FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project Nos. 2785-094, 10808-060, 10809-043, and 10810-048
— Michigan
Sanford, Edenville, Secord, and Smallwood Hydroelectric Projects
Boyce Hydro Power, LLC

July 19, 2018

Mr. Kyle Kruger
Senior Fisheries Biologist
Michigan Department of Natural Resources
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Subject: Request for Clarification Regarding Reservoir Water Temperature Measurement Protocol.

Dear Mr. Kruger:

We are in receipt of your letter filed May 1, 2018, in which you request the Commission clarify how we expect Boyce Hydro Power, LLC (licensee) to measure the reservoir surface temperature in relation to the end of winter drawdown benchmark for its Sanford Project No. 2785,[1] Edenville Project No. 10808,[2] Secord Project No. 10809,[3] and Smallwood Project No. 10810.[4]

Background

Article 411 of the Sanford Project license, as modified, requires the licensee to operate the project such that the reservoir does not fluctuate more than 0.4 foot below and

[1] *Wolverine Power Corporation*, 41 FERC ¶ 62,192 (1987).

[2] *Wolverine Power Corporation*, 85 FERC ¶ 61,063 (1998).

[3] *Wolverine Power Corporation*, 85 FERC ¶ 61,064 (1998).

[4] *Wolverine Power Corporation*, 85 FERC ¶ 61,065 (1998).

0.3 foot above the normal pool elevation of 630.8 feet National Geodetic Vertical Datum except during the winter drawdown.[5] The winter drawdown begins after December 15 and the licensee must return the impoundment to the normal elevation prior to the reservoir surface water temperature reaching 39 degrees Fahrenheit in the spring. The Edenville, Secord, and Smallwood projects have very similar requirements, the only difference being the normal and minimum winter drawdown pool elevations.

In late March 2018, the Commission received a complaint alleging that the Sanford Project reservoir was still at its winter drawdown elevations despite the rising water temperature. Additionally, on April 3, 2018, you copied the Secretary of the Commission on a letter to the licensee stating you had received several complaints about low reservoir elevations at the four projects referenced above, and requesting information to investigate the issue. Subsequently, we issued a letter on April 10, 2018 requesting both reservoir elevation and water temperature data from the licensee. The licensee filed the requested information with the Commission on April 13, 2018. We reviewed this filing and are issuing a letter detailing our response concurrently with this letter.

The licensee responded to your April 3, 2018 letter on April 9, 2018, stating it would provide its water temperature data in a later document. You responded to the licensee's letter on April 11, 2018, to which the licensee responded on April 30, 2018. In these documents, you argue the water temperature benchmark for returning the reservoirs to the normal elevation should be measured in the tailrace, while the licensee argues it should be measured at a location approximately 4 feet below the reservoir surface at the dam, as it has done historically.

Clarification Request

Your May 1, 2018 filing requests clarification of the appropriate metric to determine the reservoir refill requirements and how it matches with the water temperature benchmark outlined in license Article 411 for the Sanford Project, license Article 404 for the Edenville Project, license Article 403 for the Secord Project, and license Article 403 for the Smallwood Project.

In your letter, you state the purpose of returning the reservoir to its normal elevation by the time the surface reaches 39 degrees Fahrenheit is for the benefit of northern pike and yellow perch spawning, which occurs at that temperature in shallow water habitat. You acknowledge that the licensee has been using its preferred water

[5] *Wolverine Power Corporation*, 85 FERC ¶ 61,066 (1998), and *Boyce Hydro Power, LLC*, 162 FERC ¶ 62,050 (2018).

temperature monitoring method of taking measurements at the dam 4 feet below the reservoir surface for many years, but state the method became problematic this year based on the number of public complaints. Furthermore, you argue that measuring water temperature in the tailrace would provide a representative value for water moving through the impoundments, and state the licensee should modify its methods for measuring water temperature for the above referenced requirement by measuring it in the tailrace.

Our Review

We agree that the purpose of requiring the licensee to return its reservoirs to the normal operating range by the time the surface temperature reaches 39 degrees Fahrenheit is for the benefit of fish spawning, primarily northern pike. Commission staff stated as much while discussing the justification for the requirement in the final environmental assessment (EA) issued August 14, 1998, for the licensing or amendment of the four projects.[6] We also agree that this spawning occurs primarily in shallow water habitat at the margins of the impoundment, and keeping the littoral zones of the impoundments dewatered while spawning begins would reduce spawning success and recruitment.

Nevertheless, we disagree with you on the method by which the water temperature should be measured. Water temperature at the surface would have the greatest influence on spawning activity in the shallow areas near the shore; and hence, the license requirement uses reservoir surface water temperature as the benchmark. Your alternative, measuring water temperature in the tailrace, would, as you state, provide a representative value for the upper 20 feet of the water column at the downstream end of each impoundment. However, we see no need for the licensee to modify its water temperature measurement protocols under this requirement at the present time as it provides a better representation of the surface water temperature.

[6] EA at 42.

If you have any questions, please contact Steven Sachs by telephone at 202-502-8666 or by email at Steven.Sachs@ferc.gov.

Sincerely,

Kelly Houff
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Division of Hydropower Administration
and Compliance

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