



November 1, 2024

VIA E-FILING

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

RE: Comments on Proposed Study Plan: Brunswick Hydroelectric Project (FERC No. 2284).

Dear Secretary Reese:

On behalf of its 300 members the Merrymeeting Bay Chapter of Trout Unlimited (TU) in consultation with the Free the Andro Coalition and the Maine Council of Trout Unlimited (collectively “the Coalition”), respectfully submits these comments on the Proposed Study Plan (PSP) for the Brunswick Project (P-2248) filed for Brookfield White Pine Hydro LLC, by Brookfield Renewable US (“Brookfield” or “Applicant”) on August 2, 2024.

Introduction and Basis for Action:

The operations of the hydro-facility located at Brunswick Falls are integrally tied to the health of migratory fish populations accessing the Androscoggin River. The Coalition recognizes that FERC will ultimately determine the operational parameters of the facility if a new license is approved. With its mission **to regulate and oversee energy industries in the economic, environmental, and safety interests of the American public** FERC will be considering impact on migratory fish species, including the Atlantic Salmon which are listed as endangered under the Endangered Species Act. This provides a rare opportunity to take steps to significantly improve migratory fish passage at Brunswick Falls.

As outlined in detail with its initial filing for Docket P-2284 regarding Brookfield’s Preliminary Application Document (PAD) and Scoping Document on June 20,2024, the Coalition’s primary goal is to achieve changes in the license terms that will allow remnant populations of diadromous fish to again ascend the falls to reach their historical spawning grounds and complete their respective life cycles with unfettered upstream and downstream passage. It supports the use of best available science and engineering practices along with new on-site studies leading to the restoration of unimpaired diadromous fish passage.

Comments on Proposed Study Plan:

After review of the PSP as submitted on August 2nd and after attending two meetings hosted by Brookfield to answer questions and receive input, the Coalition welcomes the study plans as outlined in the PSP with the following comments and requested changes:

1) **Keeping the status quo on fish passage under the current license cannot be an allowable option:** We note that the PSP as written leaves the option for Brookfield to ultimately default to the status quo under the current FERC license. Brookfield should eliminate that possibility with a clear statement as it further revises its study plans and final application. As cited in our June 20th filing in response to the Preliminary Application Document and Scoping Sessions, there are myriad studies showing the status quo does not work for all species of migratory fish both for upstream and downstream passage. Leaving the status quo will effectively sever the nexus between hydro-power operations at the site and FERC’s mandate to consider environmental interests of the American public.

2). **The study parameters need to include data to allow for consideration of a Nature-Like Fishway:** In the PSP’s Section 5.2.1 Computational Fluid Dynamics Modeling - Upstream and Downstream Passage Study, the study parameters for measurement locations downstream are limited to the powerhouse tailrace and do not include downstream flows immediately below the 400 ft section of the dam that acts as an overflow spillway. See Figure 5.2.1.5-1: Proposed CFD Model Extents in the PSP (copied below).



Figure 5.2.1.5-1: Proposed CFD Model Extents

Our concern is that this limitation precludes analysis of flow dynamics and geomorphology below the spillway which is actively passing water most of the year and at times may be creating unintentional attraction flows. Therefore, the ability to consider a Nature-Like-Fishway (NLF) that mimics a more natural environment for fish passage as an alternative fishway design in that very large section of river will be severely limited by lack of data from the currently proposed studies. As a goal in alignment with the Fish Passage Alternatives Study an NLF should be under consideration with the objective of creating data that allows consideration of all reasonable passage options. Therefore, an NLF must be one of the alternatives vetted under the study regimes discussed in section **5.2.2 Upstream and Downstream Fish Passage Alternatives Study** which states:

“BWPH is proposing to conduct an *Upstream and Downstream Fish Passage Alternatives Study* that will include evaluations of previously conducted telemetry studies at the Project, an evaluation of the existing upstream and downstream fish passage facilities at the Project as compared to agency design criteria, a desktop evaluation of entrainment potential, and an evaluation of potential upstream and downstream passage alternatives. The study results will be used to identify potential measures and/or modifications, as necessary, for improving upstream and downstream fish passage at the Project.”

Please include requirements for consideration of a NLF fish passage design in the spillway area using literature review and real-world examples of methodologies as mentioned for other designs that will only be considered for the tailrace area. This should include literature such as, but not limited to, fishway designs as described in Turek et al 2016¹ and real-world examples in Maine (see Saccarappa Falls example for U.S. Fish and Wildlife Service, Westbrook, Maine <https://www.fws.gov/story/rallying-round-presumpscot>) and beyond. Study conclusions should include reporting of alternative fishway analyses that considers these designs and fully address feasibility relative to other alternatives being considered.

