UNITED STATES OF AMERICA

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

(August 4, 2023)

Brookfield White-Pine Hydro LLC	)	Project No. P-2333-091
	)	
Application for Major New License	)	
Rumford Falls Hydroelectric Project	)	

MOTION TO INTERVENE AND PROTEST

Pursuant to Rules 210, 211 and 214 of the Rules and Regulations of the Federal Energy Regulatory Commission (the "Commission" or "FERC"), 18 C.F.R. §§ 385.210, 211 and 214 (2021) the Maine Council of Trout Unlimited ("Maine TU") hereby moves to intervene in the above captioned proceeding and to protest the New Application for a Major License ("License Application") filed by Brookfield White-Pine Hydro LLC ("Brookfield" or "Applicant") subsidiary Rumford Falls Hydro LLC, for the Rumford Falls Hydroelectric Project (FERC Project No. 2333-091) (the "Rumford Falls Project").

I. MOTION TO INTERVENE

Maine TU is a non-governmental organization (NGO) whose stated mission is: "to conserve, protect, and restore Maine's coldwater fisheries and their watersheds." Maine TU encompasses six chapters with over 2000 members. The Androscoggin River watershed is Maine's third largest watershed. Maine TU members use the Androscoggin River for recreational and aesthetic pursuits. Its members fish, boat and otherwise enjoy the watershed. Further, Maine TU members have broad and deep organizational interests in the Commission's equal consideration of power development and environmental quality in hydropower licensing.[1]

[1] As required under the Federal Power Act ("FPA") 16 U.S.C. §§ 791 et seq.; Part One, Section 4(e) (16 U.S.C. § 797(e)) and Section 10(a) (16 U.S.C. § 803).

Maine TU has been heavily involved with efforts to restore stream connectivity and improve water quality within the Androscoggin River Watershed since early in 2019 when it became involved with the Lower Barkers Mill (P-2808) relicensing. It is currently involved with ongoing FERC hydroelectric relicensings throughout the greater watershed from the Aziscohos Project (P-4026) at the headwaters to the Worumbo Project (P-3428) on the lower river.

Maine TU and its members therefore have a direct and substantial interest in the outcome of the proposed License Application now before the Commission as the new license will impact the Androscoggin watershed and Maine TU's interests for a substantial period of time. Accordingly, for the foregoing reasons, Maine TU hereby moves to intervene with full party status in this proceeding.

II. PROTEST

In connection with its Motion to Intervene and pursuant to Rule 211, Maine TU submits this Protest to the License Application and notes pursuant to Rule 211(3) it be placed in the public file and the Commission consider the protest in determining further appropriate action in this matter,

A. Introduction

Licensee Brookfield is applying for a new license for operation of the Rumford Falls Project for a proposed term of forty (40) years. The current license was issued in 1994 for the first time since the enactment of the Clean Water Act. Maine TU believes the original license terms and conditions were favorable to hydro operations at the expense of other environmental concerns: fisheries and aquatic habitat, and recreational uses due in part to the early and immature development of environmental law particularly with respect to water quality and recreational use. The Rumford Falls Project contains the fourth largest generation capacity of any

generation facility in Maine and is located on the site of what was once Maine's largest natural waterfall – then the largest falls in the United States east of Niagara Falls. Under most observed flow conditions, currently authorized minimum flows of between 1 cfs and 21 cfs effectively dewater both sets of falls and bypasses for most of the year, effectively reducing and eliminating natural fisheries and aquatic habitat and any reasonable resemblance to a "natural waterfall".

