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April 21, 2021

Governor's Office of Planning & Research

Apr 21 2021

STATE CLEARINGHOUSE

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Via Electronic Mail

Subject: CDFW Comments on the Initial Study and Mitigated Negative Declaration for the South State Water Project Hydropower Relicensing Project, FERC Project No. 2426, Los Angeles County (SCH# 2021030471)

Dear Mr. Maier:

The California Department of Fish and Wildlife (CDFW) has reviewed California Department of Water Resources' (DWR) Initial Study and Mitigated Negative Declaration (IS/MND) for the South State Water Project (SWP) Hydropower Relicensing Project, Federal Energy Regulatory Commission (FERC) Project No. 2426 (Project) in Los Angeles County. Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect State fish and wildlife resources.

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CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq.*). Likewise, to the extent implementation of the Project as proposed may result in “take”, as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description and Summary

Description: DWR, Los Angeles Department of Water and Power (LADWP), and the United States government own the land the Project operates on. DWR and LADWP (Licensees) operate the South SWP Hydropower Project that includes existing hydroelectric facilities, access roads, maintenance areas, recreation areas, rights-of-way, and other supporting facilities. The Licensees operate the South SWP Hydropower under an existing FERC license that is scheduled to expire on January 31, 2022. The Licensees have used the Integrated Licensing Process in seeking a new license from FERC pursuant to the Federal Power Act. Under this CEQA analysis, the proposed Project is the continued operation of the South SWP Hydropower, including the hydroelectric, recreation, and supporting facilities, in accordance with the Licensees’ proposed terms and conditions for inclusion in the new FERC license, as described in the Licensees’ Final License Application, as amended.

The Licensees’ proposed changes to the existing South SWP Hydropower include administrative changes and protection, mitigation, and enhancement (PM&E) measures. The proposed administrative changes include: (1) an overall reduction in land area designated in the FERC Project boundary that is necessary for the operation and maintenance of the South SWP Hydropower; (2) addition of the existing Quail Detention Embankment as a licensed facility; (3) addition of an existing lake level gauge; (4) identification of existing access roads currently maintained within the FERC Project boundary; (5) addition of the existing Los Alamos Campground in the proposed FERC Project boundary; and, (6) removal of the Warne Transmission Line, owned by Southern California Edison, from the FERC Project boundary. Several of the PM&E measures include upgrades to existing recreation facilities, vegetation management, cultural resources management, and fish and wildlife resource protections.

Location: The South SWP Hydropower is located along the West Branch of the SWP in Los Angeles County, California, between the towns of Castaic and Gorman. The lake and stream areas of the project include: Castaic Creek, Quail Lake, Gorman Creek, Canada de Los Alamos, Liebre Gulch, West Fork Liebre Gulch. Lower Quail Canal,

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Gorman Bypass Channel, Pyramid Lake, Pyramid Dam, Angeles Tunnel, Elderberry Forebay Bay, and Piru Creek.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist DWR in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. CDFW recommends the measures or revisions below be included in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring and reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097). The recommendations and revisions below also advocate for measures that will adequately and equitably protect, mitigate damages to, and enhance water quality and fish and wildlife resources under Fish and Game Code (FGC) sections 1602, 2080, 2301, 5650, 5901, and 5937.

Specific Comments

Comment #1: Fish Passage Barriers

Issue: The Project states that there is a less than significant impact in responding to the question of whether the Project will interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (IS/MND Pg. 3-96). CDFW disagrees with this statement.

Specific impacts: The Project continues to interfere substantially with the movement of native fish species. There are current and ongoing Project impacts to the existing population of native coastal rainbow trout (*Oncorhynchus mykiss* (*O. mykiss*)) that is landlocked in Middle Piru Creek. Pyramid Dam is preventing these trout and the future Southern California Coast Steelhead (*Oncorhynchus mykiss* (*O. mykiss*) or southern steelhead), an endangered species under the Endangered Species Act from accessing important habitat upstream of Pyramid Dam that was historically available to these fish.

Why impacts would occur: Existing landlocked rainbow trout cannot access upstream habitat in Upper Piru Creek. Zero access to Upper Piru Creek results in low genetic diversity, genetic isolation, and susceptibility to extirpation. Pyramid Dam is currently a fish passage barrier and southern steelhead fish passage is a reasonably foreseeable action during the Licensees' new 30- to 50-year license term. This is because southern steelhead fish passage is also reasonably foreseeable around Santa Felicia Dam Project (FERC No. P-2153) and into Middle Piru Creek. Fish passage around Santa Felicia Dam is a foreseeable action because there are currently plans for southern steelhead that reach the base of Santa Felicia Dam from the ocean to be moved up over Santa Felicia Dam and into Middle Piru Creek. Once this action occurs, southern

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steelhead will be able to migrate to the base of Pyramid Dam. Pyramid Dam is currently considered a fish barrier for current native fish species and for future southern steelhead that gain access from Lower Piru Creek into Middle Piru Creek via the Santa Felicia Dam Project (FERC No. P-2153). Southern steelhead that reaches Middle Piru Creek will not be able to pass over Pyramid Dam to suitable upstream habitat without a fishway prescription.

Evidence impacts would be significant: In Southern California, at the southern limit of the range for southern steelhead, it is estimated that annual runs have declined dramatically from 32,000-46,000 returning adults historically, to currently less than 500 returning adults (NMFS 2012). A 2005 study by The Nature Conservancy and the Santa Clara River Trustee Council (Stoecker and Kelley 2005) provided several recommendations to improve southern steelhead conditions in the Santa Clara River Watershed. According to the study:

“... [Pyramid Dam] fails to meet all DFG and NOAA passage criteria. While the dam is located upstream from the impassable Santa Felicia Dam, Pyramid Dam significantly impacts water supply and quality downstream in middle and lower Piru Creek and the Santa Clara River. The dam also blocks all upstream migration of native fish, including known native coastal rainbow trout (i.e., landlocked steelhead) and other aquatic biota that occur downstream in Piru Creek and its tributaries” (Stoecker and Kelley 2005).”

Adequate upstream fish passage is currently being studied at Santa Felicia Dam. The 2005 study further states that:

“There is considerable good quality spawning and rearing habitat located upstream of Pyramid Dam and the issue of fish passage around Pyramid Dam should be addressed if adequate passage at Santa Felicia Dam and barriers downstream is achieved” (Stoecker and Kelley 2005).

