



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
GREATER ATLANTIC REGIONAL FISHERIES OFFICE  
55 Great Republic Drive  
Gloucester, MA 01930

July 10, 2025

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

**RE: Reservation of Authority for Prescribing Fishways Under FPA Section 18 and Conservation Recommendation Under FPA Section 10(j) for the Lewiston Falls Hydroelectric Project (P-2302-101)**

Dear Secretary Reese,

On May 15, 2025 you issued your Notice of Application Ready for Environmental Analysis and Soliciting Comments, Recommendations, Terms and Conditions, and Prescriptions for the Lewiston Falls Hydroelectric Project (Project) located on the Androscoggin River in Androscoggin County, Maine.<sup>1</sup> The current FERC license was issued on September 29, 1986 and is set to expire on August 31, 2026. In the following attachment, please find our 10(j) Conservation Recommendation to protect habitat and mitigate project impacts downstream of the Project on the mainstem Androscoggin River.

The Project does not currently provide upstream or downstream fish passage, even though diadromous fish have access to the Project boundary. Based on the following considerations, NMFS will not exercise our authority to prescribe fishways pursuant to Section 18 of the Federal Power Act at this time.

- 1) The State of Maine Draft Management Plan for the Androscoggin River states that Lewiston Falls is a natural barrier to the upstream migration of Alewife (*Alosa pseudoharengus*), American Shad (*Alosa sapidissima*), and Blueback Herring (*Alosa aestivalis*).
- 2) The NOAA Fisheries Comprehensive Plan for the Androscoggin River states that our restoration focus area is downstream of Lewiston Falls.<sup>2</sup>
- 3) There is no designated critical habitat for Atlantic salmon (*Salmo salar*) upstream of the Project and reintroduction of this species upstream of the Project is not currently part of the recovery plan.

During the term of the license, however, it may be necessary to prescribe fishways should conditions change, and fish passage and protection facilities for diadromous fish are needed to meet fisheries management goals.

---

<sup>1</sup> FERC Accession # [20250515-3015](#)

<sup>2</sup> Submission of plan FERC Accession # [20200414-5171](#), FERC determination that of plan qualifies as a comprehensive plan FERC Accession # [20200618-3041](#)



### Reservation of Authority

The Secretary of the Department of Commerce reserves the right to revise this Section 18 Fishway Prescription to protect and enhance fish passage at the Project in order to respond to any significant changes or new information that warrant a revision of this Prescription.

NMFS requests that the Commission include the following article in any license issued for the Project:

*In addition, authority is reserved to the Commission to reopen the license upon request by NMFS to require the Licensee to construct, operate, and maintain, or provide for the construction, operation, and maintenance, of such fishways as may be prescribed by the Secretary of Commerce during the term of the license pursuant to Section 18 of the Federal Power Act.*

Such a revised prescription may be necessary in the future for various reasons and conditions including, but not limited to, those described below:

- Future changes in policy about distribution of fish populations or habitat suitability conditions;
- Changes in available fish passage technology
- Changes in management policies for anadromous fish at the project

If you have any questions or need additional information, please contact Bill McDavitt (978-675-21561 or [william.mcdavitt@noaa.gov](mailto:william.mcdavitt@noaa.gov)).

Sincerely,

*Christopher Boelke*

for

Louis A. Chiarella

Assistant Regional Administrator

for Habitat and Ecosystem Services

cc: Randy Dorman, Brookfield Renewable  
Kevin Bernier, Brookfield Renewable  
Luke Anderson, Brookfield Renewable  
Jason Seyfried, Brookfield Renewable  
Wendy Bley, Kleinschmidt Group  
Patrick Dockens, USFWS  
Casey Clark, MDMR  
Lars Hammer, MDMR  
John Perry, MDIF&W  
Jim Pellerin, MDIF&W  
Laura Paye, MDEP  
Eric Cousens, City of Auburn  
David Hediger, City of Lewiston

Maine TU Council: Steve Heinz  
Peter Rubins, Grow L+A River

Attachment: 10(j) Conservation Recommendation

## ATTACHMENT

### National Marine Fisheries Service 10(j) Conservation Recommendation

#### 1 NMFS STATUTORY AUTHORITY

We have statutory authority for protecting and managing a variety of living marine resources that may be affected by the proposed relicensing, including, alewife, blueback herring, American shad, Atlantic salmon, sea lamprey and American eel in accordance with the following statutes:

