

**Michigan Department of Environment, Great Lakes, and Energy
Certification Amendment under Section 401 of the
Federal Clean Water Act**

**In the matter of: Black River Limited Partnership
 Alverno Hydroelectric Project
 Benton Township, Cheboygan County, Michigan
 Federal Energy Regulatory Commission Project #11730**

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) certifies that the Black River Limited Partnership (BRLP), Alverno Hydroelectric Project (Alverno Project), located downstream and north of Black Lake along the Black River in Benton Township, Cheboygan County, Michigan, will comply with the Michigan Water Quality Standards (WQS) provided the conditions set forth in this Certification are met. This amended Certification is issued to the BRLP under Section 401(a) of the federal Clean Water Act based on its request letter of December 29, 2021, and other information contained in the official files of EGLE, Water Resources Division. Fish passage and turbine mortality are not addressed by this Certification and were evaluated during negotiations under Section 10(j) of the federal Power Act (Title 16 of the United States Code, Sections 791a-825r).

Pursuant to the Clean Water Act Section 401 Certification Rule finalized June 1, 2020 (Docket ID No. EPA-HQ-OW-2019-0405), additional informational requirements are set forth for Certifications clarifying the purpose of each condition. Appendix A contains the additional information regarding certification conditions.

Certification Conditions:

1.0 Alverno Project - Operational Requirements:

- 1.1 The BRLP shall continue to maintain a calibrated staff gauge in the Alverno Impoundment at a location clearly visible to the public that shows the impoundment level referenced to the National Geodetic Vertical Datum of 1929 (NGVD). The Alverno Impoundment level and total discharge through the Alverno Dam (including spill) shall be recorded hourly. An annual report of all recorded Alverno Impoundment and total discharge through Alverno Dam shall be submitted to the Michigan Department of Natural Resources (MDNR) and EGLE.
- 1.2 Upon Federal Energy Regulatory Commission (FERC) license amendment issuance, the BRLP shall operate the Alverno Project in a run-of-river mode. Run-of-river means the instantaneous flow through the dam shall approximately equal instantaneous impoundment inflow as monitored by impoundment level elevations and stream flow downstream of the Alverno Project.

- 1.3 To accomplish run-of-river mode, year-round headwater operations at the Alverno Project shall target an operating level of 611.8 +/- 0.5 feet. Elevations are measured in feet using the NGVD.
- 1.4 During adverse conditions when the requirements in Sections 1.2 or 1.3 cannot be met, the BRLP shall, within one business day, consult with the FERC, MDNR, and EGLE's Lake Michigan Unit Supervisor regarding emergency actions taken or planned. Consultation during the adverse conditions shall continue following a mutually agreed upon schedule. Upon cessation of the adverse conditions, the BRLP shall resume the normal operations.

2.0 Alverno Project – Water Quality Limitations:

- 2.1 The BRLP shall not warm the Black River downstream from the Alverno Project, by operation of the project, to temperatures in degrees Fahrenheit higher than the following monthly average temperatures:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
38	38	41	56	70	80	83	81	74	64	49	39

This Section (2.1) shall not apply when the natural temperatures of the Black River measured upstream of the Alverno Impoundment exceed the above monthly average temperature values.

- 2.2 The BRLP shall not cause dissolved oxygen (DO) concentration measured in the Black River downstream of the Alverno Project to be less than 5.0 milligrams per liter (mg/L) at any time. This Section (2.2) shall not apply when the DO of the Black River measured upstream of the Alverno Impoundment is less than 5.0 mg/L.
- 2.3 In the event that any of the water quality limitations listed in Sections 2.1 or 2.2 of this Certification are not met, or if conditions change to indicate that they may not be met, the BRLP shall immediately notify EGLE's Lake Michigan Unit Supervisor, and take all practical steps, including appropriate monitoring, to achieve compliance and minimize impacts on downstream waters.

3.0 Alverno Project – Water Quality Monitoring and Reporting:

- 3.1 All measurements of water quality shall use methods approved by the United States Environmental Protection Agency pursuant to Title 40 of the Code of Federal Regulations, Section 136, or methods approved by EGLE.