Per CEQA Guidelines section 15065(a), a project may have a significant effect on biological resources if the project has the potential to substantially reduce the habitat of a fish species or substantially reduce the number or restrict the range of a special status species. Per FGC section 5901, it is unlawful to construct or maintain in any stream any device or contrivance that prevents, impedes, or tends to prevent or impeded, the passing of fish up and downstream.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To comply with FGC section 5901, DWR perform fish passage studies over/around Pyramid Dam. Any fish passage studies should address the current obstruction of Pyramid Dam that is impeding native *O. mykiss* and other native fish species from accessing upstream habitat pursuant to FGC section 5901. Licensees

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should study and evaluate options for providing upstream volitional fish passage (per Fish and G. Code, § 5901) of native coastal rainbow trout, and adult and juvenile southern steelhead around Pyramid Dam including; fish ladders, locks, elevators, associated collection facilities, and upstream release sites. The study should evaluate options for providing downstream fish passage, such as an evaluation of all reservoir outlet works, bypass channels, in lake fish guidance devices, and downstream outlet sites.

Mitigation Measure #2: CDFW recommends DWR prepare to implement any fish passage measures required by the National Marine Fisheries Service (NMFS).

Comment #2: Flow Conditions

Issue: The Project currently does not have an instream flow plan with accurate and precise flow gauges above or below Pyramid Dam.

Specific impacts: Flow reductions from Pyramid Dam could have a significant impact on downstream biological resources, especially during the dry season preceding a below-average water year.

Why impacts would occur: Inaccurate inflow predictions will prevent natural inflows from Piru Creek, Gorman Creek, Canada de Los Alamos, Liebre Gulch, and West Fork Liebre Gulch from matching outflow below Pyramid Dam. Matching outflow to natural inflows is important to mimic the natural hydrograph, which would maintain the geomorphology of the streambed and mobilize gravel and woody material. This would support healthy aquatic and riparian habitats necessary to maintain native aquatic species in Middle Piru Creek. Reduced flows could directly or indirectly impact biological resources through habitat modifications, and diminish aquatic refugia with a lack of mobilized gravel and large woody material to provide channel complexity and natural cover from predators.

Evidence impacts would be significant: According to United States Forest Service (USFS) (2021), “the unimpaired flows from all of these tributaries is currently not documented using quantifiable methods (gauging stations) before they flow into Pyramid Lake and contribute to the water supply used for power generation. Without accurate monitoring and recording of contributing surface water it is unclear if the Pyramid Dam release appropriately matches the natural inflow above the Pyramid Dam. Additionally, inaccurate predictions may contribute to miss allocation of resources for downstream delivery and power generation” (Pg. 19). Per CEQA Guidelines section 15065(a), a project may have a significant effect on biological resources if the project has the potential to substantially reduce the habitat of a fish species or substantially reduce the number or restrict the range of a special status species. Per FGC section 1602, an entity is required to notify CDFW prior to beginning any activity that may do one or more of the following: divert or obstruct the natural flow of any river, stream, or

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lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or, deposit or dispose of material into any river, stream, or lake.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends DWR develop a Flow Management Plan and incorporate USFS Condition No. 30. Instream Flow Plan for Pyramid Dam (USFS 2021) and NMFS Condition 1- Instream Flow Plan for Pyramid Dam (NMFS 2021) as a mitigation measure in the IS/MND.

USFS Condition No. 30. Instream Flow Plan for Pyramid Dam (USFS 2021) states:

“Licensee shall release flows from Pyramid Dam matching the timing and volume of all-natural sources of inflow into Pyramid Lake as defined in the Flow Management Plan. Within one year of License issuance, Licensees shall develop a Flow Management Plan (Plan) for the South State Water Project in consultation with the Forest Service and Resource Agencies which includes an implementation schedule to meet the requirement above. At a minimum, the plan shall include the following components:

- *Instream Flows*
 - *Determine how and where instream flows from the natural watersheds upstream of Pyramid Lake shall be measured.*
 - *Determine how flows will be released from Pyramid Dam to ensure releases match the timing and volume, within 90%, of all-natural sources of inflow into Pyramid Lake.*
 - *During non-storm times, a time-step of two hours or less during the day and 12 hours or less during the night, should be used for volume matching.*
 - *During storm events, a time-step of two hours or less should be used for volume matching.*
 - *The instream flow requirement described above can be modified if an alternative instream flow requirement is agreed to by the Licensee, Forest Service, and Resource Agencies during the development of the Plan.*
- *Streamflow and Temperature Gauges*
 - *Determine the feasibility of upgrading existing stream flow gauges to ensure instantaneous flow measurements occur at 15-minute intervals, consistent with USGS standards (<https://water.usgs.gov/osw/pubs/WRIR01-4044.pdf>) to meet the instream flow requirement.*
 - *Identify locations for additional stream flow telemetry gauges to improve the accuracy and timing of flows released at Pyramid Dam, as determined by consultation with Forest Service and the Resource Agencies.*
 - *All stream flow gauges should be calibrated for the full range of possible unimpaired flows.*

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- *Identify locations for water temperature gauges to monitor water temperature of the instream flow releases into Middle Piru Creek, as determined by consultation with the Resource Agencies.*
- *Ungauged Flow Modeling*
 - *The plan shall describe the methodology for hydrological modeling of overland water flows into Pyramid Lake from all ungauged sources during rain events as agreed to by Forest Service and the Resource Agencies.*
 - *Ensure that the hydrological modeling can account for different terrain types and can be adjusted to account for terrain changes (e.g., post-wildfire).*
- *Water deliveries to United Water Conservation District (UWCD)*
 - *The Licensees, in releasing water for UWCD down Middle Piru Creek, shall follow these requirements, unless otherwise agreed to by the Forest Service:*
 - *Up to 6 days of water will be released on weekends, from November 1 through February 28, depending on the water release requirements of the given year. Determination of the number of flow days to shape will be based on delivery needs of UWCD.*
 - *The released water will not adversely affect listed species.*
 - *Releases will follow the ramping rates below unless the Licensees get written approval from the Forest Service to adjust these schedules if operational, safety, or endangered species protection changes are needed.*
 - *For a 1-day release starting Saturday, 100 cfs from 0400-0700, then 300 cfs from 0800-1700, then 200 cfs from 1800-0100 Sunday, then 100 cfs from 0200-0700, then return to base condition.*
 - *For a 2-day release starting Saturday, 100 cfs from Day 1 0400-0700, followed by 300 cfs from 0800 to Sunday 1600, then 200 cfs from Sunday 1700-2400, then 100 cfs Monday 0100-0700, then return to base condition.*
 - *The Licensees shall inform the Forest Service of the planned release 4 days prior to the release.*
 - *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 Forest Service and other interested agencies and stakeholders to discuss alternatives.*
- *Implementation Schedule*
 - *The Plan shall include an implementation schedule for the components identified above and the following plan revision process for making changes to the plan through the term of the License, unless otherwise agreed to by the Forest Service.*
 - *The Licensees, in consultation with the Forest Service, Resource*

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Agencies, and interested stakeholders, shall review, update, and/or revise the Plan, as needed, when substantial changes in resource management occur or resource objectives are not being met. Sixty days would be allowed for the Forest Service, Resource Agencies, and interested stakeholders to provide written comments and recommendations. After consultation and agreement with the Forest Service, the Licensees will work with the Forest Service to file the updated Plan with FERC. The Licensees will include all relevant documentation of coordination and consultation with the updated Plan filed with FERC.