##### 1.1 MAGNUSON-STEVEN'S FISHERY CONSERVATION AND MANAGEMENT ACT (AS AMENDED) (16 USC §§1801, *ET SEQ.*).

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act set forth a number of mandates for the National Marine Fisheries Service (NMFS), regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitats. Fishery management councils, with assistance from us, are required to designate EFH for all federally-managed species. EFH is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." Federal action agencies that fund, permit, or carry out activities that may adversely affect EFH are required to consult with us regarding the potential effects of their actions on EFH, and to respond in writing to our recommendations. In addition, we may comment on any state agency activities that would affect EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality and/or quantity of EFH.

##### 1.2 ENDANGERED SPECIES ACT OF 1973 (AS AMENDED) (16 USC §§1531, *ET SEQ.*).

Section 7(a)(1) of the ESA requires federal agencies to use their authorities to further the conservation of listed species. ESA section 7(a)(2) states that each federal agency shall, in consultation with the Secretary of Commerce or Interior, as appropriate, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Any discretionary federal action that may affect a listed species or its critical habitat must undergo ESA section 7 consultation. Issuance of a hydroelectric project license by the Commission is an action that requires ESA section 7 consultation.

##### 1.3 ATLANTIC COASTAL FISHERIES COOPERATIVE MANAGEMENT ACT (AS AMENDED) (16 USC §§5101, *ET SEQ.*).

The purpose of the Atlantic Coastal Fisheries Cooperative Management Act is to provide for more effective conservation of coastal fish species that are distributed across the jurisdictional boundaries of the Atlantic states and the federal government. These coastal fish species, including blueback herring and alewife (collectively, "river herring"), American shad, and American eel, are managed by various boards of the Atlantic States Marine Fisheries Commission (ASMFC). The ASMFC creates fishery management plans and recommends management action to the states and NMFS.

#### 1.4 FISH AND WILDLIFE COORDINATION ACT (AS AMENDED) (16 USC 661, *ET SEQ.*).

The Fish and Wildlife Coordination Act provides that wildlife conservation shall receive equal consideration and be coordinated with other features of water resource development programs. A federal action agency, such as FERC, must consult with us and consider the conservation of wildlife resources by preventing loss and damage to such resources. In addition, action agencies must consider providing for the development and improvement of wildlife resources in connection with such water-resource development. We may provide recommendations to the federal action agency; the action agency is required to give these recommendations full consideration.

#### 1.5 NATIONAL ENVIRONMENTAL POLICY ACT (AS AMENDED) (42 USC §§4321, *ET SEQ.*).

NEPA and its implementing regulations require federal action agencies to analyze the direct and indirect environmental effects and cumulative impacts of project alternatives and connected actions. NEPA requires the federal action agency to conduct a comparative evaluation of the environmental benefits, costs, and risks of the proposed action, and alternatives to the proposed action.

#### 1.6 FEDERAL POWER ACT (AS AMENDED) (16 USC §§791A, *ET SEQ.*)

##### *1.6.1 Section 18 of the FPA*

The Federal Energy Regulatory Commission (FERC) authorizes the licensing of non-Federal hydropower projects pursuant to the Federal Power Act (FPA), as amended. Projects are issued licenses for 40-50 years. NMFS participates in the licensing of non-federal hydropower projects by FERC. Under FPA Section 18 (16 U.S.C. § 811), NMFS has authority to prescribe fish passage measures (“fishway prescriptions”) to ensure safe, timely, and effective fish passage. Such prescriptions are mandatory and must be included in the license issued by FERC, although licensees are entitled to request a formal adjudication of their factual basis. FPA Section 10(j) (16 U.S.C. § 803(j)) provides NMFS with authority to make recommendations for the “protection, mitigation, and enhancement” of fish and wildlife. In addition, FPA Section 10(a) makes it a condition of license issuance that the project be “best adapted to a comprehensive plan for improving or developing a waterway or waterways” for multiple uses including “the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat).”