As a simple, illustrative example, a NLF analysis could include parameters that account for the average height of the dam as described in Section 3.2 of the Preliminary Application Document (PAD) at approximately 20 feet. This section runs horizontally for nearly 400 feet from the right of the spillway pier (circled in red) and past the tainter gates as shown in the aerial photo below copied from Figure 3.2.1 in the PAD. This section is separated from the flows directed through the powerhouse and its tailrace by the spillway pier. For a 20-foot rise with a slope of 2% an NLF would require a run of about 1,000 feet. The scale provided in the photo indicates that such a run may be possible if incorporated above and below that segment of the dam, an area which is already largely roughened and free flowing below the dam.

¹ Turek, J., A. Haro, and B. Towler. 2016. Federal Interagency Nature-like Fishway Passage Design Guidelines for Atlantic Coast Diadromous Fishes. Interagency Technical Memorandum. 47 pp.



Copied from Figure 3.2.1 in the PAD

The nexus between hydro-operations and a NLF is the provision for adequate fish passage by creating volitional routes for fish around the hydro-power production facility rather than at its face. Analyses should consider costs of construction but also include savings over the operating life of the new license including minimal ongoing long-term maintenance and monitoring costs for a passive fishway design. Collecting adequate data is important in order to make an objective decision about an NLF as a feasible alternative fishway.

3) Sea Level Rise over the next 50 years must be factored into license requirements for this head of tide facility: The goal is to assure that operations of the power plant and/or any fish passage design will not be impaired by sea-level rise over the life of a new license. No elements of the PSP mention the fact that this head-of-tide dam which is affected by tidal flows on a daily basis may be operationally impacted by sea level rise in the future. Currently the State of Maine has adopted planning criteria which recognizes that Maine has experienced eight inches of sea level rise during the last century and anticipates 1.5 feet or more of additional rise by 2050 (<https://www.maine.gov/climateplan/climate-impacts>). A new FERC license will run 40 to 50 years.

Further with the passage of LD 1572, Maine Agencies are now required to account for the impacts of sea level rise in planning for infrastructure, social, and economic impacts (https://www.maine.gov/future/sites/maine.gov.future/files/2021-05/GOPIF_SLR_Factsheet_2021_05_06.pdf)

In a May 2024 report published by the Union for Concerned Scientists entitled: “*Looming Deadlines for Coastal Resilience: Rising Seas, Disruptive Tides, and Risks to Coastal Infrastructure*”² the Brunswick hydro-power plant is specifically cited and is determined to be at risk by 2050. The report includes an interactive risk map showing that the “Brunswick Hydro power plant in Brunswick, ME is at risk of disruptive flooding. This facility is at risk of flooding once every two weeks per year in 2050 under a medium sea level rise scenario” (<https://storymaps.arcgis.com/stories/6ca511bc6cd14ce8a4a6e18b769fb802>).

Given these projections by credible sources and implementation by the state of Maine requiring its agencies to account for and act to mitigate impacts, the infrastructure of the power facility as designed and any fishway alternatives should be vetted by objective engineering analysis. Unless findings of these analyses indicate a high likelihood that operations of the hydro facility as a whole and any fishway designs will be unimpaired by a sea level rise of 1.5 feet or more, the designs must be considered faulty under a license that will exceed the 2050 mark by another 20 plus years. Faulty operational designs will affect both the functionality of the hydropower facility and the efficacy of migratory fish passage: both fall under the purview of a FERC license renewal. The nexus in this case between facility operations and the role of FERC to consider impacts on power generation, economic, social, and environmental interests is clear. In a most extreme case these analyses could lead to a basis for dam decommissioning.

The Merrymeeting Bay Chapter of Trout Unlimited and the rest of the members of the Free the Andro Coalition appreciate the opportunity to comment on the relicensing of the Brunswick Project (P-2248) which is a keystone element in the efforts to restore migratory fish passage in the Androscoggin River.

Questions concerning this submission be directed to Chip Spies at Merrymeeting Bay Trout Unlimited, Chapter 329. He can be reached at chipspies@gmail.com.

Respectfully submitted,



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² Dahl, Kristina, Juan Deplet-Barreto, Rachel Cleetus, Erika Spanger, Benjamin Vitale, Shana Udvardy, Philip Thompson, Pamela Worth, and Astrid Caldas. 2024. *Looming Deadlines for Coastal Resilience: Rising Seas, Disruptive Tides, and Risks to Coastal Infrastructure*. Cambridge, MA: Union of Concerned Scientists. <https://www.ucsusa.org/resources/looming-deadlines-coastal-resilience>. <https://doi.org/10.47923/2024.15502>