PUBLIC COMMENT PERIOD FOR DRAFT WATER QUALITY CERTIFICATION FOR PACIFIC GAS AND ELECTRIC COMPANY'S KERCKHOFF HYDROELECTRIC PROJECT

To: Interested Parties, including Federal Energy Regulatory Commission Interested Parties Mailing List for Kerckhoff Hydroelectric Project

On July 16, 2025, Pacific Gas and Electric Company (PG&E) applied to the State Water Resources Control Board (State Water Board) for a water quality certification (certification) for the relicensing of the Kerckhoff Hydroelectric Project (Project). While not required, the State Water Board is providing this opportunity for public review and comment on a draft certification for the Project.

Background Information

The Kerckhoff Hydroelectric Project is located in Fresno and Madera counties on the San Joaquin River with an installed capacity of 162.72 megawatts. The existing Kerckhoff Hydroelectric Project is comprised of Kerckhoff Dam, Kerckhoff Reservoir, Kerckhoff 1 Powerhouse and associated facilities, Kerckhoff 2 Powerhouse and associated facilities, the Smalley Cove Recreation Area, helicopter landing zones, roads, and gages.

The Project involves the relicensing (continued operations) of the Kerckhoff Hydroelectric Project. In addition to continued operations, PG&E proposes: (1) decommissioning of the Kerckhoff 1 Powerhouse (out of service since 2017); (2) construction of a new day use area; (3) updates to the FERC boundaries for the Kerckhoff Hydroelectric Project; and (4) implementation of new environmental management plans and measures. Additional information on the Kerckhoff Hydroelectric Project, including the Proposed Project, can be found in the State Water Board's Kerckhoff Hydroelectric Project webpage[1].

Water Quality Certification

In California, the State Water Board is responsible for protecting the State's water quality, including through issuance of certifications under Section 401 of the Clean Water Act. Certifications must ensure compliance with water quality standards and other appropriate requirements of state law. If the State issues a certification with conditions, those conditions become conditions of the federal permit or license. In this instance, the certification will provide conditions for FERC's relicensing of the Project.

Opportunity for Public Comment

This draft certification does not constitute final action by the State Water Board on PG&E's request for certification for the Project. The State Water Board is releasing this draft certification to provide the public with an opportunity to review and comment on draft conditions developed to protect water quality and beneficial uses. The comment

[1] https://waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/kerckhoff_hydroelectric_ferc96.html

period for the draft certification is from the date of this notice until July 2, 2026. **Comments on the draft certification must be received by 5:00 pm on Wednesday, July 2, 2026**, and can be submitted electronically (preferred) or by mail as follows:

Email (preferred):
WR401Program@waterboards.ca.gov

or

Mail:
State Water Resources Control Board
Division of Water Rights – Water Quality Certification Program
Attn. Chase McCormick
P.O. Box 2000
Sacramento, CA 95812-2000

The draft certification for the Project and additional information regarding the State Water Board's certification process for the Project are available on the State Water Board's webpage for the Kerckhoff Hydroelectric Project.[2]

If you have questions related to this notice, the best means of contact is by email to: WR401Program@waterboards.ca.gov

KEEP INFORMED OF PROJECT MILESTONES

To receive emails related to the Project, interested persons should enroll in the "Water Rights Water Quality Certification" e-mail notification service. Instructions on how to sign up for the State Water Board's Email Subscription List are outlined below:

1. Visit the State Water Board's Email Subscription webpage.[3]
2. Provide your name and email in the required fields.
3. In the categories below the email and name fields, under "State Water Resources Control Board" select "Water Rights," then "Water Rights Water Quality Certification."
4. Click the "Subscribe" button.
5. An email will be sent to you. You must respond to the email message to confirm your membership on the selected list(s).

By enrolling in this email list, you will receive notices for the Project's certification process and other current projects in the Division of Water Rights' Water Quality Certification Program. If you do not have internet access or do not wish to participate in the email subscription list, you may contact Mr. Chase McCormick by phone at: 916-323-9390 to request to receive notices by mail. You can enroll or un-enroll from the email subscription service at any time.

Rajaa Hassan, acting for
Parker Thaler
Water Quality Certification Program Manager
Division of Water Rights

6/18/2026
Date

[2] https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/kerckhoff_hydroelectric_ferc96.html

[3] http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml

Certificate of Service

I hereby certify that I have this day filed electronically with the Federal Energy Regulatory Commission and served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 18th day of June 2026.

Glenn Hoffmann

Glenn Hoffmann
Engineering Geologist
Division of Water Rights
State Water Resources Control Board
glenn.hoffmann@waterboards.ca.gov

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for

PACIFIC GAS AND ELECTRIC COMPANY'S
KERCKHOFF HYDROELECTRIC PROJECT

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 96

Source: **San Joaquin River**

Counties: **Fresno and Madera**

DRAFT WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

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Bay-Delta Plan	Water Quality Control Plan for the San Francisco Bay-Sacramento/San Joaquin Delta Estuary
BMP	best management practices
BLM	Bureau of Land Management
CDFW	California Department of Fish and Wildlife
Central Valley Basin Plan	Water Quality Control Plan for Sacramento River Basin and San Joaquin River Basin
Central Valley Regional Water Board	Central Valley Regional Water Quality Control Board
CEQA	California Environmental Quality Act
cfs	cubic feet per second
Construction General Permit	General Permit for Stormwater Associated with Construction and Land Disturbance Activities
Deputy Director	Deputy Director of the Division of Water Rights
DOI	Department of the Interior
Dredge or Fill Procedures	State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
Executive Director	Executive Director of the State Water Resources Control Board
FERC	Federal Energy Regulatory Commission
KAT	Kerckhoff Advisory Team
K1	Kerckhoff 1
K2	Kerckhoff 2
Licensee	Pacific Gas and Electric Company
LLO	Low-Level Outlet
MSL	Above mean sea level
MIF	minimum instream flows
No(s).	Number(s)
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas and Electric Company
Project	Kerckhoff Hydroelectric Project
SCE	Southern California Edison
State Water Board	State Water Resources Control Board
TMDL’s	total maximum daily loads
USEPA	United States Environmental Protection Agency

USFWS	United States Fish and Wildlife Service
Forest Service	United States Forest Service
USGS	United States Geological Survey
WQMP Plan	Water Quality Monitoring Protection Plan
WY	Water Year

1.0 Project Description

Pacific Gas and Electric Company (PG&E or Licensee) owns and operates the Kerckhoff Hydroelectric Project (Project), also known as Federal Energy Regulatory Commission (FERC) Project No. 96. The Project is located on the San Joaquin River in Fresno and Madera Counties, approximately 3.5 miles northwest of the town of Auberry, California. (See Figure A-1 in Attachment A: Overview of Major Project Facilities and Land Jurisdictions (PG&E 2023)). The Project's existing FERC boundary encompasses approximately 531.7 acres of land managed by the United States Forest Service (Forest Service), Bureau of Land Management (BLM), and PG&E.

The Project consists of: (1) Kerckhoff Reservoir with a current storage capacity of 2,434 acre-feet (ac-ft); (2) Kerckhoff Dam with a crest length of 507 feet and a height of 114.5 feet; (3) Kerckhoff 1 (K1) Powerhouse with 22.72 megawatt capacity; (4) Kerckhoff 2 (K2) Powerhouse with 140 megawatts capacity; (5) Smalley Cove Recreation Area, which is located on the northeast portion of Kerckhoff Reservoir; and (6) appurtenant facilities. The Project has an installed generation capacity of 162.72 megawatts.

The Project's total discharge capacity through Kerckhoff Dam and K1 and K2 Powerhouses is approximately 54,000 cubic feet per second (cfs). Kerckhoff Dam has 14 radial gates (nine of which are manually operated) with a combined discharge capacity of 43,700 cfs. Flows can also be passed through three low-level outlets (LLOs) (3,900 cfs maximum combined discharge capacity) and two intakes, which are located 100-200 feet upstream from Kerckhoff Dam and provide flow to the K1 and K2 Powerhouses via the K1 and K2 tunnels. Three adits branch from the K1 tunnel before reaching the K1 Powerhouse: North Adit, Adit 1, and Adit 2. Adit 1 and Adit 2 have been sealed with concrete making them no longer useable. The K1 Powerhouse has a designed hydraulic capacity of 1,500 cfs, while the K2 Powerhouse has hydraulic capacity of 5,100 cfs. Minimum instream flows (MIFs) originate from Kerckhoff Reservoir and travel through the K1 Tunnel, into the instream flow pipe, thence the North Adit and are discharged into the San Joaquin River, approximately 100 feet below Kerckhoff Dam.

The Project is located directly downstream of two other FERC regulated hydroelectric projects that operate independently: (1) Southern California Edison's (SCE's) Big Creek No. 4 Hydroelectric Project[1] (3,565 cfs maximum discharge capacity), which is 0.5 miles upstream of the Project on the San Joaquin River; and (2) PG&E's Crane Valley Hydroelectric Project (760 cfs maximum discharge capacity), which is approximately 20 miles upstream of the Project on Willow Creek, but also discharges directly into Kerckhoff Reservoir from the A.G Wishon Powerhouse or if spill at Corrine Lake occurs. Discharges from both Big Creek No. 4 Hydroelectric Project and Crane Valley Hydroelectric Project enter Kerckhoff Reservoir.

[1] The Big Creek No. 4 Hydroelectric Project (FERC Project No. 2017) is a component of SCE's Big Creek System which includes FERC Project Nos. 67, 120, 2017, 2085, 2086, 2174, 2175 that have nine major powerhouses, six major reservoirs and numerous other dam and diversion facilities.

Uncoordinated flow releases associated with operations of Big Creek No. 4 Hydroelectric Project and Crane Valley Hydroelectric Project often exceed the Project's capacity to moderate[2] flows, resulting in spill conditions in the San Joaquin River downstream of Kerckhoff Dam. Additionally, the Project's hydropower generation operations contribute to high flow spill conditions in the San Joaquin River below Kerckhoff Dam.

PG&E currently manages the Project according to its existing FERC license. This includes 60 Articles with requirements for MIFs, flows to maintain water temperatures for smallmouth bass, and a flow regime for American shad below Kerckhoff Dam (PG&E 2023).

In addition to its request to operate the Project under a new FERC license for 50 years, PG&E proposes to: (1) retrofit two manual spill gates, each with a 2,800 cfs discharge capacity at Kerckhoff Dam to allow increased automated operations; (2) construct a new inflow gage approximately 1,000 feet upstream of Kerckhoff Reservoir; (3) build a new recreation site (Vista Day Use Area)[3], located near Kerckhoff 2 Powerhouse; (4) retire and decommission Kerckhoff 1 Powerhouse; (5) modify the Project's existing FERC boundary to encompass all facilities and structures; and (6) implement 16 new resource management plans[4].

2.0 Water Rights

Table A lists PG&E's water rights associated with the Project.

[2] The limited storage capacity of Kerckhoff Reservoir, the close proximity of upstream releases from the Big Creek 4 Powerhouse, the K2 Powerhouses rough operating zone, and limited access to Kerckhoff Dam to adjust the manually operated gates contribute to the challenges of moderating flows below Kerckhoff Dam.

[3] Within one year of construction or as otherwise agreed to by PG&E and BLM, ownership of the Vista Day Use Area will be transferred to BLM and BLM will be responsible for all routine maintenance of this day use area, while PG&E will be responsible for all heavy maintenance.

[4] The 16 new management plans generally cover the following areas: flow release operations, scheduled boating flows, aquatic and terrestrial resources, recreational resources, project roads, and trails.

Table A: PG&E's Water Rights for the Project*

License No.	Priority Date	Face Value (ac-ft/year)*	Storage (ac-ft/year)	Direct Diversion (cfs)	Purpose of Use	Point of Diversion
L000339	11/14/1917	506,784	--	700	Power	San Joaquin River
L000340	09/25/1919	65,4779	3,200	900	Power	San Joaquin River
L000341	04/11/1922	78,794	--	175	Power	San Joaquin River
L013352	09/28/1977	3,330,296	--	4,600	Power and Incidental Domestic	San Joaquin River

* Information is from the State Water Resource Control Board's California Water Accounting, Tracking, and Reporting System.

3.0 Federal Energy Regulatory Commission Licensing Process

FERC issued a license for the Project on November 3, 1979, which expired on November 30, 2022. Since its license expiration the Project has been operated under annual licenses issued by FERC (i.e., license conditions established in the original November 3, 1979, license and subsequent license amendments).

On November 24, 2020, PG&E filed a Final License Application (PG&E 2020a) with FERC proposing to relicense the Project for a 50-year term. Following its Final License Application submission, PG&E held multiple meetings with relicensing participants[5] to continue discussions related to potential Final License Application revisions specific to Project protection, mitigation, and enhancement measures (e.g., public safety actions related to flow releases in the San Joaquin River below Kerckhoff Dam). To provide additional time for ongoing discussions, on August 27, 2021 (PG&E, 2021a) and January 21, 2022 (PG&E 2022b), PG&E requested FERC delay issuance of the Ready

[5] American Whitewater, Bureau of Land Management, Bureau of Reclamation, California Department of Fish and Wildlife, North Fork Mono Tribe, State Water Board, United States Fish and Wildlife Service, and United States Forest Service.

for Environmental Analysis (REA). On May 27, 2022, and March 21, 2023, PG&E submitted supplements to its Final License Application (PG&E 2022a, PG&E 2023).

On June 27, 2024, FERC issued the REA (FERC 2024). In response, on September 25, 2024, State Water Resources Control Board (State Water Board) staff filed preliminary terms and conditions (State Water Board, 2024a). On September 24, 2024, the Department of the Interior (DOI) filed Comments, Recommendations, Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions for the Kerckhoff Hydroelectric Project (DOI 2024a). This filing included the BLM preliminary 4(e) conditions.

In response to BLM's 4(e) conditions, PG&E filed a request for a trial-type hearing on Disputed Issues of Material Fact (PG&E 2024a). PG&E and DOI agreed to stay the hearing process to continue discussions to settle the issues related to the hearing request (DOI 2024b). On May 12, 2025, DOI issued Revised Conditions and Recommendations for the Kerckhoff Hydroelectric Project (DOI 2025). On December 31, 2025, per requirements of the National Environmental Policy Act, FERC issued an Environmental Assessment for Hydropower License for the Kerckhoff Hydroelectric Project, FERC Project No. 96-048 (FERC 2025b).

4.0 Regulatory Authority

4.1 Water Quality Certification and Related Authorities

The federal Clean Water Act (33 U.S.C. § 1251 et seq.) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) The Clean Water Act recognizes, preserves, and protects "the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources…" (33 U.S.C. § 1251(b).) In addition, section 101 of the Clean Water Act 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." (33 U.S.C.§ 1251(g).)

Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires any applicant for a federal license or permit to conduct any activity which may result in a discharge into waters of the United States to provide the licensing or permitting federal agency with certification that the project will comply with specific provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act section 401directs the state agency responsible for certification to prescribe effluent limitations, monitoring requirements, and other conditions necessary to ensure the project will comply with the Clean Water Act and with "any other appropriate requirement of State law." (33 U.S.C. § 1341(d).) These certification conditions shall become conditions of any federal license or permit for the project. (Ibid.)

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 (Executive Director). (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

Water Code section 13383 provides that the State Water Board may "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) in State Water Board Resolution 2012-0029. (State Water Board 2012.) In the Redelegation of Authorities memorandum issued by the Deputy Director on April 20, 2023, this authority is redelegated to the Assistant Deputy Directors of the Division of Water Rights. (State Water Board 2023a.)

Procedure, Application, and Noticing

On August 22, 2024, PG&E filed a certification application for relicensing of the Project with the State Water Board under section 401 of the Clean Water Act. On September 17, 2024, the State Water Board 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. No comments were received.

On April 1, 2025, the Executive Director of the State Water Board determined that there was not sufficient information to assess the Project's potential impacts to water quality and denied PG&E's August 2024 certification application request without prejudice (State Water Board 2025a).

On July 16, 2025, PG&E filed a certification application for relicensing of the Project with the State Water Board under section 401 of the Clean Water Act (PG&E 2025a). On August 14, 2025, 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. No comments have been received as of the date of release of the draft certification.

On December 24, 2025, State Water Board staff forwarded the certification application to the Central Valley Regional Water Quality Control Board (Central Valley Regional Water Board). (See Cal. Code Regs., tit. 23, § 3855, subd. (b)(2)(B).). No comments were received.

4.2 Water Quality Control Plans and Related Authorities

The State Water Board's certification for the Project must ensure compliance with applicable water quality standards in the Central Valley Regional Water Board's *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Central Valley Basin Plan) (Central Valley Regional Water Board 2019) and the *Water*

Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) (State Water Board 2018)[6] and any amendments thereto.

Water quality control plans designate the beneficial uses of water that are to be protected (such as municipal and domestic supply, industrial, agricultural, fish and wildlife), water quality objectives for the reasonable protection of the beneficial uses and the prevention of nuisance, and a program of implementation to achieve the water quality objectives. (Wat. Code, §§ 13241, 13050, subds. (h), (j).) The beneficial uses, together with the water quality objectives contained in the water quality control plans, and applicable state and federal anti-degradation requirements, constitute California's water quality standards for purposes of the Clean Water Act. In issuing water quality certification for a project, the State Water Board must ensure consistency with the designated beneficial uses of waters affected by the project, the water quality objectives developed to protect those uses, and anti-degradation requirements. (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology* (1994) 511 U.S. 700, 714-719.)

The nine California Regional Water Quality Control Boards have primary responsibility for the formulation and adoption of water quality control plans for their respective regions, subject to State Water Board and United States Environmental Protection Agency (USEPA) approval, as appropriate. (Wat. Code, § 13240 et seq.) As noted above, the State Water Board may also adopt water quality control plans, which will supersede regional water quality control plans for the same waters to the extent of any conflict. (Water Code, § 13170.) The State Water Board and Regional Water Boards (collectively Water Boards) adopt water quality control plans pursuant to their authorities under the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) and the federal Clean Water Act (33 U.S.C. §1313).