B. Procedural Background.

Brookfield submitted its Notice of Intent to File Application for a New License and Pre-Application Document (NOI/PAD) in September of 2019.[2] Subsequent comments filed by the Town of Rumford and others requested various studies including fisheries, flow, and recreational use. Maine TU Comments were submitted in June of 2020 supporting a Minimum Flow Analysis, Brown Trout and Rainbow Trout Telemetry Study, and Comprehensive Angler Creel Survey.[3] These and other studies including the Angler Creel Study and the standard suite of water quality studies were subsequently approved in the Study Plan Determination.[4] The Initial Study Report (ISR) noted that "The majority of the Water Quality Study has been completed, although some limited additional data will be collected." Specifically, an Angler Creel Survey was postponed to 2022 due to safety concerns and anticipated anomalous usage due to the COVID-19 pandemic. Although, the Angler Creel Survey has been postponed, study and on-site consultation with Maine Department of Inland Fisheries and Wildlife ("MDIFW") was conducted and, therefore, this study is being identified as "ongoing."[5] The Recreation Study was also noted as "Postponed". The ISR Meeting Summary noted that the Creel Survey would be

[2] Rumford Falls Project (FERC No. 2333) Notice of Intent to File Application for a New License and Pre-Application Document dated September 27, 2019.
[3] Maine TU Council letter dated June 1, 2020, Subject: Comments of Maine Council of Trout Unlimited on the Proposed Study Plan (PSP) for the Rumford Falls Hydroelectric Project (FERC No. 2333).
[4] FERC Study Plan Determination for the Rumford Falls (P-2333-091) Hydroelectric Project dated August 6, 2020.
[5] Rumford Falls Hydroelectric Project (FERC No. 2333-091) Initial Study Report dated August 6, 2021, page 4-1, Table 4-1 Study Status.

completed in November 2022.[6] The Updated Study Report ("USR") was submitted on August 5, 2022 that significantly included the Outlet Stream Aquatic Habitat Study, Aquatic Habitat Flow Study, and Habitat Suitability Curves.[7] It noted that the Recreational Study, Angler Creel Study would not be filed until after the Final License Application. The Draft License Application (DLA) was filed on May 2, 2022 noting that "The Licensee is *not proposing any changes to the operation of the Project for the term of the new license*." (emphasis supplied)[8] On August 31, 2022, Inland Woods and Trails, the Appalachian Mountain Club, Maine Rivers, the Friends of Richardson Lake, and Maine Council of Trout Unlimited (collectively non-governmental organizations or "NGOs") filed comments on the DLA and USR.[9] On October 13, 2022, FERC issued notice specifying March 2023 as the date for Notice of Acceptance / Notice of Ready for Environmental Analysis.[10] Brookfield filed its Final License Application (FLA) on September 29, 2022.[11] The FLA specified no change to minimum flows for the Upper Dam and the following changes to flows for the Middle Dam: "Provide a minimum flow, primarily via notched flashboards, into the Middle Dam bypass reach of 95 cfs from May 1st to October 31st and 54 cfs from November 1st to April 30th."[12] FERC issued its Ready for Environmental Assessment on June 26, 2023.[13]

[6] Initial Study Report Summary dated September 3, 2021, page 6.
[7] Rumford Falls Hydroelectric Project (FERC No. 2333-091) Updated Study Report Dated August 5, 2022.
[8] Rumford Falls Hydroelectric Project (FERC No. 2333-091) Draft License Application dated May 2. 2022, page B-2.
[9] Inland Woods and Trails, the Appalachian Mountain Club, Maine Rivers , the Friends of Richardson Lake, and Maine Council of Trout Unlimited letter dated August 31, 2022, Subject: NGO Comments on the Draft License Application (DLA) and Updated Study Report (USR) for the Rumford Falls Hydroelectric Project (FERC No. 2333).
[10] FERC Issuance for Project No. 2333-094 dated October 13, 2022, Subject: Notice of Application Tendered for Filing with the Commission and Establishing Procedural Schedule for Licensing and Deadline for Submission of Final Amendments, page 3.
[11] Rumford Falls Hydroelectric Project (FERC No. 2333-091) Final License Application dated September 29, 2022.
[12] Id., page D-4.
[13] FERC Issuance dated June 26, 2023, Rumford Falls Hydro LLC, Project No. 2333-094, Notice of Application Accepted for Filing, Soliciting Motion to Intervene and Protests, Ready For Environmental Analysis, and Soliciting Comments, Recommendations, Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions.

