



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
LANSING



KEITH CREAGH
DIRECTOR

September 20, 2012

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**RE: BOYCE HYDRO REQUEST FOR NON-CAPACITY LICENSE
AMENDMENT FOR THE SANFORD PROJECT (FERC NO. 2785) ON
THE TITABAWASSEE RIVER, MICHIGAN**

Dear Ms. Bose,

The Michigan Department of Natural Resources (Department) has reviewed Boyce Hydro's submitted request for a non-capacity license amendment. In their filing, the licensee indicated their opinion that since they were not requesting any change in flows for the upgrade to turbine number 3, no consultation with the resource agencies was required and that the normal FERC notice process was an acceptable period of time for any comments to be provided to the Commission.

The Department adamantly disagrees with Boyce Hydro's position that no consultation was needed. As part of the multiple environmental assessment (MEA) conducted for the relicensing of the three upstream projects (Edenville FERC No 10808, Smallwood FERC No 10810, and Secord FERC No.10809), the Sanford Project was included based on the hydrologic connection between the four projects. As a result of the MEA, the Sanford Project license was amended to include minimum flows. This requirement for minimum flows was based on the Commission's balancing the environmental impacts versus the economic costs related to various minimum flow scenarios. In the Order on Rehearing and Amending License Order (issued October 16, 1998) the Commission stated:

DISCUSSION

A. Mode of Operation

Wolverine has been operating the Sanford Project in a peaking mode since 1925. There is no minimum flow, and when the project is not operating the river below the dam receives only leakage flows of between 30 and 60 cubic feet per second (cfs). The 1987 license required Wolverine to change project operation to a run-of-river mode, but this requirement was stayed pending rehearing.

Wolverine's 1983 license application proposed a minimum flow of 120 cfs, whereas Michigan DNR and the U.S. Fish and Wildlife Service (FWS) recommended that the project be operated in a run-of-river mode, in order to reduce the 5.4-foot daily fluctuations in the project tailwater, increase the fishery forage base, improve spawning habitat, and assist fish passage past the downstream Dow Chemical dam. The 1987 EA concluded that, while a 120-cfs minimum flow would increase somewhat the amount of downstream aquatic habitat over that available under peaking operations, run-of-river operation would provide a much greater overall benefit to the fishery resources. It also concluded that such operation would not result in a net change in overall project generation; on-peak generation would however decrease by 1,200,000 kilowatt hours (kWh).

The 1998 MEA compared the amount of effective fish habitat provided by current flows, various minimum flows, and run-of-river conditions. The analysis shows that, as year-round minimum flows increase, enhancement to fish habitat increases. However, the incremental benefit of increasing minimum flows diminishes as the minimum flows increase. Operating the projects in a run-of-river mode would provide the greatest predicted fishery habitat. Using run-of-river results as the benchmark, the MEA calculated that the 120-cfs minimum flow at Sanford (proposed by Wolverine) would provide effective habitat of an average of 50 percent of the benchmark, while a 210-cfs minimum flow would provide an average of 68 percent of the benchmark.

Current operation of the Sanford Project results in average annual energy generation of 9,210,000 kWh, worth about \$445,600. A change to run-of-river operation would reduce the average annual energy by about 2,058,872 kWh, or by a value of about \$145,500, which, together with an additional \$8,600 in annual O&M expense, would result in an annual cost of about \$154,100, making the net worth \$291,500, which is a 35 percent reduction from peaking mode. The annual lost energy cost of a year-round minimum instream flow of 210 cfs would be \$89,300 (a 20 percent reduction from current peaking operations).

The primary migratory game fish species of concern are walleye, white bass, smallmouth bass, and chinook salmon. The MEA therefore examined the energy generation cost of providing higher

minimum flows from Sanford during the walleye spawning season, March 15 through April 30. It concluded that a 650-cfs minimum flow during this period would provide six times the habitat available under current peaking conditions, and 97 percent of the habitat available under run-of-river operations. The cost of a 650-cfs minimum flow instead of a 210-cfs flow during this period would average an additional \$5,500 annually. A minimum flow requirement of 650 cfs from March 15 through April 30 and 210 cfs the rest of the year would result in a loss of about 950,000 kWh per year of energy generation. Under this regime, the project's annual power value would be \$363,000, its annual costs would be about \$97,000, and its annual net benefit would be about \$266,000.

In light of all of the above, we conclude that the agencies' recommendations for run-of-river operations are inconsistent with our balancing of beneficial public uses of the waterway under Sections 4(e) and 10(a)(1) of the FPA, in that they would significantly reduce the power value of the project but would not obtain concomitant environmental gains over and above the MEA-recommended flow regime. We are accordingly amending the Sanford Project license to require a minimum flow of 210 cfs, except for the period of walleye spawning, when the minimum flow will be 650 cfs.

Therefore it is clear that given the proposal to upgrade one of the units at Sanford to a new, more efficient unit, capable of generating at substantially lower flows than the units under which the Commission determined the minimum flow requirement mandates minimum flows be re-evaluated as part of this request for license amendment. As part of that re-evaluation, the resource agencies should have been consulted regarding applying for a license amendment for the Sanford Project given the connection between minimum flows and downstream resource protection.

It is obvious from the Commission's discussion that Commission staff realized that the maximum fishery benefit would be if the project operated as a run-of-river project (or if peaking continues at the upstream projects, re-regulation flow). However, due to the restrictions of the original equipment installed at the project, the cost to the licensee was too high at that time. Given the licensee's inability to capture generation during the periods of minimum flow, the final license requirement was set at 210 cfs, except during the walleye spawning period when flows were required to be 650 cfs. If the new turbine is installed and the licensee is able to generate with a minimum flow or run-of-river restriction,

then the previous economic arguments limiting the minimum flow to 210 cfs most of the year are no longer are justified.

The Department requests that the Commission reject the submitted license amendment application and return it to the licensee and require proper consultation with the resource agencies as part of the license amendment process. In addition, a new economic analysis will be necessary to determine the appropriate minimum flow or run-of-river flow operational requirement for the Sanford Project.

Please feel free to contact me if you have any questions or need clarification at:

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Sincerely,

A handwritten signature in black ink, appearing to read "Kyle Kruger", with a long horizontal flourish extending to the right.

Kyle Kruger
Senior Fisheries Biologist
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FISHERIES DIVISION
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cc Lee Mueller, Boyce Hydro
Burr Fisher, USFWS, E. Lansing
Chris Freiburger, Fisheries, Lansing