- *The final version of the Plan shall be approved by the Forest Service, prior to implementation. Throughout the term of the license, the Plan may be modified in accordance with the revision/update process to be defined within the Plan, after Forest Service approval.”*

NMFS Condition No. 1. Instream Flow Plan for Pyramid Dam (NMFS 2021) states:

“Within 6 months of License issuance, the Licensees shall develop and implement an Instream Flow Plan (Plan) for Pyramid Dam. Development of the Plan shall be done in consultation with NMFS, U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), State Water Resources Control Board (SWRCB), and the California Department of Fish and Wildlife (CDFW) (collectively, the Resource Agencies).

The Plan shall determine how instream flows from the natural watersheds upstream of Pyramid Lake, not including flows from the California Aqueduct, are to be measured and continuously released from Pyramid Dam. The Licensees shall continuously release instream flows from Pyramid Dam that match (within 5%) all-natural sources of inflow into Pyramid Lake. Flows shall be measured as instantaneous flows (every 15-minutes) at all gauges, consistent with USGS standards, and the gauges shall be calibrated for the full range of possible unimpaired flows. All such natural inflow into Pyramid Lake, including flows continuously discharged past Pyramid Dam and into Middle Piru Creek, shall be measured by the following means:

- (1) Licensees’ new flow gauges (10(j) & 10(a) Condition 2, Upgraded Flow Gauges Plan).*
- (2) Licensees’ new overland flow modeling (10(j) & 10(a) Condition 3, Ungauged Runoff Plan).*
- (3) Licensees’ new electronic flow control system (EFCS) on Pyramid Dam.*

The Plan may include additional components as needed, based on consultations with the Resource Agencies and FERC. The Licensees shall submit a draft Plan to the Resource Agencies for a 30-day review. The Agencies and the Licensees shall submit a Final Plan to FERC for final approval and the Licensees shall implement the FERC-approved Plan.”

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Comment #3: Aquatic Invasive Species Management

Issue: Currently, the Project does not include a systematic monitoring program to identify introductions or occurrences of Aquatic Invasive Species (AIS). The Project also does not have a control program to prevent the spread of or treat existing infestations of AIS.

Specific impacts: The following AIS currently occur or have the potential to infest Project-affected waters: Quagga and Zebra mussels (*Dreissena bugensis* and *D. polymorpha*, respectively), New Zealand mudsnail (*Potamopyrgus antipodarum*), Asian clam (*Corbicula fluminea*), red swamp crayfish (*Procambarus clarkia*), signal crayfish (*Pacifastacus leniusculus*), virile crayfish (*Orconectes virilus*), largemouth bass (*Micropterus salmoides*) downstream of Pyramid Dam (Pyramid Reach), American bullfrog (*Lithobates catesbeianus*), Eurasian milfoil (*Myriophyllum spicatum*), Hydrilla (*Hydrilla verticillata*), curly leaf pondweed (*Potamogeton crispus*), Brazilian waterweed (*Egeria densa*), parrot's feather milfoil (*Myriophyllum aquaticum*), water primrose (*Ludwigia* spp.), and didymo (*Didymosphenia geminate*). AIS have the potential to threaten the diversity or abundance of native species through competition for resources, predation, parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat (CDFG 2008).

Why impacts would occur: CDFW sent DWR a letter (dated September 16, 2019) stating that their draft Quagga Mussel Control (QMC) Plan submitted on December 5, 2018 was non-compliant with FGC section 2301 and California Code of Regulations Title 14, Section 672.1. Without an AIS Plan, AIS can reproduce, spread, and become irreversible. Water flows and currents may also deliver these AIS to downstream ecosystems, adversely affecting native aquatic species (CDFW 2008).

Evidence impacts would be significant: One of CDFW's resource objectives is to prevent, reduce and, where possible, reverse the spread of AIS. AIS have the potential to be introduced into the Project reservoir and stream reaches via Project-related flow releases, operation and maintenance (O&M), and recreational activities. The development of an AIS Plan would implement activities to minimize and prevent the introduction, establishment, and spread of AIS into and throughout Project reservoir and stream reaches. Implementation of the AIS Plan will maintain ecosystem health, including water quality. Per CEQA Guidelines section 15065(a), a project may have a significant effect on biological resources if the project has the potential to substantially reduce the habitat of a fish species or substantially reduce the number or restrict the range of a special status species. Per FGC section 1602, an entity is required to notify CDFW prior to beginning any activity that may do one or more of the following: divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or, deposit or dispose of material into any river, stream, or lake. Per FGC section 2301(a), an entity shall not possess, import, ship, or transport in the state, or place, plant, or cause to be

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placed or planted in any water within the state, dreissenid mussels. Lastly, per FGC section 5937, the owner of any dam shall allow sufficient water at all times to pass through a fishway, or to keep in good condition any fish that may be planted or exists below the dam.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends DWR develop and implement an AIS Plan and incorporate USFS Condition No. 44. Aquatic Invasive Species Management (USFS 2021) as a mitigation measure in the IS/MND. A commitment to an AIS Plan would facilitate the Project's compliance with FGC sections 1602, 2301(a), and 5937 within Pyramid Lake, Elderberry Forebay, and middle Piru Creek.