Periodic Review. The State Water Board has commenced the 2024 Review of State Water Quality Control Plans and State Policies for Water Quality Control (2024 Review). State water quality control plans and policies for water quality control (state plans and policies) contain water quality standards and other provisions established by the State Water Board to preserve and enhance California's waters to safeguard human health, support aquatic ecosystems, improve the quality of water resources, and protect beneficial uses of waters.

Triennial reviews are conducted pursuant to the federal Clean Water Act (33 U.S.C. § 1251 et seq.) and its implementing regulations, and periodic reviews are conducted pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.). (See 33 U.S.C. § 1313(c)(1); 40 C.F.R. § 131.20(a); Wat. Code, §§ 13143, 13170, 13170.2, subd. (b), 13240.) For the 2024 review cycle, the State Water Board will be conducting triennial review and periodic review in a single combined proceeding. In addition to reviewing state plans and policies, the 2024 Review will include

[6] On December 12, 2018, the State Water Board adopted the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan). Resolution 2018-0059. Available at: https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf.

consideration of the federally promulgated water quality standards for California (40 C.F.R. §§ 131.36, 131.37, and 131.38) and Clean Water Act section 304(a) recommended criteria.

The 2024 Review will engage the public and interested persons to identify potential changes or additions that will help to guide the State Water Board's priorities for future amendments to the state plans and policies, including new or revised water quality standards that are enforceable for the waterbodies for which they are established.

Central Valley Basin Plan

The Central Valley Regional Water Board adopted, and the State Water Board and USEPA approved, the Central Valley Basin Plan. The Central Valley Basin Plan designates the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses. The Central Valley Basin Plan identifies existing beneficial uses for surface waters affected by the Project as follows:

- San Joaquin River sources to Millerton Lake: municipal and domestic supply; agricultural; power; contact recreation; canoeing and rafting; other noncontact recreation; warm freshwater habitat; cold freshwater habitat; and wildlife habitat.

Bay-Delta Plan

The Bay-Delta Plan establishes water quality objectives to protect beneficial uses of water in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) and tributary watersheds, including drinking water supply, irrigation supply, and fish and wildlife. The State Water Board adopted the Bay-Delta Plan pursuant to its authorities under the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) and the federal Clean Water Act (33 U.S.C. § 1313).

The State Water Board has historically developed the water quality control plan for the Bay-Delta for several reasons. The Bay-Delta is a critically important natural resource that is both the hub of California's water supply system and the most valuable estuary and wetlands system on the West Coast. As diversions of water within and upstream of the Bay-Delta Estuary are a driver of water quality in the Bay-Delta watershed, much of the implementation of the Bay-Delta Plan relies on the combined water quality and water rights authorities of the State Water Board. In addition, the Bay-Delta falls within the boundaries of two Regional Water Boards. Having the State Water Board develop and adopt a water quality control plan that crosses Regional Water Board boundaries ensures a coordinated approach.

Beneficial uses identified in the Bay-Delta Plan are: municipal and domestic supply; industrial service supply; industrial process supply; agricultural supply; groundwater recharge; navigation; water contact recreation; non-contact water recreation; shellfish harvesting; commercial and sport fishing; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; estuarine habitat; wildlife habitat; and rare, threatened, or endangered species. In addition, the State Water Board is proposing to incorporate tribal beneficial

uses in recognition of the numerous California Native American Tribes that rely upon Bay-Delta waterways, the surrounding lands, and the native fish and fauna for subsistence, cultural, ceremonial, and spiritual purposes.

In 2018, the Bay-Delta Plan was updated to adopt new and revised Lower San Joaquin River (LSJR) flow objectives and revised southern Sacramento-San Joaquin Rivers Delta (Delta) salinity objectives. The new and revised LSJR flow objectives apply from February – June to the Stanislaus, Tuolumne, and Merced Rivers and include a baseflow requirement that applies on the San Joaquin River at Vernalis (Vernalis). In addition, the Bay-Delta Plan includes a revised southern Delta salinity objective of 1.0 deciSiemens/meter (dS/m) electrical conductivity (EC) at Vernalis and at the three interior southern Delta stations for the protection of agricultural beneficial uses. The 2018 updates to the Bay-Delta Plan retain the LSJR flow objective that applies to the San Joaquin River at Vernalis during October.

On August 8, 2022, the State Water Board issued a notice of preparation of environmental documentation and scoping meeting for a proposed regulation to implement the 2018 updates to the Bay-Delta Plan. Additionally, the Bay-Delta Plan provides pathways for voluntary agreements to implement the LSJR flow portions of the Bay-Delta Plan for the "[t]ributaries as a whole, an individual tributary, or some combination thereof."

The State Water Board is currently considering additional updates to the Bay-Delta Plan focused on the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne Rivers), interior Delta flows, and Delta outflows, including consideration of proposed voluntary agreements. The State Water Board released proposed draft updates to the Bay-Delta Plan in October 2024, a revised draft in July 2025, and another revised draft in December 2025 for public comment and input.

4.3 Antidegradation Policy

The State Water Board's *Statement of Policy with Respect to Maintaining High Quality Waters in California* (Antidegradation Policy)[7] (State Water Board 1968) 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, which requires "[e]xisting instream water uses and the level of water quality

[7] State Water Board Resolution 68-16 and any amendments thereto. Available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs 68_016.pdf. Accessed on December 19, 2025.

necessary to protect the existing uses shall be maintained and protected." (40 C.F.R. § 131.12(a)(1).)

4.4 Clean Water Act Section 303(d) Listing

The *2024 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report)* (2024 Integrated Report) was partially approved and partially disapproved by USEPA on December 13, 2024. Section 303(d) of the Clean Water Act requires total maximum daily loads to be developed for impaired waterbodies. Total maximum daily loads 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. The Integrated Report does not include any impairments for the Kerckhoff Reservoir or the section of the San Joaquin River within the Project boundary.

4.5 Construction General Permit

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)[8] (State Water Board 2022a) is required 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 a facility. Coverage is required pursuant to Clean Water Action sections 301 and 402 which 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. parts 122, 123, and 124.)

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

The *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Dredge or Fill Procedures)[9] (State Water Board 2019b and 2021) 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 Dredge or Fill Procedures ensure that State Water Board regulatory activities will result in no net loss of wetland quantity, quality, or permanence, consistent with Water Code sections 16200-16201.

[8] State Water Board Order WQ2022-0057-DWQ and National Pollutant Discharge Elimination System No. CAS000002, and any amendments thereto. Available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Accessed December 19, 2025.

[9] The Dredge or Fill Procedures and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html. Accessed on December 19, 2025.

PG&E must comply with the Dredge or Fill Procedures when conducting dredge or fill activities that may impact waters of the state, including wetlands.

4.7 Statewide Bacteria Provisions

Part 3 of the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Bacteria Provisions and a Water Quality Standards Variance Standards Policy* (Bacteria Provisions) (State Water Board 2019a)[10] protects waters designated with the water contact beneficial use (REC-1) by establishing statewide numeric water quality objectives for bacteria, based on the USEPA 2012 Recreational Criteria. The objectives correspond with the risk protection level of 32 illnesses per 1,000 recreators and use *Escherichia coli* (E. coli) as the indicator of pathogens in freshwaters and enterococci as the indicator of pathogens in estuarine and ocean waters. The Bacteria Provisions' bacteria water quality objectives supersede any numeric water quality objective, but not any narrative water quality objective, for bacteria for REC-1 beneficial uses contained in a water quality control plan before the effective date of the Bacteria Provisions. Numeric site-specific objectives for bacteria established before or after the effective date of the Bacteria Provisions remain in effect. These provisions will be implemented through NPDES permits, certifications, waste discharge requirements, and waivers of waste discharge requirements.

4.8 Comprehensive Plan

Section 10(a)(2)(A) of the Federal Power Act requires FERC to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. In March 2019, the State Water Board submitted to FERC the plans and policies included in California's comprehensive plan for orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state. On August 5, 2024, the State Water Board filed a comprehensive plan supplement to its March 2019 filing that included updated plans and policies for water quality protection. These submissions included the Central Valley Basin Plan, the Bay-Delta Plan, the Antidegradation Policy, and other applicable plans and policies for water quality control. FERC included these updates in its List of Comprehensive Plans in May 2025 (FERC 2025a).

5.0 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to discretionary projects that may cause a direct or indirect physical change in the environment. (Pub. Resources Code, § 21000 et seq.) When proposing to undertake or approve a discretionary project, state agencies must comply with the procedural and substantive requirements of CEQA. The State Water Board is the lead agency for the purposes of the Project's CEQA compliance. (Pub. Resources Code, § 21000 et seq; Cal. Code Regs., tit. 14, § 15000 et seq.).

[10] The Bacteria Provisions are available online at: https://www.waterboards.ca.gov/bacterialobjectives/docs/bacteria.pdf. Accessed on: December 19, 2025.

On May 30, 2023, the State Water Board released a Notice of Preparation (NOP) for the Environmental Impact Report (EIR) for the Kerckhoff Hydroelectric Project relicensing[11] (State Water Board 2023b). The State Water Board received four comment letters in response to the NOP, which were used in the development of the Project's draft EIR.

On April 10, 2026, the State Water Board released a draft EIR to analyze potential environmental impacts associated with the Proposed Project and Project alternatives (State Water Board 2026[12]). The draft EIR's public comment period concluded on May 26, 2026. The State Water Board received comments from seven individuals and entities.

Table B identifies resource areas in the State Water Board's purview for which the draft EIR identified mitigation measures for potential impacts, and associated certification conditions with water quality protection, monitoring, or reporting requirements.

Table B: Draft EIR Mitigation Measures and Corresponding Certification Conditions

Mitigation Measure	**Applicable Certification Condition(s)**
Mitigation Measure Water Quality (WQ)-1: Retirement Plan for Kerckhoff 1 Powerhouse and Associated Facilities	Condition 10: Kerckhoff 1 Facilities Retirement
Mitigation Measure WQ-2: San Joaquin River Above Kerckhoff Reservoir Inflow Gage Plan	Condition 6: Gaging
Mitigation Measure WQ-3: Construction General Permit, Water Quality Monitoring and Protection Plans, and Dewatering Plans	Condition 7: Construction and Maintenance
Mitigation Measure WQ-4: A Low-Level Outlet Sediment Sluicing Management Plan	Condition 14: Sediment Sluicing Management
Recommended Measure WQ-5: Instream Flow Public Safety Plan	Condition 3. Ramping Rates and Reservoir Spill Operations
Mitigation Measure Biological Resources (BIO)-1: Conduct a Preconstruction Survey for Northwestern Pond Turtle at the San Joaquin River Above Kerckhoff Reservoir Inflow Gage	Condition 6: Gaging

[11] Available online at: https://waterboards.ca.gov/waterrights/water_issues/programs//water_quality_cert/docs/kerckhoff_hydroelectric/Kerckhoff_NOP.pdf. Accessed on: April 22, 2026.

[12] The draft EIR for the Project is available online at: waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/kerckhoff_hydroelectric/kerckhoff-deir-04-2026.pdf. Accessed on: April 10, 2026.

Mitigation Measure	Applicable Certification Condition(s)
Mitigation Measure BIO-3: Compensate for the Temporary and Permanent Losses of Waters of the United States/Waters of the State	Condition 6: Gaging
Mitigation Measure Geology (GEO)-1 Erosion and Sediment Control Plan	Condition 13: Monitoring and Adaptative Management

6.0 Rationale for Water Quality Certification Conditions

This section of the certification explains that the grant of certification, as conditioned, is warranted and why the conditions in Section 8.0 are necessary to ensure that the Project will comply with water quality requirements. This section also includes, as necessary, citations to federal, state, or tribal laws that authorize the conditions and sets forth citations to applicable regulatory authority. Section 4.0 also 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 8.0.

As explained in this section, the conditions in this certification are generally required pursuant to the Central Valley Basin Plan and other applicable plans and policies adopted by the Water Boards, as described in Section 4.0, Regulatory Authority.

The Dredge or Fill 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, section 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.

As noted in Section 4.1, Clean Water Act section 401(d) authorizes state agencies responsible for certification to require monitoring to ensure the project will comply with the Clean Water Act and with “any other appropriate requirement of State law.” (33 U.S.C. § 1341(d).) Water Code sections 13267 and 13383 authorize the Water Boards to establish monitoring and reporting requirements for persons discharging or proposing to discharge waste to navigable waters. Water Code section 13165 authorizes the State Water Board to require a state or local agency to investigate and report on technical factors involved in water quality control, 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. 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 the Project’s activities that may impact waters of the state.

Fish and Game Code section 5937 requires the owner[13] of any 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. Section 5937 and requirements to maintain or monitor flow or other water quality characteristics as required to meet section 5937 are appropriate conditions of state law necessary to protect fishery beneficial uses.

The State Water Board has broad authority to prevent waste and unreasonable use pursuant to article X, section 2 of the California Constitution and Water Code sections 100 and 275. In addition, the State Water Board has both the authority and the duty to protect public trust uses whenever feasible under the public trust doctrine. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 446.) Under California's public trust doctrine, public trust uses include, but are not limited to, navigation, fishing, recreation, environmental values, and fish and wildlife habitat. (Id. at pp. 434-435.)

In general, the code citations, plans, and policies that support issuance of this certification that are described in Section 4.0 are not duplicated in this section. 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 and the federal Clean Water Act, including requirements in applicable water quality control plans, and other appropriate requirements of state law. The conditions in Section 8.0 of this certification are necessary to protect the beneficial uses of waters of the state identified in water quality control plans, prevent degradation of water quality, and ensure compliance with state and federal water quality requirements and other applicable requirements of state law. When preparing the conditions in this draft certification, State Water Board staff reviewed and considered the following information:

- PG&E's application for the water quality certification (PG&E 2025a);
- PG&E's Final License Application and associated supplements (PG&E, 2020a, 2022a, and 2023a);
- FERC's Final Environmental Assessment (FERC 2025b);
- DOI's Final and Revised 4(e) Conditions (DOI 2024a, 2025);
- FERC's Additional Information Requests (FERC 2021, 2022, 2023);
- Comments and responses associated with the aforementioned documents;
- State Water Board's draft EIR (State Water Board 2026a);
- Existing and potential beneficial uses, associated water quality objectives, and implementation measures and programs described in the Central Valley Regional Water Board's Central Valley Basin Plan (Central Valley Regional Water Board 2019) and the Bay-Delta Plan (State Water Board 2018);

[13] The Fish and Game Code defines "owner" to include "the United States . . . , the State, a person, political subdivision, or district (other than fish and game district) owning, controlling, or operating a dam or pipe." (Fish & G. Code, § 5900, subd. (c).)

- Applicable water quality information, permits, policies, objectives, implementation measures, and programs (e.g., Construction general Permit, Dredge or Fill Procedures, etc.);
- Project-related controllable water quality factors (e.g., discharges from Project facilities, controllable flow releases, etc.); and
- Other information in the record.

This certification is issued in conformance with the final Clean Water Act Section 401 Water Quality Certification Improvement Rule (88 Fed.Reg. 66558 (Sept. 27, 2023) [amending 40 C.F.R. parts 121, 122, and 124]) that went into effect on November 27, 2023 (2023 Rule), but as it pertains to documentation of conditions also generally complies with the previous USEPA Clean Water Act Section 401 Certification Rule, 85 Fed.Reg. 42210 (July 13, 2020) (2020 Rule) that was in effect for portions of 2020-2023. Under section 401 of the Clean Water Act, when an activity requiring a federal permit or license "may result in any discharge into the navigable waters," the applicant is required to obtain a certification that states the activity will comply with applicable water quality standards and that also sets forth any "limitations" and "monitoring requirements" necessary to assure that the "applicant" will comply with water quality standards, other provisions of the Clean Water Act, and "with any other appropriate requirement of State law." (33 U.S.C. § 1341(a) & (d).) Certification is required for such activity as a whole, not merely for its point source discharges to waters of the United States. (PUD No. 1, *supra*, 511 U.S. at pp. 711-712.) As explained in this certification, each certification condition is authorized by applicable state and federal law and is necessary to ensure compliance with such laws. This paragraph is hereby incorporated as part of the explanatory statement for each condition of this certification.

5.1 Rationale for Condition 1: Flows

MIFs provide habitat for fish and wildlife, contribute to scenic and aesthetic qualities of natural settings, and help support beneficial uses and water quality objectives for surface waters as established in the (Central Valley Basin Plan (Central Valley Regional Water Board 2019). The approach for developing flow requirements (including Conditions 3: Ramping Rates and Reservoir Spill Operations, Condition 8: Water Temperature Measure, and Condition 11: American Shad Spawning) included consideration of the aquatic-dependent biota (primarily fish) that are currently present, hydroelectric energy generation, evaluation of water quality and beneficial uses protections, and technical information developed as part of the Project relicensing process (including study results from relicensing studies, and information developed by the State Water Board in the draft EIR).

Condition 1 requires MIFs for the San Joaquin River reach below Kerckhoff Dam based on water year (WY) types described in Condition 2. MIFs are designed to protect and enhance environmental and public resources while providing for power generation. MIF requirements of Condition 1 are consistent with the flows proposed by PG&E and agreed to by relicensing participants, and as described in PG&E's Aquatic Resource Management Plan submitted to FERC on March 31, 2023 (PG&E 2023). The MIFs protect aquatic habitat related beneficial uses by providing improved ecosystem function and the enhancement of habitat for native fish and wildlife.

Beneficial uses that could be adversely affected by Project operations include: municipal and domestic supply (MUN), agricultural (AGR), power (POW), contact (REC-1), canoeing and rafting (REC-1), other non-noncontact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD). Further, 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.

5.2 Rationale for Condition 2: Water Year Types

Condition 2 defines water year types for relevant Project certification conditions. Condition 2(A) requires PG&E to implement its proposed MIF WY types. The MIF WY types are consistent with existing operations and are based on the California Department of Water Resources' Bulletin 120 forecast of April through July unimpaired runoff of the San Joaquin River at Millerton Lake. Condition 2(B) requires implementation of WY types (separate from those established for MIFs) for ramping rate operations to help reduce rapid flow fluctuations, which also lowers the potential for fish stranding and provides for a specified number of days with recreational boating flow releases during spill recessions based on the WY type. Condition 2(B) WY types are consistent with those required in BLM's May 2025 Revised 4(e) conditions (Department of the Interior (DOI) 2025). Additionally, Condition 2(C) includes flexibility to update WY types during the term of the new FERC license as future climate and water availability may result in a need to update WY types to more accurately reflect a changed environment over the Project's potential 50-year license term.