C. Basis for Objection

Maine TU's primary objections to this License Application are: (1) it fails to change any minimum flow requirements which are severely detrimental to fisheries and aquatic habitat in the Rumford Falls Project area; and (2) it fails to adequately consider other federal environmental and use requirements. The project dewaters what was once the largest falls in the United States east of Niagara Falls especially during the summer months which severely degrades the fisheries and aquatic habitat. Viewing and whitewater uses are specifically impacted as well. Called by historian George J. Varney "the grandest cataract in New England, where the Androscoggin River drops 177 feet (54 m) over solid granite."[14] It was a conscious choice to alter the natural water flow when the mill was established in 1901. Without any justification in its License Application, Brookfield seeks to continue to dewater vital fisheries and aquatic habitat for 40 more years. This is in derogation of, among other things, the Edmund Muskie Memorial honoring the man who was the impetus behind the Clean Water Act in the immediate view in Rumford's J. Eugene Boivin Park, and the purpose and intent of Clean Water Act, and potentially the act itself.

As part of this licensing process, the central question for the Commission is whether issuing a new license is in the public interest, provided that "equal consideration" be given to power development and non-power uses and public resources of the river, such as fish and wildlife habitat, recreation, and aesthetics.[15] Further, courts have interpreted the FPA's equal consideration doctrine by stating "No license may be issued unless the Commission first determines that the proposed project 'will be best adapted to a comprehensive plan for improving or developing' the relevant waterways."[16] In making that determination, "the Commission must

[14] Varney, George J. (1886), Gazetteer of the state of Maine, Rumford. Boston: B. B. Russell, 1881.
[15] 16 U.S.C. § 797(e).
[16] American Rivers and Alabama Rivers Alliance v. Federal Energy Regulatory Commission, 895 F.3d 32, 36 (D.C. Cir. 2018) quoting the FPA at 16 U.S.C. § 803(a)(1) (American Rivers III).

give '**equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.'**"[17] (bold emphasis added). There is no limitation in the FPA or the court decisions that have subsequently interpreted the Commission's licensing obligations under the FPA that selectively limit in any way the specific fish and wildlife species environmental aspects to be considered in this determination.

Here, Brookfield proposes only intermittent seasonal water flow changes to its operations at Middle Dam to address these requirements. This comes as no surprise given Brookfield's stated corporate priorities: Brookfield Renewable Partners operates one of the world's largest publicly traded renewable power platforms. Its portfolio consists of approximately 19,400 MW of capacity and 5,318 generating facilities in North America, South America, Europe and Asia. Its investment objective is to deliver long-term annualized total returns of 12%–15%, including annual distribution increases of 5–9% from organic cash flow growth and project development. It has an established track record of creating value by prudently acquiring, building and financing assets, and actively managing its operations. The company is a global leader in hydroelectric power, which comprises approximately 64% of its portfolio."[18]

The Rumford Falls Project is the fourth largest hydroelectric project in Maine in terms of electrical generation capacity, and one that Brookfield has requested the construction of battery storage facility that will further increase the profitability of the project.[19] As an owner and

[17] Id. quoting the FPA at 16 U.S.C. § 797(e).
[18] https://bep.brookfield.com/ - Overview
[19] FLA, page A-5 "Separate from this relicensing, RFH requested a non-capacity amendment for the Project's license on April 27, 2021, and supplemented on May 18, 2021, to construct and maintain a battery storage system at the Project. On June 3, 2021, FERC issued an order amending the license to include the battery storage system. RFH will install the battery storage system along the transmission line adjacent to the Project's substation in the summer/fall of 2022. The 8 MW battery storage system consists of 15 smaller battery enclosures with integrated heating/cooling and ventilation and have a rating of 372.7 kilowatt-hours each. The battery storage system also consists of DC-AC inverters, inverter step-up transformers, spill containment, and associated auxiliary equipment. Although this battery storage system will increase Project efficiency, it will not change the Project's authorized

operator it has more than adequate financial resources to eliminate or mitigate the project's obvious fisheries habitat and other harms. Simply stated it is the business of producing hydroelectric revenue and has no stated goals aligned with the FERC "equal consideration" of fisheries and other environmental guidelines. Particularly here where they have been so degraded over time by the dam's operations.

For the reasons set forth in more detail below, Maine TU protests this License Application as in violation of the FPA's "equal consideration" mandate and the legal criteria developed to ensure it occurs specifically to protect fisheries habitat and other environmental and recreational uses.

