

September 2, 2025

Debbie-Anne A. Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Electronically Filed

**RE: Ripogenus Project (FERC P-2572-141) and Penobscot Mills Project (P-2458-273)
Comments on GLHA Additional Information Requests (AIRs) on the Final License
Application – Appendix B Draft Operations and Monitoring Plan**

Dear Secretary Reese:

The following comments on the Additional Information Request (AIR) reports for the Ripogenus Project (P-2572-141) are submitted on behalf of members of the Caribou and Chesuncook Lake Camp Associations. Three interconnected lakes: Ripogenus Lake, Chesuncook Lake, and Caribou Lake (as well as the smaller Moose Pond, Brandy Pond and Black Pond sub-basins) comprise the so-called “Ripogenus Impoundment” and “Ripogenus Project” upstream of Ripogenus Dam. The Ripogenus Impoundment is the largest and most upstream reservoir in the Ripogenus-Penobscot Mills project and contains well over 50% of the projects water storage.

These comments pertain to the *Draft Operations and Compliance Monitoring Plan* and *Draft Low Inflow Protocol* documents submitted by Great Lakes Hydro America, LLC (GLHA) in their response to the AIRs dated July 28, 2025.

Our comments primarily concern the Ripogenus Project and the need to maintain stable lake elevations within the Ripogenus Impoundment in order to comply with the system-wide rule curve that GLHA proposes to operate under with the new license. Operating under the System-Wide Rule Curve has historically provided the best possible combination of: (1) aquatic habitat/fisheries in the West Branch of the Penobscot River below McKay Station, (2) stable lake elevations above Rip Dam, (3) recreational access at the boat launches, and (4) scheduled boating flows.

As we know, and as documented in numerous submittals over the last 4 years, GLHA has NOT operated according to the System-Wide Rule Curve since the paper mill in East Millinocket shut down in 2014. The existing license does not require adherence to the System-Wide Rule Curve. As a result, GLHA is not required to, and has not, strictly maintained the storage volumes specified month-by-month by the rule curve. Excessive drawdown of the Ripogenus impoundment, and peaking/ramping flows below McKay Station have resulted in (1) aquatic

habitat/fisheries impacts above Rip Dam and below McKay Station, (2) unstable lake elevations, (3) limited or no access at public boat launches, and (4) impacts to recreational flows/schedules. Prior to GLHA's operation, these four issues did not exist.

We appreciate that GLHA acknowledged that weather forecasting, snowpack surveys, and analysis of inflow from upstream storage ponds are performed as part of their operation. However, the Licensee has failed to explain how these data are incorporated into storage management.

Specific Comments on *Draft Operations and Compliance Monitoring Plan*

Section 3.1, page 5 reads:

“During normal operations and normal inflow years, the Ripogenus impoundment elevation will be gradually drawn down through the summer and fall months with the lowest elevation typically reached by late winter in anticipation for the spring thaw and freshet. In the spring, the Ripogenus impoundment elevation will rise based on inflows from the upstream Storage Project (FERC No. 2634), spring thaw, and precipitation with the goal to reach an elevation near full pond by late spring.”

This draft paragraph lacks specific operating parameters and is purposely vague. We propose the following change below to quantify and specify the minimum lake elevations required on the interconnected Chesuncook-Caribou-Ripogenus Lakes (Ripogenus Impoundment), in accordance with the applicants statements in the FLA to “operate pursuant to the existing System-Wide Rule Curve”, and “maintain Ripogenus impoundment elevations pursuant to the existing systemwide rule curve” :

Section 3.1, page 5 proposed changes:

“During normal operations and normal/wet inflow years, the Ripogenus impoundment elevation will be filled to at or above elevation 940.1 (1.5 feet below the full pool elevation of 941.6) in the spring. After June 1st, Ripogenus will be drawn down at a steady rate of 1 foot per month until October 15th (elev. 935.6, 6 feet below full pool). The lower limit on winter drawdown will be elevation 925.1 (16.5 feet drawdown). In the spring, the Ripogenus impoundment elevation will be managed based on inflows from the upstream Storage Project (FERC No. 2634), spring thaw, and precipitation to reach an elevation above 940.1 by late spring.”

