



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING



LIESL EICHLER CLARK
DIRECTOR

September 17, 2020

VIA E-MAIL AND U.S. MAIL

Mr. Lee W. Mueller, Member Manager
Boyce Hydro Power, LLC
6000 South M-30
P.O. Box 15
Edenville, Michigan 48620

Mr. Lee W. Mueller, Member Manager
Boyce Hydro Power, LLC
10120 W. Flamingo Rd., Suite 4, #192
Las Vegas, Nevada 89147

SUBJECT: Emergency Order
Edenville Dam, Dam ID No. 549
Gladwin County, T19N, R02W, Section 27

Dear Mr. Mueller:

The Edenville Dam, Dam ID No. 549, is regulated under Part 315, Dam Safety, (Part 315) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). On May 19, 2020, the Edenville Dam suffered a catastrophic breach of its earthen embankment which caused an uncontrolled release of impounded water from Wixom Lake. As a result, the Tittabawassee River side of the impoundment was mostly drained, and the flow of the Tobacco River was diverted through the causeway, partially lowering the Tobacco side of the impoundment. However, both the Tittabawassee portion of the dam and the Tobacco River side of the impoundment are still maintaining head, continue to meet the Part 315 definition of a "dam" and still pose a significant threat to public health and safety and the natural resources of the state. Currently the Tittabawassee side holds back roughly 10 feet of head, while the Tobacco side is holding back nearly 30 feet of head.

During the breach, the Tobacco River side earthen embankment sustained significant damage, which could endanger the remainder of the dam, potentially causing another uncontrolled release of impounded water. There are also serious public safety concerns associated with the impacts to the M-30 corridor and the challenges to reconstruct crossings due to continuously evolving river channel dynamics. Additionally, the diversion of the Tobacco River creates numerous ecological impacts, from stagnation and potential dewatering of roughly 1.2 miles of the Tobacco River, to continuous elevated sediment loads associated with lateral migration and head-cutting along the upstream face of the dam.

A May 22, 2020 Department of Environment, Great Lakes, and Energy (EGLE) compliance communication, a June 2, 2020 e-mail, a June 3, 2020 Dam Safety Order, and a June 15, 2020 Temporary Restraining Order, instructed you to have an inspection of the dam completed by a licensed engineer of your employ, and to report any deficiencies and recommended corrective actions to address dam safety, public transportation and natural resource impacts. Pursuant to the Temporary Restraining Order, the report was due to this office no later than July 24, 2020. Boyce Hydro did submit a dam inspection report, completed by TRC Engineers Michigan, Incorporated, on July 24, 2020. That report identified significant issues with the dam. However, page 4 of the report specifically states that it does not address all of the requirements of the Temporary Restraining Order. Within the report, an analysis of the earthen embankment indicated that the dam could only safely support water levels up to elevation 664.8 (NAVD) before the dam fails to provide appropriate factors of safety. This means that the dam would be at an elevated risk of failure. Subsequently, EGLE's consultant has determined that this water surface elevation would be exceeded during a one to two-year flood event. There is a high probability this type of event could occur over the next year, and nearly certain to occur over the next five to ten years while the dam's permanent disposition is determined.

Due to Boyce Hydro's failure to perform the necessary engineering investigations and implement any mitigation measures, EGLE has partnered with the Michigan Department of Transportation (MDOT) and utilized the services of AECOM to perform an evaluation of the dam and readily available data, and develop an alternatives analysis for addressing the ongoing dam safety concerns and impacts to public transportation and natural resources. The outcome of this analysis determined that the preferred alternative for mitigating the current danger posed by the dam is to modify and lower the Tobacco spillway crest, such that it can safely pass the 200-year flood with an impoundment water surface elevation less than 664.8 feet (NAVD). That way, during a 200-year flood event, the embankment will maintain appropriate factors of safety for stability, and flow through the causeway would be restricted to non-erosive flow conditions. The channel crossing downstream of the Tobacco Spillway must be removed and a natural channel section restored. The Tittabawassee River must be diverted away from the breach and restored to its former channel, up to the 100-year flood. All sediment and debris deposited within the river channel from the Tittabawassee spillway to approximately 3,000 feet downstream must be removed. This work must be started this construction season and completed this winter, because the current configuration of the dam is causing ongoing damage to natural resources and transportation, and a significant flooding event or the spring thaw or a combination could overwhelm the remaining dam and cause even more damage. EGLE has tried without success since May 22, 2020 to compel Boyce and its affiliates to adequately address the ongoing hazards posed by the dam, and now must take major steps in the public's interest that Boyce and its affiliates have refused to take.

