



An **AEP** Company

BOUNDLESS ENERGY™

Indiana Michigan Power  
Hydro Generation  
13840 E. Jefferson Road  
Mishawaka, IN 46545

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

March 3, 2023

RE: Indiana Michigan Power Company  
Buchanan Hydroelectric Project No. 2551  
License Article 402  
Deviation from Reservoir Elevation Requirement

Dear Secretary:

On behalf of Indiana Michigan Power Company (I&M), I am notifying the Federal Energy Regulatory Commission of a deviation from the reservoir elevation requirement for the Buchanan Hydroelectric Project No. 2551 (Project) located on the St. Joseph River near the City of Buchanan in Berrien County, Michigan.

Under the conditions of Article 402 of the Project license, as amended on September 28, 1998, I&M is to operate the Project in a run-of-river mode and maintain the Project reservoir surface at a target elevation 637.50 feet National Geodetic Vertical Datum (NGVD) plus or minus (+/-) 0.25 feet from April 1 through November 30. Pursuant to the Order on Rehearing issued on March 16, 1998, I&M may reduce the reservoir elevation to  $637.00 \pm 0.25$  feet, to prevent icing of the spillway crest gates, no earlier than December 1 to no later than March 31 of each year.

I&M notified the Michigan Department of Natural Resources (MDNR) and the U. S. Fish & Wildlife Service (FWS) (via email dated November 15, 2022) of its plans to lower the Project reservoir to a normal winter operating level of  $637.20 \pm 0.25$  feet on December 12, 2022. [Note that I&M filed an application with the Commission to amend the winter operating elevation referenced in the above paragraph on November 7, 2022.]

Article 402 allows for temporary modification to this operation if required by operating emergencies beyond the control of the licensee.

BOUNDLESS ENERGY™

At approximately 1242 hours on February 24, 2023, the Buchanan reservoir elevation exceeded the upper winter reservoir elevation limit while I&M personnel were performing annual crest gate testing. During the gate testing, the programmable logic controller (PLC) over compensated in response to the lower reservoir elevation while crest gates were open by taking three generating units offline simultaneously. The hydro mechanic immediately responded by setting the crest gates to auto-float mode and restarting the three units.

The highest recorded elevation was 637.58 feet at approximately 1243 hours. The reservoir elevation was back in range at 1310 hours. Thus, the total duration of deviation was approximately 28 minutes. The MDNR and the FWS were notified of the exceedance on February 24, 2023 via email and are copied on this letter. Documentation of consultation is attached.

Following the reservoir elevation deviation event, the root cause of the PLC over compensation is being investigated. Also, the annual gate testing procedures have been modified to add an additional person to monitor the PLC during testing.

I&M believes that this notification fulfills the requirements of Article 402 of the Project license. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'E.S. Brennan', followed by a long horizontal line extending to the right.

Edward S. Brennan  
Plant Environmental Coordinator Principal  
(540) 985-2984

Attachment

cc: Yun Gao, AEP  
Elizabeth Parcell, AEP  
Richard Walag, I&M  
Christina Svoboda, I&M  
Fred Colburn, AEP  
Kesiree O'Brien, MDNR  
Scott Hicks, USFWS

**From:** [Richard Walag](#)  
**To:** [Hicks, Scott](#); [OBrien, Kesiree \(DNR\)](#)  
**Cc:** [Frederick A Colburn](#); [Edward S Brennan](#); [Elizabeth B Parcell](#); [Steve Dolan](#); [Yun Gao](#)  
**Subject:** Buchanan Hydro Notification of Deviation from Reservoir Elevation 2/24/23  
**Date:** Friday, February 24, 2023 3:02:35 PM  
**Attachments:** [image001.png](#)

---

All,

In accordance with Article 402 of Indiana Michigan Power's (I&M) license issued by the Federal Energy Regulatory Commission, this email serves to notify you of a deviation from the upper limit of the winter reservoir elevation at the Buchanan Hydroelectric Plant. On February 24, 2023 at approximately 1242 hours, the reservoir water surface elevation exceeded the upper limit of 637.45 feet National Geodetic Vertical Datum (NGVD). The reservoir reached its highest elevation of 637.58 feet NGVD at approximately 1243 hours and the reservoir level returned within the operating limits at 1310 hours. The deviation occurred while I&M personnel were performing annual FERC crest gate testing. During testing, the programmable logic controller over compensated for the lower reservoir elevation while crest gates were open by taking three generators offline simultaneously. The hydro mechanic immediately responded by setting the crest gates to auto-float mode and restarted the three generating units. The forebay elevation deviation lasted approximately 28 minutes.

Sincerely,

Rich Walag



**RICHARD WALAG** | MAINTENANCE SUPV  
[RWALAG@AEP.COM](mailto:RWALAG@AEP.COM) | D:574.236.1663 | C:574.340.0784  
13840 EAST JEFFERSON ROAD, MISHAWAKA, IN 46545-7343