Mitigated Negative Declaration

State Clearinghouse No. 2012122009
September 2013

Fire Mountain Lodge Hydroelectric Project Relicensing and Dam Safety Repairs

Federal Energy Regulatory Commission Project No. 1992
Tehama County

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Lead Agency: State Water Resources Control Board
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The Mitigated Negative Declaration and water quality certification are located on the Division of Water Rights' website at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/ceqa_projects.shtml. If you are unable to access the documents online, you may request a copy by contacting Michelle Lobo.

Introduction

The Fire Mountain Lodge Hydroelectric Project Relicensing and Dam Safety Repairs (Project) requires a Clean Water Act Section 401 water quality certification (certification) from the State Water Resources Control Board (State Water Board). Issuance of a certification by the State Water Board is a discretionary action under the California Environmental Quality Act (CEQA). (Pub. Resources Code §21000 et. seq.) Accordingly, the State Water Board is required to comply with CEQA before considering issuance of a certification. In the CEQA analysis of an existing hydroelectric project, reauthorizing the Project would not yield many environmental impacts because most of the impacts have already occurred, and are not considered significant when compared to the current conditions.

Project Description

The Project is comprised of two elements: (1) relicensing the existing Fire Mountain Lodge Hydroelectric Project (also referred to as Federal Energy Regulatory Commission [FERC] Project No. 1992); and (2) dam safety repairs required by FERC's Division of Dam Safety and Inspections. The Project is owned and operated by Ken Willis (Applicant or Licensee). The Applicant diverts water for domestic use and power generation. The Fire Mountain Lodge Hydroelectric Project's minor FERC license expired on April 30, 2010. The Fire Mountain Lodge Hydroelectric Project currently operates under annual licenses as the Project undergoes relicensing by FERC. The Applicant proposes to continue to operate the Fire Mountain Lodge Hydroelectric Project as it has been operated historically, with proposed modifications and improvements to the dam. The Applicant will be required to comply with the conditions of the certification for the Project, which includes stabilization of the adjacent Project road, installation of flow measurement devices, and minimum streamflow requirements.

The existing Fire Mountain Lodge Hydroelectric Project consists of: (1) a 265-foot long by 29-foot high 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 long transmission line; and (7) appurtenant facilities. The power generated by the Fire Mountain Lodge Hydroelectric Project is used for commercial and residential purposes, solely for the owners of the Fire Mountain Lodge, a self-provider of electricity.

The Project is located on an unnamed creek (locally referred to as "Fern Springs Creek"), which is a tributary to Deer Creek, in the Deer Creek Watershed of Tehama County, California. The dam and reservoir are situated northeast of Fire Mountain Lodge, on 1.03 acres of United States Forest Service land within Lassen National Forest and on 0.52 acre of private land owned by the Collins Pine Company.

The Applicant 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 of water from Fern Springs for power and domestic use year round.

The Fire Mountain Lodge Hydroelectric Project impounds water that originates from "Fern Springs" (Fern Springs) and a second unnamed spring (Unnamed Spring). For 8-10 months of the year the dam obstructs flows from the Unnamed Spring for which the Licensee does not have a water right. This obstruction of flow from the Unnamed Spring occurs when the pipes that pass water through the dam are intentionally plugged to fill the reservoir. 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.

In the past, the pipes (used to pass 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 have led to uncontrolled flows and earthen dam material being carried to Fern Springs Creek below the dam. Sediment from these events can be transported down to Gurnsey Creek, a tributary to Deer Creek, which supports anadromous fish populations.

Modifications and improvements to the existing dam and spillway are needed to prevent future dam breaches and protect against sediment releases. Construction on the existing dam would involve repairs to the dam and outfall, and installation of an open channel spillway. Engineered fill would be used on the dam and proposed spillway. Water would be re-routed during construction. The proposed spillway would be surfaced with concrete and grout. The spillway headwall would be placed near the southeast high water mark of the reservoir. The elevation of the top of the dam is 4,768 feet and the spillway elevation is designed to be 4,763.53 feet.

Construction on the dam will be restricted to the top 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.

Best Management Practices (BMPs) 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(s) 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 tons per acre;
- Place stockpiles away from natural drainage courses;
- Place construction materials off of the ground, where possible;
- Place straw wattles or rock check dams in the existing ditch flowline to reduce runoff velocity;
- Ensure immediate cleanup and removal of Project-related debris and materials;
- Schedule prompt pick-up of debris containers; 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 the 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.

Findings and Determination

The State Water Board is the lead agency under CEQA for issuance of the certification for the Project. The current environmental setting constitutes the baseline physical conditions against which the State Water Board would determine whether an impact is significant under CEQA.

