
- Measures for the annual placement of up to 35,203 cubic yards of spawning gravel in Piru Creek, between Pyramid Dam and Fish Creek;
- Measures to protect water quality and beneficial uses during gravel placement;
- Monitoring and reporting program that describes how the Licensees will evaluate and report on the performance of gravel enhancement efforts. This plan shall address assessment of spawning gravel availability, quantification of spawning gravel use by native *O. mykiss* (including Southern California steelhead when present);
- An adaptive management program that describes how the Licensees plan to adjust gravel placement (including the annual gravel replacement quantity) and

monitoring methods based on evaluation of information and monitoring results;
and

- Documentation of consultation with the Forest Service, USFWS, NMFS, CDFW State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

If it is determined that Gravel Enhancement Plan implementation is adversely impacting sensitive species (identified in Condition 13), including the arroyo toad, the Licensees shall consult with the State Water Board, CDFW, Forest Service, USFWS, NMFS, and State Water Board staff to determine if revisions to the Gravel Enhancement Plan are needed. The Deputy Director may approve a temporary suspension of gravel enhancement activities if one or more resource agencies indicate that gravel enhancement activities are negatively impacting sensitive species (species identified in Condition 13).

CONDITION 8. Pyramid Lake Levels

Upon license issuance, the Licensees shall implement the following water surface elevation requirements for Pyramid Lake:

- Pyramid Lake shall be maintained at or above an elevation of 2,560 feet;
- Pyramid Lake elevation shall not lower or rise by more than eight feet in a day (from midnight to midnight each day); and
- Pyramid Lake shall not lower or rise by more than 14 feet during a seven-day period (i.e., from midnight on Sunday through 11:59 p.m. the following Saturday).
- Pyramid Lake shall maintain a minimum storage of 27,000 acre-feet (AF), except as noted in the conditions below.

The Licensees may deviate from the water surface elevation requirements for Pyramid Lake, directly above, during the following conditions:

- An electrical or mechanical failure, extraordinary maintenance, uncontrollable force, or other occurrence that impairs the ability of the collective facilities of the State Water Project (SWP) to deliver to, store in, or deliver scheduled quantities of water from Pyramid Lake;
- An electrical or mechanical failure, extraordinary maintenance, uncontrollable force, or other occurrence that impairs water contractors' abilities to take scheduled quantities of water from the SWP that impact operation of the Project;
- Higher than scheduled water requirements from the SWP by water contractors; and
- Conditions determined to be an emergency by the appropriate power authority (on LADWP's power system or the power systems with which it is interconnected) that require generation at Castaic Powerplant for such an extended period of time that greater than normal flows must be released from Pyramid Lake.

The Licensees shall notify Deputy Director as soon as they become aware of an of the conditions listed above, and provide the revised operating schedule that will be implemented during the applicable time period of the condition and recovery therefrom. The Deputy Director may require additional monitoring and reporting, or other actions during modified operations due to any of the conditions listed above.

The Licensees shall report any deviation from this condition to the Deputy Director and the Executive Officer of the Los Angeles Regional Water Board within 24 hours of the deviation.

CONDITION 9. Hazardous Materials Management

No later than nine months following issuance of the FERC license, the Licensees shall submit a Hazardous Materials Management Plan to the Deputy Director for review and consideration for approval. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Hazardous Materials Management Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Hazardous Materials Management Plan upon Deputy Director and any other required approvals. Any changes to the Hazardous Materials Management Plan shall be approved by the Deputy Director prior to implementation.

