STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for

KEN WILLIS'
FIRE MOUNTAIN LODGE HYDROELECTRIC PROJECT

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 1992

SOURCE: Fern Springs Creek

COUNTY: Tehama

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

Draft released for public comment on **December 6, 2012**

Comments due by 12:00 PM (NOON) on January 11, 2013, to:

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State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000
or
by email to mlobo@waterboards.ca.gov

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BY THE EXECUTIVE DIRECTOR:

I. Background

Ken Willis (Applicant or Licensee) applied to the Federal Energy Regulatory Commission (FERC or Commission) for a new minor license for the existing Fire Mountain Lodge Hydroelectric Project (Project), FERC Project No. 1992. The license expired on April 30, 2010, and the Project currently operates under annual licenses until a new license is issued by FERC. A Clean Water Act, Section 401 water quality certification (certification) issued by the State Water Resources Control Board (State Water Board) is required before the Commission can issue a new license for the Project.

II. Project Description

Ken Willis owns and operates the Project, which is located in Tehama County within the Deer Creek Watershed near Highway 36. Maps of the Project are included as Attachment A of this certification. The Project impounds water that originates from an Unnamed Spring locally known as "Fern Springs" (Fern Springs) and a second Unnamed Spring (Unnamed Spring). The Project dam and reservoir are located on 1.03 acres of United States Forest Service (USFS) land in Lassen Volcanic National Forest and on 0.52 acre of private land owned by Collins Pine Company. The Project is located near Fire Mountain Lodge, a private resort that is located in the town of Mill Creek, south of Lassen Volcanic National Park, northwest of Plumas National Forest and west of Lake Almanor.

The existing Project consists of: (1) a 265-foot long earth and concrete filled dam; (2) a 0.8-acre reservoir; (3) a 38-inch intake tower; (4) a 1,540-foot long penstock; (5) a powerhouse with an installed capacity of 60-kilowatts; (6) a 1,000-foot transmission line; and (7) appurtenant facilities. The power generated by the Project is used for commercial and residential purposes, solely for the owners of the Fire Mountain Lodge, a self-provider of electricity.

In the past, pipes for passing water through the dam and to the penstock became plugged and the dam overtopped, eroding the crest and partially washing out the dam. Overtopping and dam failure events led to uncontrolled flows and earthen dam material being carried to Fern Springs Creek below the reservoir. Sediment from these events can be transported down to Gurnsey Creek, a tributary to Deer Creek, which supports anadromous fish populations. The Licensee proposes to continue to operate the Project as it has historically been operated, with modifications and improvements to the dam and stabilization of the adjacent Project road. The modifications and improvements to the existing dam and installation of a concrete-lined open channel spillway are needed to prevent future dam breaches and protect against sediment releases.

The Licensee currently holds Water Rights License No. 4976 (Application No. 012096) issued by the State Water Board, Division of Water Rights for the diversion and use of water. License No. 4976 allows the license-holder to use up to, but not exceed, 3.0 cubic feet per second (cfs) of water from Fern Springs for power and domestic use year round.

Eight to ten months of the year the Project dam obstructs flows from Fern Springs and another Unnamed Spring for which the Licensee does not have a water right. This occurs when the pipes that pass water through the dam are intentionally plugged to fill the reservoir. This certification will include a condition to ensure that an amount of water equivalent to the natural flow from the Unnamed Spring shall flow into Fern Springs Creek year round. In an unobstructed system, water from the Unnamed Spring joins with water from Fern Springs, to flow into Fern Springs Creek. Fern Springs Creek is a tributary to Gurnsey Creek; Gurnsey Creek is a tributary to Deer Creek; and Deer Creek is a tributary to the Sacramento River.

Project Construction

Construction activities at the existing facilities involve the repair of the dam and outfall, and installation of an open channel spillway. Engineered fill will be used on the dam and the spillway, which will require that water be re-routed during construction. The spillway will be surfaced with concrete and grout. The spillway headwall will be placed near the reservoir's southeast high water mark. The spillway elevation will be approximately two feet below the large relief pipe, which is designed to relieve pressure from the dam, if necessary.

Construction will be restricted to the top of the dam and the backside of the dam (downstream-side) above the high water mark. Construction is proposed to occur when the water level is lowest, typically in September and October. An excavator equipped with a thumb attachment will be used to create the spillway ramp and add grouted rip rap to the spillway ramp. Construction activities will be confined to upland areas and areas previously disturbed.

Activities incorporated into the Project to minimize impacts from construction activities include:

- Placement of straw wattles, erosion control blankets or straw and tackifier in the area of ground disturbance to protect against erosion;
- Placement of silt fencing and mulch on all stockpiles prior to rainfall events;

- Mulch and seed (using native plant species) all bare ground disturbed beyond the dam structure, with mulch to be applied at a rate of two (2) tons per acre;
- Place stockpiles away from natural drainage courses;
- Place construction materials off-ground where possible;
- Place straw wattles or rock check dams in the existing ditch flowline to reduce runoff velocity;
- Ensure immediate cleanup of construction debris;
- Schedule prompt pick-up of debris containers;
- Remove all Project-related debris and materials; and
- Install an energy dissipater at all discharge points.