USFS Condition No. 44. Aquatic Invasive Species Management (USFS 2021) states: *Within one year after license issuance, Licensees shall, file with the Commission a Plan approved by the Forest Service and Resource Agencies, that provides guidance to manage aquatic invasive species (AIS) that occur or have the potential to be introduced into Project-affected waters within the FERC Project Boundary while addressing applicable current federal and state laws, regulations, and policies. The plan will address species provided in consultation with the Forest Service. The goals of the Plan are to:*

- (1) implement Best Management Practices (BMPs) to minimize and prevent the introduction and spread of AIS into and throughout Project-affected waters;*
- (2) provide education and outreach to ensure public awareness of AIS effects and management throughout Project-affected waters;*
- (3) implement monitoring programs to ensure early detection of AIS;*
- (4) ensure Project AIS management activities comply with federal and State of California laws, regulations, policies, and management plans, and with Forest Service AIS directives and orders.*

At a minimum, the Plan shall include BMPs to prevent the introduction of AIS into Project affected waters, early detection monitoring and monitoring of known AIS populations, and management of existing populations of AIS, to include, but not be limited to:

- *A public education program, including CDFW-/Forest Service-supported signage and informational cards at public recreational access sites and on Licensee's AIS website, covering the following prevention actions:*
 - *Draining water from boat, motor, bilge, live well, and bait containers before leaving a water access site.*
 - *Removing visible plants, animals, and mud from boat and trailer before leaving waterbody.*
 - *Cleaning and drying boats using CDFW protocols for the prevention of all AIS before entering any waterbody area.*
 - *Disposing of unwanted bait in trash, including earthworms.*
 - *Avoiding the release of plants and animals into a waterbody unless they*

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system, and iMapInvasives [<https://www.imapinvasives.org/vision>]) to determine if new AIS have been found in the Project Area. AIS occurrence information shall be included in an AIS report provided to agencies annually as described below.

- *Annual employee AIS training (i.e., employees and contractors that could potentially affect AIS in Project waters), including:*
 - *Species identification of AIS species of concern outlined in the Plan. However, it is not the intent of this training that staff become experts in the identification of AIS of concern.*
 - *BMPs to prevent AIS introduction and spread in Project reservoirs and Project affected stream reaches.*
 - *For those staff or contractors that shall perform AIS monitoring, training in CDFW's quagga/zebra mussel protocols for surface survey, artificial substrate monitoring, and veliger sampling.*
- *Control and Management Actions*
 - *If any of the AIS species of concern listed above are detected within the FERC Project Boundary, the Licensees shall immediately notify (within 3 business days) the Forest Service, State Water Board, USFWS, and CDFW and consult with these agencies to develop and institute an appropriate plan of action. Examples of potential actions include:*
 - *Control of quagga and zebra mussels.*
 - *If non-native crayfish (i.e., *P. clarkii*) are detected in any Project-affected streams, implement control measures, and evaluate effects of Project flows on invasive species in stream reaches.*
 - *Educational measures targeted at anglers in relation to crayfish movement and whirling disease decontamination measures (in coordination with CDFW).*
 - *Consult with the Forest Service, State Water Board, USFWS, and CDFW on appropriate rapid response measures, including:*
 - *rapid confirmation of the identity of the suspicious organism;*
 - *assess the extent of the infestation;*
 - *quick review of available control options to choose one best suited for the treatment conditions;*
 - *application of the chosen control option(s); and,*
 - *modification of the control strategy as indicated by the results.*
- *Reporting and Consultation*
 - *Beginning within the first full calendar year of the new license, provide an annual report of AIS prevention and monitoring activities by March 31 of the following year. The annual AIS monitoring report shall be provided to the Forest Service and Resource Agencies. Electronic data (tabular and spatial) shall be provided along with the report. The Licensees shall provide a summary of AIS observed during the previous year at the annual Ecological Group meeting.*
- *Plan Revisions*
 - *The Licensees, in consultation with the Forest Service, Resource*

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Agencies, and interested stakeholders, shall review, update, and/or revise the Plan, as needed, when substantial changes in resource management occur or resource objectives are not being met. Sixty days would be allowed for the Forest Service, Resource Agencies, and interested stakeholders to provide written comments and recommendations. After consultation and agreement with the Forest Service, the Licensees will work with the Forest Service to file the updated Plan with FERC. The Licensees will include all relevant documentation of coordination and consultation with the updated Plan filed with FERC. Changes or revisions to the Plan would be expected if AIS conditions change as a result of: 1) unforeseen effects from new or existing Project-related activities, 2) the potential for new AIS to occur, 3) changed conditions as a result of natural events such as fire or flood, or 4) establishment of other regulatory or legal requirements for AIS. Additional monitoring may be required as part of any plan revisions. Licensee shall include all relevant documentation of coordination/consultation with the updated Plan filed with the Commission.

- *The final version of the Plan shall be approved by the Forest Service, prior to implementation. Throughout the term of the license, the Plan may be modified in accordance with the revision/update process to be defined within the Plan, after Forest Service approval.*

Comment #4: Harmful Algal Blooms

Issue: The Project's Water Quality Monitoring Plan collects samples at Pyramid Lake but does not have a plan to collect samples to detect Harmful Algal Blooms (HABs) below Pyramid Dam.

Specific impacts: Downstream impacts from HABs in Pyramid Lake have the potential to be problematic because they adversely affect aquatic life.

Why impacts would occur: Pyramid Lake has had known occurrences of HABs and Microcystis. DWR has documented that Microcystis, and other cyanobacteria occurs at Pyramid Lake. Because nitrogen, phosphorus, or light commonly limit the growth of stream algae (Buss et al. 2011), elevated levels of these resources often result in nuisance algal blooms (Grimm and Fisher 1986; Winterbourn 1990; Borchardt 1996) in streams and reservoirs. HABs have the potential to adversely affect aquatic life by lowering dissolved oxygen concentration and produce potent toxins (SWRCB 2016). HABs can be considered deleterious to fish, plants life, mammals, or bird life, if left undetected.

Evidence impacts would be significant: Per CEQA Guidelines section 15065(a), a project may have a significant effect on biological resources if the project has the potential to substantially reduce the habitat of a fish species or substantially reduce the number or restrict the range of a special status species. Per FGC section 5650, it is

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unlawful to deposit in, permit to pass into, or place where it can pass into waters of the state any substance or material deleterious to fish, plant life, mammals, or bird life, including, but not limited to gasoline and oil, as well as sediment.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends DWR develop a Piru Creek Harmful Algal Blooms (HABs) Plan in consultation with CDFW, USFS, NMFS, and State Water Resources Control Board (SWRCB). The Piru HABs Plan should propose an early detection monitoring plan that will detail the frequency of HABs monitoring below Pyramid Dam in Piru Creek. The Piru HABs Plan should also propose various mitigating actions to counter for any detection of algae blooms. The Piru HABs Plan should also include water quality profiles, including nitrogen and phosphorus, collected below Pyramid Dam in Piru Creek.

Comment #5: Tricolored Blackbirds

Issue: The Project is continuing the routine maintenance activities from the existing license, which will continue to have an impact to tricolored blackbirds, a species listed as threatened under CESA.