- 3.2 The BRLP shall monitor the temperature and DO of the Black River from June 1 through September 30 at representative locations upstream of the impoundment and immediately downstream of the Alverno Project beginning five years after the issuance of the original FERC license and every five years thereafter. The monitoring frequency shall be determined in consultation with EGLE.
- 3.3 During the years when DO and temperature are monitored pursuant to Section 3.2 of this Certification, the BRLP shall also measure the temperature and DO depth profile in the deepest part of the impoundment every two weeks from June through September. Measurements shall be made at 0.5-meter increments or less. Secchi disc depth measurements shall be made at the same time as the profiling.
- 3.4 Ten years after the issuance of the original FERC license, and every ten years thereafter, the BRLP shall analyze the sediments in the Alverno Impoundment for the following parameters:

Oil and Grease	Total Arsenic
Total Cadmium	Total Chromium
Total Copper	Total Lead
Total Mercury	Total Nickel
Total Organic Carbon	Total Phosphorus
Total Selenium	Total Silver
Total Zinc Acid	Volatile Sulfides
Total PCB	

- 3.5 All sampling locations, sampling methods, and analytical methods shall be determined in consultation with EGLE. An annual report of the data generated to comply with Sections 3.1 through 3.4 shall be submitted to EGLE and the MDNR within three months of completing the sampling. The annual report shall include a summary of quality assurance data.
- 4.0 Alverno Project - Bank Erosion Control:
 - 4.1 The BRLP shall continue to implement the FERC-approved plan for erosion monitoring and control, which was approved September 27, 2019 (Accession #20190927-3023).
- 5.0 Alverno Project - Natural Organic Debris Maintenance:
 - 5.1 The BRLP shall continue to implement the BRLP, EGLE, and MDNR agreed upon plan (described below) to pass natural vegetative debris (logs, stumps, sticks, limbs, leaves, and aquatic vegetation) collected on the trash racks and log booms over the Alverno Dam in a manner that will not create

a navigation hazard. The BRLP shall remove and properly dispose of all other materials collected in the trash racks and spill gates.

- 5.1.1 Rake the rack as needed and pull any weeds, sticks, or other debris off the rack onto the intake deck area.
- 5.1.2 The weeds and small sticks shall be transported from the intake deck to the tailrace and put into the water there during non-ice conditions (i.e., April 15 to November 15). This process is typically completed with the use of an industrial-grade wheelbarrow and manually transported down the hill to the tailrace. It shall be completed at least weekly and, occasionally, every few days when debris loading is high. During the winter periods (i.e., November 16 to April 14), the BRLP shall continue to bring debris down to the tailrace, using a wheelbarrow when snow conditions allow that. When snow builds up, the BRLP will utilize a plastic sleigh (snowmobile sleigh). This process will continue during the winter as long as it can be completed in a safe and effective manner.
- 5.1.3 The smaller logs up to approximately 3 inches in diameter and wood that can be handled without machinery shall be removed from the intake area and transported to the tailrace or downstream boat launch area and put back into the river during non-ice conditions. Further to comments and requirements received by the MDNR on March 23, 2018, the BRLP shall leave intact, as practical, larger logs and move those to the tailrace area.
- 5.1.4 Pursuant to the requirement by the MDNR, larger logs that are not practical to leave intact shall be cut into smaller pieces, taken to the tailrace, and put back into the river during non-ice conditions.
- 5.1.5 Transporting of natural debris, sticks, and logs shall be done in a reasonable timeframe and in a manner that is convenient with the operation of the dam and, further, take into consideration the convenience of the public so as not to limit the use of the designated public use areas by recreationalists and fishers. In general, all debris will be moved to the tailrace area at least weekly.
- 5.1.6 All domestic waste and unnatural or treated wood items shall be disposed of through the BRLP's weekly refuse disposal service.
- 5.1.7 Any item that may be of value to a property owner such as a dock section shall be removed from the intake area and set aside for them to claim and pick up. If it is not picked up in a reasonable time, the BRLP shall dispose of it through their disposal service.

6.0 Schedule modification:

6.1 EGLE may extend or modify the specified implementation schedules within this Certification upon written request from the BRLP, in the event the BRLP, despite their good faith efforts, is unable to meet the schedules specified within this Certification because of events beyond their control.

7.0 Temporary Modification of Operational Requirements:

7.1 Operational requirements specified in Section 1.0 of this Certification may be temporarily suspended for completion of necessary inspections, maintenance activities, dam safety activities, and other activities as may be required by the FERC provided that prior written approval is obtained from EGLE and the MDNR, and including all federal, state, and local permits as necessary. Drawdowns below the operational requirements specified in Section 1.0 of this Certification will require stranded organism recovery and relocation in consultation with the MDNR.

8.0 Alverno Project – Natural Resources Damages and Penalties:

8.1 The state reserves the right to seek civil and/or criminal penalties and liabilities under applicable law for natural resource damages that may occur.

9.0 Alverno Project – Permits and Approvals:

9.1 The issuance of this Certification does not authorize violation of any federal, state, or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any EGLE permits, or approvals from other units of government as may be required by law. For all proposed drawdowns and refills for dam maintenance purposes, the BRLP shall obtain any necessary state of Michigan permits.