The following precautionary measure will be implemented as part of the Project:

- If any archaeological discoveries other than the historic hydroelectric power system (e.g., human skeletal remains, culturally modified lithic materials, structural features, or historic artifacts) are made during ground disturbing activities, all such activities shall stop within a 100-foot radius of the discovery, and a qualified archaeologist shall be contacted immediately to determine the nature of the find, evaluate its significance, and if necessary, suggest preservation or avoidance measures.

III. **Regulatory Authority**

Water Quality Certification

The Federal Clean Water Act (33 U.S.C. §§ 1251-1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Section 401 of the Clean Water Act (33 U.S.C. § 1251 (g)) requires federal agencies to "co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources."

Section 401 of the Clean Water Act (33 U.S.C. §1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the Project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to Section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act Section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the Project. The State Water Board has delegated the issuance of water quality certifications to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

The Licensee submitted an application for certification to the State Water Board on September 15, 2011. 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 on November 22, 2011. No comments on the notice were received. On August 16, 2012, the Licensee simultaneously withdrew and resubmitted its certification application.

Water Code section 13383 provides the State Water Board with authority to "establish monitoring, inspection, entry, reporting, and record keeping requirements… and [require] other information as may reasonably be required" for activities subject to certification under Section 401 of the Clean Water Act that involve a diversion of water for beneficial use. The State Water Board delegated this authority to the Deputy Director for Water Rights (Deputy Director), as provided for in State Water Board Resolution No. 2012-0029. In the *Redelegation of Authorities Pursuant to Resolution No. 2012-0029* memo issued by the Deputy Director on July 6, 2012, this authority is redelegated to the Assistant Deputy Directors of the Division of Water Rights.

Water Quality Control Plans

The California Regional Water Quality Control Boards (Regional Water Boards) adopt, and the State Water Board approves, water quality control plans (basin plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin, and water quality objectives designed to protect those uses pursuant to Section 303 of the Clean Water Act. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans and state and federal anti-degradation requirements constitute State water quality standards.

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted, and the State Water Board and the United States Environmental Protection Agency approved the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Sacramento-San Joaquin River Basin Plan). As specified in the Sacramento-San Joaquin River Basin Plan, the beneficial uses of any specifically identified water body generally apply to its tributary streams; therefore in this case, the beneficial uses designated for Deer Creek apply. The Sacramento-San Joaquin River Basin Plan identifies existing beneficial uses for Deer Creek as: municipal and domestic water supply; agriculture supply; water contact recreation and non-contact water recreation, including canoeing and rafting; warm freshwater habitat; cold freshwater habitat; cold water migration of aquatic organisms; wildlife habitat; and warm and cold spawning, reproduction, and/or early development.

California Environmental Quality Act

The State Water Board is the lead agency for the purpose of California Environmental Quality Act (CEQA) compliance. The State Water Board issued an Initial Study and proposed Mitigated Negative Declaration (IS/MND) for the Project on December 6, 2012. The Mitigation Monitoring and Reporting Plan (MMRP) (Attachment B) provides the mitigation measures that are required to reduce impacts to a less-than-significant level. Compliance with the measures in the MMRP is required as a condition of approval of this certification. The State Water Board will file a Notice of Determination with the State Clearinghouse within five days from the issuance of this certification.

All documents and other information that constitute the public record for this Project shall be maintained by the Division of Water Rights and shall be available for public review at the following address: State Water Board, Division of Water Rights, 1001 I Street, Sacramento, California 95814.

IV. Rationale and Findings

The existing Commission license for the Project does not contain any instream flow requirements for the channel downstream of the Project dam. The Project is located on a tributary to Deer Creek. The conditions required in this certification are needed to protect the beneficial uses of Deer Creek and the tributaries to Deer Creek affected by the Project. In general, protection of the instream beneficial uses identified in the Sacramento-San Joaquin River Basin Plan requires maintenance of adequate instream flows, as well as effluent limitations and other limitations for discharges of pollutants from point and non-point sources.

The collection of streamflow data, implementation of minimum streamflow requirements, and use of adaptive management to review and update streamflow requirements, if necessary, will protect the beneficial uses of Deer Creek and ensure that the amount of diversion does not exceed 3.0 cfs from Fern Springs. The requirement to provide bypass flows will maintain aquatic habitat connectivity in Fern Springs Creek between the Project dam and the confluence with Gurnsey Creek, and will protect the warm and cold freshwater habitat beneficial uses of Deer Creek and its tributaries. The requirement to monitor aquatic macroinvertebrates and conduct visual surveys of fish populations downstream of the Project dam will provide information regarding the status of the aquatic communities over the course of the new license term. The requirement to stabilize the Project road will reduce erosion and the potential release of sediment into surface water.

Implementation of the conditions in this water quality certification and mitigation measures identified in the MMRP (Attachment B) will ensure that measures are taken to protect water quality and to avoid the discharge of sediment and construction materials into surface water.

California Code of Regulations, title 23, section 3860 requires imposition of certain mandatory conditions for all certifications, which are included in this certification. In order to ensure that the Project operates to meet water quality standards as anticipated, and to ensure that the Project will continue to meet water quality standards and other appropriate requirements of state law over its lifetime, this certification imposes conditions regarding monitoring, enforcement, and potential future revisions.