1) Current and Proposed Project Operations Dewater Rumford Falls with Serious Fisheries and Environmental Consequences.

The Upper Reach is unsuited for aquatic life when it is dewatered, and any organisms trapped in the stagnant pools that form below the Upper Dam during falling flows will not survive. Brookfield refers to this reach as "bypass" when it is actually the main channel of the Androscoggin River. Similarly, the riverine reach below Middle Dam has significant impacts to fisheries and aquatic habitat during periods of minimum flows.

Current minimum flows authorized by the old License terms are 21 cfs below Middle Dam. Brookfield proposes to: "Provide a minimum flow, primarily via notched flashboards, into the Middle Dam bypass reach of 95 cfs from May 1st to October 31st and 54 cfs from November 1st to April 30th."[20] Like the NGOs, MDIFW disagrees with Brookfield's interpretation of the information in the USR and states: "Based on our site observations and experience with evaluating aquatic habitats, flows between 250-500 cfs appear to be appropriate to protect and

installed capacity nor its hydraulic capacity. All connection points to the Independent System Operator New England electrical grid will remain unchanged. Implementation of the battery storage system will not change Project operations and will not impact the generating or water control capabilities of the dam or powerhouse."

[20] FLA, page D-4.

enhance the habitat for fish and other aquatic organisms, remain reasonably wadable, as well as improve aesthetics. It should be noted that flows in this range still only equate to a fraction (13-25%) of aquatic baseflow, and all excess flows would be available for hydropower production. Again, we believe additional flow evaluations might help to discover the best, most-balanced value."[21]

Maine TU is in accord with MDIFW's assessment regarding the reach below Middle Dam, and further objects to the minimum flows for both the Upper Dam and Upper Reach as proposed by Brookfield as failing to adequately consider fisheries and aquatic habitat and other environmental factors in its proposed operations.

2) The Environmental Impact Statement (EIS) for the seven Androscoggin River dams located upstream recommended minimum flows of 200 to 400 cfs.

The EIS issued for those dams recommended minimum flows of 200 cfs to 400 cfs.[22] The first dam included was the Shelburne project located approximately 40 miles upstream. The EIS recommended watering the bypass reaches of projects that had been dewatered similarly to the reach below Upper Dam for the Rumford Falls Project. The EIS cited benefits to salmonid habitat; similar measures should be adopted for the Rumford Falls Project. With the Rumford Project including a greater catchment, minimum flows of 250 cfs to 500 cfs are proportional.

[21] MDIFW Comments on Final License Application for the Rumford Falls Hydroelectric Project (FERC No. 2333) February 17, 2023, page 7.

[22] Final Environmental Impact Statement for the Upper Androscoggin River Basin Hydroelectric Projects, New Hampshire, FERC/ESI 0070 D dated November 1993, page 4-45: "Overall, our recommendations to protect and enhance the resident salmonid populations in the Androscoggin River include: (1) operation of all seven Androscoggin River Projects in run-of-river modes, (2) maintenance of zone-of-passage minimum flow releases in the Sawmill and Shelburne bypass reaches, (3) increasing the minimum flow release for an enhanced salmonid year-round zone-of-passage in the Smith bypassed reach, (4) establishment of an interim minimum flow release for salmonid habitat in the Cascade upper bypassed reach, (5) establishing an optimum salmonid habitat flow of 400 cfs in the 7,400 ft-long Pulsifer Rips bypassed reach, (6) providing optimum salmonid habitat flows of 200 cfs and 400 cfs in the 4,500 ft-long James River Gorham, and Public Service Gorham bypassed reach for rainbow trout and brook trout fry, juvenile and adults, (7) providing a minimum flow of 200 cfs in the 800 ft-long Public Service Gorham bypassed reach for significantly enhanced juvenile brook trout and rainbow trout habitat and (8) providing downstream bypass facilities at Cascade, James River Gorham and Public Service Gorham. All of our recommended measures would contribute to protecting, significantly enhancing, and mitigating for cumulative adverse impacts that might occur to the Androscoggin River basin's resident salmonid population from the continued operations of the projects.