Specific impacts: The Project may result in direct and indirect impacts to nesting tricolored blackbirds and disrupt natural tricolored blackbird breeding behavior. The Project may also contribute to the loss of breeding, wintering, and foraging habitat for the species. Project impacts further contribute to statewide population decline for tricolored blackbird.

Why impacts would occur: Impacts to tricolored blackbird could result from vegetation clearing and other vegetation disturbing activities. Project disturbance activities may result in crushing or filling of active nests causing the death or injury of adults, eggs and young.

Evidence impacts would be significant: Since protocol surveys were not included in the studies conducted by the Licensees, CDFW cannot concur that Project operation and maintenance will not affect CESA-listed species and cannot recommend specific alternative avoidance and minimization measures from known locations. Under CESA, take of any endangered, threatened, candidate species, or State-listed rare plant species that results from the Project is prohibited, unless preempted by federal law or authorized by State law (Fish and G. Code, §§ 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). Per FGC section 1602, an entity is required to notify CDFW prior to beginning any activity that may do one or more of the following: divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or, deposit or dispose of material into any river, stream, or lake.

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Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends any ground-disturbing activities, vegetation treatments, operation and maintenance activities, and recreation activities within and immediately adjacent to Quail Lake include consultation with CDFW for consistency under the CESA and FGC section 1602.

Mitigation Measure #2: CDFW recommends including restoration of tricolored blackbird nesting habitat at Quail Lake. Adequate nesting vegetation should be maintained for the species to compensate for the continued disturbance of maintenance activities in the area.

Comment #6: Wildlife Movement

Issue: The Project identifies the western half of Pyramid Lake and the Piru Creek drainage as being less permeable (IS/MND, Pg. 3-50).

Specific impacts: While a segment of resident wildlife may have become adapted to the fencing around Project-related features, the fencing continue to present a barrier to natural movement affecting genetic exchange, dispersal, and the ability to escape fire.

Why impacts would occur: The South Coast Missing Linkages Project is an inter-agency effort to identify and conserve the highest-priority linkages in the south coast ecoregion (SCW 2017). The South Coast Missing Linkages Project identifies the Project area as less permeable. CDFW is concerned that the Project would have ongoing impacts to wildlife corridors. Ongoing impacts could result from human-wildlife interactions that could lead to injury or wildlife mortality.

Evidence impacts would be significant: According to USFS (2021), "...much of the Project area is impacted by existing developments and infrastructure that impact the ability of wildlife to conduct both short and long-distance movements. Features and infrastructure associated with the Project contribute to the fragmentation of this landscape and disruption of wildlife movement. Features such as I-5 and SR 138 are not associated with the Project but also present barriers to wildlife movement in the Project area and add to the cumulative impact" (Pg. 11). Per CEQA Guidelines section 15065(a), a project may have a significant effect on biological resources if the project has the potential to substantially reduce the number or restrict the range of a special status species.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends DWR incorporate USFS Condition No. 29 Wildlife Movement Protection (USFS 2021) as a mitigation measure in the IS/MND.

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The USFS Condition No. 29. Wildlife Movement Protection states:

“Within one year after license issuance, Licensees shall file with the Commission a feasibility plan for designing and implementing corrective measures addressing the barriers to wildlife movement associated with Project infrastructure. Plan development shall be done in consultation with the Forest Service and Resource Agencies.

At minimum, the plan will include the following:

- *Identification of wildlife movement corridors.*
- *Mitigation and corrective measures to improve wildlife movement affected by Project infrastructure.*
- *Implementation schedule for mitigation and corrective measures identified.*
- *A plan revision process with the following language, unless otherwise agreed to by the Forest Service:*
 - *The Licensees, in consultation with the Forest Service, Resource Agencies, and interested stakeholders, shall review, update, and/or revise the Plan, as needed, when substantial changes in resource management occur or resource objectives are not being met. Licensees shall provide the Forest Service, Resource Agencies, and interested stakeholders to 60 days to provide written comments and recommendations. After consultation and agreement with the Forest Service, the Licensees will work with the Forest Service to file the updated Plan with FERC. The Licensees will include all relevant documentation of coordination and consultation with the updated Plan filed with FERC.*

The final Plan shall be approved by the Forest Service, prior to implementation. Throughout the term of the license, the Plan may be modified in accordance with the revision/update process to be defined within the Plan, after Forest Service approval.”

Mitigation Measure #2: CDFW recommends DWR reference The California Department of Transportation (Caltrans) Wildlife Crossing Guidance Manual e on the construction and maintenance of wildlife friendly fencing (pg. 59-62, Caltrans 2009).

General Comment #1: Castaic Lake Fish Stocking

CDFW appreciates DWR and LADWP’s FERC submittal of the executed off-license agreement between DWR and CDFW on January 28, 2021 (DWR and LADWP 2021). CDFW recommends that DWR incorporate the executed off-license agreement into the final IS/MND.

Conclusion

We appreciate the opportunity to comment on the IS/MND. CDFW has provided DWR and LADWP with a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation and Monitoring Reporting

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Plan (MMRP; Attachment A). If you have any questions or comments regarding this letter, please contact Mary Ngo, Senior Environmental Scientist (Specialist), at Mary.Ngo@wildlife.ca.gov or (562) 477-0743.

Sincerely,

DocuSigned by:
Erinn Wilson-Olgin
B6E58CFE24724F5...
Erinn Wilson-Olgin
Environmental Program Manager I

Attachment A: Draft Mitigation and Monitoring Reporting Plan (MMRP)

CDFW

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Attachment A: Draft Mitigation and Monitoring Reporting Plan (MMRP)

CDFW recommends the following language to be incorporated into a future environmental document for the Project.

Biological Resources (BIO)			
Mitigation Measure (MM) or Recommendation (REC)		Timing	Responsible Party
MM-1	To comply with FGC section 5901, DWR perform fish passage studies over/around Pyramid Dam . Any fish passage studies should address the current obstruction of Pyramid Dam that is impeding native <i>O. mykiss</i> and other native fish species from accessing upstream habitat pursuant to FGC section 5901. Licensees should study and evaluate options for providing upstream volitional fish passage (per Fish and G. Code, § 5901) of native coastal rainbow trout, and adult and juvenile southern steelhead around Pyramid Dam including; fish ladders, locks, elevators, associated collection facilities, and upstream release sites. The study should evaluate options for providing downstream fish passage, such as an evaluation of all reservoir outlet works, bypass channels, in lake fish guidance devices, and downstream outlet sites.	Upon FERC License Renewal	Licensees
MM-2	CDFW recommends DWR prepare to implement any fish passage measures required by the National Marine Fisheries Service (NMFS).	Upon FERC License Renewal	Licensees