State Water Board staff reviewed and considered the application for certification and associated submittals, the Sacramento-San Joaquin River Basin Plan, the existing water quality conditions, and Project-related controllable factors. The State Water Board finds that, with the conditions and limitations imposed under this certification, the proposed Project will be protective of the state water quality standards and other appropriate requirements of state law.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT KEN WILLIS' FIRE MOUNTAIN LODGE HYDROELECTRIC PROJECT will comply with Sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of State law, if the Licensee complies with the following terms and conditions during the Project activities certified herein.

1. Streamflow Requirements

(A) Collect Streamflow Data:
Within one month of license issuance, the Licensee shall measure, document, and submit to the Fishery Resource Agencies[1] and the State Water Board average monthly streamflow measurements (based on weekly measurements) reported in cfs for the locations identified below. A Parshall flume (or similar measuring device) shall be installed to measure streamflows, following approval of the design by the USFS. Streamflow measurements shall be collected at the following locations:

1. In the reach of each spring which feeds the Project reservoir (i.e., Fern Springs and the Unnamed Spring);

2. Below the Project dam to measure minimum streamflow releases into Fern Springs Creek;

3. Either within the Project penstock or at the point of diversion into the penstock; and

4. At the point of diversion upstream of the Project reservoir where water is diverted from Fern Springs for the Licensee's domestic use.

These flows shall be measured once per week and the measurements shall be averaged on a monthly basis for the two years following license issuance resulting in 24 averaged measurements at each of the locations listed above in Condition (1)(A)(1-4). If weekly flow measurements cannot be made for one month due to conditions beyond the control of the Licensee, such as lack of access or flow is frozen, the Licensee shall notify the Deputy Director in writing within seven days. This information shall be reported annually to the Fishery Resource Agencies and the State Water Board. The Deputy Director may require the collection of additional streamflow data based on the Licensee's submittals.

(B) Minimum Streamflow Requirements:

1. **In all years and at all times,** the amount of water matching the flow (in cfs) entering the Project reservoir from the Unnamed Spring shall be released into Fern Springs Creek; and

2. The Licensee shall release flows from Fern Springs or the Project reservoir into Fern Springs Creek (between the Project dam and Gurnsey Creek confluence) as follows:

[1] "Fishery Resource Agencies" refers to the National Marine Fisheries Service (NMFS), USFS, United States Fish and Wildlife Service (USFWS), and California Department of Fish and Game (DFG).

a. **In all years** (except those designated as "dry"[2] as defined in Condition (1)(B)(2)(b) below)**:** All flows that exceed the Licensee's prescribed water right of 3.0 cfs (Water Rights License No. 4976; Application No. 012096); or

b. **In dry years:** 1.0 cfs, to establish and maintain water connectivity between Fern Springs Creek at the Project dam and its confluence with Gurnsey Creek.

(C) Review and Adaptive Management for Minimum Streamflow Requirements: Following the two years of streamflow data collection required in section A of Condition 1 above, the Licensee shall meet and consult with the Fishery Resource Agencies and State Water Board staff to discuss the adequacy of the minimum flow releases required in section B(2)(b) to determine if any adjustments to the minimum streamflow requirements are needed.

If, based on the outcome of the consultation, the Fishery Resource Agencies and State Water Board staff recommend adjustments to the minimum streamflow, the Licensee shall submit any recommended flow modification(s) to the Deputy Director for review and approval. The Deputy Director may require modifications as part of the approval. Upon receiving all necessary regulatory approvals, the Licensee shall submit a request to the Commission to adjust the minimum streamflow requirements in the license. The Licensee shall implement the new minimum streamflow requirements upon Commission approval.

2. Within the first year after license issuance and every five years thereafter for the term of the new license and any annual licenses, the Licensee shall conduct aquatic biological monitoring (at a time of year agreed to by the Fishery Resource Agencies and the State Water Board) as follows:

(A) For benthic macroinvertebrates (BMI), the Licensee shall follow the State Water Board's Surface Water Ambient Monitoring Program's protocol (SWAMP) or other current protocol (if approved by the Deputy Director) for monitoring BMI in Fern Springs Creek below the Project dam.

(B) Conduct a direct visual observation survey of Fern Springs Creek, noting USFS aquatic special status species (e.g., cascade frogs) and trout. This work may be conducted concurrently with the BMI monitoring outlined in Section A of Condition 2 above. The Licensee shall confirm the current list of USFS aquatic special status species with the USFS prior to each five-year monitoring survey.

The Licensee shall provide the results of the aquatic biological monitoring and visual surveys to the Deputy Director within four months of completion of the field monitoring. The data shall also be provided in accordance with Condition 19.

3. To limit erosion and prevent sediment from entering Gurnsey Creek, the Licensee shall stabilize and maintain the Project road that crosses Gurnsey Creek and leads to the Project dam for all portions of the Project road on any lands. Within three months of license issuance, the Licensee shall consult with State Water Board staff and USFS to prepare a road stabilization and maintenance plan (Road Plan).

[2] Dry years are defined as years when flows from Fern Springs at the point of diversion upstream of the reservoir (see Condition 1(A)4 above) are less than 3.0 cfs.

The Road Plan shall describe the measures that will be taken to stabilize and maintain the Project road. The Road Plan shall be consistent with the USFS's Maintenance of Roads: Practice 2-22 in Attachment 1a to USFS's *Final §4(e) License Terms and Conditions and §10(a) Recommendation*. The Road Plan shall include measures to repair existing damage and minimize erosion from Project road. At a minimum, the Road Plan shall include disconnecting road sediment sources to Gurnsey creek and implementing erosion control measures, such as waterbars, filter strips, rolling dips, cross-drains, etc.