The Hazardous Materials Management Plan shall address the storage, spill prevention, cleanup, and disposal of oil and hazardous substances associated with Project activities and describe how to protect waters from the release of such substances. The Licensees shall consult with the Los Angeles Regional Water Board, the Lahontan Regional Water Board, and State Water Board staff in the development of the Hazardous Materials Management Plan. At a minimum, the Hazardous Materials Management Plan shall include:

- Purpose of the plan;
- Provisions for and implementation of onsite containment for storage of chemicals classified as hazardous to be away from watercourses and include secondary containment and appropriate management as specified in California Code of Regulations, title 27, section 20320;
- Identification of location for and maintenance of spill cleanup equipment suitable to contain and clean any Project spills in the Project area;
- Immediate reporting of spills to the State Water Board, Los Angeles Regional Water Board or Lahontan Regional Water Board (as applicable based on the spill location), and other relevant agencies of the magnitude, nature, time, date, location, and action taken;
- Monitoring and reporting that details water quality monitoring and corrective measures that will be implemented to reduce water quality impacts if spills occur, as well as information on how hazardous substances will be properly disposed of once their useful life has passed or as part of cleanup activities;
- Evaluation of any release and cleanup of hazardous substances. This evaluation shall be completed no later than 120 days after the release and include a report

submitted to the Deputy Director with any proposed updates to the Hazardous Materials Management Plan to prevent or limit similar instances in the future; and

- Documentation of consultation with the Los Angeles Regional Water Board, the Lahontan Regional Water Board, and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

The Deputy Director may require implementation of additional actions in response to the information provided as part of a report following a release or other information indicating a threat to water quality or beneficial uses.

CONDITION 10. Aquatic Invasive Species Management

No later than six months following FERC license issuance, the Licensees shall submit an Aquatic Invasive Species Management Plan to the Deputy Director for review and consideration of approval. The Licensees shall file the Deputy Director-approved Aquatic Invasive Species Management Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Aquatic Invasive Species Management Plan upon Deputy Director and any other required approvals. Any changes to the Aquatic Invasive Species Management Plan shall be approved by the Deputy Director prior to implementation.

At a minimum, the purpose of the Aquatic Invasive Species Management Plan shall be to minimize and prevent the introduction, establishment, and spread of aquatic invasive species associated with Project activities. This Aquatic Invasive Species Management Plan condition may be developed to fulfill the requirements of this condition and Condition No. 44 of the Forest Service's *Preliminary Terms and Conditions* (Forest Service 2021) and amendments thereto, so long as the provisions of this condition are met. The Aquatic Invasive Species Management Plan shall be developed in consultation with Forest Service, USFWS, CDFW, NMFS, Los Angeles Regional Water Board, Lahontan Regional Water Board, and State Water Board staff. At minimum, the Aquatic Invasive Species Management Plan shall include:

- Purpose of the plan;
- Guidance and references the Licensees will use to manage aquatic invasive species that occur or have the potential to occur in Project waters;
- Identification of Project waters with aquatic invasive species or the potential for such species, and identification of the aquatic invasive species that occur or have the potential to occur in these Project waters;
- BMPs that will be implemented to prevent the introduction of aquatic invasive species into Project waters;
- Education and outreach to ensure public awareness of aquatic invasive species effects and management of such species throughout Project waters to help the public avoid the introduction and spread of aquatic invasive species. The education program shall include appropriate signage and/or public information pamphlets at designated boat access sites;

- A monitoring and reporting program that will be implemented to ensure early detection of new aquatic invasive species and monitor for the spread or reduction of established aquatic invasive species. The monitoring program shall include the species that will be monitored for, monitoring protocols, frequency, and locations. The program shall describe how the Licensees will evaluate and report on the performance of aquatic invasive species management efforts. The program shall include the criteria that will be used to evaluate the performance of aquatic invasive species BMPs. The reports shall include identification of changes associated with the presence of aquatic invasive species in Project waters and recommendations to address the presence or change in density of aquatic invasive species;
 - Early detection monitoring for quagga and zebra (dreissenid) mussels, consisting of surface surveys, artificial substrate monitoring, and/or plankton tow sampling using the most current CDFW protocols (available online at: <https://www.wildlife.ca.gov/Conservation/Invasives/Quagga-Mussels>), shall be conducted at Project reservoirs where recreational, boating, or fishing activities are permitted, which includes Pyramid Lake and Quail Lake;
 - Water quality profiles, including water temperature, dissolved oxygen, pH, turbidity, and conductivity, shall be collected coinciding with quagga and zebra mussel monitoring at each reservoir; and
- An adaptive management program that describes how the Licensees plan to adjust aquatic invasive species monitoring methods or BMPs based on evaluation of information and monitoring resulting from implementation of the plan; and
- Documentation of consultation with Forest Service, USFWS, CDFW, NMFS, Los Angeles Regional Water Board, Lahontan Regional Water Board, and State Water Board staff, including comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

