



Idaho Department of Environmental Quality Final §401 Water Quality Certification

January 5, 2021

Permit Application Number: Big Creek Hydroelectric Project (FERC Project No. 10721)

Applicant/Authorized Agent: Idaho Aviation Foundation/Big Creek Lodge

Project Location: The Big Creek Project is located on McCorkle Creek about 24 miles northeast of the town of Yellow Pine, Valley County, Idaho.

Receiving Water Body: McCorkle Creek

Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended; 33 U.S.C. Section 1341(a)(1); and Idaho Code §§ 39-101 et seq. and 39-3601 et seq., the Idaho Department of Environmental Quality (DEQ) has authority to review activities receiving Section 404 dredge and fill permits and issue water quality certification decisions.

Based upon its review of the joint application for permit, received on July 14, 2020, DEQ certifies that if the permittee complies with the terms and conditions imposed by the permit along with the conditions set forth in this water quality certification, then there is reasonable assurance the activity will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the "Clean Water Act," the "Idaho Water Quality Standards" (WQS) (IDAPA 58.01.02), and other appropriate water quality requirements of state law.

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations, or permits.

Project Description

The purpose of the Big Creek Project is to relicense the generation of hydroelectric power in order to provide a source of energy to Big Creek Lodge. Idaho Aviation Federation (IAF) is proposing no changes to their current project facilities or operation. IAF operates the project continually in a run-of-river mode. This project would allow IAF to continue generating electricity at its current state for the term of the license, making electric power available to IAF's Big Creek Lodge which is located adjacent to the project. The lodge has an isolated electric system, and the only other power supply is a back-up propane generator. Most of the large appliances used by the lodge are powered directly by propane, so the project supplies power to run other electrical systems such as lighting, pumps, and small appliances.

The hydro power project operates seasonally from mid-May through October and has an average annual generation of 14.2 megawatt-hours (MWh). The project includes a 2-foot-wide by 7-foot-

long diversion structure with a check gate to divert flow into a 1,321-foot-long, 4-inch-diameter PVC penstock with a screened inlet. The penstock is buried for the entire distance except for approximately the last 15 feet. Water is conveyed to a Pelton turbine with an installed capacity of 5 kilowatts (kW) located in a 12-foot-wide, 14-foot-long, log cabin generator house. The Pelton turbine drives an 8-kW Marathon Magnaplug generator. Water flows through an 18-inch-diameter tailrace pipe that discharges into McCorkle Creek. A 257-foot-long transmission line is buried in a 2-inch-diameter PVC conduit that connects the generating facility to IAF's Big Creek Lodge.

Antidegradation Review

The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

- Tier I Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body, and the level of water quality necessary to protect those existing uses, will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier I review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).
- Tier II Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
- Tier III Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

Pollutants of Concern

There are no pollutants of concern for this project. The primary issues associated with relicensing the project are minimum flows in the bypassed reach. IAF operates the project continually in a run-of-river mode until the end of their operating season (mid-May through October). During operation, from mid-May through October, IAF will maintain a minimum flow in the bypassed reach by diverting no more than 50 percent of inflow as measured at the diversion structure, up to a maximum diversion of 0.75 cubic feet per second (cfs). Although the current license allows IAF to divert up to 0.75 cfs for power generation, the maximum hydraulic capacity of the turbine is 0.5 cfs; therefore, the project does not divert more than 0.5 cfs. The minimum hydraulic capacity of the turbine is about 0.1 cfs. Additionally, IAF will continue to visually check the staff gage near the diversion structure and the penstock flow meter in the

powerhouse to monitor compliance with minimum flows. Because this is a small run-of-river operation with minimum flows being maintained water quality degradation is not expected to occur.

Receiving Water Body Level of Protection

This project is located on McCorkle Creek, a tributary to Big Creek, within the Lower Middle Fork Salmon Subbasin assessment unit (AU) 17060206SL003_02 (Big Creek 1st and 2nd order tributaries). This AU has the following designated beneficial uses: salmonid spawning, cold water aquatic life, primary contact recreation, and domestic water supply. In addition to these uses, all waters of the state are protected for agricultural and industrial water supply, wildlife habitat, and aesthetics (IDAPA 58.01.02.100).

According to DEQ's (2018/2020) Integrated Report, this receiving water body AU is fully supporting its assessed uses (IDAPA 58.01.02.052.05.a). As such, DEQ will provide Tier II protection in addition to Tier I for this water body (IDAPA 58.01.02.051.02; 58.01.02.051.01).

Protection and Maintenance of Existing Uses (Tier I Protection)

A Tier I review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the Clean Water Act, and requires demonstration that existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. The numeric and narrative criteria in the WQS are set at levels that ensure protection of existing and designated beneficial uses.

The permit application ensures that the level of water quality necessary to protect both existing and designated uses will be maintained and protected in compliance with the Tier I provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

High-Quality Waters (Tier II Protection)

The McCorkle Creek, a tributary to Big Creek, is considered high quality for both cold water aquatic life and primary contact recreation. As such, the water quality relevant to these uses must be maintained and protected, unless a lowering of water quality is deemed necessary to accommodate important social or economic development.

To determine whether degradation will occur, DEQ must evaluate how the permit issuance will affect water quality for each pollutant that is relevant to both cold water aquatic life and primary contact recreation uses of the McCorkle Creek, a tributary to Big Creek, (IDAPA 58.01.02.052.06). There are no pollutants of concern for this project. As such, the project complies with IDAPA 58.01.02.051.02 and IDAPA 58.01.02.052.06.

The conditions of this certification ensure that degradation to the Big Creek 1st and 2nd order tributaries AU or the McCorkle Creek, a tributary to Big Creek, will not occur. Therefore, DEQ concludes that this project complies with the Tier II provisions of Idaho's WQS (IDAPA 58.01.02.051.02; 58.01.02.052.06 and 58.01.02.052.08).

Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law

General Conditions

1. This certification is conditioned upon the requirement that any modification (e.g., change in infrastructure, minimum flows, and or design) of the permitted activity shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401. Such modifications may not be implemented until DEQ has determined whether additional certification is necessary.
2. DEQ reserves the right to modify, amend, or revoke this certification if DEQ determines that, due to changes in relevant circumstances—including without limitation, changes in project activities, the characteristics of the receiving water bodies, or state WQS, there is no longer reasonable assurance of compliance with WQS or other appropriate requirements of state law.
3. If ownership of the project changes, the certification holder shall notify DEQ, in writing, upon transferring this ownership or responsibility for compliance with these conditions to another person or party. The new owner/operator shall request, in writing, the transfer of this water quality certification to his/her name.
4. A copy of this certification must be kept on the job site and readily available for review by any contractor working on the project and any federal, state, or local government personnel.
5. The applicant shall provide access to the project site upon request by DEQ personnel for site inspections, monitoring, and/or to ensure that conditions of this certification are being met.

Right to Appeal Final Certification

The final Section 401 Water Quality Certification may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the “Rules of Administrative Procedure before the Board of Environmental Quality” (IDAPA 58.01.23), within 35 days of the date of the final certification.

Questions or comments regarding the actions taken in this certification should be directed to Kati Carberry, DEQ Boise Regional Office, at (208) 373-0434 or kati.carberry@deq.idaho.gov.



for

Aaron Scheff
Regional Administrator
Boise Regional Office