A rule curve for the Ripogenus Impoundment and upstream Storage Project needs to be developed, implemented, and followed. The paragraph above prescribing a monthly elevation schedule for Ripogenus, Chesuncook and Caribou will be the basis for the Ripogenus rule curve.

We note that GLHA has operated with lake elevation schedules for both North Twin Lake and Millinocket Lake and has historically, when mandated, been able to meet the lake elevation schedules. The extensive computer modeling (CHEOPS) performed by the applicant for this project has consistently indicated that the proposed lake elevation schedule proposed for the Ripogenus Impoundment is achievable (see Camp Association submittal dated 6/24/25 *Accession No. 20250624-5483*). This is not a surprise given that this was how GNP operated when the mill was active (i.e. before GLHA).

Establishment of lake elevation schedules for the Ripogenus Impoundment is required in order for the *Recreation Management Plan* and the *Loon Management Plan* to be effective. The *Recreation Management Plan* is completely deficient. It is not a “plan”, per se, but merely a description of boat launch sites. An actual “plan” would include a usability analysis and list the elevation of each boat launch (which by the way ties back to the system-wide rule curve which originally factored elevations into the recreational access plan). GLHA’s current operating scheme of excessive summer drawdown routinely renders the boat launches on Caribou, Chesuncook and Ripogenus Lakes not accessible. Similarly, the Loon Management Plan does not reference actual lake elevations or drawdown elevations as part of the “Plan”. Based on this writer’s regular observance of loon “floating nests” sitting high and dry away from the water’s edge (see photos previously submitted July 29, 2024 *Accession No. 20240731-5157*), there is no plan.

Specific Comments on Draft Low Inflow Protocol

The brief 5 page *Draft Low Inflow Protocol* is deficient and should be rejected. There is no “plan” presented. The low flow protocol basically says that “*minimum flows and/or recreational boating flow may be modified if required by hydrologic conditions*” and FERC will be notified “*no later than 10 days after each such incident.*”

No lake elevations or inflow / outflow numbers or calculations are provided in the protocol. No limits on winter drawdown, or a water use plan to maintain required storage volumes is mentioned. No data is presented in tabular format that specifies the storage volumes by-the-foot in each lake. In fact, the Licensee has yet to define a “water year” in a real time context. After-the-fact designations have no use in real time lake management.

Section 2.0, page 1 reads:

“The Ripogenus Project operates as a store-and-release development with an annual seasonal drawdown that allows for management of water levels and flows downstream of the Project, including the downstream reaches of the West Branch of the Penobscot River (West Branch) and the mainstem of the Penobscot River.”

Section 2.0, page 1 proposed changes:

The Ripogenus Project, consisting of Ripogenus Lake, Chesuncook Lake, Caribou Lake, Brandy Pond, Black Pond and Moose Pond, operates as a store-and-release development with an annual seasonal drawdown that allows for management of water levels in the Ripogenus Project lakes, and flows downstream of the Project Lakes, including the downstream reaches of the West Branch of the Penobscot River (West Branch) and the mainstem of the Penobscot River.

Section 2.0, page 1, last paragraph reads:

“The West Branch storage system (including storage impoundments associated with the Storage Project, Ripogenus Project, and Penobscot Mills Project) have a total usable storage capacity of 58.7 billion cubic feet (BCF), of which the Ripogenus impoundment provides 30 BCF (51% of the total).”