##### *1.6.2 Section 10(a)(1) of the FPA*

Under Section 10(a), the Commission must consider a project’s consistency with federal and state comprehensive plans for improving, developing, or conserving a waterway. Comprehensive plans include management and restoration of fish and habitat resources. The Commission must ensure that hydropower projects are consistent with a comprehensive plan for improving or developing a waterway and for other beneficial public use. Under Section 10(a)(1), a project in a river basin must serve the public interest, not just power generation. Section 10(a) requires the Commission to solicit recommendations from resource agencies and Indian tribes (if affected by the project) on how to make a project more consistent with federal or state comprehensive plans. The Commission will give consideration to a plan which a federal or state agency has adopted under its own authority, if the plan (1) is a comprehensive study of one or more of the beneficial uses of the river; (2) specifies the standards, data, and methodology used; and (3) is filed with the Commission’s Secretary before Section 10(a) conditions are established for a given project.

### 1.6.3 Section 10(j) of the FPA

Under section 10(j), licenses for hydroelectric projects must include conditions to protect, mitigate damages to, and enhance fish and wildlife resources, including related spawning grounds and habitat. Recommendations received from federal and state fish and wildlife agencies form the basis of these conditions. The Commission is required to include such recommendations in the license unless it finds that they are inconsistent with Part I of the FPA or other applicable law, and that alternative conditions adequately address fish and wildlife issues. Before rejecting an agency recommendation, the Commission must attempt to resolve the inconsistency, giving due weight to the agency's recommendations, expertise, and statutory authority. If the Commission does not adopt a section 10(j) recommendation, in whole or in part, it must publish findings that adoption of the recommendation is inconsistent with the purposes and requirements of Part I of the FPA or other applicable provisions of law, and that conditions selected by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife and their habitats.

## **2 RESOURCE MANAGEMENT GOALS AND OBJECTIVES**

We are responsible for the stewardship of the Nation's living marine resources and their habitats. In our "*Habitat Enterprise Strategic Plan*" (NOAA Fisheries, 2024), one of the stated mission goals is to conserve habitat for managed and protected resources by increasing access to historic riverine rearing and spawning habitat for targeted diadromous fish species. Our consultation activity in this licensing process supports this mission goal.

Complimentary to our agency goals, the Atlantic States Marine Fisheries Commission (ASMFC) supports sustainable Atlantic coast fishery resources, which includes diadromous species. The ASMFC developed Interstate Fishery Management Plans (FMP) for alewife, blueback herring, American shad, and American eel under the authority of the Atlantic Coastal Fisheries Cooperative Management Act. The goals of the American shad and river herring FMPs are to protect, enhance, and restore migratory spawning stocks of American shad, alewife, and blueback herring to achieve stock restoration and maintain sustainable levels of spawning stock biomass (ASMFC, 2010). The goals of the American eel FMP are to reverse local or regional declines in abundance and institute consistent fishery-independent and dependent monitoring programs throughout the management unit (ASMFC, 2018).

A management goal for both the Androscoggin and the Little Androscoggin Rivers is to rebuild self-sustaining diadromous fish runs with full access to historical habitat and production potential. This goal applies throughout the region with respect to species within our congressionally mandated authority. Our recommended terms and conditions are intended to serve the public interest and meet our management objectives and statutory obligations.

We consider appropriate flows as essential components to mitigate project related impacts on public trust resources and reach our stated goals for the anticipated license duration. Specifically, appropriate flows are necessary to protect native diadromous species and their habitats in stream reaches affected by the Project. This includes providing a range or schedule of flows necessary to: 1) optimize suitable habitat; 2) stabilize flows during spawning and incubation; 3) facilitate the efficient migration of spawning adults, emigration of juveniles, and movement of rearing juveniles between feeding and sheltering areas; and 4) restore channel-forming processes and riparian ecological function.

### 3 CONSERVATION RECOMMENDATION

#### 3.1 NATIONAL MARINE FISHERIES SERVICE CONSERVATION RECOMMENDATION

We recommend the Licensee develop and implement a Project Operation and Flow Monitoring Plan (Plan). In this Plan, Project operations will reregulate the inflow when inflows are within the hydraulic capacity of the Project. Operational control of inflows relies on spill over the dam, flow through the powerhouse, and management of the impoundment water surface elevation. Knowledge of inflows from the upstream projects will also assist in managing headpond storage and total project releases. Reregulation should occur from April 1 to October 31, which coincides with the Atlantic salmon upstream migration season, and the plan should be developed in consultation with the National Marine Fisheries Service and the Maine Department of Marine Resources. Temporary deviations from this plan may include: 1) approved maintenance activities 2) emergency electrical system conditions and 3) other agreed upon conditions between the licensee and the National Marine Fisheries Service. The licensee should allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. The plan should describe records management procedures and reporting requirements for headpond elevation levels, crest gate operations, generation flow, and total project outflow. The licensee should include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the aforementioned agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information. The plan should identify the monitoring methods and locations of monitoring devices necessary to ensure that the project operates in a manner that is consistent with all of the conditions in the Commission's Order Issuing New License.