The draft Road Plan shall be provided to the USFS and State Water Board staff for review and comment within six months of license issuance. The Licensee shall provide a minimum of 30 days for the USFS and State Water Board staff to comment on the draft Road Plan. Within nine months of license issuance, the Licensee shall submit the Road Plan to the Deputy Director for review and approval. The Deputy Director shall be provided with 60 days for review and approval of the Road Plan. The Deputy Director may require modifications as part of the approval. Upon Deputy Director approval of the Road Plan, the plan and its implementation shall become a condition of this certification.

Weather permitting, within four months of Deputy Director approval of the Road Plan, the Licensee shall complete the road stabilization work. If weather prohibits the road stabilization work, the Licensee shall request a time extension from the Deputy Director and provide notification to the USFS. The Licensee shall report to the Deputy Director on the actions taken to stabilize the Project road within two months of road work completion.

Following completion of the initial road stabilization work, the Licensee shall perform ongoing maintenance of the Project road to limit erosion and prevent sediment from entering Gurnsey Creek. The Licensee shall perform the necessary stabilization or maintenance activities as needed, but no less than every five years for the term of the license and any annual extensions. The Licensee shall report on these road maintenance activities to the Deputy Director no less than every five years and whenever stabilization or maintenance activities are performed.

4. The Licensee shall ensure that all required bypass flows and diversion(s) are consistent with the provisions outlined in Water Rights License No. 4976 (Application No. 012096) throughout the term of the new license and any annual extensions.

5. The Licensee shall ensure that exclusion fencing is used to fence off aquatic habitats prior to any construction activities.

6. All best management practices described in the application for certification and supplemental information are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, the Licensee shall comply with all measures described in the application for certification and its supplements, and the attached MMRP.

7. Control measures for erosion, excessive sedimentations and turbidity shall be implemented and be in place at commencement of, during and after any ground clearing activities, excavation, or any other Project activities that could result in erosion or sediment discharges to surface waters. Erosion control blankets, liners with berms, and/or other erosion control measures shall be used for any stockpile of excavated material to control runoff resulting from precipitation, and prevent material from contacting or entering surface waters.

8. Project activities shall not cause an increase in turbidity downstream of the Project area greater than those identified in the Sacramento-San Joaquin River Basin Plan. Waters shall be free of changes in turbidity (due to Project activities) that cause nuisance or adversely affect beneficial uses. Increases in turbidity shall not exceed background levels (natural turbidity measured Nephelometric Turbidity Units [NTUs] prior to the start of Project activities) by more than the thresholds identified below and as outlined in the Sacramento-San Joaquin River Basin Plan:

Background Level or Natural Turbidity	**Downstream Turbidity (after starting construction)**
Less than 1 NTU	Total turbidity shall not exceed 2 NTU
Between 1 and 5 NTU	Increases shall not exceed 1 NTU
Between 5 and 50 NTU	Increases shall not exceed 20 percent
Between 50 and 100 NTU	Increases shall not exceed 10 NTUs
Greater than 100 NTU	Increases shall not exceed 10 percent

   Monitoring shall occur every 30 minutes during Project construction. If monitoring shows that turbidity exceeds the thresholds identified above, construction will cease and the violation will be reported immediately to the Deputy Director and the Executive Officer for the Central Valley Water Board (Executive Officer). Construction may not re-commence without the permission of the Deputy Director.

9. Construction material, debris, spoils, soil, silt, sand, bark, slash, sawdust, rubbish, steel, other organic or earthen material, or any other substances which could be hazardous to aquatic life resulting from Project related activities shall be prevented from entering surface waters. All construction debris and trash shall be contained and regularly removed from the work area to the staging area during construction activities. Upon completion, all Project-generated debris, building materials, excess material, waste, and trash shall be removed from all the Project sites for disposal at an authorized landfill.

10. All imported riprap, rocks, and gravels used for construction shall be pre-washed. All wash water shall be contained and disposed of in compliance with State and local laws, ordinances, and regulations.

11. No unset cement, concrete, grout, damaged concrete, concrete spoils, and wash water used to clean concrete surfaces shall contact or enter surface waters. No leachate from truck or grout mixer cleaning stations shall percolate into Project area soils. Cleaning of concrete trucks or grout mixers shall be performed at a designated concrete washout area within the staging site. Washout water shall be held in temporary pit or bermed area of sufficient volume to completely contain all liquid and waste concrete or grout generated during washout procedures. Hardened concrete or grout shall be disposed of at an authorized landfill, in compliance with State and local laws, ordinances and regulations.

12. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris and foreign matter. Any maintenance or refueling of vehicles or equipment occurring on-site will be done in a designated area with secondary containment, located away from drainage courses to prevent the runoff of stormwater and the runoff of spills. All equipment using gas, oil, hydraulic fluid or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors,

pumps, generator, etc.) and vehicles not in use shall be positioned over drip pans or other types of containment. Spill and containment equipment (e.g., oil spill booms, sorbent pads, etc.) shall be maintained onsite at all locations where such equipment is used or staged.

