

July 21, 2023

**Ripogenus Project
FERC No. 2572-ME**

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Subject: Ripogenus Project (FERC No. 2572);
Whitewater Recreation Flow Excursion Report**

Dear Secretary Bose:

Great Lakes Hydro America, LLC (GLHA), licensee for the Ripogenus Project, is reporting a whitewater recreation flow excursion that occurred at the Project on July 8, 2023.

Please see the attached excursion reporting form for details.

If you have any questions, please contact me by phone at (207) 951-5006 or by e-mail at kevin.bernier@brookfieldrenewable.com.

Sincerely,

Kevin Bernier

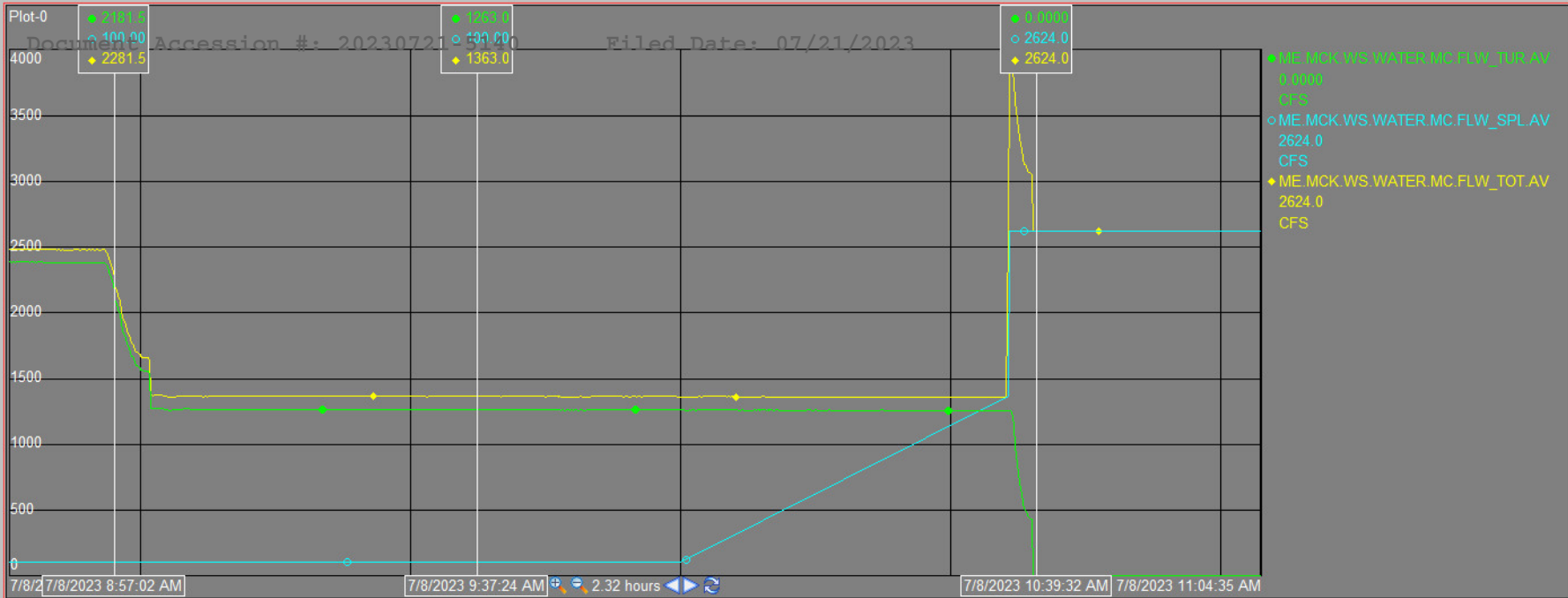
Kevin Bernier
Senior Compliance Specialist

Attachments

Cc. J. Cole, N. Stevens, K. Maloney, M. Osborne, S. Farrington, T. Mapletoft, R. Dill,
S. Michaud, D. Heidrich, L. Macomber, P. Wainwright, P. McNelis, R. Dorman,
E. Deluca, A. Frechette; GLHA
K. Olcott, L. Paye; MDEP
D. Kane, T. Obrey, J. Perry; MDIFW
J. Rosset, A. Cross, B. Sojkowski; USFWS