The Deputy Director may require implementation of additional actions in response to the information provided as part of implementation of this condition indicating a threat to water quality or beneficial uses.

CONDITION 11. Recreation Management

No later than one year following FERC license issuance, the Licensees shall submit a Recreation Management Plan to the Deputy Director for review and consideration of approval. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Recreation Management Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Recreation Management Plan upon Deputy Director and any other required approvals. Any changes to the Recreation Management Plan shall be approved by the Deputy Director prior to implementation. The Recreation Management Plan shall be developed in consultation with the Forest Service, USFWS, CDFW, NMFS, and State Water Board staff. At a minimum, the Recreation Management Plan shall include:

- Purpose of the plan;
- A comprehensive list and map of recreation facilities associated with the Project, and any known modifications to existing recreation facilities (including removal) or new facilities to be constructed during the term of the new FERC license. This list and map shall be updated throughout the term of the new FERC license as new information becomes available;
- For each recreation facility with proposed activities with the potential to impact water quality or beneficial uses, the Licensees shall identify whether the Licensees plan to cover such activities under this plan, a separate WQMP Plan (Condition 2), or the recreation facilities/activities have no potential to impact water quality and beneficial uses with supporting documentation for no impacts;
- A description of routine recreation facilities maintenance that may have an impact on water quality or beneficial uses, and measures that will be implemented to minimize or avoid impacts. Maintenance activities related to recreation facilities that may impact water quality and beneficial uses shall be submitted for Deputy Director approval as part of the original or an amended Recreation Management Plan or as a separate WQMP Plan (Condition 2);
- Description of warning system and signage that will be implemented to warn the public of high instream flows in Pyramid Reach. This component of the Recreation Plan shall be developed in consultation with the Forest Service and landowners. The system and signage shall be designed and implemented to ensure the public is effectively notified and warned of potential flooding dangers to reduce the risk of injury or death from potential flooding in the Pyramid Reach. The Licensees shall maintain records demonstrating compliance with Mitigation Measure MAND-1 of DWR's final IS/MND and MMRP (DWR 2021);
- Reference to the Aquatic Invasive Species Management Plan (Condition 10) monitoring for coverage of water quality related items associated with aquatic invasive species;
- Identification of the need for aquatic vegetation management at recreation sites, when applicable, and actions that may be implemented as needed;
- A list of additional permits and environmental review required for implementation of the plan; and
- Documentation of consultation with the agencies and landowners, as outlined in this condition, comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

CONDITION 12. Extremely Dry Conditions

In the event of extremely dry conditions, which may include a year in which the Governor of the State of California or the Los Angeles County Board of Supervisors declares a drought emergency for Los Angeles County, the Licensees may request modification of the instream flow and related requirements of this certification. If the Licensees anticipate that they may request modification pursuant to this condition, the Licensees shall notify CDFW, USFWS, Forest Service, NMFS, and the Deputy Director of the Licensees' concerns related to instream flows and related requirements as early as possible. If the Licensees request modification pursuant to this condition, the

Licensees shall develop a Revised Operations Plan in consultation with the agencies listed in this paragraph and State Water Board staff for modifications to instream flows or other relevant conditions of this certification during the extremely dry conditions.