Furthermore, the Plan should include provisions consistent with the emergency notification requirements for project operations, lake levels, and flows required by this license. In addition, should impoundment elevations or instream flows, as measured according to the approved monitoring plan, fall below the levels required by this license, the Plan should include a provision whereby the licensee files, with the Commission, a report of the incident within 30 days of the incident. This report should, to the extent possible, identify the cause, severity, and duration of the incident and any observed or reported adverse environmental impacts resulting from the incident. The report should also include: (1) operational data necessary to determine compliance with this article; (2) a description of any corrective measures implemented at the time of the occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and (3) comments or correspondence, if any, received from resource agencies, as identified below, regarding the incident.

#### 3.2 RECOMMENDATION GOAL

The goal of our recommended Plan is, to the degree possible, to reregulate the inflow at the Project in a transparent manner that limits unnatural sub-daily fluctuations in flow affecting downstream habitats occupied by diadromous species. As the plan is being developed, these are the stated objectives to be achieved in the development of this plan:

### 3.3 RECOMMENDATION RATIONALE

#### 3.3.1 *Evidence*

The Rumford Project and the Gulf Island/Deer Rips Project (GI/DR) are hydro-peaking facilities upstream of the Lewiston Falls Project. The water discharged from these projects becomes the inflow to the Lewiston Falls Project. Currently the USGS operates two hydrographs on the mainstem Androscoggin River that highlight the different flow regimes that occur on the river. USGS gage 01054500 Androscoggin River at Rumford, Maine GI/DR projects is located within the bypass reach of the Rumford Hydroelectric Project. Figure 1 depicts the flows at this location during the upstream anadromous fish migration period in 2024. According to the mode of operation that McManamay et al. (2016) established, both the Rumford and GI/DR projects are classified as ‘Peaking’ hydropower projects<sup>3</sup>. This upstream hydrograph during the spring of 2024 shows a hydrograph with minimal sub-daily variation with some notable exceptions whereby spill releases from the Rumford spillway changed rapidly.

USGS gage 01059000 is located downstream of the Lewiston Falls Project near Auburn, Maine. Consequently, this gauge reflects the outflow from this Project. After May 18, the flows at this gauge are generally within the hydraulic capacity of the Project. The downstream gauge data near Auburn reveals more sub-daily flow variation than what is occurring at the upstream gauge in Rumford (Figure 2). The Lewiston Falls Project is classified as ‘Run-of-river/upstream Peaking’ according to McManamay et al. (2016).<sup>4</sup> This downstream hydrograph near Auburn, Maine provides evidence that hydropeaking operations are still visible below Lewiston Falls, even though Lewiston Falls is predominantly a run of river project as licensee rarely drops the headpond below the spillway crest by more than one foot.