GLHA File: HSSE 19a/ii/Penobscot

Brookfield Renewable U.S.		COMPLIANCE EXCURSION REPORT			
Project No(s): P-2572		Project Name(s): Ripogenus			
Licensee(s): Great Lakes Hydro America, LLC		Facility: McKay Station			
SUBJECT:		Whitewater Recreation Flow Excursion			
BACKGROUND (e.g. License Article/ Requirement; Permit Condition; Operating Procedure, etc.):		Article 402 of the Ripogenus Project license in part requires minimum whitewater recreation flows from May 1 – September 15 between the hours of 0830 and 1700. In a "normal" hydrologic year (such as 2023), the required minimum flows are 2,300 cfs on Saturdays and Sundays, 2,200 cfs on Mondays and Fridays, and 2,000 cfs on Tuesdays through Thursdays. These specified minimum flows shall be the minimum flows for each hourly period (measured on the basis of an hourly average).			
DATE OF EVENT:		July 8, 2023		TIME OF EVENT:	08:57 hrs
				DURATION:	1 hour, 42 minutes
DESCRIPTION:		As the result of a lightning storm that occurred on July 7, 2023, all of GLHA's hydro stations on the Penobscot River tripped offline due to a lightning strike to the local utility's (Versant Power's) transmission line. It was subsequently determined that this and other lightning strikes damaged GLHA equipment, including lightning arrestors in Millinocket and at McKay Station, along with bearing damage to two hydro units at McKay Station. The loss of the two units resulted in an interruption of scheduled whitewater recreation flows from the Ripogenus Project, with a low flow of 1,363 cfs released during the excursion (see attached graph).			
CAUSE:		Due to a high bearing temperature alarm, an emergency shutdown of two units at McKay Station was implemented, which in turn resulted in a whitewater recreation flow excursion until a deep gate could be opened upstream at Ripogenus Dam.			
CORRECTIVE MEASURES:		IMMEDIATE ACTION			
		Local technicians were dispatched to McKay Station to investigate the high bearing temperature alarm. Upon arrival, they found hot (smoking) bearings, flooded wheel pits, and energized motors that had become submerged. The crew immediately implemented an emergency shutdown of two units, and then addressed the emergency conditions found at the station. The crew then opened a deep gate at Ripogenus Dam to resume whitewater recreation flows.			
CORRECTIVE MEASURES:		LONG-TERM ACTION			
		The two units at McKay Station remain out of service until bearing repairs can be made. In the meantime, minimum flows are being provided via Unit #3 at McKay Station and a deep gate at Ripogenus Dam.			
OBSERVED OR REPORTED EFFECTS:		None.			
AGENCIES NOTIFIED (attach correspondence):		Method of Initial Notification: ☐ Phone ☒ Email ☐ Letter Date of Notification: <u>July 10, 2023 (attached)</u> Federal Agencies: ☒ USFWS ☐ NMFS ☐ USACE ☐ FERC ☐ Other(s): _____ State Agencies: STATE: <u>Maine</u> ☒ Env. Prot ☒ F&W ☐ Dam Safety ☐ Other(s): _____ Other Agencies/NGOs: _____			
RESOURCE AGENCY COMMENTS:					
ADDITIONAL INFORMATION /COMMENTS:		None.			
EXCURSION REPORT BY:		DATE:			
Kevin Bernier, Senior Compliance Specialist		July 21, 2023			



From: [Bernier, Kevin](#)
To: [Dunham, Kevin](#) (Kevin.Dunham@maine.gov); [Gallant, Kevin](#); [Mark Caron](#) (mark.caron@maine.gov); [John Perry](#) (john.perry@maine.gov); [Bryan Sojkowski](#); [Julianne Rosset](#) (julianne_rosset@fws.gov); [Tim Obrey](#) (tim.obrey@maine.gov); [Doug Kane](#) (douglas.kane@maine.gov); [Paye, Laura](#); [Olcott, Kyle](#); [Cross, Amanda S](#) (amanda.cross@maine.gov); [Cole, James](#); [Maloney, Kelly](#); [Dill, Richard](#); [Osborne, Michael](#); [Heidrich, David](#); [Michaud, Steve](#); [Stevens, Nate](#); [Mapletoft, Thomas](#); [Farrington, Stephen](#); [Macomber, Lance](#); [Wainwright, Paul](#); [McNelis, Patrick](#); [Dorman, Randy](#); [Frechette, Allison](#); [Deluca, Ernest](#)
Cc:
Subject: Penobscot flow interruptions due to station trips, lightning storm
Date: Monday, July 10, 2023 12:37:00 PM
Attachments: [image001.gif](#)