The Licensees shall provide interested parties, including the Ecological Consultation Group (Condition 14), with notice of the proposed Revised Operations Plan at least seven days prior to submittal to the Deputy Director. Whenever possible, the Licensees shall provide an opportunity for interested parties to comment on the proposed Revised Operations Plan prior to submittal to the Deputy Director, and provide such comments to the Deputy Director as part of the submittal of the Revised Operations Plan. The Licensees' request may include modifications to: ramping rate, minimum instream flows, and reservoir levels. The request shall include: identification of beneficial uses that will benefit from the proposed changes; a timeline for the return to regular operations; proposed monitoring for the revised operations, including an estimation of any impacts the drought operations may have on any beneficial uses of water; identification of measures to reasonably protect beneficial uses under the circumstances; and proposed water conservation measures that will be implemented. If conservation measures are not applicable, the Licensees shall describe the circumstances and justification for not implementing water conservation measures.

The Licensees shall submit the proposed Revised Operations Plan to the Deputy Director for review and consideration for approval. The Licensees shall file the Deputy Director-approved Revised Operations Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Revised Operations Plan upon Deputy Director and any other required approvals. Any changes to the Revised Operations Plan shall be approved by the Deputy Director prior to implementation.

CONDITION 13. Sensitive Species Management

No later than six months following FERC license issuance, the Licensees shall submit a Sensitive Species Plan to the Deputy Director for review and consideration of approval. At a minimum the purpose of the Sensitive Species Plan shall be to ensure the protection of sensitive species and habitats for the protection of water quality and beneficial uses. The Deputy Director may require modifications as part of any approval. The Licensees shall file the Deputy Director-approved Sensitive Species Plan, together with any required plan modifications, with FERC. The Licensees shall implement the Sensitive Species Plan upon Deputy Director and any other required approvals. Any changes to the Sensitive Species Plan shall be approved by the Deputy Director prior to implementation.

The Sensitive Species Plan shall be developed in consultation with the Forest Service, USFWS, CDFW, NMFS, and State Water Board staff. Unless otherwise approved by the Deputy Director based on support provided by the Licensees in consultation with the agencies, the Sensitive Species Plan shall address special-status species and sensitive habitats that are aquatic, riparian, littoral, or otherwise have a particular nexus to waterbodies (e.g., eat primarily aquatic foods). The plan shall identify special-status species from the following categories that are aquatic, riparian, littoral, or otherwise have a particular nexus to waterbodies: 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. At minimum, the Sensitive Species Plan shall include:

- Purpose of the plan;
- Protective measures that will be implemented during Project operations and maintenance to protect sensitive species and sensitive habitats;
- Protocols used to delineate riparian and wetland areas and a description of avoidance and minimization measures that will be implemented (Condition 35);
- Delineation or description of sensitive species potentially affected by Projects activities;
- Description of Project activities with the potential to affect sensitive species;
- Criteria to determine whether monitoring and reporting of sensitive species impacts from normal Project operations should be considered and added to the Sensitive Species Plan (in consultation with CDFW, USFWS, Forest Service, NMFS, and State Water Board staff), or whether additional proactive measures should be considered. At a minimum, these criteria shall include the listing of new sensitive species and expansion of recognized habitat for sensitive species in the Project area; and
- Documentation of consultation with State Water Board staff, comments and recommendations made in connection with the plan, and a description of how the plan incorporates or addresses the comments and recommendations.

CONDITION 14. Annual Ecological Consultation Group Meeting

Within three months of FERC license issuance, the Licensees shall establish an Ecological Consultation Group (ECG). The first ECG meeting shall be held in the first full calendar year of license implementation. ECG meetings shall be open to representatives from the Forest Service, USFWS, CDFW, NMFS, State Water Board, and other interested agencies, who may fully participate in the meeting. The Licensees shall coordinate meeting agendas with interested agencies. The Licensees shall maintain an ECG e-mail contact list consisting of e-mail addresses (one primary and one alternate) provided to the Licensees by the USFS, USFWS, CDFW, NMFS, State Water Board, and other interested agencies. ECG meetings shall also be open to interested parties, and the Licensees shall notify interested organizations and individuals of the opportunity to participate in the ECG and of upcoming meetings. The Licensees shall maintain a list of agency representatives, organizations, and individuals that attended or expressed an interest in participating in the ECG and make this list available upon request. The Licensees shall organize and host ECG meetings.