Section 31521(1) of Part 315 states:

The department may issue emergency orders as provided in this section. The department may, by written notice, order an owner to immediately repair, draw down, breach, or cease operation of a dam where a dam is in imminent danger of failure and is causing or threatening to cause harm to public health, safety, welfare, property, or the natural resources or the public trust in those natural resources. If an owner fails to comply with an order, or is unavailable or unable to be contacted, then the department may undertake immediate repair, drawdown, breaching, or cessation of operation, as may be necessary to alleviate the danger, and may recover from the owner the costs incurred in a civil action commenced in a court of competent jurisdiction. The department may terminate an emergency order upon a determination in writing that all necessary emergency actions have been complied with by the owner and that an emergency no longer exists.

A portion of the Edenville Dam failed on May 19, 2020. The remaining Tobacco side earthen embankment is maintaining a significant amount of head. Page 40 of TRC's July 24, 2020 inspection report indicates that the right side of the embankment becomes unsafe when the water level in the impoundment reaches 665.0 feet (NGVD), which is an approximate five-foot rise from current water surface elevation, but the report does not analyze at what magnitude of flooding would cause this unsafe condition to develop. Therefore, in addition to the ongoing damage the dam is causing, the dam continues to be at risk of additional failure and is threatening to cause additional harm to the public health, safety, welfare, property, and natural resources. EGLE is issuing this order pursuant to Section 31521(1). You are hereby ordered to take the following actions:

1. Immediately employ an engineer and contractor for completion of the work described above for the preferred alternative. Boyce Hydro shall submit to EGLE proof of executed contract(s) for the aforementioned scope of work, no later than September 21, 2020.
2. Submit an administratively complete Joint Permit Application for the work described above to EGLE no later than September 25, 2020.
3. Commence construction no later than October 19, 2020 for the work described above as the preferred alternative.

You are required to submit a written response to this order stating your intent to meet the above timeline to this office no later than 5:00 p.m. on September 18, 2020. If you fail to submit the written response by September 18, 2020, or submit a response stating your intent to proceed with the work but fail to meet any of the deadlines specified above, EGLE will immediately commence with undertaking the actions and will seek to recover costs from the Owner as provided for in Section 31521(1) of Part 315.

Please note that Section 31521(3) of Part 315 states that:

The department shall provide the owner with an opportunity for a hearing pursuant to the administrative procedures act of 1969 within 15 days of the date of its issuance. At the hearing, the department shall determine, based on information and fact, if the emergency order shall be continued, modified, or suspended as necessary to protect public health, safety, welfare, property, or natural resources or the public trust in those natural resources.

A virtual hearing will be conducted on September 24, 2020 at 9:00 a.m. for the purpose of determining whether this emergency order should be continued, modified, or suspended. Please see the enclosed Notice of Hearing for additional information.

We look forward to your response and compliance in this matter. Please feel free to contact Dan DeVaun at 989-370-1528; DevaunD@Michigan.gov; or EGLE, Cadillac District Office, 120 West Chapin Street, Cadillac, Michigan 49601 if you have any questions or wish to schedule a coordination meeting.

Sincerely,



Mario Fusco, Jr., P.E., Supervisor
Hydrologic Studies and Dam Safety Unit
Water Resources Division
517-256-4458

Enclosure

cc: Mr. Dan Curth, Goldstein & McClintock LLLP (electronic)
Mr. Matt McClintock, Goldstein & McClintock LLLP (electronic)
Mr. Lawrence Kogan, Kogan Law Group (electronic)
Mr. Bob North, Gladwin County Emergency Management (electronic)
Ms. Jenifier Boyer, Midland County Emergency Management (electronic)
Mr. Dave Kepler, Four Lakes Task Force (electronic)
Ms. Teresa Seidel, EGLE (electronic)
Mr. Dave Pingel, EGLE (electronic)
Mr. Dan DeVaun, PE, EGLE (electronic)
Mr. Luke Trumble, P.E., EGLE (electronic)