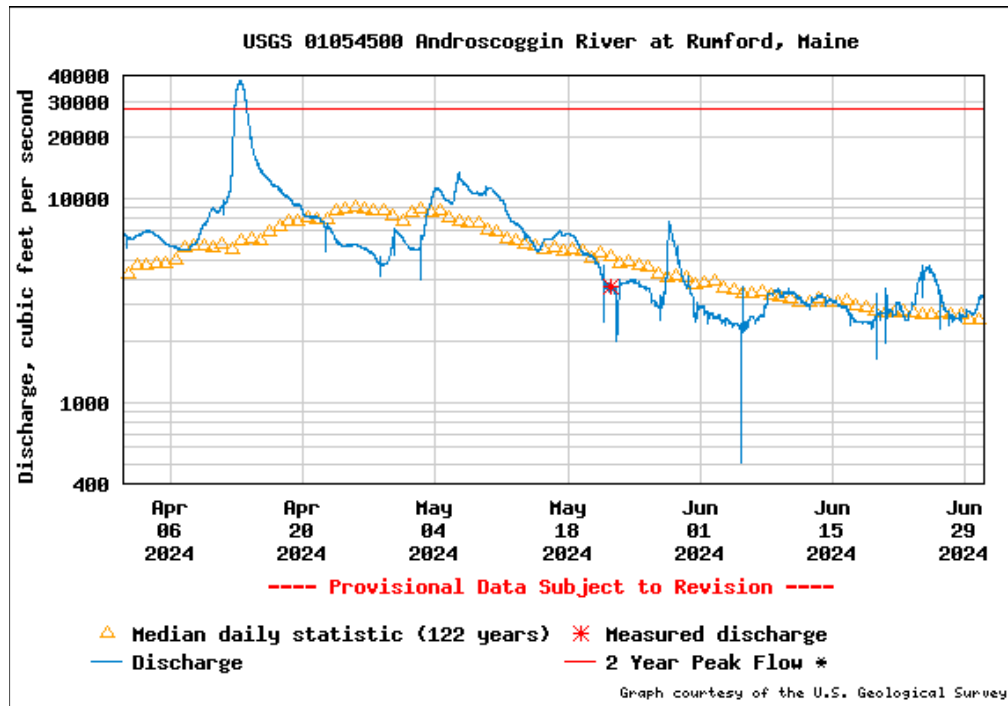
---

<sup>3</sup> McManamay et al. (2016) defines this mode of operation as a project that stores and releases water (high flow releases) for peaking hydroelectric generation. Reservoir fluctuations typically are large due to seasonal drawdowns of the reservoir.

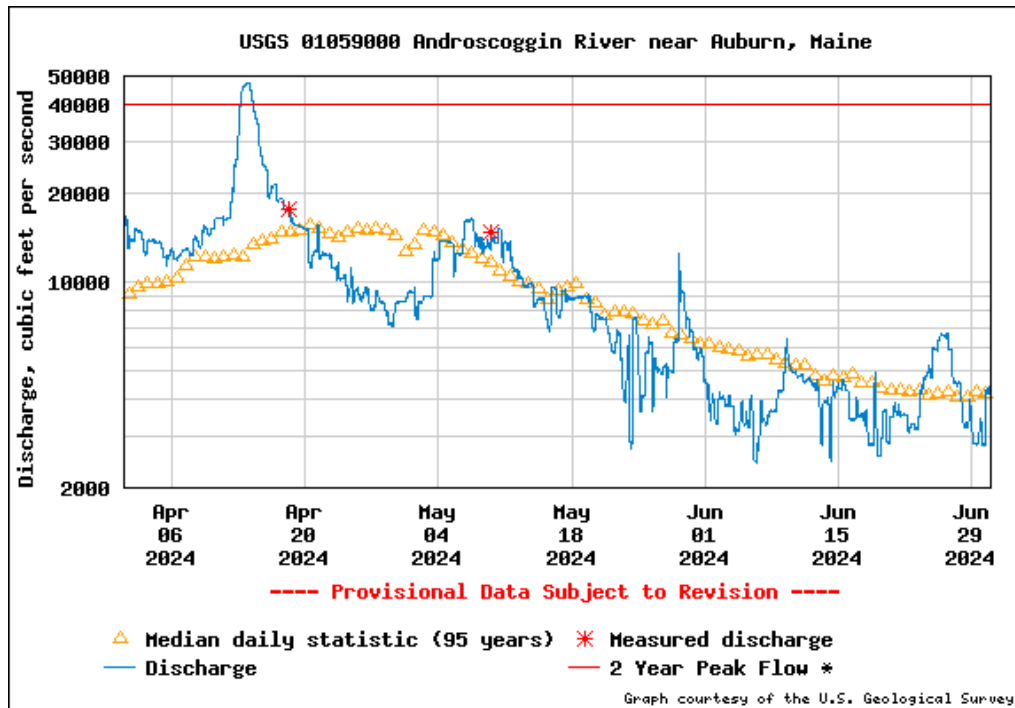
<sup>4</sup> McManamay et al. (2016) defines this mode of operation as a project that operates as a run-of-river facility, but harnesses inflows from upstream storage releases or peaking operations to generate electricity.



**Figure 1. Hydrograph of the Androscoggin River at Rumford, ME. This gauge is located within the bypass reach of the Rumford Hydroelectric Project.**



**Figure 2 Hydrograph of the Androscoggin River downstream of the Lewiston Falls project. Note this gage also includes flows from the Little Androscoggin River. Given that the Lewiston Fall largely varies the impoundment by one foot or less, the rapid changes in flow are the result of operations at the hydroelectric projects between the two gauges.**



Hydrologic alternations have negatively impacted the biodiversity and ecological integrity of rivers worldwide (Sakaris, 2013).