The State Water Board, as lead agency under CEQA, has determined that with implementation of the proposed mitigation measures, no significant environmental effects will occur as a result of this Project. Mitigation measures will avoid or mitigate adverse effects to a less than significant level. This determination is based on the Initial Study and Environmental Checklist and the following findings:

1. The Project includes all the activities and protective measures identified in the Initial Study.
2. There is no substantial evidence that any aspect of the Project, individually or cumulatively, may cause a significant effect on the environment.
3. The Project will not have environmental effects that will cause substantial adverse impacts on human beings, either directly or indirectly.
4. The Project will not degrade the quality of the environment, significantly reduce or degrade fish or wildlife habitat, decrease a wildlife population below self-sustaining levels, reduce the number or restrict the range of a special status species, or significantly affect important examples of California history or prehistory.
5. This Mitigated Negative Declaration reflects the independent judgment of the lead agency.

Mitigation Measures

The Applicant has agreed to include the following mitigation measures in the Project to reduce impacts to a less than significant level.

Mitigation Measure 1: The Licensee shall ensure that exclusion fencing be used to fence off aquatic habitats prior to any construction activities.

Mitigation Measure 2: The Licensee shall ensure that a qualified biologist performs a pre-construction survey for special status plant and animal species within the immediate vicinity of the construction areas not more than seven days prior to initiation of ground disturbing construction activities. The qualified biologist may recommend protective species-specific measures. The Licensee shall ensure that any species-specific measures recommended by the qualified biologist are implemented.

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 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.

Mitigation Measure 4: The Licensee shall vegetate all disturbed soil with native species or seed with native grasses. If vegetation cannot be reestablished before expected rainfall, mulching, erosion control fabric, or other sediment control measures shall be implemented to prevent delivery of sediment to the drainages.

Mitigation Measure 5: All materials required to implement BMPs and mitigation measures shall be on-site and ready for timely deployment before the start of construction activities.

Mitigation Measure 6: The Licensee shall conduct construction activities when flows are lowest, typically during September and October.

Mitigation Measure 7: The Licensee shall install all erosion control measures prior to construction periods and preferably by October 15. The Licensee shall maintain all erosion control measures throughout the construction period, including installation of flow measurement devices (e.g., weirs, flumes, etc.). Straw rolls and silt fences shall be placed around the proposed flow measurement device location during installation to prevent sediment from entering waterways. If needed, clean rock slope protection shall be installed in the streambed to reduce erosion. The Licensee shall remove temporary erosion and sediment control measures after disturbed areas are stabilized and work is completed.

Mitigation Measure 8: All equipment shall be maintained in good working order and spill kits shall be on hand once equipment is onsite and throughout construction and cleanup activities. Fueling of equipment shall occur away from water courses, in bermed, lined areas to prevent potential spills from infiltrating groundwater and surface water. Hazardous materials shall be properly stored away from creeks in the Project area.

Mitigation Measure 9: For cast in place structures, the area to receive wet concrete shall be completely bermed and isolated to contain any and all wet concrete, even if water is not present. The berm may be made of sandbags or soil, but the berm shall be lined with plastic to prevent the seepage of material outside the berm.

Mitigation Measure 10: Any surplus soil or construction material will be taken to an appropriate disposal site in accordance with applicable state and federal regulations, and shall not be deposited in or near any creeks.

Mitigation Measure 11: The work area within the streambed and riparian zone shall be limited to the minimum area needed for installation of the flow measurement device(s).

Mitigation Measure 12: Use of soil stabilization materials that contain synthetic materials (e.g., plastic, nylon, etc.) within waters of the United States or waters of the State is prohibited.

Mitigation Measure 13: Use of erosion control materials that contain synthetic (e.g., plastic or nylon) netting for permanent erosion control (i.e., to be left in place for longer than two years from the date of installation) is prohibited. Photodegradable synthetic products are not considered biodegradable and shall not be used. The Licensee shall remove any remaining synthetic netting or material no later than two years from the date of installation.

Mitigation Measure 14: If erosion control netting or other products entrap or harm wildlife, the Licensee shall immediately remove the netting or product and replace it with wildlife-friendly biodegradable products. Similar erosion control netting or products shall also be removed and replaced elsewhere in the Project area within five days.

Mitigation Measure 15: The Licensee shall prevent any debris, soil, silt, cement, oil, or other such foreign substance from entering into or being placed where it may be washed by rainfall runoff into adjacent waters. The Licensee may divert runoff to a settling area away from disturbed soil to prevent sediment from entering surface waters during and after construction, or filter runoff from disturbed areas to prevent sediment from entering surface waters during and after construction.

Mitigation Measure 16: The Licensee shall enclose and cover exposed stockpiles of dirt or other loose, granular construction materials (e.g., gravel from pathway) that could contribute sediment load in waterways.

Mitigation Measure 17: The Licensee shall remove all temporary fill and restore all temporarily affected streambed and riparian zones to pre-construction contours prior to Project completion.

APPROVED:

SEP 2 6 2013

Barbara Evoy — Date
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State Water Resources Control Board