GLHA’s accompanying *Figure 1 West Branch Penobscot River System-Wide Rule Curve* on page 2 shows a total usable storage capacity of approximately 52 BCF, which does not agree with the 58.7 BCF number. Given that the storage volume curves for Rip (710,000 acre-feet = 30.9 BCF) and North Twin (350,000 acre-feet = 15.2 BCF) account for 46.1 BCF should we assume that the storage projects provide the remaining 12.6 BCF of usable storage? This is unclear. What is clear is that the Ripogenus Impoundment represents well over 50% of the combined Rip/N. Twin storage. The Licensee should provide exact numbers to explain how the 58.7 BCF total usable storage capacity number was reached. Were the storage projects included in the existing rule curve as developed in the 1990s?

Section 2.0, page 3, Figure 2 Ripogenus Impoundment Storage Volume Curve:

The storage volume curve data presented for the Ripogenus Impoundment (see Figure 2) are stated to be *“for planning purposes and are not of physical survey quality.”* This raises multiple questions:

- How did you calculate storage by foot of elevation for the CHEOPS model?
- Why is the storage volume curve not accurate?

- How accurate are drawdown calculations if the volume curve is not accurate?
- When were the Bathymetric maps developed and by whom?
- Were the bathymetric maps as presented in the *Riparian and Littoral Assessment Study* used to calculate storage volumes? If not, why not? If yes, why are they inaccurate?

Please provide in tabular format the input data files for the CHEOPS models that specify the storage volume by foot of elevation in the Ripogenus and North Twin impoundments. This data should not be considered “proprietary” as it merely contains physical geographic data for the lakes.

The proposed plan completely fails to explain how the system-wide rule curve and impoundment storage volume curves would be used as part of a water use management/operations plan to maintain lake levels (and system storage) and prevent the horrors of dewatering Ripogenus/Chesuncook/Caribou Lakes which have been documented and submitted in multiple filings and survey results. The proposed plan is “largely based on the consultation that GLHA and the applicable agencies have performed over the term of the 1996 licenses during low flow periods...” This basis of operations currently includes virtually unlimited and unrestricted drawdowns on Ripogenus/Chesuncook/Caribou Lakes. Any low flow protocol must be based on inflow data from the North Branch of the Penobscot, analysis of inflow from upstream storage impoundments ((Project No. 2634) and of their storage in relation to agreed upon Ripogenus/Chesuncook/Caribou Lake levels that meet monthly parameters.

The submitted low flow plan's only response to low inflow is to reduce whitewater boating releases to 1800 cfs both weekdays and weekends (see Figure 3, Page 7, *Draft Operations and Compliance Plan*). The licensee offers no explanation of how this apparently arbitrary flow number was derived. This very limited vision of a low flow operational plan fails to explore numerous other options including flow limits during hours outside of boating requirements. There are numerous operating alternatives that could provide necessary power generation, acceptable fish and aquatic macro invertebrate habitats, fishing and boating flows while maintaining acceptable lake levels. Our model run, labeled “RipNTwinElevLev3MinInst” (pg. 302) in the May 29, 2025 AIR response, shows one such example. Any flow restrictions/reductions should equally balance the aquatic environment, fisheries, and recreational boating flow interests.

Section 4.0, page 5, Figure 3 Ripogenus Impoundment Available Water Curve Indicating Wet, Normal, and Dry Ranges:

GLHA’s graph titled *Ripogenus Impoundment Available Water Curve Indicating Wet, Normal and Dry Ranges* (Figure 3, Page 5, *Draft Low Flow Protocol*) is again based on the assumption

that storage in Ripogenus/Chesuncook Lake is available until the dam design restriction of 45 feet below full pond. There needs to be a clearly identified lake volume that identifies the beginning of low water so operational modifications can be made before a drought is in full swing and the lakes dewatered. The normal water year graph in the proposed low flow plan simply gives a range of what GLHA identifies as normal, but provides no specific data about when operations will be modified due to low inflow.

Below is a Water Budget Plan that the Caribou/Chesuncook Lake Associations, TU, AMC, and American Whitewater have prepared, in conjunction with the CHEOPS operations model simulations, that accomplishes what GLHA's proposal purposefully ignores. It defines flows based on lake levels with subsequent flow modifications.