- Hydropeaking stalls anadromous fish migration alters the thermal regime that affects spawning success and survivability of juvenile fish species (Casas-Mulet et al., 2016).
- Frequent variations in flow and water levels can increase the vulnerability of fish populations (Bakken et al., 2023).
- Fish are sensitive to sub-daily flow fluctuations which can impact life stages from egg to adult through various components of the hydropeaking hydrograph (Hayes et al., 2019).
- Fish located downstream of hydropeaking projects are negatively impacted from the organism to the community level. Hydropeaking operations can decrease fish production and diversity, interrupt reproduction, prompt fish movement, increase fish stranding and decrease habitat stability (Bozeman et al., 2024).

### *3.3.2 Nexus to project*

The Applicant proposes to fluctuate the headpond by up to one foot during normal operations. The headpond will occasionally drop by for feet for maintenance operations and emergencies. The Final License Application indicates that the project has a usable storage capacity of 642 acre-feet.<sup>5</sup> Based on this storage capacity, the ability to control flow over spill gates and through the powerhouse, it is therefore possible for outflows to vary from inflows primarily when inflows are within the hydraulic capacity of the powerhouse.

### *3.3.3 Need for this recommendation*

We propose this 10j recommendation because listed Atlantic salmon critical habitat and essential rearing, spawning and foraging habitat for other NOAA trust resources exist downstream of this Project. Restoring and maintaining designated critical habitat to recovery of endangered species is a strategic goal in our region's Strategic Plan (NOAA Fisheries, 2024). Recovery of migratory fish in the Androscoggin River is also consistent with our stated goal to maximize the economic value and community resilience of our commercial and recreational fisheries. Reregulating the inflows that the Lewiston Falls project receives benefits the habitat that Atlantic salmon and all other migratory and resident fish in the Androscoggin River inhabit downstream of the Project. Minimizing sub-daily flow variations allows suitable habitat to persist. Slowing the rate of rapidly decreasing available habitat can give fish more time to find suitable habitat (Bozeman et al., 2024).

A flow demonstration study conducted at the Project in 2014 and 2015 the ability to control outflows that in turn affects the downstream habitat.<sup>6</sup> During the study at the project had a high flow release of 7,812 cfs and a low flow release of 2,431 cfs. The report showed a decrease in wetted width at Transect 2 (8.1 ft, 2.6% difference) and water depth (maximum decrease of 3.2 ft) as flows receded from the high flow release to the low flow release. While flow demonstration study was indeed a controlled experiment, a review of flows during the upstream anadromous migration period revealed similar patterns in 2024. Figure 3 documents flow in the river rapidly decreasing from approximately 6,500 cfs in the early hours of May 24, 2024. Less

---

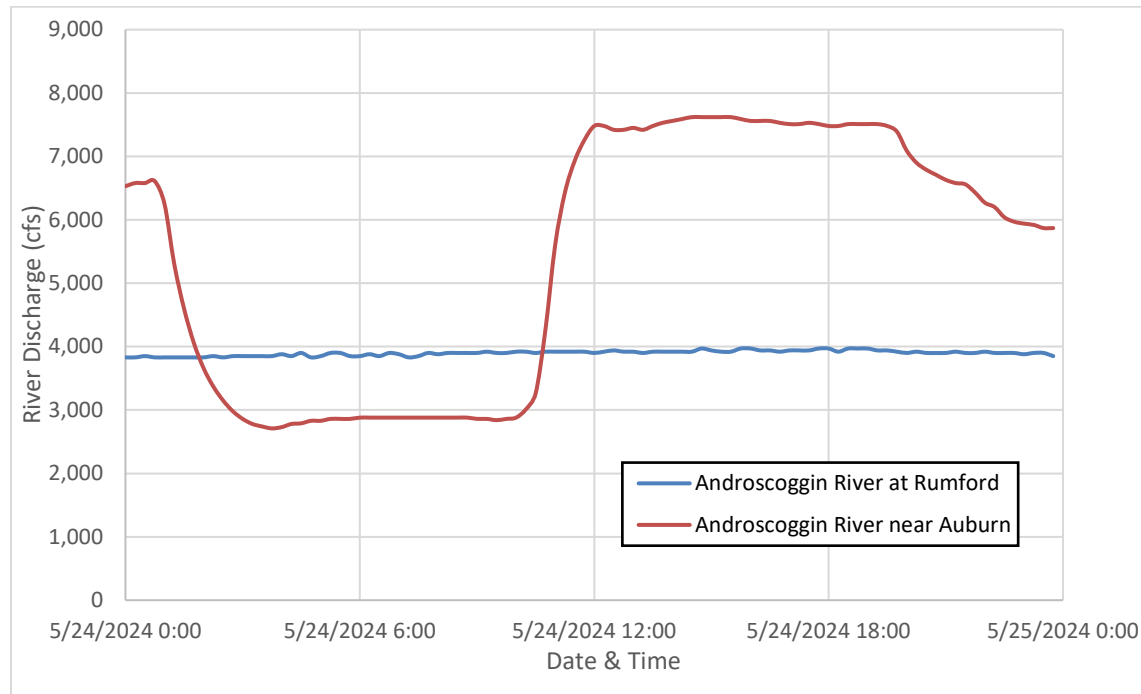
<sup>5</sup> FERC Accession # [20240828-5049](#) Final License Application Table 3.2-1