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<p>MM-3</p>	<p>CDFW recommends DWR develop a Flow Management Plan and incorporate USFS Condition No. 30. Instream Flow Plan for Pyramid Dam (USFS 2021) and NMFS Condition 1- Instream Flow Plan for Pyramid Dam (NMFS 2021) as a mitigation measure in the IS/MND.</p> <p>USFS Condition No. 30. Instream Flow Plan for Pyramid Dam (USFS 2021) states: <i>Licensee shall release flows from Pyramid Dam matching the timing and volume of all-natural sources of inflow into Pyramid Lake as defined in the Flow Management Plan. Within one year of License issuance, Licensees shall develop a Flow Management Plan (Plan) for the South State Water Project in consultation with the Forest Service and Resource Agencies which includes an implementation schedule to meet the requirement above. At a minimum, the plan shall include the following components:</i></p> <ul style="list-style-type: none"> • <u>Instream Flows</u> <ul style="list-style-type: none"> ○ <i>Determine how and where instream flows from the natural watersheds upstream of Pyramid Lake shall be measured.</i> ○ <i>Determine how flows will be released from Pyramid Dam to ensure releases match the timing and volume, within 90%, of all-natural sources of inflow into Pyramid Lake.</i> <ul style="list-style-type: none"> ▪ <i>During non-storm times, a time-step of two hours or less during the day and 12 hours or less during the night, should be used for volume matching.</i> ▪ <i>During storm events, a time-step of two hours or less should be used for volume matching.</i> 	<p>Upon FERC License Renewal</p>	<p>Licensees</p>
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	<ul style="list-style-type: none">○ <i>The instream flow requirement described above can be modified if an alternative instream flow requirement is agreed to by the Licensee, Forest Service, and Resource Agencies during the development of the Plan.</i>● <u><i>Streamflow and Temperature Gauges</i></u><ul style="list-style-type: none">○ <i>Determine the feasibility of upgrading existing stream flow gauges to ensure instantaneous flow measurements occur at 15-minute intervals, consistent with USGS standards (https://water.usgs.gov/osw/pubs/WRIR01-4044.pdf) to meet the instream flow requirement.</i>○ <i>Identify locations for additional stream flow telemetry gauges to improve the accuracy and timing of flows released at Pyramid Dam, as determined by consultation with Forest Service and the Resource Agencies.</i>○ <i>All stream flow gauges should be calibrated for the full range of possible unimpaired flows.</i>○ <i>Identify locations for water temperature gauges to monitor water temperature of the instream flow releases into Middle Piru Creek, as determined by consultation with the Resource Agencies.</i>● <u><i>Ungauged Flow Modeling</i></u><ul style="list-style-type: none">○ <i>The plan shall describe the methodology for hydrological modeling of overland water flows into Pyramid Lake from all ungauged sources during rain events as agreed to by Forest Service and the Resource Agencies.</i>		
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	<ul style="list-style-type: none">○ <i>Ensure that the hydrological modeling can account for different terrain types and can be adjusted to account for terrain changes (e.g., post-wildfire).</i>● <u><i>Water deliveries to United Water Conservation District (UWCD)</i></u><ul style="list-style-type: none">○ <i>The Licensees, in releasing water for UWCD down Middle Piru Creek, shall follow these requirements, unless otherwise agreed to by the Forest Service:</i><ul style="list-style-type: none">▪ <i>Up to 6 days of water will be released on weekends, from November 1 through February 28, depending on the water release requirements of the given year. Determination of the number of flow days to shape will be based on delivery needs of UWCD.</i>▪ <i>The released water will not adversely affect listed species.</i>▪ <i>Releases will follow the ramping rates below unless the Licensees get written approval from the Forest Service to adjust these schedules if operational, safety, or endangered species protection changes are needed.</i>▪ <i>For a 1-day release starting Saturday, 100 cfs from 0400-0700, then 300 cfs from 0800-1700, then 200 cfs from 1800-0100 Sunday, then 100 cfs from 0200-0700, then return to base condition.</i>▪ <i>For a 2-day release starting Saturday, 100 cfs from Day 1 0400-0700, followed</i>		
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	<p><i>by 300 cfs from 0800 to Sunday 1600, then 200 cfs from Sunday 1700-2400, then 100 cfs Monday 0100-0700, then return to base condition.</i></p> <ul style="list-style-type: none">○ <i>The Licensees shall inform the Forest Service of the planned release 4 days prior to the release.</i>○ <i>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 Forest Service and other interested agencies and stakeholders to discuss alternatives.</i>● <i><u>Implementation Schedule</u></i><ul style="list-style-type: none">○ <i>The Plan shall include an implementation schedule for the components identified above and the following plan revision process for making changes to the plan through the term of the License, unless otherwise agreed to by the Forest Service.</i>○ <i>The Licensees, in consultation with the Forest Service, Resource Agencies, and interested stakeholders, shall review, update, and/or revise the Plan, as needed, when substantial changes in resource management occur or resource objectives are not being met. Sixty days would be allowed for the Forest Service, Resource Agencies, and interested stakeholders to provide written comments and recommendations. After consultation and</i>		
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	<p><i>agreement with the Forest Service, the Licensees will work with the Forest Service to file the updated Plan with FERC. The Licensees will include all relevant documentation of coordination and consultation with the updated Plan filed with FERC.</i></p> <ul style="list-style-type: none"><i>○ The final version of the Plan shall be approved by the Forest Service, prior to implementation. Throughout the term of the license, the Plan may be modified in accordance with the revision/update process to be defined within the Plan, after Forest Service approval.</i> <p>NMFS Condition No. 1. Instream Flow Plan for Pyramid Dam (NMFS 2021) states: <i>Within 6 months of License issuance, the Licensees shall develop and implement an Instream Flow Plan (Plan) for Pyramid Dam. Development of the Plan shall be done in consultation with NMFS, U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), State Water Resources Control Board (SWRCB), and the California Department of Fish and Wildlife (CDFW) (collectively, the Resource Agencies).</i></p> <p><i>The Plan shall determine how instream flows from the natural watersheds upstream of Pyramid Lake, not including flows from the California Aqueduct, are to be measured and continuously released from Pyramid Dam. The Licensees shall continuously release instream flows from Pyramid Dam that match (within 5%) all-natural sources of inflow into Pyramid Lake. Flows shall be measured as instantaneous flows (every 15-minutes) at all gauges, consistent with USGS</i></p>		
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	<p><i>standards, and the gauges shall be calibrated for the full range of possible unimpaired flows. All such natural inflow into Pyramid Lake, including flows continuously discharged past Pyramid Dam and into Middle Piru Creek, shall be measured by the following means:</i></p> <ul style="list-style-type: none"> <i>(4) Licensees' new flow gauges (10(j) & 10(a) Condition 2, Upgraded Flow Gauges Plan).</i> <i>(5) Licensees' new overland flow modeling (10(j) & 10(a) Condition 3, Ungauged Runoff Plan).</i> <i>(6) Licensees' new electronic flow control system (EFCS) on Pyramid Dam.</i> <p><i>The Plan may include additional components as needed, based on consultations with the Resource Agencies and FERC. The Licensees shall submit a draft Plan to the Resource Agencies for a 30-day review. The Agencies and the Licensees shall submit a Final Plan to FERC for final approval and the Licensees shall implement the FERC-approved Plan.</i></p>		
<p>MM-4</p>	<p>CDFW recommends DWR develop and implement an AIS Plan and incorporate USFS Condition No. 44. Aquatic Invasive Species Management (USFS 2021) as a mitigation measure in the IS/MND. A commitment to an AIS Plan would facilitate the Project's compliance with FGC sections 1602, 2301(a), and 5937 within Pyramid Lake, Elderberry Forebay, and middle Piru Creek.</p> <p>USFS Condition No. 44. Aquatic Invasive Species Management (USFS 2021) states: <i>Within one year after license issuance, Licensees shall, file with the Commission a Plan approved by the Forest Service and Resource Agencies, that provides guidance to manage</i></p>	<p>Within One Year of FERC License Issuance</p>	<p>Licensees</p>