As described above, how the Project is operated in different WY types impacts aquatic life and affects recreational opportunities below Kerckhoff Dam. Beneficial uses for sources to Millerton Lake that could potentially be impacted by Project's WY types include: municipal and domestic supply (MUN), contact (REC-1), canoeing and rafting (REC-1), other non-contact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

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. WY types are needed to ensure the protection of beneficial uses and are used to ensure monitoring and compliance with certification conditions in accordance with Clean Water Act section 401, Water Code sections 1051, 13165, 13267 and 13383, and other applicable laws.

5.3 Rationale for Condition 3: Ramping Rates and Reservoir Spill Operations

Project operations and associated flow releases have the potential to impact beneficial uses of the San Joaquin River by contributing to rapid changes in instream flows below Kerckhoff Dam. Rapid flow changes (increases and decreases) can impact beneficial uses such as contact (REC-1) and canoe and rafting (REC-1) in the Project Bypass Reach. Kerckhoff Dam releases enter the San Joaquin River within the San Joaquin River Gorge Special Recreation Management Area and BLM estimates that this area is increasing in popularity each year with an estimated 30,833 and 60,253 people visiting

the area in 2010 and 2016, respectively (PG&E 2017). Visitors partake in hiking, biking, swimming, boating, and camping in the area.

Condition 3(A) requires PG&E to implement the *End-of-Spill Flow Recession and Whitewater Flow Releases Measure* as submitted to FERC by PG&E on March 31, 2023 (PG&E 2023), as changed by the BLM Revised 4(e) conditions submitted to FERC on May 12, 2025 (DOI 2025), and as changed by requirements of Condition 3(A). The End-of-Spill Flow Recession and Whitewater Flow Releases Measure provides scheduled whitewater boating flows with advanced notification in conjunction with annual implementation of end-of-spill recession flows. The scheduled whitewater boating flows will provide stable flows and established time periods for whitewater boaters below Kerckhoff Dam. Changes required by Condition 3(A) clarify monitoring and reporting requirements for whitewater recreation and also include adaptive management actions that may adjust the number of whitewater recreation days based on whitewater recreation use.

Condition 3(B) requires PG&E implement the *Spill Season Flow Measure* as submitted to FERC by PG&E on March 31, 2023 (PG&E 2023), as changed by the BLM Revised 4(e) Conditions submitted to FERC on May 12, 2025 (DOI 2025), and as changed by Condition 3(B). The Spill Season Flow Measure includes maintaining flows in the San Joaquin River below Kerckhoff Dam between 400 to 1,200 cfs (depending on water year types) to create a deterrent effect by filling the channel bottom near BLM recreational areas with flowing water, reduce accessibility to deeper channel areas, and discourage wading during spill events of varying magnitudes (PG&E, 2026). PG&E's Spill Season Flow Measures also include gradual ramp down rates to improve aquatic resources in the San Joaquin River. As discussed in the State Water Board's draft EIR, the Spill Season Flow Measure may actively inhibit the recreational beneficial use and could result in unsafe conditions for the public as it relies on the public to independently recognize potentially unsafe flow conditions created by the Spill Season Flow Measure. Condition 3(B) requires that PG&E prioritize implementation of up ramping rates required by Condition 3(E) over implementation of the Spill Season Flow Measure whenever feasible. Ramping rates identified in Condition 3(E) are prioritized over those in Condition 3(B) because while both are intended to act as protective mechanisms to recreators when Kerckhoff Dam begins spilling, Condition 3(B) has the potential to result in sudden large stage change increases in the San Joaquin River below Kerckhoff Dam that can result in substantial risk to public safety and otherwise impact contact recreational beneficial uses, while Condition 3(E) limits stage change increases to the extent feasible. Additionally, implementation of Condition 3(B), when coupled with implementation of Conditions 3(F), 3(G), and 4 will provide an additional assessment of the Project's potential impacts to fluctuating flows in the San Joaquin River below Kerckhoff Dam, provide for adaptive management of ramping rates, improve public signage and notification of potentially unsafe flow conditions, and improve coordinated operations of the Project, Crane Valley Hydroelectric Project, and the Big Creek No. 4 Hydroelectric Project to address flow changes as discussed further in the corresponding rationales below. These components would help reduce impacts to recreation beneficial uses.

Condition 3(C) requires PG&E to implement the *Subsequent Spill Ramp Down Measure* as submitted to FERC by PG&E on March 31, 2023 (PG&E 2023). The Subsequent Spill Ramp Down Measure is designed to reduce potential fish stranding from spills resulting from unexpected high flows from upstream projects after the conclusion of the End-of-Spill Flow Recession and Whitewater Flow Releases Measure (Condition 3(A)). While the risk of fish stranding in the Project Bypass Reach is relatively low due to its geomorphology, young native fish species such as hardhead, Sacramento pikeminnow, and Sacramento sucker use shallow edge water habitats in the San Joaquin River below Kerckhoff Dam. As a result, implementation of Condition 3(C) would reduce the risk of stranding for these native fish species.

Condition 3(D) requires PG&E to implement the *Planned Outage Measure* as submitted to FERC by PG&E on March 31, 2023 (PG&E 2023), and as changed by BLM Revised 4(e) Conditions submitted to FERC on May 12, 2025 (DOI 2025). The Planned Outage Measure requires notification of planned outages and includes flow decreases to gradually ramp down spill flows from Kerckhoff Dam during planned Kerckhoff 2 (K2) powerhouse outages that will reduce impacts to beneficial uses related to freshwater habitat. The Planned Outage Measure's down ramping protocols are similar to the Spill Season Flow Measure (Condition 3(B)), which could result in potential impacts to recreation beneficial uses (REC-1) during outage events. However, outages generally only occur once per year and the measure as proposed by PG&E includes both advanced signage postings at nearby recreation facilities and email notification to resource agencies[14] and the cultural resources working group one week prior to planned outage events. In addition, Condition 3(G): Instream Recreation Protection Plan requires notification in real-time to warn recreators of flow changes via sirens at or below Kerckhoff Dam for targeted areas during high recreation timeframes. These components work together to reduce impacts to recreation beneficial uses.

Condition 3(E) requires, as feasible, PG&E implement a one foot or less per hour ramp up rate for flows between the required MIF and 4,000 cfs as measured at Gage J-2 unless allowed per the Deputy Director through Condition 3(F) – Ramping Rate Management or other applicable condition of this certification (e.g., Condition 1(C)). Project operations coupled with independent operations of Big Creek No. 4 Hydroelectric Project and the Crane Valley Hydroelectric Project result in flow fluctuations in the San Joaquin River below Kerckhoff Dam of up to 6,000 cfs in one hour resulting in a stage change of up to approximately 11 feet near the K2 Powerhouse (within the vicinity of main recreational opportunities along the San Joaquin River). These flow changes pose a public safety risk and adversely affect beneficial uses of the San Joaquin River. Although PG&E's proposed flow measures including ramp down rates (Conditions 3(A), (B), (C), and (D)) help lower stage changes in relation to existing operations, ramp up rates are also needed to ensure protection of beneficial uses. Ramp up rates required by Condition 3(E) are subject to infrastructure limitations and advanced notification of incoming flows. Additionally, Condition 3(E) specifies that if the stage, as measured at Gage J-2, cannot be maintained at or under one foot per hour,

[14] Resource Agencies to be notified under PG&E's Planned Outage Measure include BLM, CDFW, USFWS, and the State Water Board.

PG&E will release flows from Kerckhoff Dam in a manner that remains as close as feasible to the one foot per hour requirement.

Condition 3(F) requires PG&E within two years of license issuance to consult with BLM, Forest Service, California Department of Fish and Wildlife (CDFW), United States Department of Fish and Wildlife (USFWS), State Water Board staff, SCE, and American Whitewater to collect information and implement studies (as needed) to evaluate the Project's contribution to spill conditions and fluctuating flows in the San Joaquin River below Kerckhoff Dam. Within one year of completing the Deputy Director-approved studies/modeling, PG&E must submit a report to the Deputy Director that includes results of the studies, recommendations for additional data collection, and identification of adaptive management actions to address large increases in flows throughout the remainder of the FERC license, as appropriate, for Deputy Director review. Adaptive management actions may include revisions to Project flow releases, increased coordination with other hydroelectric project operations, and the assessment of how management actions would affect downstream river conditions. The studies and report are necessary to adequately assess and adaptively manage flow releases and ramping rates in order to ensure protection of beneficial uses such as freshwater habitat and recreation.

Condition 3(G) requires the development and implementation of an Instream Recreation Protection Plan. The plan will require PG&E to develop and implement siren activation protocols to notify recreators of potential dangers related to sudden flow increases. This includes flow arrival-based siren activation, consideration of facility upgrades to ensure sirens are audible in or near areas used for recreation, and clear multilingual signage explaining siren meaning and related hazards (e.g. large stage changes). Condition 3(G) will ensure recreators in the San Joaquin River below Kerckhoff Dam are notified of the upcoming or active stage change so they can exit the river channel when flow increases are expected to cause a stage change greater than one-foot-hour (as measured at Gage J-2). Condition 3(G) will work to balance recreational accessibility and safety, to help protect recreation beneficial uses in the San Joaquin River below Kerckhoff Dam.

Beneficial uses for sources to Millerton Lake that could potentially be impacted by Project's flow releases include: municipal and domestic supply (MUN), contact (REC-1), canoeing and rafting (REC-1), other non-contact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.4 Rationale for Condition 4: Coordinated Operations Plan

As discussed above, inflow to Kerckhoff Reservoir can be highly variable in part due to operations of Big Creek No. 4 Hydroelectric Project and Crane Valley Hydroelectric Project. Variable inflow coupled with: (1) the Project's operations and current infrastructure limitations; and (2) lack of real-time inflow data (i.e., gages) upstream of Kerckhoff Reservoir contributes to fluctuating flow conditions in the San Joaquin River below Kerckhoff Dam.

Condition 4 requires PG&E to develop and implement a Coordination Operations Plan in consultation with SCE to coordinate Project operations with SCE's Big Creek No. 4

Hydroelectric Project and PG&E's Crane Valley Hydroelectric Project. The Coordination Operations Plan seeks to coordinate operations and improve communication related to flow releases of these projects to ensure implementation of flow-related conditions in the Project license, including ramping rates during normal operations, whitewater boating flows, scheduled outages, and unscheduled outages to the extent feasible. It is understood that SCE as the operator of Big Creek No. 4 Hydroelectric Project is not obligated through this certification to update Big Creek No. 4 Hydroelectric Project operations, to participate in development of a Coordination Operations Plan, or to provide improved communication on flow releases from its project; however, Condition 4 requires PG&E to provide SCE the opportunity to participate in development of a Coordination Operations Plan and to implement (as feasible) actions identified in the Coordination Operations Plan (e.g., increased outreach/communication of flow conditions and planned/unplanned outages) to reduce potential impacts of hydroelectric projects operations to beneficial uses of the San Joaquin River downstream of Kerckhoff Dam.

During development of State Water Board's EIR for the Project, modeling results showed for the water years analyzed approximately 97.6 percent success in implementing a one foot per hour up ramping rate at the Gage J-2 below Kerckhoff Dam when PG&E had advanced notification of incoming flows to allow for adjusted releases from Kerckhoff Reservoir in advance of the inflows arriving at Kerckhoff Reservoir. Development and implementation of a Coordinated Operations Plan, along with the new inflow gage above Kerckhoff Reservoir (Condition 6), will ensure that PG&E, to the extent feasible, is able to meet up-ramping rate requirements set forth in Condition 3.

Beneficial uses that may be impacted by Project operations include: power (POW), municipal and domestic supply (MUN), contact (REC-1), canoeing and rafting (REC-1), other non-contact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.5 Rationale for Condition 5: Whitewater Access and Flow Notification Measure

Project flow releases and facility locations/fencing limit recreational whitewater boating opportunities in the San Joaquin River below Kerckhoff Dam. Condition 5 requires PG&E implement its proposed *Whitewater Access and Flow Notification Measure* (PG&E 2023) that provides advanced notification of upcoming whitewater boating flow releases and escorted access through the Project facilities (e.g., K2 Powerhouse Intake Facility) to PG&E's J-2 Stream Gage access trail downstream of the Kerckhoff Dam on the days of whitewater boating flow releases.

This condition supports recreational activities and power generation and specifically helps support public safety and the contact (REC-1), canoeing and rafting (REC-1), and non-contact (REC-2) beneficial uses.

5.6 Rationale for Condition 6: Gaging

During relicensing, PG&E proposed a San Joaquin River Above Kerckhoff Reservoir Inflow Gage Measure to install and operate a new streamflow gage located upstream of

Kerckhoff Reservoir and downstream of SCE's Big Creek No. 4 Powerhouse. PG&E proposes to construct the new streamflow gage within four years of issuance of the new FERC Project license and to provide gage data to the United States Geological Survey. PG&E's proposed San Joaquin River Above Kerckhoff Reservoir Inflow Gage Measure did not include water quality monitoring, aquatic biological resource protections, compliance with the Dredge or Fill Procedures, or adaptive management actions to ensure protection of water quality and beneficial uses during gage construction. Condition 6 requires PG&E to implement its proposed San Joaquin River Above Kerckhoff Reservoir Inflow Gage Measure and to develop a Gaging Plan to ensure construction of the new streamflow gage adequately protects water quality and aquatic biological resources. The Gaging Plan will require actions consistent with mitigation measures for Hydrology and Water Quality Impacts 1 and 5 (MM-WQ-2), and Biological Resources Aquatics Impacts 1 and 2 (MM-BIO-1 and MM-BIO-3) which are identified in the draft EIR for the Project.

Beneficial uses for sources to Millerton Lake that could potentially be impacted by Project-related water quality degradation associated with construction of the inflow gage or Project operations include: municipal and domestic supply (MUN), contact (REC-1), canoeing and rafting (REC-1), other non-contact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.7 Rationale for Condition 7: Construction and Maintenance

Construction and maintenance activities without appropriate water quality protection measures can contribute to the degradation of the waters of the state; therefore, it is necessary to implement actions to eliminate or limit such discharges to protect water quality and associated beneficial uses associated with such activities. Condition 7 includes provisions for the protection of water quality and beneficial uses associated with erosion and sediment control related to various activities including construction and maintenance activities. Protection of the instream beneficial uses identified in the Central Valley Basin Plan requires effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the San Joaquin River and Kerckhoff Reservoir. Erosion from Project related construction and maintenance activities has the potential to result in discharges that violate water quality standards.

Condition 7 requires PG&E to comply with the Construction General Permit, as applicable, or to develop and implement Water Quality Monitoring and Protection Plans (WQMP Plans) to protect water quality and beneficial uses. WQMP Plans will be developed for Project-related activities (e.g., construction and maintenance) with the potential to cause erosion, stream sedimentation, release of hazardous materials, or otherwise impair water quality that are not otherwise covered by the Construction General Permit or another condition of the certification. Additionally, Condition 7 requires PG&E to comply with the Dredge or Fill Procedures.

Condition 7 is consistent with mitigation measures for Hydrology and Water Quality Impacts 1 and 5 (MM-WQ-3), Hazards and Hazardous Materials Impact 2 (MM-WQ-3), which are identified in the draft EIR. Beneficial uses that may be impacted by the Project-related activities include: municipal and domestic supply (MUN), contact (REC-

1), canoeing and rafting (REC-1), other non-contact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.8 Rationale for Condition 8: Water Temperature

During relicensing, PG&E proposed a *Water Temperature Measure* which provides for additional flow releases of up to 50 cfs below Kerckhoff Dam from May 1 through October 31 to better manage San Joaquin River temperatures for hardhead (*Mylopharodon conocephalus*). Specifically, PG&E will release up to 50 cfs when needed between May 1 through October 31 to maintain at Gage J-7: (a) a maximum weekly average temperature of ≤25°C; and (b) a daily maximum water temperature of ≤30°C. Condition 8 requires PG&E to implement its proposed Water Temperature Measures to better manage the San Joaquin River temperature below Kerckhoff Dam for native hardhead. Hardhead are a native species and have been identified by CDFW as a species of special concern in the Project Bypass Reach below Kerckhoff Dam. Additionally, both CDFW and USFWS filed comments on PG&E's Draft License Application in support of shifting water temperature management objectives to favor native species such as hardhead (CDFW 2020, USFWS 2020). 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.

Beneficial uses of San Joaquin River Sources to Millerton Lake that may be impacted by the Project flow releases and associated temperature impacts include: warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.9 Rationale for Condition 9: Recreation Management

During relicensing, PG&E proposed to implement a Recreation Management Plan that includes expansion of existing recreation facilities (in or near Smalley Cove Recreation Area) and development of new a new facility (Vista Day Use Area) to increase recreation opportunities. This includes creating more boat-in access at Kerckhoff Reservoir, new access roads and facilities at the Vista Day Use Area, and heavy maintenance for Project paved surfaces including a slurry seal (liquid asphalt) or surface treatment (tar and chip) of the pavement. PG&E's proposed Recreation Management Plan includes general measures to address effects of Project-related recreation use on environmental resources, but does not include specific water quality monitoring, aquatic biological resource protections, compliance with the Dredge or Fill Procedures, or adaptive management actions to ensure protection of water quality and beneficial uses during construction or maintenance activities described within the Recreation Management Plan.

Condition 9 requires the Recreation Management Plan include appropriate protection, mitigation, and enhancement measures that will be implemented to ensure that the construction, operation, and maintenance of recreation facilities is completed in a manner that protects water quality. Condition 9 is required pursuant to Water Code section 13264, which prohibits any discharge that is not specifically authorized in this certification.