Maine TU objects to the proposed minimum flows and asserts there is no justification that the Rumford Falls Project should be allowed to have a significant and detrimental effects on fisheries and aquatic habitat immediately and further downstream from the project.

3) Data indicates that the reach below Upper Dam can provide suitable habitat for aquatic life if adequate flows are made available.

Additional water quality studies for this riverine reach were requested and not performed. In the absence of requested additional water quality studies, Exhibit 1[23] is an analysis of available photography, satellite imagery, and LIDAR for the reach below Upper Dam. The study, conducted independently, it concludes: "These data demonstrate conclusively that (if watered) the reach below the Rumford Falls Project Upper Dam would support communities of aquatic life." Declining studies because the owner/operator does not want them or does not want to pay for them does not prevent an independent showing that in fact there are environmental and fisheries and aquatic habitat issues that need to be considered here. Maine TU objects to this attempt to "gaslight" the negative fisheries and aquatic impacts the Project has and is proposing to have on this riverine reach.

4) There is a high likelihood the reach below Upper Dam will not meet State water quality standards and that minimum flow requirements will need to be modified.

By law, Brookfield will need to obtain a state of Maine Water Quality Certification in order to have a new FERC license issued. The terms and conditions of that WQC, unless the state of Maine waives its authority to do so, will in turn be incorporated into the new FERC license. There is a high likelihood that the dewatered reaches below Upper Dam as proposed will not meet Maine numeric or narrative water quality standards when there is little to no flow as proposed by Brookfield. Large dewatered reaches, clearly visible in publicly available Google

[23] Evaluation of Aquatic Habitat Potential for the Main Channel of the Androscoggin River Below Rumford Falls Upper Dam, Maine Council of Trout Unlimited, July 2023.

Maps and other readily available sources of satellite imagery such as the Rumford Upper Falls LIDAR image provided in Exhibit 1,[24] in many cases containing stagnant isolated pools do not appear to have sufficient water for these areas to meet the state standards. This issue will ultimately be a matter for the state of Maine to determine but is noted here because the flow regime of the dams in question are both an operational and environmental issue and FERC and Brookfield will need to consider and accommodate minimum flow impacts to state water quality standards. Maine TU preserves its objection for the record here to the minimum flows proposed by Brookfield as potentially in derogation of state water quality standards and further asserts that FERC must require studies and testing early in the process to avoid conflicts with the Maine Water Quality Certification process.

5) The License Application as filed does not meet Federal Power Act or NEPA requirements.

The Federal Power Act, and NEPA EA require a "Well Considered" and "Fully Informed" Study. Here, incomplete and inadequate water quality studies are neither "well considered" nor will they "fully inform" the EA that is to be prepared. NEPA demands far more analytical rigor than what has been conducted.

It has been shown that lack of complete water quality sampling data in the Environmental Assessment (EA) only serves to form the basis for further administrative and possible resource intensive legal action going forward, a fundamental and unnecessary flaw that is preventable. For example, there is recent precedent that the absence of relevant, contemporary data, and the presence of flawed data and analysis will lead to a license that is doomed by the arbitrary and capricious nature of an EA premised on insufficient data.[25] This means that it is in both the Applicant's and FERC's interests to ensure a hard look is taken at the fisheries and

[24] Id., page 3.
[25] American Rivers III.

environmental impacts as early in the process as possible to avoid: (1) a failed license because a state WQC cannot issue; and (2) unnecessary administrative and litigation delays that also jeopardize the future license.

6) FERC's rejection of the request for additional water quality studies below Lower Dam was procedural and without accurate factual basis.

FERC rejected the NGOs arguments that the studies under-sampled the project below the Lower Station Development.[26]This is the first project that Maine TU has encountered where there was no sampling done in or below the outflow from a powerhouse. As previously stated, the sampling conducted was not done in accordance with MDEP protocols.[27] Project areas were either not sampled at all or in the wrong locations. Here, the area below Lower Dam is not the same aquatic environment as that below Middle Dam. Appropriate sampling and study designed to evaluate this unique discharge flow was simply not done. The burden is on the Applicant to demonstrate compliance with applicable standards, not on the stakeholder to show that the Applicant did not. Here the Applicant has wholly failed to meet even minimum sampling and testing requirements on this riverine section.