At least one ECG meeting shall be held each year by April 15, unless otherwise agreed to by the ECG. The Licensees shall organize and host additional ECG meetings or conference calls if agreed upon by the ECG and the Licensees. Unless otherwise modified by the ECG, the agenda shall at a minimum include the following:

- Opportunity for EGC members and interested parties comments;
- The Licensees' report of any deviations from the conditions of this certification;
- Discussion of the Licensees' FERC filings in the previous year (e.g., monitoring reports, monitoring results for plans required in this certification, or amendments to this certification);
- Discussion of the Licensees' planned certification-required monitoring in the upcoming year (i.e., next 12 months);
- Discussion of any certification-required agency consultation in the upcoming year, and the Licensees' proposal to complete the consultation, if needed;
- Discussion of any anticipated proposals in the upcoming year regarding: (1) changes or additions to facilities or features in the license; (2) variances to conditions in the license; (3) adaptive management that is required or may be required; or (4) amendments to the license;
- The Licensees' follow-up on action items from the last meeting;
- Identification of the Licensees' action items from this meeting, if any; and
- Review of the current lists of special-status species (species that are federally endangered or threatened, or proposed for listing as threatened or endangered under the federal ESA; Forest Service species of conservation concern; state threatened, endangered, or candidate species for the California ESA; state species of special concern; state fully protected species, and state rare plants) that occur or have the potential to occur on Project-affected lands and may be affected by Project operation, maintenance, or recreation activities.

At least 30 days in advance of the EGC meeting, the Licensees shall make reports and other information from the previous calendar year that are required by license conditions or implementation plans in the FERC license available to members of the EGC. The EGC members shall work collaboratively to make decisions and resolve issues assigned to the EGC.

The EGC shall communicate its recommendations to the Forest Service and State Water Board staff. The Forest Service is responsible for final decisions covered by the Section 4(e) Conditions and the State Water Board is responsible for final decisions within its jurisdiction.

CONDITIONS 15 – 37

CONDITION 15. The Deputy Director reserves the authority to modify or add conditions to this certification if the Executive Director determines that it is reasonably foreseeable that state- or federally-listed anadromous fish species will be introduced into Projects-impacted streams to ensure adequate protection of beneficial uses.

The Deputy Director also reserves the authority to require the Licensees to develop and conduct studies if it is reasonably foreseeable that listed anadromous fish species will be reintroduced into Projects-impacted areas. The Licensees shall refer to NMFS' Federal Power Act Preliminary §18 Prescription for fish passage for the Project, and any amendments thereto, for potential actions and details on implementation that may be appropriate when reintroduction of listed anadromous fish species into Project-impacted areas is reasonably foreseeable. Studies shall be designed in consultation with Forest

Service, USFWS, CDFW, NMFS, and State Water Board staff, to develop fish passage, minimum instream flows, or other measures, as well as determine appropriate modifications to the certification to minimize potential impacts and protect water quality and beneficial uses. Introduction of anadromous fish may require reevaluation of the Projects facilities, instream flow regimes, fish stocking plans, availability of large woody material, water quality, gravel enhancement, and access to Projects-impacted tributaries.

CONDITION 16. 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 17. This certification does not authorize any act which results in the take of a threatened, endangered, or candidate species or any act which is now prohibited, or becomes prohibited in the future, under either the California ESA (Fish & G. Code, §§ 2050–2097) or the federal ESA (16 U.S.C. §§ 1531–1544). If a “take” will result from any act authorized under this certification or water rights held by the Licensees, the Licensees 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 Licensees are responsible for meeting all requirements of the applicable ESAs for the Project authorized under this certification.

CONDITION 18. This certification shall not be construed as replacement or substitution for any necessary federal, state, and local approvals. The Licensees are 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 19. 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 20. 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 21. This certification is subject to modification or revocation upon administrative or judicial review, including but not limited to review and amendment pursuant to California Water Code, section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with section 3867).