Beneficial uses that may be impacted by Project dewatering, in water, and water adjacent work related to recreation facilities management include: municipal and domestic supply (MUN) contact (REC-1), canoeing and rafting (REC-1). other non-contact (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.10 Rationale for Condition 10: Kerckhoff 1 Powerhouse Retirement

As part of the Project, PG&E is proposing to retire the Kerckhoff 1 (K1) Powerhouse. The Kerckhoff 1 Powerhouse has been inactive since 2017 due to the generating units no longer being operational. The Proposed Retirement Plan for Kerckhoff 1 Powerhouse and Associated Facilities states PG&E plans to prepare detailed design plans to permit and implement the approved approach for the retirement of K1 facilities after the FERC license has been issued. The Proposed Retirement Plan for Kerckhoff 1 Powerhouse and Associated Facilities as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans) does not include specific construction plans or measures to protect water quality. K1 Powerhouse retirement construction activities have the potential to impact water quality related to turbidity, dissolved oxygen, pH, oils and greases, suspended material, and settleable material. K1 Powerhouse retirement construction activities have the potential to impact water quality related to turbidity, dissolved oxygen, pH, oils and greases, suspended material, and settleable material.

Condition 10 requires PG&E to develop and implement a supplemental K1 Powerhouse Retirement Plan that specifies K1 retirement activities as well as associated water quality measures that will be implemented and monitoring, reporting, and adaptive management to ensure the retirement activities, are protective of water quality and beneficial uses.

Condition 10 is consistent with mitigation measures for Hydrology and Water Quality Impacts 1 and 5 (MM-WQ-1). Beneficial uses of sources to Millerton Lake that may be impacted by the activities associated with retirement of the Kerckhoff 1 Powerhouse include: municipal and domestic supply (MUN), agricultural (AGR), power (POW), contact (REC-1), canoeing and rafting (REC-1), other non-contact (REC-2); warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD). Condition 10 is required pursuant to Water Code section 13264, which prohibits any discharge that is not specifically authorized in this certification.

5.11 Rationale for Condition 11: American Shad Spawning

The current limit of anadromous fish passage in the San Joaquin River is Friant Dam, which was constructed in 1941 and is located approximately 24.3 miles downstream from Kerckhoff Dam. Though Friant Dam blocks anadromous fish passage, a self-sustaining population of American shad (*Alosa sapidissima*) currently resides in

Millerton Lake[15] and is present in the San Joaquin River below Kerckhoff Dam. American shad are a native anadromous species and the population above Friant Dam is the only known self-maintaining landlocked population (PG&E 2023). Current operation of the Project includes spawning flow requirements between May 15 and June 30 to protect American shad.

The K2 Powerhouse discharges directly into the San Joaquin River as it enters the headwaters of Millerton Lake. The river downstream of K2 Powerhouse and above Millerton Lake helps provide spawning habitat for American shad. The quality/quantity of spawning habitat available is in part dependent on the K2 Powerhouse discharges as well as Millerton Lake elevations since American shad require flowing water to spawn. During the American shad spawning season, K2 Powerhouse discharges must be of a sufficient flow to overcome the backwater effect of Millerton Lake (FERC 1993). The higher the elevation of Millerton Lake, the higher the discharge required from K2 Powerhouse to ensure adequate American shad spawning habitat (FERC 1993).

During relicensing, PG&E proposed to continue its American shad spawning flow requirements from its existing license with minor updates to recognize that K1 Powerhouse will be retired and therefore flow releases supporting American shad spawning habitat may be released from Kerckhoff Dam as well as the K2 Powerhouse. Condition 11 requires PG&E to implement its proposed American Shad Spawning Flow Release Regime Measure as submitted to FERC on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans). This condition is consistent with Fish and Game Code section 5937, which 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.

Beneficial uses of sources to Millerton Lake that may be impacted by the Project flow releases associated with American shad spawning habitat include: warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD).

5.12 Rationale for Condition 12: Project Roads and Trails Maintenance

The Project maintains a network of roads and hiking/unpaved trails used almost exclusively by PG&E to access Project facilities. During relicensing, PG&E proposed to implement the Project Roads and Trail Maintenance Plan, as submitted to FERC by PG&E in the April 3, 2023, Supplemental Information Filing (PG&E 2023). PG&E's Project Roads and Trail Maintenance Plan describes maintenance activities such as debris removal, vegetation management, drainage maintenance, surface maintenance, maintenance of control features and maintenance of signage along Project roads and trails for water quality protection.

[15] Millerton Lake is located immediately downstream of the confluence of the K2 Powerhouse discharge structure with the SJR at river mile 282.5 and approximately 10 miles from Kerckhoff Dam. Friant Dam is located approximately 14.5 miles downstream of the K2 Powerhouse.

Condition 12 requires PG&E to implementation its Project Roads and Trail Maintenance Plan to ensure that management of Project roads and trials does not result in discharges to surface waters that would adversely impact water quality and beneficial uses. Condition 12 is required pursuant to Water Code section 13264, which prohibits any discharge that is not specifically authorized in this certification.

Beneficial uses of sources to Millerton Lake that may be impacted by the Project-related erosion, sedimentation, or water adjacent work include: municipal and domestic supply (MUN), contact (REC-1), canoeing and rafting (REC-1), other non-contact(REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD)

5.13 Rationale for Condition 13: Monitoring and Adaptative Management

Monitoring is necessary to evaluate information regarding water quality and biological resources in the Project area in response to potential impacts from the Project. The methods and frequency of monitoring proposed by PG&E and conditioned by this certification are designed to determine whether resource objectives and associated beneficial uses are protected. This condition also allows for monitoring plans to adaptively change over the license term to ensure adequate environmental resource assessments are performed to inform adaptive management during the term of the new Project license and ensure ongoing water quality protections associated with the Project.

Condition 13 requires that PG&E to implement the Aquatic Resource Management Plan (ARMP) (Condition 13(A)) that establishes MIF, water temperature, and aquatic species monitoring requirements for the Project Bypass Reach unless otherwise updated by Condition 1. This plan includes monitoring for resident fish populations, the Kern brook lamprey, western pearlshell mussel, identification of other native and non-native molluscs, and adaptive monitoring for BMI. Monitoring requirements in Condition 13(A) are necessary for assessing compliance with water quality requirements of this certification, including assessment of long-term trends in water temperature related to the Project over the term of the new Project license through established reporting.

The Hazardous Materials Management Plan (HMMP) (Condition 13(B)) establishes procedures for ensuring hazardous materials are properly stored, used, transported, and managed in the Project area to avoid and minimize the release of hazardous materials to water, and associated impacts to beneficial uses. Implementation of a HMMP will ensure the Project complies with: (1) Central Valley Basin Plan water quality objectives, including those for floating material, oil and grease, tastes and odors, and toxicity; (2) Water Code section 13264, which prohibits any discharge that is not specifically authorized in this certification; and (3) California Code of Regulations, title 27, section 20320, which specifies containment criteria for hazardous materials.

Vegetation management such as herbicide treatment has the potential to harm native and/or special status plant species. These activities also have the potential to impact water quality objectives for inland surface waters (i.e. pesticides or chemical constituents) if applied too close to surface waters. The Vegetation Management and Pest Control Plan (Condition 13(C)), as proposed by PG&E, requires, routine vegetation

management methods (e.g., manual and mechanical removal, pesticides, herbicides, and hazard tree removal), and pest management methods (e.g., non-chemical methods or rodenticides). Monitoring requirements in Condition 13(C) are necessary for assessing the protection of the wildlife habitat related beneficial use.

The Wildlife Management Plan (Condition 13(D)) provides measures to minimize the potential for effects on wildlife resources during Project operations and routine and non-routine heavy maintenance activities and construction. The protection, mitigation, and enhancement measures address Bald Eagles. Monitoring requirements of the Wildlife Management Plan will provide feedback and provide opportunities to adapt the plan should plan objectives not be met or when more effective means of meeting the plan objectives are identified in order to protect previously discussed species and beneficial uses such as wildlife habitat.

Condition 13(E) requires the development of an Erosion and Sediment Control Plan. Erosion and sedimentation can contribute to degradation of waters of the state; therefore, it is necessary to implement actions to eliminate or limit such discharges to protect water quality and associated beneficial uses. Condition 13(E) requires PG&E to monitor areas within the Project area that have the potential to discharge sediment into waterways and implement best management practices (BMP) to reduce potential sediment discharge impacts. In addition to monitoring these locations, PG&E shall develop measures to prevent or minimize erosion-related water quality impacts for potential sediment sources into Kerckhoff Reservoir.

Monitoring and adaptive management protocols required by Condition 13 will help ensure the Project complies with Central Valley Basin Plan and statewide water quality objectives, including those for dissolved oxygen, pH, temperature, toxicity, floating material water, turbidity, and other appropriate requirements of state law. The required monitoring is consistent with the Water Boards' authority to investigate waters of the state, including for quality, and to require necessary monitoring and reporting pursuant to Clean Water Act section 401 and Water Code sections 1051, 13165, 13267, and 13383.

5.14 Rationale for Condition 14: Sediment Sluicing Management

Under Condition 14, PG&E will develop and implement (as needed) a Low-Level Outlet (LLO) Sediment Sluicing Management Plan to prevent water quality violations and unreasonable potential impacts to beneficial uses from sediment discharges from Kerckhoff Dam. As described in the PG&E's final license application for the Project, PG&E may need to perform sluicing operations. Under the existing FERC license PG&E is required to consult with CDFW if there is a need to flush sediment. PG&E implemented sluicing due to a 1997 winter storm event, when excessive sediment was deposited against the upstream face of Kerckhoff Dam. There is no specific sediment management plan for Kerckhoff Reservoir under the current FERC Project license. This plan is required as an option to address Kerckhoff Reservoir's limited storage capacity, which PG&E cites as a factor affecting the Project's ability to ramp downstream flows, should it become necessary over the course of the 50-year term of the new Project license. Condition 14 is consistent with Mitigation Measure - WQ - 4: A Low-Level Outlet

Sediment Sluicing Management Plan, as described in the EIR (State Water Board 2026. Sluicing could help maintain storage within Kerckhoff Reservoir and protect associated water quality and beneficial uses. In addition, even a gradual increase of storage capacity in the reservoir over the course of a 50-year license will help the Project comply with conditions in this certification. However, using the LLO's to sluice or pass sediment from the reservoir must be done in a manner that protects all associated beneficial uses.

Sediment sluicing management protocols required by Condition 14 will help ensure the Project complies with Central Valley Basin Plan and statewide water quality objectives, including those for dissolved oxygen, turbidity, and other appropriate requirements of state law. Condition 14 will ensure the Project does not result in discharges to surface waters that would adversely impact water quality and beneficial uses. Condition 12 is required pursuant to Water Code section 13264, which prohibits any discharge that is not specifically authorized in this certification.

5.15 Rationale for Condition 15: Kerckhoff Advisory Team (KAT) Technical Review Group Annual Meeting

The formation of a Kerckhoff Advisory Team will facilitate communication and ensure that interested parties have an opportunity to discuss Project implementation throughout the term of the new Project license. The condition requires that PG&E organize and host Kerckhoff Advisory Team meetings, with at least one meeting held each year by April 1. The Kerckhoff Advisory Team meetings will provide an opportunity for communication and coordination between PG&E, resource agencies, nongovernmental organizations, and other interested parties. The Kerckhoff Advisory Team meetings will also support the Water Boards' authority to investigate waters of the state, including for quality, and to require necessary monitoring and reporting pursuant to Water Code sections 1051, 13165, 13267, and 13383.

5.15 Rationale for Conditions 16-37

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

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 format compatible 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 Endangered Species Act (ESA) (Fish & G. Code, § 2050 et seq.) and federal ESA(16 U.S.C. § 1531 et seq.), Condition 17 of 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 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 ensuring that Project-related activities meet water quality standards and other appropriate requirements of state law, Condition 18 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 Water Board] will comply with applicable requirements" of state and federal law. 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 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. (See, e.g., Cal. Code Regs., tit. 23, § 3855, subd. (b)(1)(A).) Condition 20 explains the State Water Board's issuance of this certification is not adjudicating or approving the validity of water rights that may be related to the Project. It also recognizes the State Water Board's authority, independent of its water quality 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 certification will comply with water quality requirements. These conditions are included to comply with California Code of Regulations, title 23, 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 licensee on notice that the certification action

may be modified or revoked following administrative or judicial review. Condition 21 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, subdivision (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. 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, subdivision (c). This fee requirement condition is also required pursuant to California Code of Regulations, title 23, section 3833, subdivision (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.

Conditions 24 through 37 are necessary to ensure that the Project operate 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, climate change, or changes to the standards themselves.

This certification requires monitoring, reporting, and analysis as important elements to ensure that Project-related activities will comply with state and federal water quality requirements and other appropriate requirements of state law. Conditions 24, 25, and 26 provide for extensions of time to comply with requirements, prevention or remedy of violations, and notification of additional actions to ensure compliance and prevent violations of water quality standards. In the event of non-compliance, additional actions may be necessary to return the Project to compliance and prevent violation of water quality standards. Conditions 27, 28, 29, and 30 require the licensee to comply with the Central Valley Basin Plan and Bay-Delta Plan, and amendments thereto; provide for updates to the Project based on changes in technology and methodology; provide for consideration of the effects of climate change on the Project operations and updates to ensure continued compliance with appropriate requirements of state law; and ensure that all reasonable measures are taken to protect water quality and beneficial uses, in accordance with plans adopted pursuant to state and federal water laws.

Water Code section 13267 authorizes the State Water Board to require any person or entity who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste to furnish, under penalty of perjury, technical or monitoring reports when necessary to investigate the quality of any waters of the State. Condition 30 requires such reports that are necessary to ensure compliance with water quality standards.

Condition 32 provides that the State Water Board will provide notice and an opportunity to be heard in exercising its authority to add or modify certification conditions.

Condition 33 relates to site access requirements and is authorized pursuant to the Water Boards’ authority to investigate the quality of any waters of the State, including

specific site access authorized under Water Code section 13267 and 13383. Site access is needed to ensure compliance with the certification and associated protection of water quality and beneficial uses.

Condition 34 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 ensure 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.

Condition 35 requires the licensee to use analytical methods approved by California's Environmental Laboratory Accreditation Program, when available, to ensure that such analyses are done in a consistent manner.

Conditions 36 ensures the Licensee complies with the Dredge or Fill Procedures and the Project operation and maintenance activities result in no net loss of wetland quantity, quality, or permanence, consistent with the Water Code sections 16200-16201.

In the event that any provision of this certification is found invalid, Condition 37 ensures that the certification will remain effective, and water quality will still be protected. (Wat. Code, § 13160.)

7.0 Conclusion

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

8.0 Water Quality Certification Conditions

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT THE RELICESING OF PACIFIC GAS AND ELECTRIC COMPANY'S (PG&E OR LICENSEE) KERCKHOFF HYDROELECTRIC PROJECT (Project; Federal Energy Regulatory Commission Project No. 96) will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of State law, under the following terms and conditions.

CONDITION 1. Flows

1(A) Timeline for Implementation of Flow-related Requirements

The Licensee shall implement the minimum instream flows (MIFs) presented in Table 1[16] and other flow-related requirements (Condition 3) as soon as reasonably practicable, but no later than three months following issuance of a new Federal Energy Regulatory Commission (FERC) license for the Project. Alternative timelines to implement MIFs or other flow-related requirements of this water quality certification (certification) may be approved by the State Water Resources Control Board's (State Water Board) Deputy Director of the Division of Water Rights (Deputy Director) if they require facility modifications to implement. In the event that facility modifications are needed to achieve any of the MIFs, the Licensee shall submit, no later than 60 days following issuance of the Project license, a request for an alternative implementation timeline(s) to the Deputy Director for review and consideration of approval. The request shall include specific information on which facility(ies) requires modification, support for the alternative timeline(s), and proposed flow requirements the Licensee proposes to implement in the interim period between issuance of the Project license and completion of facility(ies) modifications. The Licensee shall implement the applicable flow requirements required by this certification within 30 days of completing any approved modifications to a facility for which an alternative timeline(s) was approved by the Deputy Director. The Deputy Director may require changes as part of any approval.

1(B) Minimum Instream Flows

MIF requirements are specified in Table 1 in cubic feet per second (cfs) by water year (WY) type (as defined in Condition 2(A)). MIFs shall be measured at United States Geological Survey (USGS) gage No. 11246700 (i.e. Gage J-2). Compliance with the MIFs specified in Table 1 shall be measured in two ways: (1) as an instantaneous flow; and (2) as the daily (24-hour) average flow. The instantaneous flow is the value used to construct the daily average flow value and shall be measured in 15-minute or more frequent increments. Each instantaneous flow measurement shall be equal to or greater than 90 percent of

[16] Table 1 MIFs are consistent with MIFs proposed by PG&E as part of its Aquatic Resource Management Plan as submitted to FERC on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, Aquatic Resource Management Plan).

the designated minimum flow value in Table 1. The daily flow is the average of the incremental readings of instantaneous flow from midnight (12:00 AM) of one day to midnight (12:00 AM) of the subsequent day. The Licensee shall record instantaneous flow readings. The Licensee shall ensure the gage is calibrated consistent with USGS standards for the full range of potential. The Licensee shall report any deviation from the required MIFs to the Deputy Director within 24 hours of the deviation along with an explanation of the deviation and any proposed actions to avoid future deviations.

The Licensee shall comply with applicable California laws and regulations regarding measuring and monitoring water diversions, including California Code of Regulations, title 23, division 3, chapters 2, 2.7, and 2.8, and amendments thereto. The Licensee shall post all flow and other data to the California Data Exchange Center website or other location approved by the Deputy Director (e.g., USGS webpage) within 24 hours of flow measurement, unless otherwise approved by the Deputy Director. The Licensee shall furnish electronic streamflow records to State Water Board staff upon request. Additionally, any flow data shall be submitted to the State Water Board in a form consistent with requirements of this certification or as otherwise directed by the Deputy Director.