13. Onsite containment for storage of chemicals classified as hazardous shall be away from watercourses and include secondary containment and appropriate management as specified in California Code of Regulations, Title 27, Section 20320.

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

15. The Deputy Director and the Executive Officer shall be notified one week prior to the commencement of ground disturbing activities. Upon request, a construction schedule shall be provided to agency staff in order for staff to be present onsite, to answer any public inquiries during construction, and to document compliance with this certification. The Licensee must provide State Water Board staff access to Project sites to document compliance with this certification.

16. No construction shall commence until all necessary federal, state, and local approvals are obtained.

17. The Licensee must take all reasonable measures to protect the beneficial uses of waters of Deer Creek and its tributaries. This certification is contingent on compliance with applicable requirements of the Sacramento-San Joaquin River Basin Plan. If at any time an unauthorized discharge to surface waters (including rivers or streams) occurs, or monitoring indicates that the Project has or could be in violation of water quality objectives the associated Project activities shall cease immediately and the Deputy Director and Executive Officer shall be notified within 24 hours after the unauthorized discharge or water quality problem arises. Associated Project activities may not resume without approval from the Deputy Director.

18. 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.

19. Unless otherwise specified in this certification or at the request of the State Water Board, data and/or reports must be submitted electronically in a format accepted by the State Water Board to facilitate the incorporation of this information into public reports and the State Water Board's water quality database systems in compliance with California Water Code section 13167.

20. Any requirement in this certification that refers to an agency whose authorities and responsibilities are transferred or subsumed by another state or federal agency shall apply equally to the successor agency.

21. The State Water Board's approval authority includes the authority to withhold approval or to require modification of a proposal or plan prior to approval. The State Water Board may take enforcement action if the Licensee fails to provide or implement a required plan in a timely manner.

22. The State Water Board reserves the authority to add to or modify the conditions of this certification: (1) if monitoring results indicate that continued operation of the Project would violate water quality objectives or impair the beneficial uses of Deer Creek and its tributaries; (2) to coordinate the operations of this Project and other hydrologically connected water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water; (3) to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Section 303 of the Clean Water Act; or (4) to incorporate load allocations developed in a total maximum daily load developed by the Deputy Director or Executive Officer.

23. This certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to California Water Code section 13330 and California Code of Regulations, Title 23, division 3, chapter 28, article 6 (commencing with § 3867).

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

25. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Section 303 of the Clean Water Act.

26. Certification is conditioned upon total payment of any fee required under California Code of Regulations, Title 23, division 3, chapter 28, article 4.

27. This certification does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish & Game Code §§ 2050-2097) or the federal ESA (16 U.S.C. §§ 1531 - 1544). If a "take" will result from any act authorized under this certification or water rights held by the Licensee, the Licensee must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The Licensee is responsible for meeting all requirements of the applicable ESAs for the Project authorized under this certification.

28. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation is subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of Section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties,

processes 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.

29. In response to a suspected violation of any condition of this certification, the State 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.) The State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

30. The Licensee must submit any change to the Project, including Project operation that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the State Water Board for prior review and written approval. If such a change would also require submission to the Commission, the change must first be submitted and approved by the State Water Board. If the State Water Board is not notified of a significant change to the Project, it will be considered a violation of this certification.

31. 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 certification application was filed pursuant to Subsection 3855(b) of Article 4, Title 23 of the California Code of Regulations and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

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

DRAFT

Thomas Howard Date
Executive Director
State Water Resources Control Board

Attachment A: Figures 1 and 2 – Maps for Fire Mountain Lodge Hydroelectric Project (FERC Project No. 1992)