CONDITION 22. 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 23. This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, division 3, chapter 28.

CONDITION 24. Notwithstanding any more specific provision of this certification, any plan developed as a condition of this certification requires review and approval by the Deputy Director. The State Water Board's approval authority, including authority delegated to the Deputy Director or others, includes the authority to withhold approval or to require modification of a plan, proposal, or report prior to approval. The State Water Board may take enforcement action if the Licensees fail to provide or implement a required item in a timely manner. If a time extension is needed to submit an item for approval, the Licensees shall submit a written request for the extension, with justification, no later than 15 days prior to the deadline. The Licensees shall not implement any plan, proposal, or report until after receiving the applicable State Water Board approval and any other necessary regulatory approvals.

CONDITION 25. 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 Project activities 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; and (4) to require additional monitoring and/or other measures, as needed, to ensure that Project activities meet water quality objectives and protect beneficial uses.

CONDITION 26. The Licensees shall submit any change to the Project, including operations, facilities, technology changes or upgrades, or methodology, which could have a significant or material effect on the findings, conclusions, or conditions of this certification, to the State Water Board for prior review and written approval. The State Water Board shall determine significance and may require consultation with other state and/or federal agencies. If the State Water Board is not notified of a change to the Project, it will be considered a violation of this certification.

CONDITION 27. This certification is contingent on compliance with all applicable requirements of the Basin Plans.

CONDITION 28. 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 Licensees shall take all reasonable measures to protect the beneficial uses of waters of the state.

CONDITION 29. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation is subject to any remedies, penalties, process, or sanctions as provided for under applicable state or

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

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

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

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

CONDITION 33. Future changes in climate projected to occur throughout the term of the new FERC license may significantly alter the assumptions used to develop the conditions of this certification. The State Water Board reserves authority to add to or modify the conditions of this certification, to require additional monitoring and/or other measures, as needed, to verify that Project operations meet water quality objectives and protect the beneficial uses assigned to Project-affected stream reaches.

CONDITION 34. 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 35. The Licensees shall ensure no net loss of wetland or riparian habitat functions under the standards and procedures set forth in the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) (State Water Board 2019) and the California Wetlands Conservation Policy (Governor's Executive Order W-59-93 (Aug. 23, 1993)), and any amendments thereto. The Licensees shall demonstrate compliance with the Procedures upon request from the Deputy Director.

CONDITION 36. The Licensees shall comply with the terms and conditions in the State Water Board's *Statewide National Pollutant Discharge Elimination System Permit*

*for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications*¹² (State Water Board 2013), and ongoing amendments during the life of the Project.

CONDITION 37. The Licensees shall use analytical methods approved by California's Environmental Laboratory Accreditation Program (ELAP), where such methods are available. Samples that require laboratory analysis shall be analyzed by ELAP-certified laboratories.



Eileen Sobeck
Executive Director

January 26, 2022

Date

¹² Water Quality Order No. 2013-0002-DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Last accessed: January 25, 2022.