Table 1: MIFs in the San Joaquin River below Kerckhoff Dam (as measured in cfs at USGS Gage No. 11246700)

Water Year Type	Required MIF (cfs)
Dry	25
Normal	15

1(C) Planned Temporary Changes to Flows, Ramping Rates, and Spill Operations

The Licensee may request temporary changes to requirements associated with flow-related requirements, including MIFs (Condition 1) and ramping rates and spill operations (Condition 3), to support non-emergency facility construction, modification, and/or maintenance activities. Non-emergency temporary change requests shall be submitted to the Deputy Director for review and consideration of approval as far in advance as practicable, but no less than four months in advance of the desired effective date. The Licensee shall notify and consult with the United States Forest Service (Forest Service), California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), United States Department of the Interior, BLM, and State Water Board staff regarding the proposed temporary change to flow-related requirements. The request shall include: a description of the proposed construction, modification, or maintenance activities that necessitate the temporary change, including a schedule for the proposed construction, modification, or maintenance; a description of the proposed change to the relevant flow-related requirement(s), including the planned duration and magnitude of the change; documentation of notification to the Forest Service, CDFW, USFWS, BLM, and State Water Board staff and any comments

received; and proposed measures that will be implemented to protect water quality and beneficial uses. The Deputy Director may deny the request or require changes as part of any approval. Upon Deputy Director approval of the change, the Licensee shall provide public notice of the planned flow-related change on the Licensee's Project webpage a minimum of 7 days in advance of the planned change. The Licensee shall file with FERC the Deputy Director-approved temporary changes and any approved amendments thereto.

1(D) Unplanned Temporary Changes to Flows, Ramping Rates, and Spill Operations

MIFs (Condition 1) and ramping rates and spill operations (Condition 3) may be temporarily changed if required by equipment malfunction reasonably beyond the control of the Licensee, as directed by law enforcement authorities, or in emergencies. An emergency is defined as an unforeseen event that is reasonably out of the control of the Licensee and requires the Licensee to take immediate action, either unilaterally or under instruction by law enforcement or other regulatory agency staff, to prevent imminent loss of human life or substantial property damage. An emergency may include but is not limited to natural events such as landslides, storms, or wildfires; vandalism; malfunction or failure of Project works; recreation accidents; or other public safety incidents. Drought is not considered an emergency for purposes of this condition. The Licensee shall make all reasonable efforts to promptly resume flows, ramping rates, and other conditions required by this certification.

When possible, the Licensee shall notify the Deputy Director prior to any unplanned temporary flow change. In all instances, the Licensee shall notify the Deputy Director within 24 hours of the beginning of any unplanned temporary flow change. Within 96 hours of the beginning of any unplanned temporary change in flows, the Licensee shall provide the Deputy Director with an update of the conditions associated with the change and an estimated timeline for returning to the applicable certification requirement.

Within 30 days of any unplanned temporary flow-related change, including changes to MIFs, ramping rates or spill operations, the Licensee shall provide the Deputy Director with: (1) a written description of the change and reason(s) for its necessity; (2) photo documentation of the emergency or reason for the flow-related change; (3) a timeline for returning to the applicable requirement or timelines when the unplanned change ended; (4) a description of corrective actions taken in response to the unplanned temporary change; (5) any observed or reported environmental effects; and (6) a plan to prevent the need for changes resulting from a similar emergency or event in the future. The Deputy Director may require changes to the Licensee's plan to prevent future unplanned temporary changes to the MIFs, ramping rates, and spill requirements resulting from similar emergencies or events. The Licensee shall implement its plan and any changes required by the Deputy Director.

CONDITION 2. Water Year Types

The Licensee shall implement the certification in accordance with the WY types defined in this condition as soon as reasonably practicable but no later than 60 days following issuance of the new Project license.

2(A) Minimum Instream Flow Water Year Types

The WY types for MIFs shall be defined as described in PG&E's April 3, 2023 submission to FERC (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, Aquatic Resource Management Plan) and as provided in Table 2.

Table 2: MIF Water Year Types

WY Type	Designation Criteria
Dry	Any 12-month period beginning May 1 in which the unimpaired runoff of the San Joaquin River at Millerton Lake for the April 1 to July 31 period, as forecast on April 1 by the California Department of Water Resources, and as may be adjusted by the State on May 1 or June 1, will be 45 percent or less of the average for such an April–July period as computed by the State for the 50-year period used at the time.
Normal	Any water year not classified as Dry.

*The California Department of Water Resources rounds the Bulletin 120 forecast of total unimpaired runoff in the San Joaquin River below Friant Dam to the nearest thousands of acre-feet to establish water year types in April and May.

2(B) Down Ramping Operations Water Year Types

The Licensee shall determine WY types for down ramping operations (Condition 3: Ramping Rates and Reservoir Spill Operations) as described in the DOI May 12, 2025 filling; *Revised Conditions and Recommendations for the Kerckhoff Hydroelectric Project, Federal Energy Regulatory Commission Project No. P-96-048, San Joaquin River, Fresno and Madera Counties, California (DOI 2025) upon license issuance*. The down ramping operations WY types are provided in Table 3.

Table 3: WY Types for Down Ramping Operations

WY Type	Designation Criteria
Above Average	April 1 forecast of San Joaquin River below Friant Dam Unimpaired Runoff during April-July is predicted to be equal to or more than 1,200,000 acre-feet based on publication in Department of Water Resources Bulletin 120 or future equivalent. If the May 1 forecast alters the below Friant Dam Unimpaired Runoff during April-July to a different WY type, that WY type shall be implemented as soon as feasible following its publication.
Below Average	April 1 forecast of San Joaquin River below Friant Dam Unimpaired Runoff during April-July is predicted to be less than 1,200,000 acre-feet based on publication in Department of Water Resources Bulletin 120 or future equivalent. If the May 1 forecast alters the below Friant Dam Unimpaired Runoff during April-July to a different WY type, that WY type shall be implemented as soon as feasible following its publication.

2(C) Review and Updates of Water Year Types

No sooner than 10 years following issuance of the new Project license and throughout the term of the new FERC Project license and any extensions, the Deputy Director may require that the Licensee develop a report that: (a) evaluates the effectiveness of the WY types defined in this condition in matching the timing and volume of actual water availability (unimpaired flow) in the San Joaquin River watershed; and (b) makes recommendations regarding potential updates to the methodology used to establish WY types for the Project that more accurately align with the volume and timing of actual water supply conditions. The Deputy Director may request such a report based on information suggesting the existing methodologies produce water availability estimates that are no longer reflective of the timing and volume of actual water supplies (e.g., changes in snowmelt, precipitation, or other factors that impact the assumptions of the methodology). The report and recommendations shall be developed in consultation with State Water Board, BLM, and the California Department of Water Resources. The Licensee shall submit the report and recommendations to the Deputy Director for review and consideration of approval by the deadline identified by the Deputy Director. The report and recommendations shall also be posted to the FERC docket concurrent with submittal to the Deputy Director. The Deputy Director may require changes as part of any approval. The Licensee may also request an update to the WY types through an amendment to this certification or this provision.

The Licensee shall file with FERC any Deputy Director-approved updates to the WY types. The Licensee shall implement changes to the WY types upon receipt of Deputy Director and any other required approvals.

CONDITION 3. Ramping Rates and Reservoir Spill Operations

The ramping rate and spill operations measures in this condition shall be implemented as soon as reasonably practicable, but no later than three months following issuance of a new FERC license as described in Condition 1(A).

3(A) End-of-Spill Flow Recession and Whitewater Flow Releases

Consistent with the End-of-Spill Flow Recession and Whitewater Flow Releases Measure as filed with FERC by PG&E on March 31, 2023 (PG&E 2023), and as changed by BLM Revised 4(e) Conditions submitted to FERC on May 12, 2025 (DOI 2025), the Licensee shall annually provide to the San Joaquin River below Kerckhoff Dam an end-of-spill flow recession in conjunction with the whitewater boating flow releases. The end-of-spill flow recession and whitewater flow releases shall be scheduled to occur between May 1 and August 31 of each year. To the extent feasible, white water boating flow releases shall be scheduled to occur over a weekend. The end-of-spill flow recession and whitewater flow releases shall be scheduled annually by the Licensee for when the projected final end-of-spill flow recession at Kerckhoff Dam is forecasted by the Licensee to decrease below 2,500 cfs. In non-spill years, the end-of-spill flow recession and whitewater flow releases shall be scheduled between May 1

and August 31, and timed based on Licensee's forecast of water availability[17]. The Licensee shall provide notification 10 days in advance of the planned end-of-spill flow recession and whitewater flow releases by email and on its website (as required per Condition 6: Whitewater Notification and Access Measure).

The Licensee shall provide the following end-of-spill flow recession and whitewater boating flow releases based on the WY types defined in Condition 2(B): minimum of three boating days in Above Average WYs and minimum of two boating days in Below Average WYs.

Above Average WY:

- Day[18] 1: By 9:00 a.m., the Licensee shall maintain flow releases from Kerckhoff Dam at an hourly average flow range of 2,500-2,000 cfs and maintain this flow range for a minimum of nine hours.
- Day 1: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 2,000-1,600 cfs and maintain this flow range for a minimum of 48 hours.
- Day 3: The Licensee shall reduce flow releases from Kerckhoff Dam to an hourly average flow range of 1,600-1,200 cfs and maintain this flow range for a minimum of 10 hours.
- Day 4: The Licensee shall reduce flow releases from Kerckhoff Dam to an hourly average flow range of 1,200-800 cfs and maintain this flow range for a minimum of five hours.
- Day 4: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 800-600 cfs and maintain this flow range for a minimum of five hours.
- Day 4: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 600-400 cfs and maintain this flow range for a minimum of five hours.
- Day 4: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 400-200 cfs and maintain this flow range for a minimum of five hours.

[17] Sufficient water availability is dependent on the combined volume of water flowing into Kerckhoff Reservoir and storage within the normal operating range of Kerckhoff Reservoir (980– 984.5 feet above mean sea level) to complete the specified flow release ramp down to the required MIF without decreasing Kerckhoff Reservoir below 980 feet above mean sea level. The minimum Kerckhoff Reservoir elevation for operation of the K2 Powerhouse is 980 feet above mean sea level (PG&E 2020).

[18] The “Day” designations are loosely assigned based on when the day is predicted to occur with strict implementation of the flow release schedule. The actual day number could shift based on how the flow release schedule is implemented (e.g., flows in a particular range are maintained for longer than required).

- Day 5: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 200 cfs to the required MIF (Condition 1(B)), or as close as feasible based on inflow to Kerckhoff Reservoir[19].

Below Average WY:

- Day 1[18]: By 9:00 a.m., the Licensee shall maintain flow releases from Kerckhoff Dam at an hourly average flow range of 2,500-2,000 cfs and maintain this flow range for a minimum of nine hours.
- Day 1: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 2,000-1,600 cfs and maintain this flow range for a minimum of 24 hours.
- Day 2: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 1,600-1,200 cfs and maintain this flow range for a minimum of 10 hours.
- Day 3: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 1,200-800 cfs and maintain this flow range for a minimum of 5 hours.
- Day 3: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 800-600 cfs and maintain this flow range for a minimum of 5 hours.
- Day 3: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 600-400 cfs and maintain this flow range for a minimum of 5 hours.
- Day 3: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 400-200 cfs and maintain this flow range for a minimum of 5 hours.
- Day 4: The Licensee shall maintain flow releases from Kerckhoff Dam to an hourly average flow range of 200 cfs to the required MIF, or as close as feasible based on inflow to Kerckhoff Reservoir.

Implementation of the flow release schedule outlined above is dependent on the availability of sufficient water[20]. If during implementation of the flow release schedules above the prescribed flow release exceeds or falls below the specified hourly average flow ranges, the Licensee shall return flows to the applicable hourly average flow range as soon as practical, and then continue to implement the remainder of the applicable WY flow release schedule listed above. The Licensee shall provide notice to FERC and

[19] Flow releases shall not be decreased below Condition 1(B) required MIFs, except as described in Conditions 1(C) and 1(D).

[20] Sufficient water availability is dependent on the combined volume of water flowing into Kerckhoff Reservoir and storage within the normal operating range of Kerckhoff Reservoir (980– 984.5 feet above mean sea level) to complete the specified flow release ramp down to the required MIF without decreasing Kerckhoff Reservoir below 980 feet above mean sea level. The minimum Kerckhoff Reservoir elevation for operation of the K2 Powerhouse is 980 feet above mean sea level (PG&E 2020).

the State Water Board of the flow deviation and cause of the deviation within seven (7) days of concluding the flow release. The notice shall include any recommendations the Licensee proposes to implement in the future to avoid the deviation and the Deputy Director may require changes based on the information provided by the Licensee or other information in the record.

Whitewater Boating Flow Triggers

Beginning in year 3 of the new FERC Project license and continuing for a total of the first five Above Average WYs the Licensee shall count the number of whitewater boaters at the Kerckhoff Dam access point (whitewater run 1) between the hours of 8:00 am and 4:00 pm during boating days from the implementation of the flow release schedule. Additionally, the Licensee shall make a survey form available at whitewater runs 2 and 3 during implementation of the end-of-spill flow recession and whitewater flow releases. In years in which monitoring occurs, the Licensee shall provide the whitewater boating recreation use numbers to the DOI, State Water Board, and American Whitewater within 60 days of concluding the flow release schedule.

The number of whitewater boating flow days associated with end-of-spill flow recession and whitewater flow releases may be decreased and/or increased during the term of the Project's FERC license as follows:

Whitewater Boating Flow Release Day Decreases: If, based on monitoring during the first five Above Average WYs in or following Year 3 of the new Project license, the annual average of daily boaters is less than 20 boaters/day, the Licensee in consultation with staff from DOI, State Water Board, and American Whitewater may propose, for Deputy Director review and consideration of approval, to reduce the number of 1,600 to 2,000 cfs boating days by one boating day in Above Average WYs. Boating days during Below Average shall not change.

Whitewater Boating Flow Release Day Increases: If, based on monitoring during the first five Above Average WYs in or following Year 3 of the new Project license, the annual average of daily boaters is equal to or greater than 20 boaters/day, the Licensee in consultation with staff from DOI, State Water Board, and American Whitewater may propose for Deputy Director review and consideration of approval to increase the number of 1,600 to 2,000 cfs boating days by one boating day in Above Average WYs. Increases in the number of whitewater boating release days is subject to the availability of sufficient water[21].

3(B) Spill Season Flow Measure

The Licensee shall implement the Spill Season Flow Measure as filed with FERC by PG&E on March 31, 2023 (PG&E 2023), and as changed by BLM Revised 4(e)

[21] As noted in an earlier footnote, sufficient water availability is dependent on the combined volume of water from inflow, storage within the normal operating range, or powerhouse diversions.

Conditions submitted to FERC on May 12, 2025 (DOI 2025) and as changed by this condition:

- The Licensee shall implement Condition 3(E) Ramp Up Rates to the extent feasible prior to implementing Spill Season Flow Measure. Feasibility of Ramp Up Rates in Condition 3(E) shall not be impacted by implementation of the Spill Season Flow Measure.

3(C) Subsequent Spill Ramp Down Measure

The Licensee shall implement the Subsequent Spill Ramp Down Measure as submitted by PG&E to FERC on March 31, 2023 (PG&E 2023).

3(D) Planned Outage Measure

The Licensee shall implement the Planned Outage Measure as filed with FERC by PG&E on March 31, 2023 (PG&E 2023), and as changed by BLM Revised 4(e) Conditions submitted to FERC on May 12, 2025 (DOI 2025), with the following addition:

- The Licensee shall provide a public notice of the upcoming planned outage event on its website at least one week prior to the outage.

3(E) Ramp Up Rates

The Licensee shall, to the extent feasible, implement an instream flow ramp up rate that maintains a stage change of one foot or less per hour when flows are at or less than 4,000 cfs as measured at Gage J-2. The “extent feasible” depends in part on infrastructure limitations and advanced notice and coordination of incoming flows from upstream hydroelectric projects[22] . Where the ramp up in Condition 3(D) conflicts with 3(E), this measure, Condition 3(E), shall apply. If the one foot per hour or less ramp up rate cannot be maintained, the Licensee shall adjust releases to remain as close as feasible to the one foot per hour ramp up rate, as measured at Gage J-2.

3(F) Ramping Rate Management

No later than six months following issuance of a new FERC Project license, the Licensee shall initiate consultation with BLM, Forest Service, CDFW, USFWS, Southern California Edison (SCE), American Whitewater, and State Water Board staff to evaluate available information and determine the need for studies or adaptive management actions related to the Project’s contributions to spill conditions and fluctuating flows in the San Joaquin River below Kerckhoff Dam. At a minimum, and unless otherwise approved by the Deputy Director, consultation shall include:

- Identification and a summary of existing information related to spill and fluctuating flow conditions in the San Joaquin River below Kerckhoff Dam related

[22] This includes flow information collected under Condition 6(A) and improved coordination under Condition 4.

to operations of the Project, Crane Valley Hydroelectric Project, and Big Creek No. 4 Hydroelectric Project.

- Identification and development of any study plans/modeling, if needed, to better identify and reduce the Project's potential impacts resulting from spills and fluctuating flow conditions in the San Joaquin River below Kerckhoff Dam. Study plans/modeling shall consider Project operations, flow releases, and ramping rates, including those required by this certification.

Within two years of issuance of the new Project license, the Licensee shall submit proposed study plans/modeling to the Deputy Director for review and consideration of approval. The Deputy Director may require changes to ensure protection of water quality and beneficial uses. The Licensee shall implement the study plans/modeling upon receipt of Deputy Director approval and any other required approvals, in accordance with the schedule and requirements specified therein.

Within one year of completing any Deputy Director approved studies/modeling, the Licensee shall submit a report to the Deputy Director for review and consideration of approval. The report shall be developed in consultation with BLM, SCE, American Whitewater, USFWS, Forest Service, CDFW, and State Water Board staff. At a minimum any report required by the Deputy Director shall include:

- Results of completed and/or ongoing approved studies/modeling.
- Recommendations, if appropriate, for additional data collection to better inform potential Project impacts and adaptive management actions.
- Identification of potential adaptive management actions (e.g., updates to flow releases and ramping rate requirements; improved coordinated operations between the Licensee, PG&E and SCE; and updates to public noticing requirements related to flow changes below Kerckhoff Dam).
    - Proposed changes, as appropriate, to update Project certification conditions to address the Project's contributions to spill conditions and fluctuating flow changes in the San Joaquin River below Kerckhoff Dam.
    - Documentation of consultation with BLM, SCE, American Whitewater, USFWS, Forest Service, CDFW, and State Water Board staff, comments and recommendations made in connection with the report, and a description of how the report incorporates or addresses the comments and recommendations.