FERC rejected the NGOs arguments that the studies under-sampled the project saying:

> "The requested sampling of temperature, DO, and macroinvertebrates directly downstream of the Lower Station development tailrace is also not practicable because there is no location within the free-flowing reach that is not affected by discharges from an adjoining paper mill. Therefore, the sampling sites recommended by the conservation groups would not be representative of the project discharge."[28]

This reasoning is also flawed and ignores the fact that the reach in question is the same water and riverine stretch from the impoundment to where the Swift River joins the Androscoggin below the outflow from the lower powerhouse. Maine TU objects to the lack of sampling done in or

[26] FERC Issuance dated November 21, 2023, Reference: Determination on Requests for Study Modifications for the Rumford Falls Hydroelectric Project.
[27] DEP Sampling Protocol for Hydropower Studies September 2019.
[28] FERC Issuance dated November 21, 2023, Reference: Determination on Requests for Study Modifications for the Rumford Falls Hydroelectric Project, pages B-4 and B-5.

below the outflow from a powerhouse as required by protocol. The existent of a separate, state licensed discharge does not relieve the Applicant from conducting its own testing and studies of its own flow discharge and submits it is arbitrary and capricious for FERC not to require sampling in this Project area.

7) The whitewater/scenic releases proposed by the Applicant will exacerbate the environmental harms unless commensurate measures are taken to continuously water the reach below Upper Dam

Infrequent releases, such as those proposed for scenic or temporary recreational use are inadequate here to establish stable and sustainable fisheries and aquatic habitat. These releases will cause other problems that must be addressed through the establishment of daily, consistent minimum flows over the Upper Dam, for example to keep aquatic organisms from becoming trapped in the three stagnant pools that form in the reach below and becoming stranded and dead. The NGOs have proposed and justified 200 cfs as an adequate flow in large part for this purpose.[29] Similarly, MDIFW does not agree with Brookfield's interpretation of its own study data and has proposed between 250 and 500 cfs for similar concerns for similar habitat below Middle Dam.

MDIFW FLA Comments also provided significant information confirming the presence of American eels above and in the vicinity of the project.[30] Water over Upper Dam would provide a path for downstream migration of American eels. This was not addressed by the FERC or the Applicant in the License Application.

Maine TU asserts that a minimum flow of 200 cfs over the Upper Falls, presumably implemented through the use of notched flashboards, would accomplish the following: (1) re-establish a sustainable fisheries and aquatic habitat; (2) reduce aquatic species mortality by

[29] NGO USR/DLA Comments, pages 2 and 3.
[30] MDIFW Comments on Final License Application for the Rumford Falls Hydroelectric Project (FERC No. 2333) February 17, 2023, pages 9 and 10.

providing oxygenating, constant flows through the pools, (3) create a downstream spawning path for American eels and other indigenous aquatic organisms, and (4) improve the views from the Rumford Falls Trail so valued by local residents. A minimum flow range such as proposed by MDIFW of 250 cfs to 500 cfs would do so more effectively and Maine TU supports this minimum flow proposal.

III. GENERAL RECOMMENDATIONS OF TERMS AND CONDITIONS FOR INCLUSION IN THE FINAL LICENSE.

The Rumford Falls Project is clearly causing a number of harms that FERC itself has acknowledged, and that are not remediated adequately by the proposed measures contained in Brookfield's Final License Application. While Brookfield offers some measures to address the recreational aspects that include whitewater/scenic releases over the Upper Falls and increased flows over Middle Dam, these measures are wholly inadequate to address fisheries and aquatic species habitat issues and will likely fail in connection with its required state WQC. In support of this contention, we have provided Exhibit 3, the affidavit of a former Maine DEP official. Maine TU objects and asserts that the Rumford Falls Project cannot be relicensed unless conditioned as the NGOs previously stated in their USR/DLA filing.[31]

There is a clear and present need to increase minimum flows at Upper Dam from the current 1 cfs that dewaters the Upper Falls under most flow conditions. Additional flow is required to reliably sustain the aquatic communities and fisheries that exist there or do not exist because there is not a sufficient minimum flow. Accordingly, and in full agreement with MDIFW's minimum flow comments, Maine TU hereby changes the fourth item in its requests for new license terms and conditions for the Lower Falls below Middle Dam as follows:

[31] Inland Woods and Trails, the Appalachian Mountain Club, Maine Rivers, the Friends of Richardson Lake, and Maine Council of Trout Unlimited Comments on the Draft License Application (DLA) Updated Study Report (USR) dated August 31, 2022.