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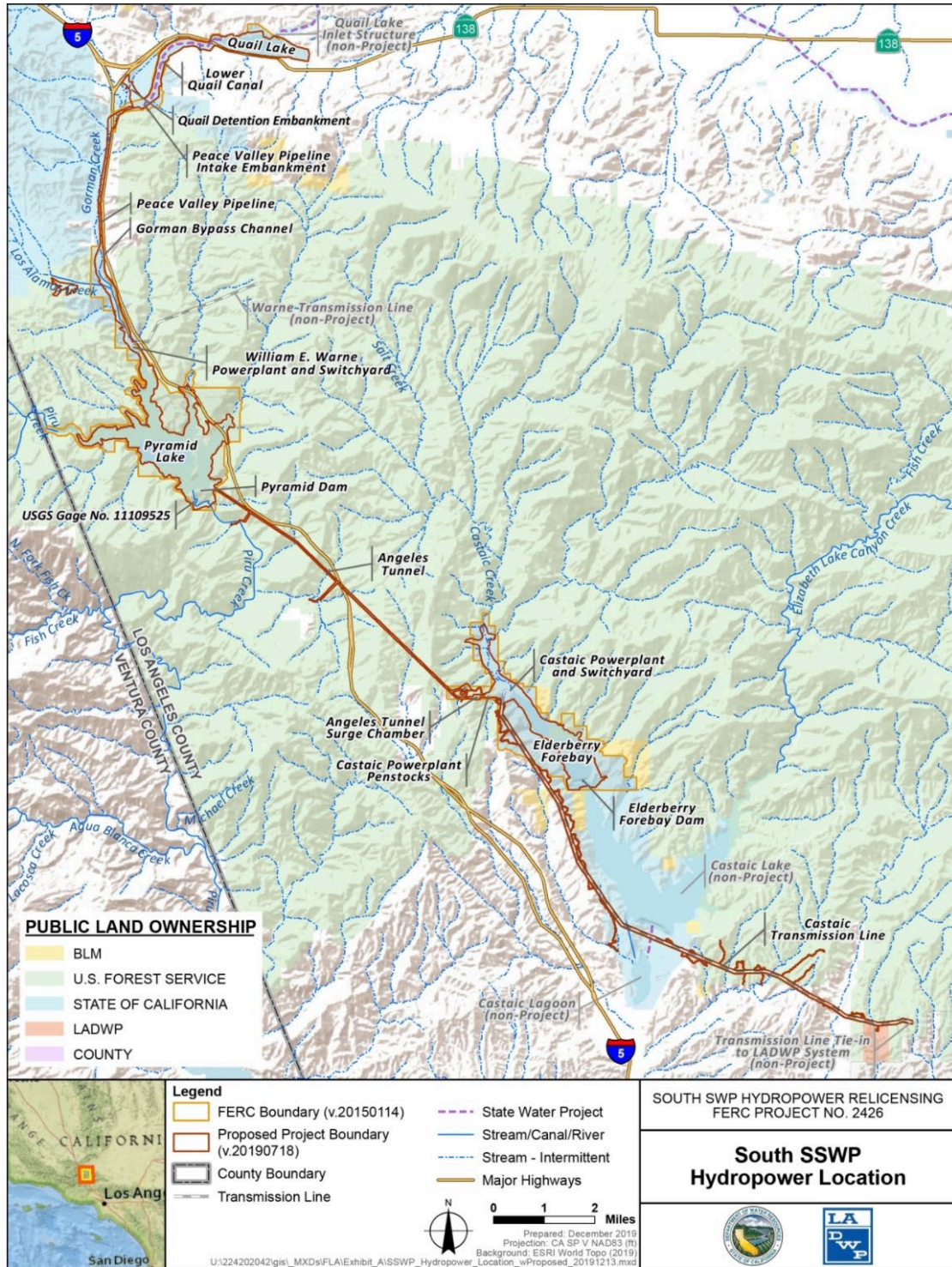


Figure 1. Overview Map of South State Water Project Hydropower¹³

¹³ Source: <http://south-swp-hydropower-relicensing.com/project/>. Accessed on August 9, 2021.

ATTACHMENT A:
PROJECT DESCRIPTION
WATER QUALITY CERTIFICATION
FOR
SOUTH STATE WATER PROJECT HYDROPOWER

The South State Water Project Hydropower (Project) is part of a larger water storage and delivery system, the State Water Project (SWP). The SWP is the largest state-owned and operated water supply project in the United States. The Project is located along the southern end of the West Branch of the SWP in Los Angeles County, California, between the towns of Castaic and Gorman. Water from the West Branch of the SWP enters Quail Lake, the uppermost facility of the Project, and is conveyed through the Peace Valley Pipeline into the William E. Warne Powerplant for power generation before being discharged into Pyramid Lake. Pyramid Dam, at the southern end of Pyramid Lake, is a 1,090-foot-long zoned earth and rockfill dam. The dam is 400 feet high. The crest of the dam is 35-feet-wide and sits at an elevation of 2,606 feet above sea level.