The Deputy Director may require changes based on the report (e.g., to measures or conditions) to ensure protection of water quality and beneficial uses. The Licensee shall implement Deputy Director-approved measures in accordance with the schedule and requirements specified in the Deputy Director approval and receipt of any other required approvals.

3(G) Instream Recreation Protection Plan

No later than one year following issuance of the new Project license, the Licensee shall submit an Instream Recreation Protection Plan to the Deputy Director for review and consideration of approval. The Deputy Director may require changes as part of any

approval for the protection of water quality and beneficial uses. The Instream Recreation Protection Plan shall be developed in consultation with BLM, Forest Service, American Whitewater, USFWS, CDFW, and State Water Board staff. The goal of the Instream Recreation Protection Plan shall be to develop recreational beneficial use/ public safety measures that will be implemented to help address fluctuating flows in the San Joaquin River below Kerckhoff Dam. Unless otherwise approved by the Deputy Director, at a minimum, the plan shall include:

- Protocols for siren activation along the San Joaquin River below Kerckhoff Dam during fluctuating flow conditions that may result in a stage increase greater than one foot per hour. Siren activation shall focus on targeted areas and consider other relevant factors associated with siren activation such as when the flows are changing (e.g., middle of night versus noon) and level of anticipated recreation (e.g., middle of summer versus winter).
- Measures to reduce potential siren noise impacts on sensitive receptors and/or homeowners along the San Joaquin River below Kerckhoff Dam.
- Siren use shall consider water transit time based on available J-2 Gage data and information from the new inflow gage that will be installed on the San Joaquin River above Kerckhoff Reservoir (Condition 6).
- Identification of facility upgrades (e.g., new or updated sirens).
- Measures to ensure proper signage is posted at or near recreation areas to educate recreators on the sirens and potential flow changes. In addition to English, signage shall be provided in the most common non-English language(s) in the Project vicinity.

No proposed changes to the Instream Recreation Protection Plan shall be implemented without prior approval by the Deputy Director. The Licensee shall implement the Instream Recreation Protection Plan and any changes thereto upon receipt of Deputy Director approval, in accordance with the schedule and requirements specified therein. The Licensee shall file with FERC the Deputy Director-approved Instream Recreation Protection Plan and any approved changes thereto.

CONDITION 4. Coordinated Operations

No later than one year following issuance of the new Project license, the Licensee shall submit a Coordinated Operations Plan to the Deputy Director for review and consideration of approval. The Deputy Director may require changes as part of any approval. The Licensee shall consult with SCE, USFWS, Forest Service, CDFW, BLM, and State Water Board staff in developing the Coordinated Operations Plan.

The Coordinated Operations Plan shall address coordination operations between the Project, PG&E's Crane Valley Hydroelectric Project (FERC Project No. 1354), and SCE's Big Creek No. 4 Hydroelectric Project (FERC Project No. 2017) to ensure improved implementation of the flow–related conditions in the Project's license such as ramping rates during normal operations (to the extent feasible) and flows during outage events. At a minimum, the Coordination Operations Plan shall consider: (1) improved communication protocols around scheduling of power generation, powerhouse outages and long-term maintenance activities that could impact operations; (2) advanced flow

release information and data sharing; and (3) annual review of the plan to determine if the operations are effective in achieving the improved implementation of the flow–related conditions in the Project license.

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

During the term of the Project license, including following issuance of a new license for the Big Creek No. 4 Hydroelectric Project and/or the Crane Valley Hydroelectric Project, the Deputy Director may require the Licensee update the Coordinated Operations Plan to improve operation of the projects for the protection of water quality and beneficial uses.

CONDITION 5. Whitewater Notification and Access Measure

No later than 30 days following issuance of a new FERC license for the Project, the Licensee shall implement the Whitewater Notification and Access Measure as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans) with the following changes:

- In addition to providing notification of upcoming whitewater boating flows to CDFW, USFWS, BLM, Forest Service, State Water Board, American Whitewater, and the Cultural Resources Working Group[23], the Licensee shall also provide public notification on its website, a minimum of 10 days in advance of the planned whitewater flow releases (Condition 3(A): End-of-Spill Flow Recession and Whitewater Flow Releases).
- The Licensee shall provide escorted access to PG&E's J-2 Stream Gage access trail on all days with scheduled whitewater boating flow releases[24].
- The Licensee shall submit the proposed J-2 Stream Gage Access Trail Plan to the Deputy Director for review and consideration of approval prior to submitting to FERC for approval. The Deputy Director may require changes as part of any approval. The Licensee shall implement any Deputy Director-approved J-2 Stream Gage Access Trail Plan upon receipt of Deputy Director and any other required approvals.

[23] The Cultural Resources Working Group refers includes North Fork Rancheria of Mono Indians, Mono Nation, Picayune Rancheria, North Fork Mono Tribe, Cold Springs Rancheria, Dunna Wo-Wah Tribal Government, Table Mountain Rancheria, Wuksache Tribe, BLM and the USFS; the California State Historic Preservation Officer, PG&E and interested individuals.

[24] This does not apply to releases that happen to fall within optimal boating flow ranges (2,500 cfs to 1,600 cfs) and are not days with scheduled whitewater boating flow releases as outlined in Condition 3(A).

Any changes to the Whitewater Notification and Access Measure require Deputy Director approval. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Whitewater Notification and Access Measure. The Licensee shall implement any Deputy Director-approved updates to the Whitewater Notification and Access Measure upon receipt of Deputy Director and any other required approvals.

CONDITION 6. Gaging

6(A) Gage Measure: The Licensee shall install the new gage in the San Joaquin River above Kerckhoff Reservoir no later than four years following issuance of the new FERC Project license unless another timeline is approved by the Deputy Director. The Licensee shall implement the San Joaquin River Above Kerckhoff Reservoir Inflow Gage Measure as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, San Joaquin River Above Kerckhoff Reservoir Inflow Gage Measure) with the following changes:

- Following gage construction, the Licensee shall ensure the gage is calibrated for the full range of anticipated flows consistent with USGS standards throughout the new FERC Project license. The Licensee shall post all flow and other data associated with the gage to the California Data Exchange Center website or other location approved by the Deputy Director (e.g., USGS webpage) within 24 hours of flow measurement, unless otherwise approved by the Deputy Director. The Licensee shall furnish electronic streamflow records to State Water Board staff upon request. Additionally, any flow data shall be submitted to the State Water Board in a form consistent with requirements of this certification or as otherwise directed by the Deputy Director.

6(B) Gage Construction Plan: A minimum of six months prior to the desired gage installation date, the Licensee shall submit a Gage Construction Plan to the Deputy Director for review and consideration for approval. The Deputy Director may require changes as part of any approval. The Licensee shall consult with BLM, Forest Service, CDFW, USFWS, and State Water Board on the development of the Gaging Construction Plan. Unless otherwise approved by the Deputy Director, at a minimum, the Gage Construction Plan shall include the following (consistent with mitigation measure (MM) Hydrology and Water Quality (WQ)-2)):

- Description of gage construction activities, location, schedule, and existing site conditions, including site plan maps(s), drawings, and/or photos showing construction areas.
- Water quality protection measures and best management practices that will be implemented during gage construction.
- Description of all construction-related activities that involve dewatering, water diversions, and in-water or water adjacent work. For dewatering or temporary water diversion activities, the description shall include:
    - Equipment and methods that will be used for dewatering and temporary water diversion, including descriptions of procedures that will be used for

installation, operation, maintenance, removal, and rewatering (e.g., inspection and follow-up actions, if applicable).
    - Type(s) of barriers that will be installed to isolate work areas from surface waters.
    - List of materials that will be used in or adjacent to the watercourse.
- Description of best management practices (BMPs) that will be implemented to avoid potential water quality and aquatic resource impacts. BMPs shall ensure discharges associated with dewatering and water diversion will not exceed water quality objectives, as defined in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Central Valley Basin Plan) (Central Valley Regional Water Board 2019) and any amendments thereto. At a minimum, BMPs shall include the following actions (consistent with mitigation measure Biological Resources (BIO)-1):
    - Within two weeks of beginning construction, a qualified biologist (i.e., a biologist familiar with the habitat requirements and biology of northwestern pond turtle) shall conduct a preconstruction survey for turtle nests or hibernating turtles. If suitable habitat is encountered that has the potential to be disturbed (as determined by the qualified biologist), then the suitable habitat shall be flagged prior to construction. Flagged areas shall be avoided during construction.
    - The qualified biologist shall periodically inspect the flagged area(s) and make repairs to flagging as needed. If a northwestern pond turtle is encountered, work in the immediate area of the turtle shall cease, the qualitied biologist shall immediately be contacted, and the turtle shall be allowed to volitionally leave the area or shall be relocated by the qualified biologist. The qualified biologist and/or the biological monitor (or other Project personnel) shall continuously monitor the turtle's movements during the working time period until it is safely out of the work area or has been relocated by the qualified biologist at least 500 feet away from the Project area to a location with similar or better habitat.
    - The qualified biologist shall report any northwestern pond turtles observations in the work area to the State Water Board, CDFW, and USFWS within 72 hours of being encountered, or within 24 hours if turtles are relocated.
    - Construction activities shall not resume until the turtle(s) have moved by its/their own volition or been relocated by the qualified biologist.
    - If a turtle nest is found, construction activities shall not take place within 100 feet of the nest until the turtles have hatched and the juvenile turtles have moved or been relocated by the qualified biologist.
- Proposed water quality monitoring and reporting. Proposed monitoring shall include a description of monitoring locations, equipment, frequency, methods, and quality assurance/quality control procedures.
- Description of measures that will be implemented to ensure gage installation does not result in a 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* (Dredge or Fill Procedures) (State Water Board 2019 and 2021) and Water Code, Division 7, Chapter 28, sections 16200-16201, and any amendments

thereto (consistent with mitigation measure BIO-3). If the Project results in a permanent impact to wetland or riparian habitat function, the Gage Plan shall include proposed compensation ratios that shall at a minimum be a 1:1 ratio.

Any changes to the Gage Construction Plan require Deputy Director approval. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Gage Construction Plan. The Licensee shall implement the Deputy Director-approved Gage Construction Plan and any approved amendments thereto upon receipt of Deputy Director and any other required approvals.

CONDITION 7. Construction and Maintenance

When applicable, the Licensee shall comply with the State Water Board's National Pollutant Discharge Elimination System (NPDES) *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit)[25] (State Water Board 2022a), *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Dredge or Fill Procedures) (State Water Board 2019b and 2021), and amendments to the aforementioned documents. For Project-related activities (e.g., construction and maintenance) 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 Licensee shall prepare and implement site-specific Water Quality Monitoring and Protection Plans (WQMP Plans) for Deputy Director review and consideration of approval. The objective of the WQMP Plans shall be to identify and implement control measures for construction, maintenance, or other activities with the potential to cause erosion, stream sedimentation, fugitive dust, soil mass movement, release of hazardous materials, or other water quality impairment.

At a minimum, WQMP Plans must demonstrate compliance with the Dredge or Fill Procedures and the sediment and turbidity water quality objectives, as well as other applicable water quality objectives associated with the Project-related activities in the Central Valley Basin Plan (Central Valley Regional Water Board 2019). The Licensee shall submit WQMP Plans to the Deputy Director for review and consideration for approval at least 120 days prior to the desired start date of the applicable Project activity. The Deputy Director may require changes as part of any approval. WQMP Plans shall be based on actual site geologic, soil, and groundwater conditions, and at a minimum shall include, consistent with mitigation measure for Hydrology and Water Quality (WQ)-3):

- Description of site conditions and the proposed activity, including work requiring dewatering, diversion of water, and in-water work.

[25] State Water Board Order WQ 2022-0057-DWQ and National Pollutant Discharge Elimination System No. CAS000002, and any amendments thereto. Available at: NPDES 2022 Construction Stormwater General Permit | California State Water Resources Control Board

- 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 at the sites.
    - Measures to dissipate energy and prevent erosion.
    - Measures that will be implemented to protect water quality and beneficial uses.
- Revegetation of disturbed areas, which shall include use of native plants and locally sourced plants and seeds.
- Description of how the Licensee will comply with the Dredge or Fill Procedures, if appropriate.
- Description of monitoring that will be performed, if appropriate, including:.
    - A monitoring program to assess potential impacts to water quality associated with the activity, including quality assurance/quality control measures that will be implemented.
    - Water quality monitoring locations for the activity, including background monitoring locations as applicable.
    - A list of parameters that will be monitored, including sampling types and sampling frequency.

A reporting schedule for water quality data, including the response and reporting that will be performed in the event of a water quality objective exceedance.

For planned work that involves any instream dewatering, diversion of water, or in-water work, the WQMP shall include the following in addition to applicable requirements stated above:

- Timeframe(s) for required dewatering or diversion work.
- Description of coffer dams or equivalent barriers that will be used to isolate the construction area from instream flows.
- Description of measures, if needed, that will be implemented to avoid potential fish stranding and entrainment. If fish stranding and entrainment are not a concern the plan should provide supporting information for why such measures are not needed.
- Description of how, upon completion of the proposed activity, flow will resume with the least disturbance to the substrate, water quality, and beneficial uses as practical. Planned activities shall not cause increased turbidity greater than allowable levels identified in the Central Valley Basin Plan and any amendments thereto. In determining compliance with the Central Valley Basin Plan, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. The Licensee shall file with FERC the Deputy Director-approved WQMP Plan(s), and any Deputy Director-approved changes thereto. The Licensee 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 8. Water Temperature

As soon as reasonably practicable but no later than 60 days following issuance of the new FERC Project license, the Licensee shall implement the Water Temperature Measure, as submitted to FERC by PG&E in its April 3, 2023, Supplemental Information Filing in Support of Final Application for New License (PG&E 2023).

The Licensee may request changes to the Water Temperature Measure. The Deputy Director may require changes as part of any approval. Any changes to the Water Temperature Measure require Deputy Director approval prior to implementation. The Licensee shall file with FERC any Deputy Director-approved updates to the Water Temperature Measure. The Licensee shall implement any Deputy Director-approved updates to the Water Temperature Measure upon receipt of Deputy Director and any other required approvals.

CONDITION 9. Recreation Management

The Licensee shall implement the Recreation Management Plan as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, Recreation Management Plan) with the following changes:

- For construction and maintenance related actions in the Recreation Management Plan (e.g., updates to the Smalley Cove Recreation Area and the construction of the Vista Day Use Area), the Licensee shall comply with the construction and maintenance requirements outlined in Condition 7 of this certification.
- Consistent with the Statewide Bacteria Provisions, the Licensee shall perform periodic recreation related water quality sampling at Project recreation facilities at least every 10 years throughout the term of the new FERC license and any annual license extensions. At a minimum, sampling shall include:
    - Five sample collections at Smalley Cove recreation facilities within a 30-day period.
    - Sampling shall be scheduled to occur during the Independence Day or Memorial Day weekend unless otherwise approved by the Deputy Director.
- Results of recreational water quality monitoring shall be provided to the CDFW, USFWS, Forest Service, BLM, and the State Water Board along with any recommendations to address the results of monitoring. Any recommendations that update the Recreation Management Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require additional monitoring or actions based on the results of the recreational water quality monitoring or other information in the record.

Any changes to the Recreation Management Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates

to the Recreation Management Plan. The Licensee shall implement any Deputy Director-approved updates to the Recreation Management Plan upon receipt of Deputy Director and any other required approvals.

CONDITION 10: Kerckhoff 1 Facilities Retirement

No later than three years following issuance of the new FERC Project license and at least 12 months in advance of the proposed start of Kerckhoff 1 (K1) retirement activities, the Licensee shall develop and submit a Supplemental K1 Facilities Retirement Plan to the Deputy Director for review and consideration for approval. The Deputy Director may require changes as part of any approval. The Supplemental K1 Facilities Retirement Plan shall be developed in consultation with Forest Service, BLM, CDFW, USFWS, and State Water Board staff. The goal of the Supplemental K1 Facilities Retirement Plan shall be to describe how the K1 Powerhouse and associated facilities will be retired and/or modified in a manner that protects water quality. At a minimum, and unless otherwise approved by the Deputy Director, the Supplemental K1 Powerhouse Retirement Plan shall include (consistent with mitigation measure for Hydrology and Water Quality (WQ)-1):

- Description of K1 facilities retirement and/or modification activities, including any dewatering and diversion activities, and the proposed timeline. At a minimum this shall include :
    - Descriptions of site conditions.
    - Location (coordinates) of all K1 facility retirement and/or modification activities including the K1 intake.
    - Specific actions for retirement and/or modification.
    - Maps and/or drawings illustrating retirement and/or modification activities (e.g., location of concrete batch plants and staging areas).
    - Description of the transport, use, storage, and production of concrete (e.g. K1 Tunnel plug).
    - Identification of material amounts for each retirement or modification activity (e.g. concrete, fuels, and lubricants), storage locations, and containment measures.
- Proposed water quality and site condition monitoring, including the schedule, analytical methods, sampling locations, and quality assurance/quality control protocols that will be implemented.
- Proposed BMPs that will be implemented to ensure water quality and beneficial use protection.
- :Proposed stabilization actions for disturbed areas, if necessary.
- Revegetation or restoration measures for disturbed areas, which shall include use of native plants and locally sourced plants and seeds if necessary.
- Documentation of consultation with BLM, CDFW, Forest Service, USFWS, 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.
- A list of additional permits and environmental review required for implementation of the plan.

- Format and schedule for reports to document, summarize, and analyze monitoring results. Reporting shall include pre-retirement and post-retirement photos documenting the existing site condition and the stabilized site condition upon completion of retirement activities.

The Licensee shall not commence K1 Powerhouse retirement without Deputy Director approval of the Supplemental K1 Powerhouse Retirement Plan. Any changes to the Supplemental K1 Powerhouse Retirement Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Supplemental K1 Powerhouse Retirement Plan and any Deputy Director-approved changes thereto. The Licensee shall implement the Deputy Director-approved Supplemental K1 Powerhouse Retirement Plan and any Deputy Director-approved changes thereto upon receipt of Deputy Director and any other required approvals.

CONDITION 11. American Shad Spawning

As soon as reasonably practicable but no later than 60 days following issuance of a new FERC license for the Project, the Licensee shall implement the American Shad Spawning Season Flow Release Regime Measure as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, American Shad Spawning Season Flow Release Regime Measure).