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	<p><i>aquatic invasive species (AIS) that occur or have the potential to be introduced into Project-affected waters within the FERC Project Boundary while addressing applicable current federal and state laws, regulations, and policies. The plan will address species provided in consultation with the Forest Service. The goals of the Plan are to:</i></p> <ul style="list-style-type: none"><i>(5) implement Best Management Practices (BMPs) to minimize and prevent the introduction and spread of AIS into and throughout Project-affected waters;</i><i>(6) provide education and outreach to ensure public awareness of AIS effects and management throughout Project-affected waters;</i><i>(7) implement monitoring programs to ensure early detection of AIS;</i><i>(8) ensure Project AIS management activities comply with federal and State of California laws, regulations, policies, and management plans, and with Forest Service AIS directives and orders.</i> <p><i>At a minimum, the Plan shall include BMPs to prevent the introduction of AIS into Project affected waters, early detection monitoring and monitoring of known AIS populations, and management of existing populations of AIS, to include, but not be limited to:</i></p> <ul style="list-style-type: none"><i>• A public education program, including CDFW-/Forest Service-supported signage and informational cards at public recreational access sites and on Licensee's AIS website, covering the following prevention actions:</i><ul style="list-style-type: none"><i>○ Draining water from boat, motor, bilge, live well, and bait containers before leaving a water access site.</i><i>○ Removing visible plants, animals, and mud from boat and trailer before leaving waterbody.</i>		
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	<ul style="list-style-type: none">○ <i>Cleaning and drying boats using CDFW protocols for the prevention of all AIS before entering any waterbody area.</i>○ <i>Disposing of unwanted bait in trash, including earthworms.</i>○ <i>Avoiding the release of plants and animals into a waterbody unless they originated from that waterbody.</i>○ <i>If any Project-affected water is found to harbor AIS, the Licensees shall consult with appropriate agencies and ensure appropriate CDFW-/Forest Service-supported educational signage is available and visible at the infested waterbody.</i>● <i>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. The type, location, and intensity of monitoring at each reservoir shall be determined by the vulnerability assessment completed by the Licensees for all Project reservoirs. The vulnerability assessment for each reservoir shall be based on proximity to dreissenid-mussel infested waterbodies, frequency, and type of recreation use, water chemistry using Claudi and Prescott (2011), and other factors that contribute to the potential introduction of</i>		
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	<p><i>dreissenid mussels into Project reservoirs. Water quality profiles, including water temperature, dissolved oxygen, pH, turbidity, and conductivity, at each reservoir shall be collected coinciding with quagga and zebra mussel monitoring.</i></p> <ul style="list-style-type: none"> • <i>Monitoring of other focal AIS</i> <ul style="list-style-type: none"> ○ <i>Crayfish monitoring in Project-affected streams concurrent with the Aquatic Resources Monitoring Plan's Stream Fish Population Monitoring.</i> ○ <i>Environmental DNA (eDNA) sampling (or other current industry standard) concurrent with the Aquatic Resources Monitoring Plan's BMI Population Monitoring schedule in Project reservoirs and Project-affected streams (Piru Creek Above and Below Pyramid Dam) (see Condition No. 45). A subset of Project reservoir tributary confluences (Fish Creek and Agua Blanca Creek) shall be sampled once within the first full calendar year after completion of the AIS Plan.</i> <ul style="list-style-type: none"> ▪ <i>whirling disease vector (Myxobolus cerebralis)</i> ▪ <i>myxosporean parasite of salmonids (Ceratonova shasta)</i> ▪ <i>myxozoan parasite of salmonids (Tetracapsuloides bryosalmonae)</i> ▪ <i>parasitic ciliate, aka "Ich" (Ichthyophthirius multifiliis)</i> ▪ <i>chytrid fungus (Bd) (Batrachochytrium dendrobatidis)</i> ▪ <i>Ranavirus (Frog virus 3)</i> 		
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	<ul style="list-style-type: none">• <i>Observations of other AIS, shall be collected and reported as described below.</i><ul style="list-style-type: none">○ <i>Incidental observations of AIS of concern shall be recorded during AIS monitoring as well as periodic aquatic surveys (e.g., fish, amphibian, etc.). Fish and amphibian monitoring datasheets shall include a checklist of the AIS species included in the AIS Management Plan.</i>• <i>Annually, or more frequently if appropriate, the Licensees shall access and download data from online AIS databases (e.g., USGS Non-Indigenous Aquatic Species (NAS) database [https://nas.er.usgs.gov/] including the automated alert system, and iMapInvasives [https://www.imapinvasives.org/vision/]) to determine if new AIS have been found in the Project Area. AIS occurrence information shall be included in an AIS report provided to agencies annually as described below.</i>• <i>Annual employee AIS training (i.e., employees and contractors that could potentially affect AIS in Project waters), including:</i><ul style="list-style-type: none">○ <i>Species identification of AIS species of concern outlined in the Plan. However, it is not the intent of this training that staff become experts in the identification of AIS of concern.</i>○ <i>BMPs to prevent AIS introduction and spread in Project reservoirs and Project affected stream reaches.</i>○ <i>For those staff or contractors that shall perform AIS monitoring, training in CDFW's quagga/zebra mussel protocols for surface survey, artificial substrate monitoring, and veliger sampling.</i>		
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	<ul style="list-style-type: none">• <i>Control and Management Actions</i><ul style="list-style-type: none">○ <i>If any of the AIS species of concern listed above are detected within the FERC Project Boundary, the Licensees shall immediately notify (within 3 business days) the Forest Service, State Water Board, USFWS, and CDFW and consult with these agencies to develop and institute an appropriate plan of action. Examples of potential actions include:</i><ul style="list-style-type: none">▪ <i>Control of quagga and zebra mussels.</i>○ <i>If non-native crayfish (i.e., <i>P. clarkii</i>) are detected in any Project-affected streams, implement control measures, and evaluate effects of Project flows on invasive species in stream reaches.</i>○ <i>Educational measures targeted at anglers in relation to crayfish movement and whirling disease decontamination measures (in coordination with CDFW).</i>○ <i>Consult with the Forest Service, State Water Board, USFWS, and CDFW on appropriate rapid response measures, including:</i><ul style="list-style-type: none">▪ <i>rapid confirmation of the identity of the suspicious organism;</i>▪ <i>assess the extent of the infestation;</i>▪ <i>quick review of available control options to choose one best suited for the treatment conditions;</i>▪ <i>application of the chosen control option(s); and,</i>▪ <i>modification of the control strategy as indicated by the results.</i>		
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	<ul style="list-style-type: none">• <i>Reporting and Consultation</i><ul style="list-style-type: none">○ <i>Beginning within the first full calendar year of the new license, provide an annual report of AIS prevention and monitoring activities by March 31 of the following year. The annual AIS monitoring report shall be provided to the Forest Service and Resource Agencies. Electronic data (tabular and spatial) shall be provided along with the report. The Licensees shall provide a summary of AIS observed during the previous year at the annual Ecological Group meeting.</i>• <i>Plan Revisions</i><ul style="list-style-type: none">○ <i>The Licensees, in consultation with the Forest Service, Resource Agencies, and interested stakeholders, shall review, update, and/or revise the Plan, as needed, when substantial changes in resource management occur or resource objectives are not being met. Sixty days would be allowed for the Forest Service, Resource Agencies, and interested stakeholders to provide written comments and recommendations. After consultation and agreement with the Forest Service, the Licensees will work with the Forest Service to file the updated Plan with FERC. The Licensees will include all relevant documentation of coordination and consultation with the updated Plan filed with FERC. Changes or revisions to the Plan would be expected if AIS conditions change as a result of: 1)</i>		
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	<p><i>unforeseen effects from new or existing Project-related activities, 2) the potential for new AIS to occur, 3) changed conditions as a result of natural events such as fire or flood, or 4) establishment of other regulatory or legal requirements for AIS. Additional monitoring may be required as part of any plan revisions. Licensee shall include all relevant documentation of coordination/consultation with the updated Plan filed with the Commission.</i></p> <ul style="list-style-type: none"> <i>The final version of the Plan shall be approved by the Forest Service, prior to implementation. Throughout the term of the license, the Plan may be modified in accordance with the revision/update process to be defined within the Plan, after Forest Service approval.</i> 		
MM-5	<p>CDFW recommends DWR develop a Piru Creek Harmful Algal Blooms (HABs) Plan in consultation with CDFW, USFS, NMFS, and State Water Resources Control Board (SWRCB). The Piru HABs Plan should propose an early detection monitoring plan that will detail the frequency of HABs monitoring below Pyramid Dam in Piru Creek. The Piru HABs Plan should also propose various mitigating actions to counter for any detection of algae blooms. The Piru HABs Plan should also include water quality profiles, including nitrogen and phosphorus, collected below Pyramid Dam in Piru Creek.</p>	<p>Upon FERC License Renewal</p>	<p>Licensees</p>
MM-6	<p>CDFW recommends any ground-disturbing activities, vegetation treatments, operation and maintenance activities, and recreation activities within and immediately adjacent to Quail Lake include consultation with CDFW for consistency under the CESA and FGC section 1602.</p>	<p>Upon FERC License Renewal</p>	<p>Licensees</p>