<sup>6</sup> FERC Accession # [20160329-5151](#)

than 4 hours later, the flow drops by over 3,200 cfs to approximately 2,800 cfs. Limiting the number of times instances such as this occur supports the goal of our recommendation.

**Figure 3. Discharge in the Androscoggin River in Auburn derived from 15 minute data.**

Source: [waterdata.usgs.gov](https://waterdata.usgs.gov)



The USGS gauge at Rumford shows significantly less variation during the same time period indicating that the hydropower projects between the two gauges manipulated flow in the river. These rapid operational changes are detrimental to habitat conditions in the Androscoggin River downstream of Lewiston Falls, and efforts to diminish significant and rapid changes in flows would improve the overall habitat conditions in the Androscoggin River.

#### 3.3.4 Specificity of this recommendation

This recommendation is being made specifically for when inflows to the Lewiston Falls project are within the hydraulic capacity of the project. The license application indicates that minimum hydraulic capacity for the Monty powerhouse is 1,600 cfs and the maximum hydraulic capacity is 6,600 cfs. This recommendation specifically requests that Brookfield develop and implement a project operations and maintenance plan that indicates how reregulation of inflows will improve downstream habitat conditions. We are recommending that the licensee develop Project Operation and Flow Monitoring Plan and implement this Plan to achieve our goal of limiting unnatural sub-daily flow variation that have deleterious effects on habit downstream of the Project. We request that the licensee consult with the National Marine Fisheries Service and the Maine Department of Marine Resources as the operation and maintenance plan is developed in order to determine the percentage by which inflow will vary from outflow and the amount of time these variances will occur.

### 3.3.5 Consistency with comprehensive development standard

This recommendation is consistent with the stated restoration goals for the diadromous fishery in our Androscoggin River Watershed Comprehensive Plan for Diadromous Fishes<sup>7</sup>. In addition, fulfillment of this recommendation would be consistent with the State of Maine Draft Management Plan for the Androscoggin River.

This recommendation is being made to protect the habitat of the Androscoggin River downstream of the Project and it is meant to mitigate the rapid changes in habitat that would be a project impact if the recommendation was not made. The protected habitat is intended to benefit migrating NOAA trust resources including endangered Atlantic Salmon that are using the Androscoggin River as a migratory corridor to reach spawning habitat in tributaries to the Androscoggin River as well as the providing spawning and rearing habitat for these species as well.

### 3.3.6 Recommendation consistency with Commission Standards for adoption

This recommendation is specifically designed to mitigate impacts to our migratory trust resources. This recommendation is being made in order to achieve the goals and objectives in our comprehensive plan.

We note that when the Commission issued its Final Environmental Assessment for the Pejepscot Project in 2022, Table 25 indicated that for NMFS's recommendation to operate in an instantaneous run-of-river project, capital, annual and levelized annual costs were stated as 'unknown.' Should the Commission adopt this recommendation, the licensee should not incur any capital costs as no changes to the existing powerhouse equipment are needed to implement this recommendation. With respect to annual and levelized costs, when outflow is allowed to vary inflow by a limited percent, Pfeifle et al. (2024) claim that some of the ecological impacts of hydropeaking may be substantially reduced without high generation loss. In addition, these authors conclude that when large deviations from inflow equaling outflow are applied to small energy price targets, revenue losses are further minimized while limiting flashiness due to the flexibility to effectively manage hourly flows, accumulate revenue and generate power.