Any changes to the American Shad Spawning Season Flow Release Regime Measure shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the American Shad Spawning Season Flow Release Regime Measure. The Licensee shall implement any Deputy Director-approved updates to the American Shad Spawning Season Flow Release Regime Measure upon receipt of Deputy Director and any other required approvals.

CONDITION 12. Project Roads and Trails Maintenance Condition

As soon as reasonably practicable but no later than 60 days following issuance of the new FERC Project license, the Licensee shall implement the Project Road and Trail Maintenance Plan as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, Project Road and Trail Maintenance Plan) with the following changes:

- Section 4.4 – *Consultation* shall be updated to include consultation with the State Water Board for any non-routine maintenance along Project roads or trails that may result in an impact to water quality or beneficial uses.
- Section 4.6 – *Reporting* shall be updated to require that the annual Project Roads and Trail Maintenance Summary Report to be submitted to the Deputy Director in addition to BLM and Forest Service.

Any changes to the Project Road and Trail Maintenance Plan shall be approved by the Deputy Director approval prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Project Road and Trail Maintenance Plan. The Licensee shall implement any Deputy Director-approved updates to the Project Road and Trail Maintenance Plan upon receipt of Deputy Director and any other required approvals.

CONDITION 13. Monitoring and Adaptive Management

13 (A) Aquatic Resource Management Plan

No later than one year following issuance of the new FERC Project license, the Licensee shall implement the Aquatic Resource Management Plan as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans, Aquatic Resource Management Plan) and as described in Condition 1 with the following changes:

- Section 4.5.3. *Report* shall be updated to clarify that the Deputy Director may require changes to the Aquatic Resources Management Plan or additional actions to ensure protection of water quality and beneficial uses based on the information provided in the reports or other information in the record.

Any changes to the Aquatic Resource Management Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Aquatic Resource Management Plan. The Licensee shall implement any Deputy Director-approved updates to the Aquatic Resource Management Plan upon receipt of Deputy Director and any other required approvals.

13 (B) Hazardous Material Management

No later than one year following issuance of a new FERC Project license, the Licensee shall submit a Project Hazardous Materials Management Plan (HMMP) to the Deputy Director for review and consideration of approval. The Deputy Director may require changes as part of any approval. The HMMP shall be developed in consultation with BLM, Forest Service, CDFW, Fresno County, Madera County, Central Valley Regional Water Board, and State Water Board staff. The goal of the HMMP shall be to address the storage, spill prevention, cleanup, and disposal of oil and hazardous substances associated with Project activities. Unless otherwise approved by the Deputy Director, at a minimum, the HMMP shall include:

- Relevant elements of PG&E's Hazardous Materials Business Plan as filed with the California Environmental Reporting System on May 28, 2025, and December 8, 2025 (CERS 2025a and 2025b).
- Description of how the Licensee will maintain a cache of spill cleanup equipment in the Project area suitable to contain any spill of hazardous substances associated with the Project.

- Periodic reporting to inform State Water Board Central Valley Regional Water Board staff of the location of the spill cleanup equipment and of the location, type, and quantity of oil and hazardous substances stored in the Project area.
- BMPs that will be implemented to prevent spills of hazardous substances during routine operations and maintenance activities, including but not limited to secondary containment for hazardous substances, equipment inspection protocols, and staging and storage procedures. BMPs shall include:
    - All hazardous materials shall be contained in appropriate spill-proof containers and/or secondary containment areas and stored in designated areas at least 100 feet away from surface waters.
    - Temporary storage of hazardous materials, equipment staging, servicing and refueling of equipment shall be conducted at designated locations away from surface waters.
    - Hazardous materials and waste generated onsite shall be placed in proper containers, labeled appropriately, and transported from the job site to an authorized hazardous waste consolidation site.
    - All equipment shall be regularly inspected for fluid leaks and signs of worn or damaged parts that may result in a hazardous material release.
- Training provisions for personnel regarding proper hazardous material management.
- Immediate reporting to State Water Board and Central Valley Regional Water Board staff and other relevant agencies of the magnitude, nature, time, date, location, and action taken for any spill.
- A monitoring and reporting component 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 materials will be properly disposed of once past their useful life or as part of cleanup activities.
- Evaluation of any release of hazardous substances. This evaluation shall be completed within 120 days of the release and include consultation with appropriate agencies that were part of consultation on the HMMP and a report submitted to the Deputy Director with any proposed updates to the plan.
- Documentation of consultation with BLM, Forest Service, CDFW, Fresno County, Madera County, Central Valley Regional Water Board, and State Water Board staff, comments and recommendations made in connection with the HMMP, and a description of how the HMMP incorporates or addresses the comments and recommendations.

If hazardous materials are released with the potential to impact surface waters, the Licensee shall immediately cease any activities that resulted in the release and implement measures to limit and clean up the release. The Licensee shall notify the Deputy Director and Central Valley Regional Water Board Executive Officer promptly, and in no case more than 24 hours, following the release. The notice shall include the type and quantity of material released, cause of the release, corrective measures taken, and measures the Licensee will implement to prevent a future release. The Deputy Director may require additional actions to help prevent similar releases in the future. The Licensee may resume work upon Deputy Director approval.

Any changes to the HMMP shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC the Deputy Director-approved HMMP and any Deputy Director-approved updates thereto. The Licensee shall implement any Deputy Director-approved HMMP and any Deputy Director-approved updates thereto upon receipt of Deputy Director and any other required approvals.

13 (C) Vegetation Management and Pest Control Plan

No later than six months following issuance of the new FERC Project license, the Licensee shall implement the Vegetation Management and Pest Control Plan as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans) with the following changes:

- Section 7.0. *Reporting and Consultation* shall be updated to clarify that the Deputy Director may require changes to the Vegetation and Pest Control Plan or additional actions to ensure protection of water quality and beneficial uses based on the information provided in the reports or other information in the record.

Any changes to the Vegetation Management and Pest Control Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Vegetation Management and Pest Control Plan. The Licensee shall implement any Deputy Director approved updates to the Vegetation Management and Pest Control Plan upon receipt of Deputy Director and any other required approvals.

13 (D) Wildlife Management Plan

No later than six months following issuance of the new FERC Project license, the Licensee shall implement the Wildlife Management Plan as submitted to FERC by PG&E on April 3, 2023 (PG&E 2023, Volume III: Exhibit E, Supporting Document A, Environmental Measures/Management and Maintenance Plans) with the following changes:

- Section 5.0 *Updates to Wildlife Management Plan* shall be updated to clarify that the Deputy Director may require changes to the Wildlife Management Plan or additional actions to ensure protection of water quality and beneficial uses based on the information provided in the reports or other information in the record.

Any changes to the Wildlife Management Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC any Deputy Director-approved updates to the Wildlife Management Plan. The Licensee shall implement any Deputy Director-approved updates to the Wildlife Management Plan upon receipt of Deputy Director and any other required approvals.

13 (E) Erosion and Sediment Control Plan

No later than one year following issuance of the new FERC Project license, the Licensee shall submit an Erosion and Sediment Control Plan (ESCP) to the Deputy Director for review and consideration of approval. The Deputy Director may require changes as part of any approval. The goal of the ESCP is to minimize Project-related erosion and sedimentation impacts for the term of the FERC license. The License shall consult with the Forest Service, BLM, USFWS, CDFW and State Water Board staff in developing the ESCP. The Licensee shall file the Deputy Director's approval, and any required changes with FERC. Unless otherwise approved by the Deputy Director, at a minimum, the ESCP shall include the following (consistent with mitigation measure for Geology and Soils (GEO)-1):

- Initial and periodic assessments and monitoring of the Project-affected areas and facilities that could contribute to erosion and/or sediment transport to surface waters.
- Identification of BMPs that will be implemented to control erosion and sedimentation. Unless otherwise approved by the Deputy Director, BMPs shall include BLM and/or Forest Service regulations and guidance (e.g. Forest Plan, Road Management Objectives, BMPs) and be customized to site-specific conditions.
- Criteria for prioritizing and ranking erosion sites for treatment and an associated schedule for treating each site.
- Implementation of effectiveness monitoring. If erosion control measures are not effective, Licensee shall implement additional erosion control measures approved by State Water Board and continue monitoring until the site has stabilized.
- A schedule for treatment (e.g. repair, mitigate, monitor) of sites.
- Protocols for new construction or non-routine maintenance erosion control including:
- At least 90 days before ground disturbance, the Licensee must prepare site-specific temporary erosion controls and long-term reclamation measures to prevent erosion, sedimentation, dust, and soil movement until permanent measures are in place, and the plan must ensure compliance with the Central Valley Basin Plan, its water quality objectives, and any amendments.
- Protocols for emergency erosion and sediment control.
- Documentation of consultation with Forest Service, BLM, USFWS, CDFW and State Water Board staff comments and recommendations made as part of consultation, and a description of how the ESCP incorporates or addresses the comments and recommendations.
- Format and schedule for reports to document, summarize, and analyze monitoring results and make recommendations. Reports shall include identification of any potential concerns, an assessment of the effectiveness of implemented measures, and any proposed modifications to better address Project-related impacts. Reports shall be submitted to

Forest Service, BLM, USFWS, CDFW and State Water Board staff. The Deputy Director may require implementation of additional monitoring or other actions in response to the information provided in the monitoring reports.

Any changes to the ESCP shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC the Deputy Director-approved ESCP and any Deputy Director-approved updates thereto. The Licensee shall implement the Deputy Director-approved ESCP and any Deputy Director-approved updates thereto upon receipt of Deputy Director and any other required approvals.

CONDITION 14. Sediment Sluicing Management

At least 120 days prior to the Licensee's desired date to use the low-level outlets (LLO) for sediment sluicing activities at Kerckhoff Dam, the Licensee shall submit a sediment sluicing management plan to the Deputy Director for review and consideration of approval. The Deputy Director may require changes as part of any approval and the Licensee shall file the Deputy Director-approved plan with FERC. The plan shall be developed in consultation with Forest Service, BLM, USFWS, CDFW, and State Water Board staff. The LLO Sediment Sluicing Management Plan shall ensure water quality standards are not violated during sediment sluicing activities (consistent with mitigation measure for Hydrology and Water Quality (WQ)-4) and include:

- Identification of how the Licensee will operate the LLOs (e.g., duration, triggers, etc.) for the purpose of sluicing sediment that has accumulated within Kerckhoff Reservoir or on Kerckhoff Dam.
- Comments received from the Forest Service, BLM, USFWS, CDFW, and State Water Board staff during the consultation process and responses or descriptions of how comments were addressed.
- Notification protocols to the consultation agencies prior to and following sediment sluicing.
- How the Licensee will estimate the amount of sediment passed through the outlets.
- Water quality monitoring that will be performed immediately downstream of the Kerckhoff Dam, including collecting turbidity and dissolved oxygen during sediment sluicing operations to ensure compliance with Central Valley Basin Plan water quality objectives and any amendments hereto.
- Reporting on sediment sluicing activities, that includes reporting to the Deputy Director and consultation agencies within 60 days following sluicing activities and includes the following information:
    - A summary of all sediment sluicing activities performed.
    - Information about compliance with this certification condition and details of any failure to meet the certification requirements, including requirements to comply with the Central Valley Basin Plan turbidity water quality objective.
    - A description of sediment conditions in the Kerckhoff Dam Impoundment including results of any recent bathometric surveys.

- A summary of monitoring data collected and estimated amounts of sediment passed.
- Any adaptive management measures proposed by the Licensee to address water quality during future sluicing events as informed by water quality monitoring results.

Any changes to the Sediment Sluicing Management Plan shall be approved by the Deputy Director prior to implementation. The Deputy Director may require changes as part of any approval. The Licensee shall file with FERC the Deputy Director-approved Sediment Sluicing Management Plan and any Deputy Director-approve updates thereto. The Licensee shall implement the Deputy Director-approved Sediment Sluicing Management Plan and any Deputy Director-approved updates thereto upon receipt of Deputy Director and any other required approvals.

CONDITION 15. Kerckhoff Advisory Team (KAT)

By the end of the first full calendar year following FERC issuance of the new FERC Project license, the Licensee shall establish a Kerckhoff Advisory Team (KAT) and host its first annual KAT meeting. KAT meetings shall be held annually prior to April 15 of each calendar year unless otherwise agreed to by the KAT. The purpose of the KAT shall be to discuss implementation of the Project license. At a minimum, the Licensee shall invite the following to participate on the KAT: representative from the Forest Service, BLM, USFWS, CDFW, Central Valley Regional Water Board, State Water Board, interested tribes, and nongovernmental organizations (KAT members). The annual meeting shall be noticed at least 30 days in advance to the KAT members, to the Licensee's Project interested parties email list, and on the Licensee's Project webpage. The annual KAT meeting shall be open to the public. The KAT shall establish communication protocols to facilitate interactions between KAT members and other participants that allow for open participation and communication between all parties. At the annual meetings, the KAT shall:

- Review and discuss the status of implementing the FERC license with a focus on the Project certification conditions.
- Review and discuss monitoring data from all monitoring conducted the previous calendar year, noting anything relevant from the current year.
- Review and discuss changes to Project facilities or features and other activities or actions completed in the previous calendar year, noting anything relevant from the current year.
- Review and discuss foreseeable changes to Project facilities or features and other foreseeable activities or actions.
- Review and discuss planned outages and any associated coordinated Project operations with the Project, Crane Valley Hydroelectric Project, and Big Creek No. 4 Hydroelectric Project.
- Review and discuss necessary or anticipated revisions or changes to plans required as part of this certification.
- Review and discuss species listing implications, including:
    - Needed protection measures for species newly listed as threatened, endangered, or sensitive;

- Changes to existing plans for actions that may no longer be necessary due to delisting of a species; and
- Changes to existing plans to incorporate new information about species requiring protection.

Materials shall be provided to KAT members at least 30 days prior to the annual meeting. The Licensee shall submit a report to State Water Board staff summarizing the annual meeting no later than 60 days following the meeting. The Licensee may integrate the requirements of this condition with elements of applicable Forest Service and BLM requirements.

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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 Water Code section 13167.

CONDITION 17. This certification does not authorize any act which results in the taking of a threatened, endangered, or candidate species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish & G. Code, §§ 2050 – 2089.25) or the federal ESA (16 U.S.C. §§ 1531 – 1544). If a "take" will result from any act authorized under this certification or water rights held by the Licensee, the Licensee must obtain authorization for the take prior to any construction, operation, or maintenance of the portion of the Project that may result in a take. The Licensee is responsible for meeting all requirements of the applicable ESAs for the Project authorized under this certification.

CONDITION 18. This certification shall not be construed as replacement or substitution for any necessary federal, state, and local approvals. The Licensee is responsible for compliance with all applicable federal, state, and local laws and ordinances and shall obtain authorization from applicable regulatory agencies prior to the commencement of activities associated with the Project.

CONDITION 19. Any requirement in this certification that refers to an agency whose authorities and responsibilities are transferred to or subsumed by another local, 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 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 specific provision of this certification, any plan or report developed as a condition of this certification requires review and approval by the Deputy Director, unless otherwise specified. The State Water Board's approval authority, including authority delegated to the Deputy Director or others, includes the authority to withhold approval or modify a proposal, plan, or report prior to approval. The State Water Board may take enforcement action if the Licensee fails to provide or implement a required item in a timely manner. Notwithstanding any other condition of this certification, if a time extension is needed to submit an item for Deputy Director or Executive Director of the State Water Resources Control Board (Executive Director) approval, the Licensee shall submit a written request for the extension, with justification, to the designated approver no later than 60 days prior to the deadline. The Licensee shall file with FERC any Deputy Director or Executive Director-approved time extensions. The Licensee 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. In the event of any violation or threatened violation of the conditions of this certification, including if monitoring results indicate that Project-related activities could violate water quality objectives or impair beneficial uses, 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 or threatened violation of the conditions of this certification, the Licensee shall, by a deadline required by the Deputy Director, submit a plan that documents why the violation occurred and steps the Licensee will implement to address the violation. The Licensee shall implement the plan upon approval from the Deputy Director, and the Deputy Director may require changes as part of any approval to ensure the protection of water quality and beneficial uses or compliance with water quality control plans, policies, or other applicable requirements of state law.

CONDITION 26. The Licensee shall submit any change to the Project, including operations, facilities, technology changes or upgrades, or methodology, which may 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, unless otherwise specified. The State Water Board shall determine significance and may require consultation with state and/or federal agencies. If the State Water Board is not notified of a change to the Project, it will be considered a violation of this certification. If such a change would also require submission to FERC, the change must first be submitted and approved by the State Water Board unless otherwise delegated in this certification or other State Water Board approval.

CONDITION 27. This certification is contingent on compliance with all applicable requirements of the Central Valley Regional Water Board's Central Valley Basin Plan (Central Valley Regional Water Board 2019) and any amendments thereto, and the State Water Board's Bay-Delta Plan and any amendments thereto.

CONDITION 28. Reports and plans submitted by the Licensee for approval under this certification shall consider the effects of the Project in relation to compliance with all applicable water quality control plans and policies and, as necessary, propose updates to the Project to ensure protection of water quality and beneficial uses and compliance with other appropriate requirements of state law. The Deputy Director may identify the need for, and set a deadline for, submittal of a report and/or plan focused on additional assessment of potential impacts to water quality and beneficial uses that may have changed from the baseline assumptions used to develop the conditions of the certification, along with recommended changes to address the new or changed water quality control plan or policy beneficial uses and/or water quality objectives. The Deputy Director may include recommendations regarding potential actions that shall be considered by the Licensee in this report and/or plan to ensure ongoing protection of water quality and beneficial uses and compliance with other applicable requirements of state law. The Licensee shall implement the plan upon approval by the Deputy Director and any other required approvals, and the Deputy Director may require changes as part of any approval.

CONDITION 29. Unless otherwise specified by 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.