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MM-7	CDFW recommends including restoration of tricolored blackbird nesting habitat at Quail Lake. Adequate nesting vegetation shall be maintained for the species to compensate for the continued disturbance of maintenance activities in the area.	Upon FERC License Renewal	Licensees
MM-8	<p>CDFW recommends DWR incorporate USFS Condition No. 29 Wildlife Movement Protection (USFS 2021) as a mitigation measure in the IS/MND.</p> <p>The USFS Condition No. 29. Wildlife Movement Protection states: <i>Within one year after license issuance, Licensees shall file with the Commission a feasibility plan for designing and implementing corrective measures addressing the barriers to wildlife movement associated with Project infrastructure. Plan development shall be done in consultation with the Forest Service and Resource Agencies.</i></p> <p><i>At minimum, the plan will include the following:</i></p> <ul style="list-style-type: none"> • <i>Identification of wildlife movement corridors.</i> • <i>Mitigation and corrective measures to improve wildlife movement affected by Project infrastructure.</i> • <i>Implementation schedule for mitigation and corrective measures identified.</i> • <i>A plan revision process with the following language, unless otherwise agreed to by the Forest Service:</i> <ul style="list-style-type: none"> ○ <i>The Licensees, in consultation with the Forest Service, Resource Agencies, and interested stakeholders, shall review, update, and/or revise the Plan, as needed, when substantial changes in resource management occur or resource objectives are not being met.</i> 	Within One Year of FERC License Issuance	Licensees

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	<p><i>Licensees shall provide the Forest Service, Resource Agencies, and interested stakeholders to 60 days to provide written comments and recommendations. After consultation and agreement with the Forest Service, the Licensees will work with the Forest Service to file the updated Plan with FERC. The Licensees will include all relevant documentation of coordination and consultation with the updated Plan filed with FERC.</i></p> <p><i>The final Plan shall be approved by the Forest Service, prior to implementation. Throughout the term of the license, the Plan may be modified in accordance with the revision/update process to be defined within the Plan, after Forest Service approval.</i></p>		
MM-9	CDFW recommends DWR reference The California Department of Transportation (Caltrans) Wildlife Crossing Guidance Manual e on the construction and maintenance of wildlife friendly fencing (pg. 59-62, Caltrans 2009).	Within One Year of FERC License Issuance	Licensees
R-1	CDFW recommends that DWR incorporate the FERC submittal of the executed off-license agreement between DWR and CDFW into the final IS/MND.	Prior to FERC License Issuance	Licensees