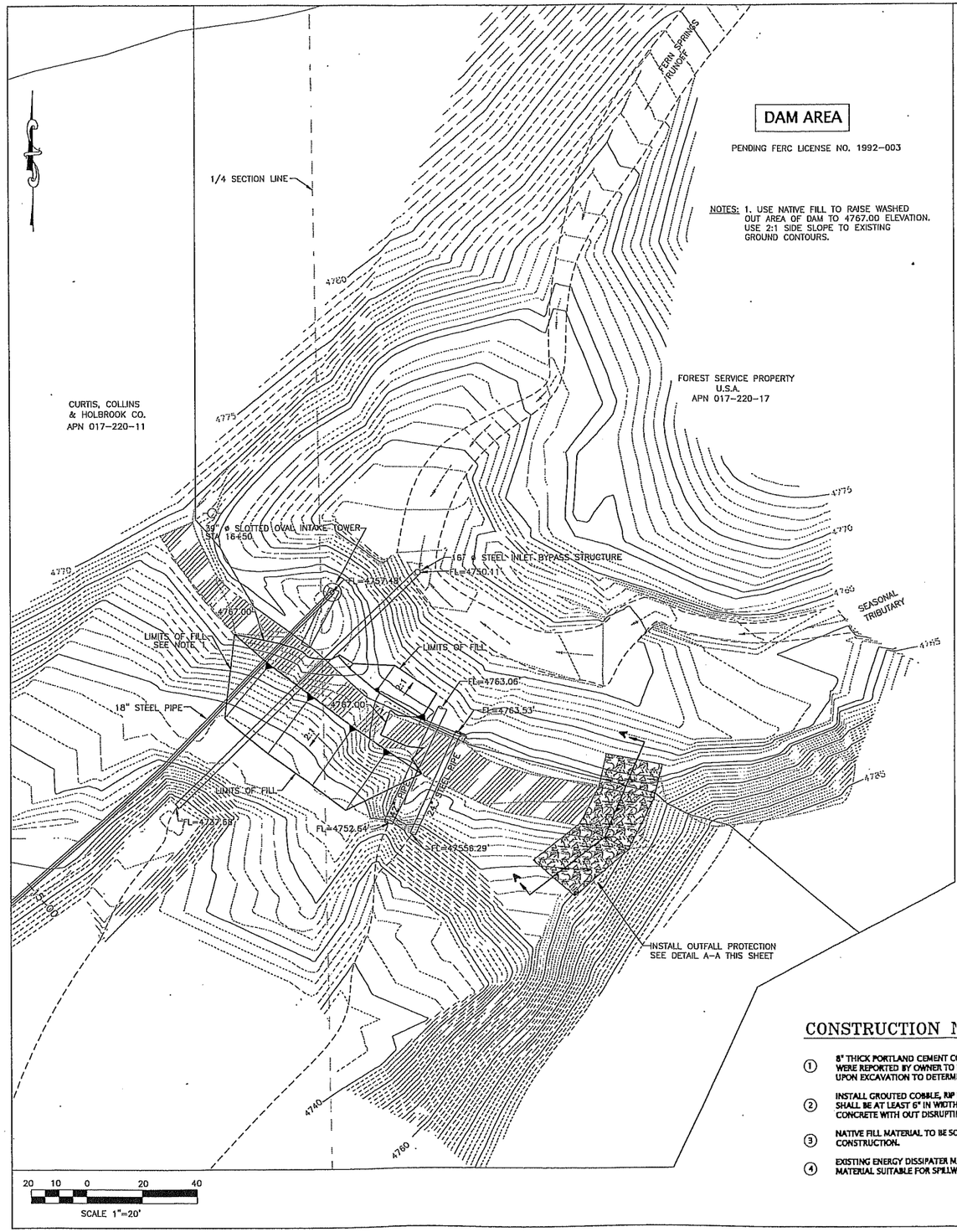
Attachment B: Mitigation Monitoring and Reporting Plan

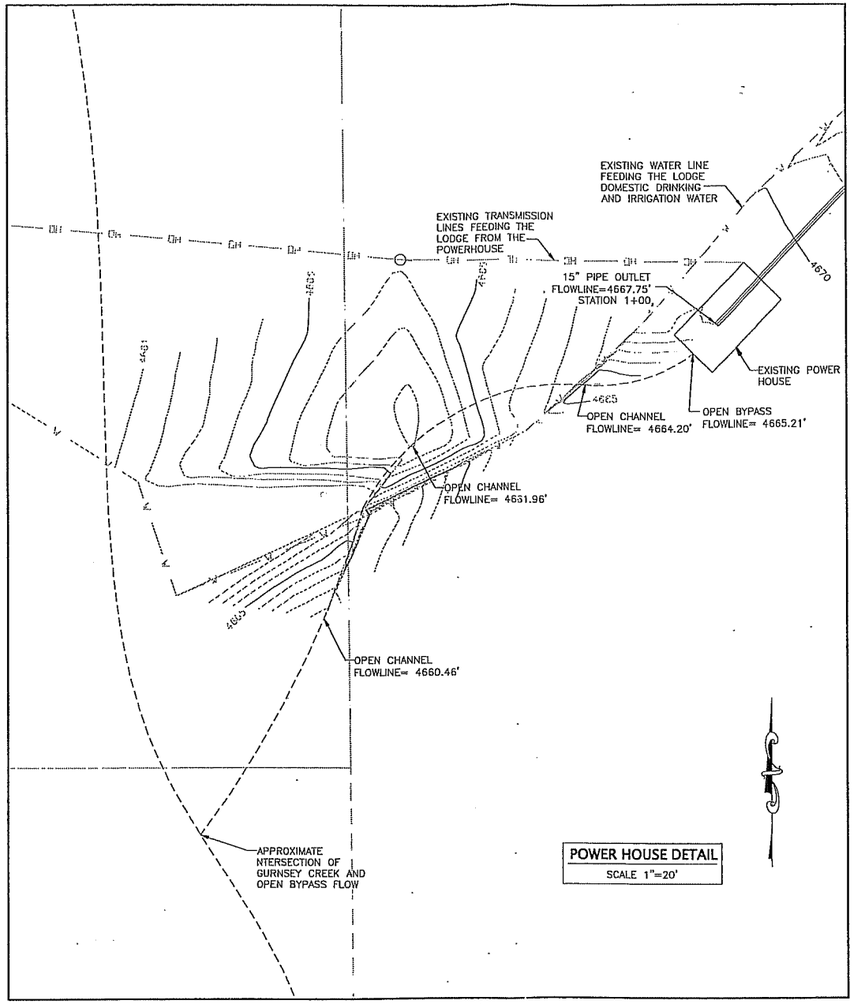
Attachment A
Figure 2
Map 2 (Exhibit F)

DAM AREA

PENDING FERC LICENSE NO. 1992-003

NOTES: 1. USE NATIVE FILL TO RAISE WASHED OUT AREA OF DAM TO 4767.00 ELEVATION. USE 2:1 SIDE SLOPE TO EXISTING GROUND CONTOURS.