At 17:57 hrs on Friday evening, July 7th, all of the Great Lakes Hydro America, LLC's (GLHA's) hydro stations on the Penobscot (McKay, North Twin, Millinocket, Dolby, East Millinocket, and Weldon) tripped offline during a severe thunderstorm causing disruptions in run-of-river flows at the Millinocket, Dolby and East Millinocket Developments (Penobscot Mills Project, FERC No. 2458) and a disruption in minimum flows at Millinocket and at Weldon (Mattaceunk Project, FERC No. 2520). The station trips were caused by a lightning strike to the local utility's (Versant Power's) transmission line, which connects these stations to the electrical grid. Although McKay Station (part of the Ripogenus Project, FERC No. 2572) also tripped offline during this event, the minimum flow system at the Station functioned properly by quickly restoring the required outage flows (at least 400 cfs) to the West Branch of the Penobscot River, thus initially avoiding a minimum flow excursion at the Project. (Please note though that due to communication interruptions during the storm event, Brookfield's Safewaters website (<https://safewaters.com/home>) only displayed the 100 cfs minimum flow from Ripogenus Dam during the outage, which is released during the months of July, August, and September to enhance fishing opportunity). After public safety checks were made downstream and warning alarm systems were activated, gates were opened at the other GLHA stations to restore river flow as soon as practicable; maintenance crews were then able to bring the McKay, Dolby, East Millinocket, and Weldon stations back online later that night.

During GLHA's efforts to resume normal operations, it was subsequently determined that the storm and station trips had caused additional damage to GLHA equipment, including damage to lightning arrestors at a Millinocket substation (which is connected to the North Twin and Millinocket Stations), and potential bearing damage to two hydro units at McKay Station. The lightning arrestors were repaired on Saturday, July 8th, which allowed the North Twin and Millinocket Stations to both be put back online. However, an emergency shutdown of the two McKay Station units was implemented as a precaution on Saturday morning, July 8th, which resulted in a brief interruption of whitewater boating flows before a deep gate could be opened at Ripogenus Dam. These two units remain out of service pending additional investigation, and minimum flows at the Ripogenus Project are currently being provided via Unit #3 at McKay Station and a deep gate at Ripogenus Dam.

Article 403 of the Penobscot Mills license requires that the Millinocket, Dolby, and East Millinocket Developments be operated in a run-of-river mode while providing an instantaneous minimum flow of 2,000 cubic feet per second (cfs) to the West Branch of the Penobscot River at Millinocket. Run-of-river operation or minimum flows may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, the U.S. Fish and Wildlife Service, and the Maine DEP.

Article 403 of the Mattaceunk Project license, through Condition B of the Maine DEP's water quality

certification for the Project, requires a total minimum flow discharge of 1,674 cfs, or inflow, whichever is less, throughout the year, along with daily average minimum flow discharges of 2,392 cfs from July 1 through September 30 and 2,000 cfs from October 1 through June 30 (unless inflow is less than the stated daily average minimum flow). Article 403 also requires that the Project be operated in a run-of-river mode with year round use of the 4-foot-high flashboards, such that average daily outflow approximates average daily inflow. And finally, Article 403 states that, *“For unplanned deviations lasting 3 hours or less that do not result in visible environmental effects, the licensee must file an annual report, by March 1, describing each incident that occurred during the prior January 1 through December 31 time period.”*

Article 402 of the Ripogenus Project license requires whitewater recreation flows in part as follows:

“Minimum flows shall be from May 1 to September 15 between the hours of 0830 and 1700 local time according to the following schedule: In a “wet” or “dry” hydrologic year, 2,200 cfs on Saturdays and Sundays”

GLHA is still investigating and collecting information on these events, which will be detailed in reports to FERC within 10 days (for Ripogenus and Penobscot Mills) and by March 1, 2024 for Mattaceunk. I will copy everybody on these reports, but in the meantime, please let me know if you have any comments or questions.

Kevin Bernier

Senior Compliance Specialist

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Document Content(s)

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