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

CONDITION 31. Future changes in climate projected to occur during the term of the Project's FERC license(s) may alter the baseline assumptions used to develop the conditions of this certification and necessitate adaptive management. Reports and plans submitted by the Licensee for approval under this certification shall consider the effects of climate change on the Project's operations and, as necessary, propose updates to the Project's operations to ensure protection of water quality and beneficial uses and compliance with other appropriate requirements of state law. The Deputy Director may identify the need for, and set a deadline for, submittal of a report and/or plan focused on additional assessment of potential impacts to water quality and beneficial uses that may have changed from the baseline assumptions used to develop the conditions of the certification, along with recommended changes to address the changed climate conditions and ensure water quality and beneficial use protections. The Deputy Director may include recommendations regarding potential actions that shall be considered by the Licensee in this report and/or plan to ensure ongoing protection of water quality and beneficial uses and compliance with applicable requirements of state law. The Licensee shall implement the plan upon approval by the Deputy Director and any other required approvals, and the Deputy Director may require changes as part of any approval.

CONDITION 32. The State Water Board shall provide notice and an opportunity to be heard in exercising its authority to add or modify the condition of this certification.

CONDITION 33. Upon request, a construction schedule shall be provided to the Deputy Director. The Licensee shall provide State Water Board and Central Valley Regional Water Board staff access to the Project sites to document compliance with this certification.

CONDITION 34. A copy of this certification shall be provided to any contractor and all subcontractors conducting Project-related work, and copies shall remain in their possession at the Project sites. The Licensee shall be responsible for work conducted by its contractor, subcontractors, or other persons conducting work related to the Project.

CONDITION 35. The Licensee shall use analytical methods approved by California's Environmental Laboratory Accreditation Program, where such methods are available. Samples that require laboratory analysis shall be analyzed by Environmental Lab Accreditation Program-certified laboratories.

CONDITION 36. The Licensee shall ensure no net loss of wetland or riparian habitat functions and is responsible for compliance with the Dredge or Fill Procedures (State Water Board 2019b and 2021) and any amendments thereto, and Water Code sections 16200-16201.

CONDITION 37. Certification that the Project will be protective of water quality and beneficial uses in compliance with state and federal water quality standards and other appropriate requirements of state law is dependent upon the conditions and limitations imposed by this certification; however, to ensure the validity of this certification upon any challenge that is not addressed by another condition of this certification, the provisions of this certification are severable. If any

provision of this certification is found invalid, affects the validity of the certification, or would result in a determination that the State Water Board has waived its section 401 certification authority for the Project, the remainder of this certification shall not be affected. Upon remand from determination on administrative or judicial review that a provision of this certification is invalid or affects the validity of the certification, the State Water Board may adopt an alternative term that addresses the water quality issue while avoiding the invalidity.

DRAFT _____

Eric Oppenheimer Date
Executive Director

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KERCKHOFF HYDROELECTRIC PROJECT
WATER QUALITY CERTIFICATION

ATTACHMENT A:
OVERVIEW MAPS FOR THE DRAFT WATER QUALITY CERTIFICATION FOR RELICENSING OF KERCKHOFF HYDROELECTRIC PROJECT

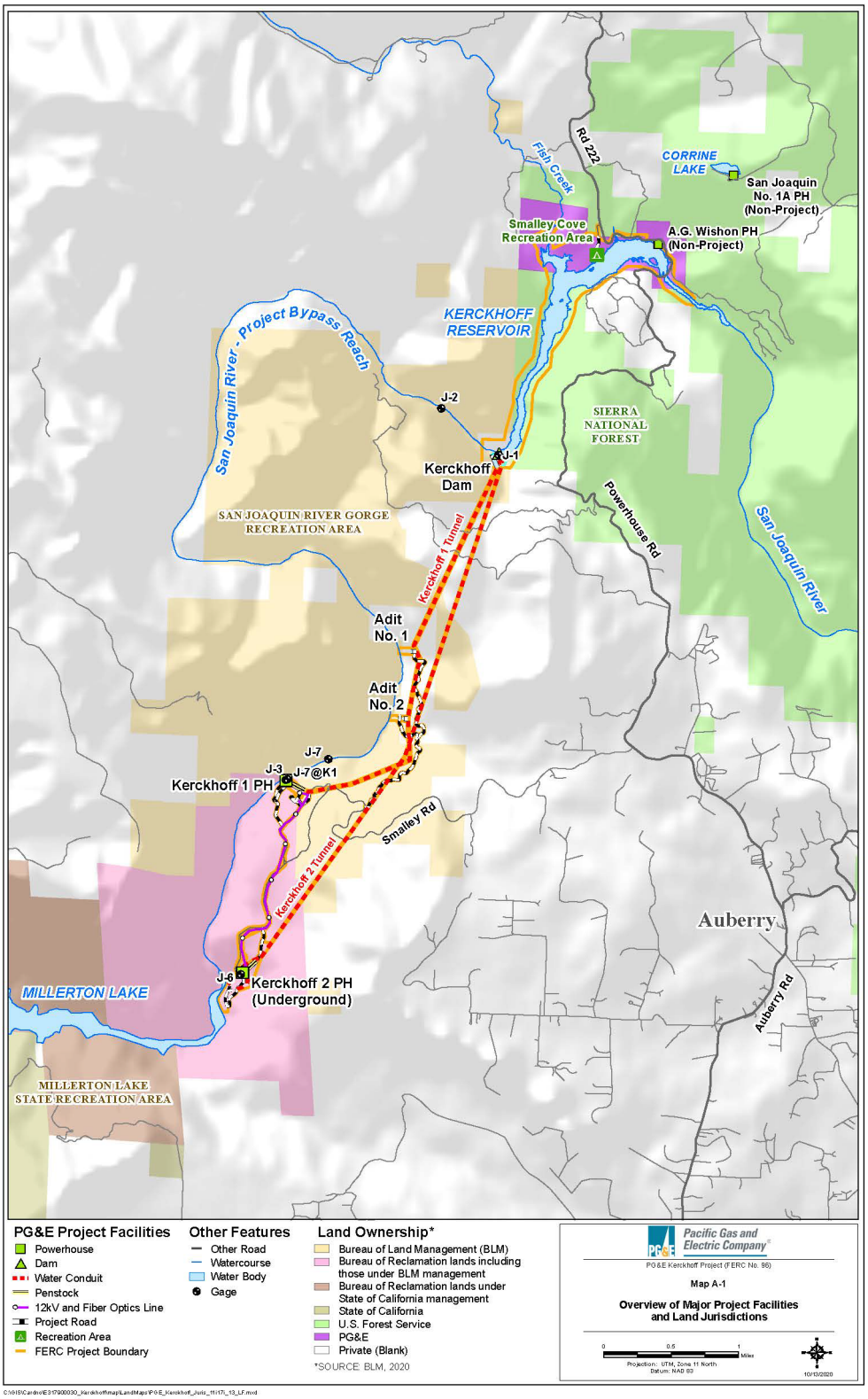

Figure A-1: Overview Map of Project Facilities and Land Jurisdiction

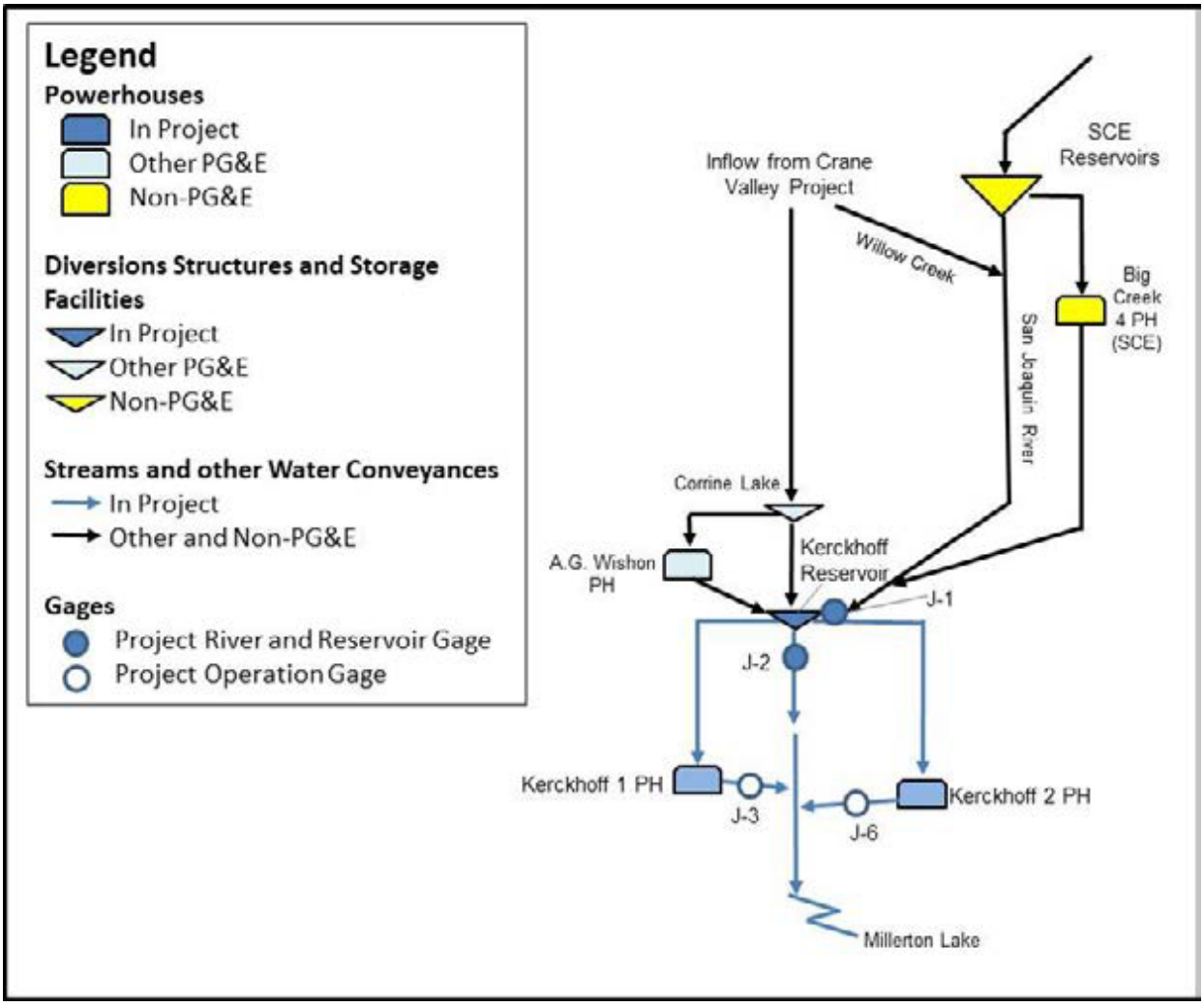

Figure A-2: Project schematic of Regional Flow and Gages (PG&E 2023)

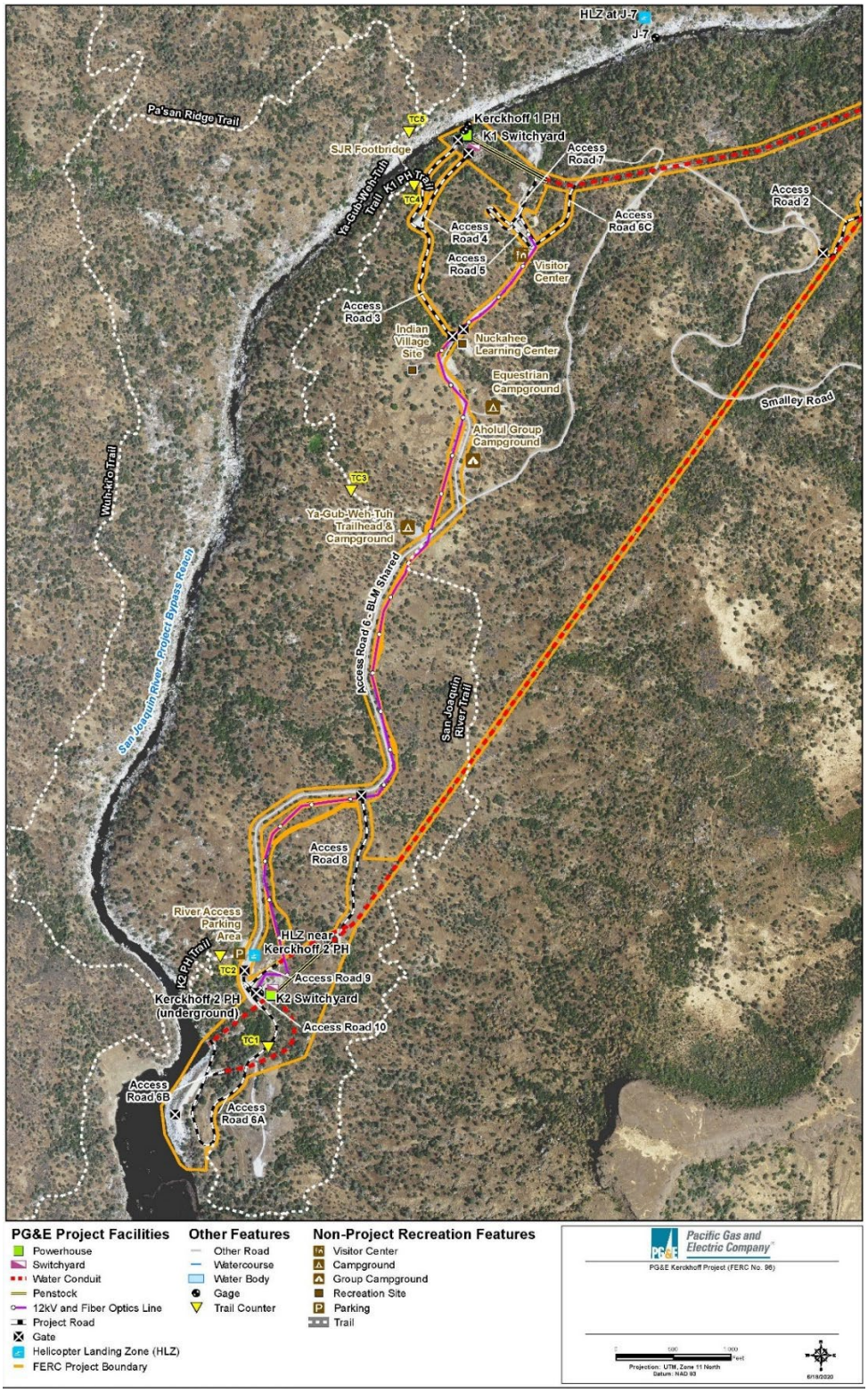

Figure A-3: Recreation Facilities Near the K1 and K2 Powerhouses

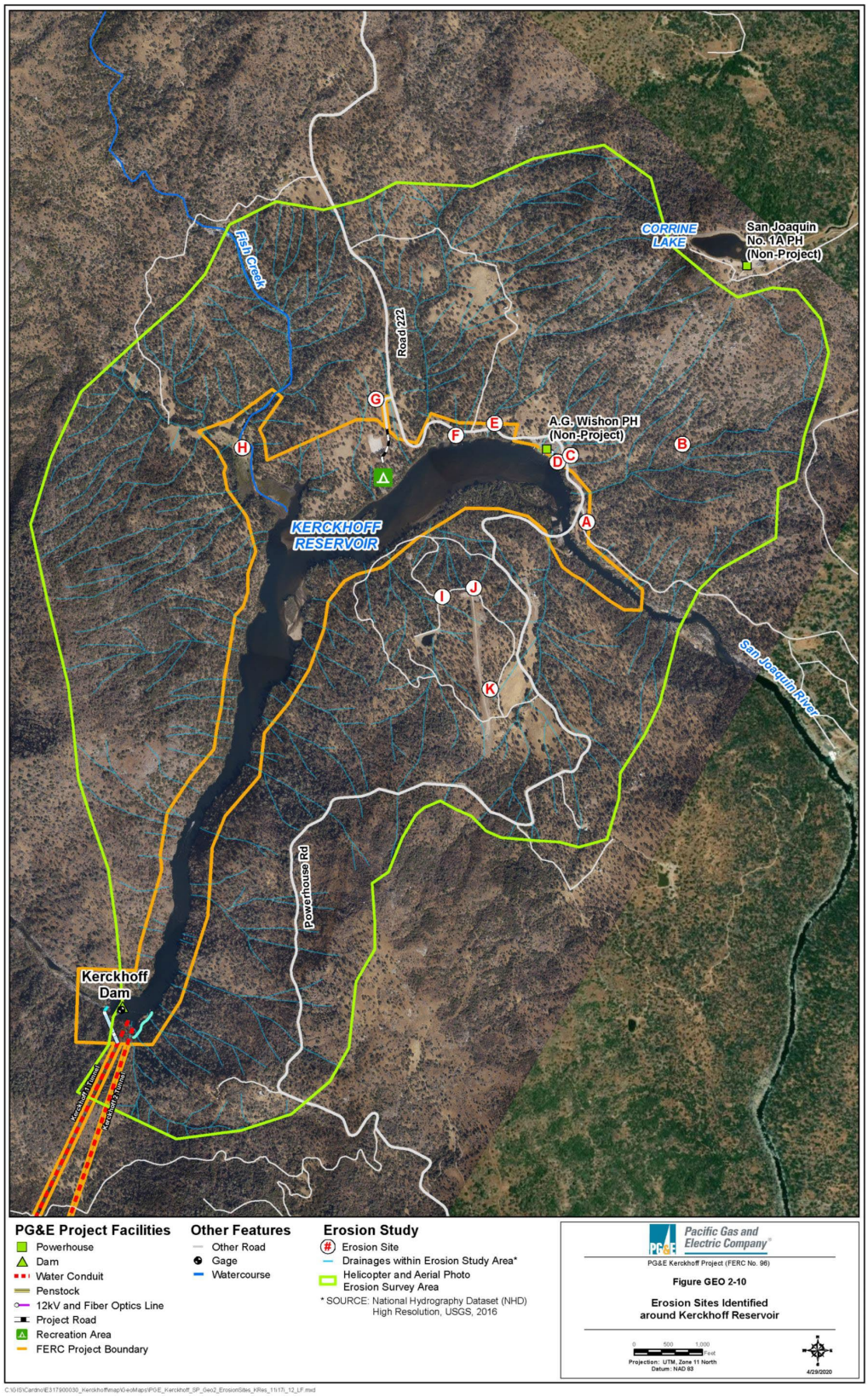

Figure A-4: Erosion sites identified around Kerckhoff Reservoir (PG&E 2019)