POWER HOUSE DETAIL
SCALE 1"=20'

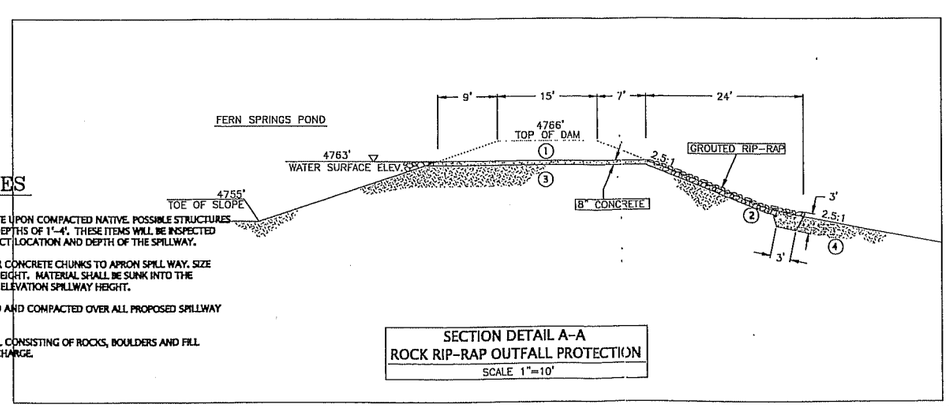
CONSTRUCTION NOTES

① 8" THICK PORTLAND CEMENT CONCRETE UPON COMPACTED NATIVE. POSSIBLE STRUCTURES WERE REPORTED BY OWNER TO BE AT DEPTHS OF 1'-4'. THESE ITEMS WILL BE INSPECTED UPON EXCAVATION TO DETERMINE EXACT LOCATION AND DEPTH OF THE SPILLWAY.

② INSTALL GROUTED COBBLE, RIP RAP, OR CONCRETE CHUNKS TO APRON SPILL WAY. SIZE SHALL BE AT LEAST 6" IN WIDTH AND HEIGHT. MATERIAL SHALL BE SUNK INTO THE CONCRETE WITH OUT DISRUPTING THE ELEVATION SPILLWAY HEIGHT.

③ NATIVE FILL MATERIAL TO BE SCARIFIED AND COMPACTED OVER ALL PROPOSED SPILLWAY CONSTRUCTION.

④ EXISTING ENERGY DISSIPATER MATERIAL CONSISTING OF ROCKS, BOULDERS AND FILL MATERIAL SUITABLE FOR SPILLWAY DISCHARGE.



SECTION DETAIL A-A
ROCK RIP-RAP OUTFALL PROTECTION
SCALE 1"=10'

11-29-2010

TRIGON
Civil Engineering, Surveying & Planning
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REGISTERED PROFESSIONAL ENGINEER JASON B. VYSE No. 67800 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

FIRE MOUNTAIN LODGE HYDROELECTRIC PROJECT
43500 HIGHWAY 36, MILL CREEK, CA 96061
FERC NO. 1992-003 EXHIBIT F

F

Attachment A
Figure 1
Map 1 (Exhibit G)

PROJECT AREA AND BOUNDRY

PORTION OF THE S.W. ¼ OF THE N.W. ¼ OF SECTION 10, T2BN R5E M.D.B.M.

PENDING FERC LICENSE NO. 1992-003

VICINITY MAP
NO SCALE

SITE
FERN SPRINGS
FIRE MOUNTAIN LODGE
STATE HWY 36 & 89
GURNSEY CREEK

FERN SPRINGS
FERN SPRINGS POND
S 00°59'09" E
1343.67'

U.S.A.
APN 017-220-10

CURTIS, COLLINS & HOLBROOK CO.
APN 017-220-11

U.S.A.
APN 017-220-17

TO MINERAL
GURNSEY CREEK

S9 | S10
N ¼ CORNER
T2BN R5E MDB&M
N=1995136.679
E=6724943.493

S 00°13'05" E
1335.86'

NW ¼ CORNER S10
T2BN R5E MDB&M
N=1995138.113
E=6726252.473

N 89°56'14" E
1308.98'

S 00°36'11" E
1339.70'

PROFILE CENTERLINE OF PIPE
15" PIPE
18" PIPE

KEN WILLIS
APN 017-220-14

STATE HIGHWAY 36 & 89

Δ = 17°03'56"
R = 2040.00'
L = 607.62'

CENTERLINE
40'
80'
RIGHT OF WAY LINE

EXISTING STRUCTURES

N 00°36'11" W
513.00'

GENERATOR HOUSE
STA 1+00

TAILWATER DITCH

N 89°56'14" E
660.35'

CURTIS, COLLINS & HOLBROOK CO.
APN 017-220-13

N 00°13'05" W
1335.86'