Water can be released from Pyramid Lake into Pyramid reach through a controlled service spillway, an emergency spillway, and a low-level outlet. Pyramid reach is the 18.1-mile segment of Piru Creek from Pyramid Dam to the normal maximum water surface elevation of Lake Piru.¹⁴ Pyramid Lake has a storage capacity of 161,375 acre-feet (AF), and a usable storage¹⁵ capacity of 20,844 AF. Water flows into Pyramid Lake from the west arm of the reservoir from Piru Creek, Liebre Gulch, and West Fork Liebre Gulch. A combination of natural and SWP water flows into the north arm of the reservoir from Gorman Bypass Channel and Gorman Creek.

Water from Pyramid Lake flows through the Angeles Tunnel¹⁶ to the Castaic Penstocks that provide water to Castaic Powerplant. The Castaic Powerplant, immediately downstream of the south portal of Angeles Tunnel, houses six reversible Francis-type pump-turbine units (Units 1 through 6). Water for Units 1-6 is delivered via six 2,400-foot-long steel penstocks. In addition, the Castaic Powerplant has a small generation unit (Unit 7) housed in a separate building that is used solely to start the six main units when they are used as pumps. Therefore, Unit 7 is excluded from the installed capacity calculation. Water to Unit 7 is delivered by a separate 1,900-foot-long steel penstock. The Castaic Powerplant is located on the upstream end of Elderberry Forebay. Castaic Powerplant has the ability to pump water back from Elderberry Forebay to Pyramid Lake using off peak energy. Castaic Powerplant generates electricity when there is high demand in the Los Angeles area.

¹⁴Lake Piru is downstream of Pyramid Lake, outside of the Federal Energy Regulatory Commission (FERC) Project boundary, and is not part of the Project.

¹⁵Usable water storage levels are between maximum water elevation (2,578 feet) and minimum pool levels (2,560 feet). Usable water storage is water that can be used for power generation, water deliveries, and recreational instream flows. If water storage levels decrease below minimum pool levels, the Department of Water Resources (DWR) can no longer move water from the reservoir. If water storage levels increase over maximum water elevations, then spill will be triggered at the emergency spillway and DWR will no longer have control over water releases.

¹⁶The Angeles Tunnel is 7.2-miles-long, 30 feet in diameter, and has a maximum flow capacity of 18,400 cubic feet per second (cfs).

Elderberry Forebay Dam is a 1,990-foot-long zoned earth fill dam that is 200-feet-tall. The crest of the dam is 25-feet-wide with an elevation of 1,550 feet above sea level. The dam forms Elderberry Forebay, which is located directly downstream of Castaic Powerplant. The Elderberry Forebay also receives a small amount of inflow from Castaic Creek. Elderberry Forebay has a gross storage capacity of 31,196 AF, a usable storage capacity of 23,096 AF, a surface area of 496 acres and a shoreline length of seven miles. When not being pumped back to Pyramid lake, water from Elderberry Forebay flows into Castaic Lake, a non-Project facility, via a spillway and an outlet.

A Storm Bypass Channel is on Castaic Creek upstream Elderberry Forebay and includes a series of three check-dam basins with a total area of approximately 21 acres. The check-dam basins capture sediment during high flow events to reduce sediment accumulation near Castaic Powerplant and ensure the sustained efficiency of the powerplant operations. The check dams have no water storage capacity. Sediment and debris are removed from the check-dam basins as needed, and spoils are disposed of onsite on State-owned lands.

The existing Project includes the 11.4-mile-long, 230-kilovolt Castaic Transmission Line that delivers energy from the Castaic Switchyard to the Haskell Junction substation, and transmits energy to the Castaic Powerplant. The transmission line consists of four circuits that are carried on two parallel double-circuit steel towers.