In addition, this recommendation is designed to largely mimic the Gulf Island-Deer Rips project's license article 407 to develop a Project Operations and Flow Monitoring Plan in the Commissions 2006 Order Issuing New License.<sup>8</sup> Based on the reading of this article and the highly similar nature of our recommendation, we infer our recommendation as being consistent with the Commission's standards for adoption.

## 4 REFERENCES

ASMFC. (2010). *Fishery Management Report of the Atlantic States Marine Fishery Commission - Amendment 3 to the Interstate Fishery Management Plan for Shad and River Herring (American Shad Management)*.  
[http://www.asmfc.org/uploads/file/Amendment3\\_FINALshad.pdf](http://www.asmfc.org/uploads/file/Amendment3_FINALshad.pdf)

---

<sup>7</sup> NOAA Fisheries submission of Plan: FERC Accession # [20200414-5171](#). FERC's determination that the Plan qualifies as a comprehensive plan: FERC Accession # [20200618-3041](#)

<sup>8</sup> FERC Accession # [20060823-3018](#)

- ASMFC. (2018). *Addendum V to the Interstate Fishery Management Plan for American Eel. Commercial Yellow and Glass/Elver Eel Allocation and Management*.  
[https://asmfc.org/uploads/file/63d135c2AmEelAddendumV\\_Aug2018\\_updated.pdf](https://asmfc.org/uploads/file/63d135c2AmEelAddendumV_Aug2018_updated.pdf)
- Bakken, T. H., Harby, A., Forseth, T., Ugedal, O., Sauterleute, J. F., Halleraker, J. H., & Alfredsen, K. (2023). Classification of hydropowering impacts on Atlantic salmon populations in regulated rivers. *River Research and Applications*, 39(3), 313-325.  
<https://doi.org/10.1002/rra.3917>
- Bozeman, B. B., Pracheil, B. M., & Matson, P. G. (2024). The environmental impact of hydropower: a systematic review of the ecological effects of sub-daily flow variability on riverine fish. *Reviews in Fish Biology and Fisheries*. <https://doi.org/10.1007/s11160-024-09909-4>
- Casas-Mulet, R., Saltveit, S. J., & Alfredsen, K. T. (2016). Hydrological and thermal effects of hydropowering on early life stages of salmonids: A modelling approach for implementing mitigation strategies. *Science of The Total Environment*, 573, 1660-1672.  
<https://doi.org/10.1016/j.scitotenv.2016.09.208>
- Hayes, D., Moreira, M., Boavida, I., Haslauer, M., Unfer, G., Zeiringer, B., Greimel, F., Auer, S., Ferreira, T., & Schmutz, S. (2019). Life Stage-Specific Hydropowering Flow Rules. *Sustainability*, 11(6). <https://doi.org/10.3390/su11061547>
- McManamay, R. A., Brewer, S. K., Jager, H. I., & Troia, M. J. (2016). Organizing Environmental Flow Frameworks to Meet Hydropower Mitigation Needs. *Environmental Management*, 58(3), 365-385. <https://doi.org/10.1007/s00267-016-0726-y>
- NOAA Fisheries. (2024). *New England and Mid-Atlantic Geographic Strategic Plan 2024-2027*. Silver Spring, MD: National Marine Fisheries Service Retrieved from  
<https://www.fisheries.noaa.gov/s3/2024-06/NMFS-NE-MA-GeoStratPlan-2024-2027.pdf>
- Pfeifle, S., Kennedy, K., & Palmer, R. (2024). Timing is everything: Rethinking flexible hydropower operations for the economy and environment. *River Research and Applications*, n/a(n/a). <https://doi.org/10.1002/rra.4370>
- Sakaris, P. C. (2013). A Review of the Effects of Hydrologic Alteration on Fisheries and Biodiversity and the Management and Conservation of Natural Resources in Regulated River Systems. In *Current Perspectives in Contaminant Hydrology and Water Resources Sustainability*. <https://doi.org/10.5772/55963>