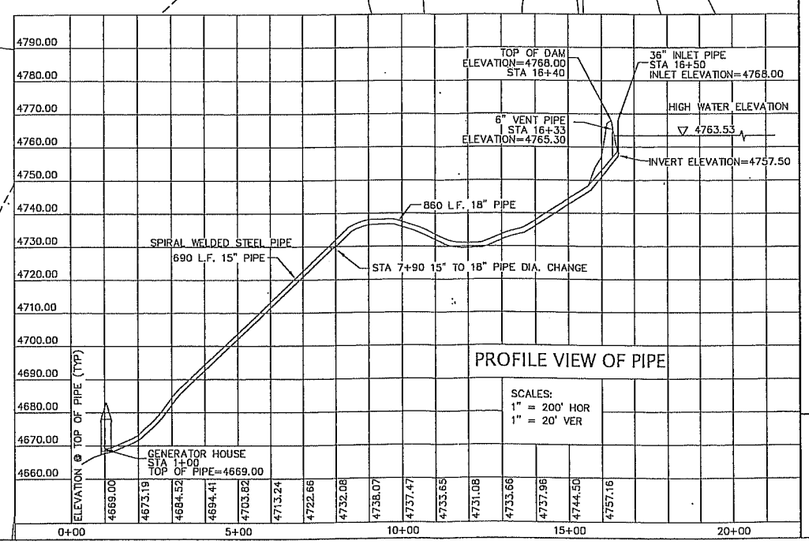
N 00°36'11" W
1339.74'

TO CHESTER

C—C
W ¼ CORNER
T2BN R5E MDB&M
N=1993798.451
E=6726266.575

REFERENCE COORDINATE METADATA
North American Vertical Datum 88 (NAVD 88)
State Plane ZONE 1
US SURVEY FOOT

100 50 0 100
SCALE 1"=100'



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FIRE MOUNTAIN LODGE HYDROELECTRIC PROJECT
43500 HIGHWAY 36, MILL CREEK, CA 96061
FERC NO. 1992-003 EXHIBIT G

G

Attachment B
Mitigation Monitoring and Reporting Plan
Water Quality Certification for Federal Energy Regulatory Commission Project No. 1992
Fire Mountain Lodge Hydroelectric Project

The State Water Resources Control Board (State Water Board) is responsible for issuing water quality certification (certification) for Fire Mountain Lodge Hydroelectric Project (Project). The State Water Board is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA) (Public Resources Code § 21000, et seq) for the Project. This Mitigation Monitoring and Reporting Plan (MMRP) has been prepared in conformance with Public Resources Code section 21081.6 and was developed based on the analysis of potentially significant Project impacts in the Initial Study/proposed Mitigated Negative Declaration (IS/proposed MND) developed for the issuance of this certification.

The MMRP lists mitigation measures recommended in the IS/proposed MND and specifies implementation and monitoring responsibilities. Pursuant to Public Resources Code section 21081.6, subdivision (b), each of the mitigation measures identified in the MMRP is included as enforceable measures in the certification. Implementation of mitigation measures is the sole responsibility of the Licensee.

CEQA prohibits an agency from approving a project for which significant effects have been identified, unless the agency can make one or more of a set of three findings set forth in Public Resources Code section 21081, subdivision (a):

(1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. (See also Cal. Code Regs., tit. 14, § 15091.)

The mitigation measures shown in the table below together with the conditions in the certification mitigate or avoid all significant impacts of the Project identified in the IS/proposed MND. Changes or alterations have been required in, or incorporated into the Project which mitigate or avoid the significant effects on the environment.

Fire Mountain Lodge Hydroelectric Project Water Quality Certification
Federal Energy Regulatory Commission Project No. 1992
Mitigation Monitoring and Reporting Plan Matrix

Mitigation Measure	Implementation	Timing	Monitoring
Biological Resources			
Mitigation Measure 1: The Licensee shall ensure that exclusion fencing be used to fence off aquatic habitats prior to any construction activities.	Licensee or designated agent	During construction activities	The Licensee or designated agent shall submit a report that describes its compliance with the measures identified in this MMRP to the Deputy Director for Water Rights (Deputy Director) within 30 days of Project construction completion.
Mitigation Measure 2: The Licensee shall ensure that a qualified biologist(s) performs a pre-construction survey for special status plant and animal species within the immediate vicinity of the construction area(s) not more than seven days prior to initiation of ground disturbing construction activities. The qualified biologist(s) may recommend protective species-specific measures. The Licensee shall ensure that any species-specific measures recommended by the qualified biologist(s) are implemented.	Licensee or designated agent	During construction activities	The Licensee or designated agent shall submit a report that describes its compliance with the measures identified in this MMRP to the Deputy Director within 30 days of Project construction completion. The report shall include any species-specific measures recommended by the qualified biologist.
Mitigation Measure 3: The Licensee shall ensure that a qualified biologist conducts a pre-construction survey for nesting birds if Project construction is to begin during the avian breeding season (February 1 through August 15). The Licensee shall ensure that a qualified biologist conducts a pre-construction survey not more than seven days prior to initiation of ground disturbing construction activities to confirm the presence or absence of active bird nests for special status species in the Project area. If active nests are encountered, the Licensee shall ensure that species-specific measures designed to protect reproductive success be prepared by a qualified biologist, and that these measures are implemented to prevent abandonment of the active nest(s). The Licensee shall ensure that the perimeter of any nest-setback zone(s), as determined by the qualified biologist, be fenced or adequately demarcated with staked flagging, and construction personnel and equipment be restricted from the area.	Licensee or designated agent	If construction activities occur during the nesting season (February 1 through August 15)	The Licensee or designated agent shall submit a report that describes its compliance with the measures identified in this MMRP to the Deputy Director within 30 days of Project construction completion.