10.0 Alverno Project – Right of Entry:

10.1 The BRLP shall allow EGLE, or any agent appointed by EGLE, upon the presentation of credentials, to enter upon the BRLP premises at reasonable times, to have access to, and copy any records required to be kept under the conditions of this Certification, and to inspect the facilities or to conduct any environmental sampling. EGLE agents shall comply with BRLP personnel safety requirements while on BRLP property unless more stringent safety procedures are required by the State of Michigan.

11.0 Alverno Project – Changes:

11.1 The BRLP shall provide written notification to EGLE and a copy to the MDNR within ten days of any change that has occurred or may occur in the structures or operation of the BRLP Alverno Project, which may affect compliance with this Certification or the WQS.

12.0 Alverno Project – Revocation:

12.1 If EGLE determines that the Alverno Project can no longer comply with Section 401(a) of the Clean Water Act and the WQS, this Certification may be revoked or modified after appropriate notice.

The contact points for consultations, approvals, and submittal of plans and reports as referred to in this document are as follows:

EGLE

Lake Michigan Unit Supervisor
Surface Water Assessment Section
P.O. Box 30458
Lansing, Michigan 48909-7958
Phone: 517-230-7548

Gaylord District Supervisor
2100 West M-32
Gaylord, Michigan 49735-2982
Phone: 989-731-4920

MDNR

Habitat Management Unit
Fisheries Division
1732 West M-32
Gaylord, Michigan 49735

Issued this 4th day of January 2023, by EGLE, and shall expire at the end of the FERC license period.



Michael Alexander, Manager
Surface Water Assessment Section
Water Resources Division

Appendix A

2020 Rule Requirements of Certification Conditions

Conditions in Section 1

Operational requirements exist to enforce the protection of Designated Uses (Rule 100 [R 323.1100] of the Part 4 Rules, Water Quality Standards [WQS], promulgated under Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended [NREPA]) including warmwater fishery, other indigenous aquatic life and wildlife, and navigation. Run-of-river operation is used to mimic the natural fluctuation of flow and protect against the artificial fluctuations in discharge created by peaking operations, which can harm or strand wildlife such as fish, mussels, and burrowing amphibians and reptiles. To ensure run-of-river operation is being enforced, a headwater elevation, operating band, and monitoring are used to measure and ensure compliance.

Conditions in Sections 2 and 3

Water quality limitations are discharge requirements, which use discrete numeric criteria pursuant to the limitations set forth in Michigan's WQS. Water temperature limitations are found in R 323.1075. The requirements for dissolved oxygen are likewise numeric and set forth in R 323.1064. Both requirements support the protection of Designated Uses (R 323.1100) for warmwater fisheries and other indigenous aquatic life and wildlife.

Sediment analysis helps to determine how the impounded water affects the accumulation of metals and toxic substances. Downstream waters are at risk of having sediment releases in the case of construction or dam failure. Releases of this nature have the ability to impact all Designated Uses, depending on constituents and quantities.

Water quality monitoring and reporting are required to ensure that state and federal agencies and the Black River Limited Partnership are aware of any violations that may occur and can aid in consultation to remediate any risks to the environment.

Conditions in Section 4

Shorelands are important ecotones (interfaces of land and water), which often carry higher species diversity than the water or surrounding lands alone. Unnatural amounts of erosion caused by artificially fluctuating discharges destroy the ecotone habitat, affecting warmwater fish spawning grounds and other indigenous aquatic life and wildlife such as mussels and burrowing amphibians and reptiles.

Bank erosion control prevents the addition of suspended solids into the water column. Rule 323.1050 states that surface waters of the state shall not have unnatural quantities of floating, settleable, or suspended solids that may be injurious to any designated use. Similarly, Rule 323.1051 limits the levels of dissolved solids in surface waters (500 milligrams per liter [mg/L] monthly average and 750 mg/L at any given time). Suspended solids block sunlight, adsorb nutrients, and create a media for

bacteria to grow on. This can have negative impacts on rooted aquatic plants, microbial communities, and riverbed composition when solids are transported downstream.

Conditions in Section 5

Organic debris must be passed around the dam to prevent damage to the project's infrastructure. The organic debris is functional for habitat in downstream waters including fish habitat and other indigenous aquatic life and wildlife. Depriving the downstream community of this component of natural habitat will cause harm and loss of habitat. Therefore, natural organic debris maintenance protects the Designated Uses (R 323.1100) of downstream waters.

Conditions in Sections 6-12

The content in Sections 6-12 is administrative in nature and supports the assurance of the Project to meet water quality requirements set forth by Michigan's WQS. Without these conditions, the Michigan Department of Environment, Great Lakes, and Energy cannot knowingly certify a project's ability to meet the water quality requirements, as is required by Section 401(a) of the Clean Water Act.