Proposed Water Budget for Ripogenus

Ramping: All turbine changes include a down ramping rate of no more than 25% an hour, when the flow change exceeds 25%.

Whitewater flow timing: Whitewater flows will be provided from 6:30am – 3:00 pm. Stakeholders request travel time flow data from the applicant.

Normal and Wet Years Operating Plan

Note: If lake elevation goes below monthly elevation targets, then maintain minimum flow (except for recreational flows) until lake elevation meets stipulated elevation

	May 15	June 1	July 1	August 1	September 1	October 15
Ripogenus Min. Elev. (ft., msl)	940.1	940.1	939.1	938.1	937.1	935.6
Minimum Flow (cfs)	2,000 McKay 300 RIP Dam	2,000 McKay 300 RIP Dam	2,000 McKay 300 RIP Dam	2,000 McKay 300 RIP Dam	2,000 McKay 300 RIP Dam	2,000 McKay 300 RIP Dam
Whitewater Flows (cfs)	2,500 Saturday 2,400 Sunday 2,200 Mon & Fri 2,200 Tues, Wed, Thurs	2,500 Saturday 2,400 Sunday 2,200 Mon & Fri 2,200 Tues, Wed, Thurs	2,500 Sat., Sun. until July 15 After July 15: 2,800 Saturday 2,400 Sunday 2,200 Mon - Fri	2,800 Saturday 2,400 Sunday 2,200 Mon – Fri	2,500 on alternating Saturdays 2,400 Sunday 2,200 Mon-Fri	2,800 Saturday 2,400 Sunday 2,200 Mon-Fri
Release Times: 06:30 – 15:00						
Maximum Outflow Below McKay (generation plus min flow)	No limit	No limit	No limit	No limit	No limit	No limit

Dry Years Operating Plan

Note: If lake elevation goes below monthly elevation targets, then maintain minimum flow (except for recreational flows) until lake elevation meets stipulated elevation

	May 15	June 1	July 1	August 1	September 1	October 15
Ripogenus Min. Elev. (ft., msl)	938	937	936	935	933	931
Minimum Flow (cfs)	1,500 McKay 100 RIP Dam	1,500 McKay 100 RIP Dam	1,500 McKay 100 RIP Dam	1,500 McKay 100 RIP Dam	1,500 McKay 100 RIP Dam	1,500 McKay 100 RIP Dam
Whitewater Flows (cfs) From McKay Release Times: 06:30 – 15:00	2,200 Saturday 2,200 Sunday 2,000 Mon - Fri	2,200 Saturday 2,200 Sunday 2,000 Mon - Fri	2,200 Saturday 2,200 Sunday 2,000 Mon - Fri	2,200 Saturday 2,200 Sunday 2,000 Mon - Fri	2,200 Saturday 2,200 Sunday 2,000 Mon - Fri	2,200 Saturday 2,200 Sunday 2,000 Mon - Fri
Maximum Outflow (cfs) Below McKay (generation plus min flow)	2,200	2,200	2,200	2,200	2,200	2,200

There are additional modifications that could be made. This Water Budget is not submitted as a specific operational plan, but as an example of what could work. The opportunity for low flow management improvement is vast and known. GLHA's proposal is inadequate and lacking in any cooperative spirit.

We ask FERC to require GLHA to:

1. Create a low flow plan, similar to the one above, which uses lake elevation and inflow data as the basis for operations.
2. Define specific inflow and lake elevations that indicate low flow/dry year conditions.
3. Provide specific data of how wet, normal and dry years would be determined in real time.
4. Develop a project-specific rule curve for the Ripogenus Impoundment, including the upstream Storage Project.

Thank you for considering these comments.

Sincerely,

Bill Houston Spokesperson - Caribou/Chesuncook Lake Associations

Document Content(s)

Review of Draft Operation and Compliance Monitoring Plan.pdf.....1