> "Based on our site observations and experience with evaluating aquatic habitats, flows between 250-500 cfs appear to be appropriate to protect and enhance the habitat for fish and other aquatic organisms, remain reasonably wadable, as well as improve recreational use and aesthetics."[32]

An updated copy of our request is included as Exhibit 2.

Maine TU also respectfully requests that FERC direct that the water quality study sites that the NGOs requested be sampled.[33] As previously stated, there is clear legal precedent that the absence of relevant, contemporary data, and the presence of flawed data and analysis will lead to a license that is doomed by the arbitrary and capricious nature of an Environmental Assessment premised on insufficient data. Having whole swaths of Project waterway exempted from sampling, or inadequately sampled is exactly the kind of insufficient data that will lead to a critically flawed EA.

In furtherance of its objection, Maine TU also requests that Exhibit 1 in its entirety be included in the record on decision. Maine TU also provides expert testimony regarding the water quality testing conducted incident to the relicensing as Exhibit 3 and request that it too be included in the record on decision.

IV. CONCLUSION

For the reasons stated above Maine TU moves to intervene and protests this License Application under Rules 210, 211 and 214 and respectfully requests that FERC consider the proposals contained in the Protest contained herein.

[32] MDIFW letter dated February 23, 2023, RE: MDIFW Comments on Final License Application for the Rumford Falls Hydroelectric Project (FERC No. 2333), page 7.
[33] Inland Woods and Trails, the Appalachian Mountain Club, Maine Rivers, the Friends of Richardson Lake, and Maine Council of Trout Unlimited Comments on the Draft License Application (DLA) Updated Study Report (USR) dated August 31, 2022.

Respectfully submitted this 4rd day of August, 2023.

Stephen G. Heinz
Maine TU Council FERC Coordinator
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CERTIFICATE OF SERVICE

I, Stephen G. Heinz, hereby certify that a copy of these comments was transmitted by electronic means to each of the persons on the Service list maintained by the Secretary of the Commission.

Stephen G. Heinz
Maine TU Council FERC Coordinator

Attachments:

Exhibit 1 - Evaluation of Aquatic Habitat Potential for the Main Channel of the Androscoggin River Below Rumford Falls Upper Dam

Exhibit 2 - Revised requested License Terms and Conditions

Exhibit 3 - Expert Testimony of Mark Whiting

Document Accession #: 20230804-5039 Filed Date: 08/04/2023

Exhibit 1

Evaluation of Aquatic Habitat Potential
for the
Main Channel of the Androscoggin River Below Rumford Falls Upper Dam

Stephen G. Heinz
Maine Council of Trout Unlimited, FERC Committee

July 2023

Summary.

Analysis of available photography, satellite imagery, and LIDAR for the reach below Upper Dam of the Rumford Falls Project demonstrate that the reach is capable of supporting a viable community of aquatic life.

Background.

Rejection of the NGO request for additional water quality studies[34] by FERC[35] left a gap in the information needed for FERC to make an informed decision regarding flow regimes for the Rumford Falls Project (P-2333) if and when it is relicensed. This report evaluates the potential habitat in the largely dewatered reach below Upper Dam and demonstrates that, if watered, the reach does provide suitable habitat for aquatic life.

Methodology.

Available photography, satellite imagery, and LIDAR for the reach below Upper Dam are analyzed and compared with data from data from Maine's West Branch of the Penobscot where a recent study showed that presumably less favorable habitat contained abundant and varied aquatic life.

Results.

This photograph of the reach immediately below Upper Dam shows a variety of substrate sizes present creating the roughness needed for viable aquatic habitat.[36]

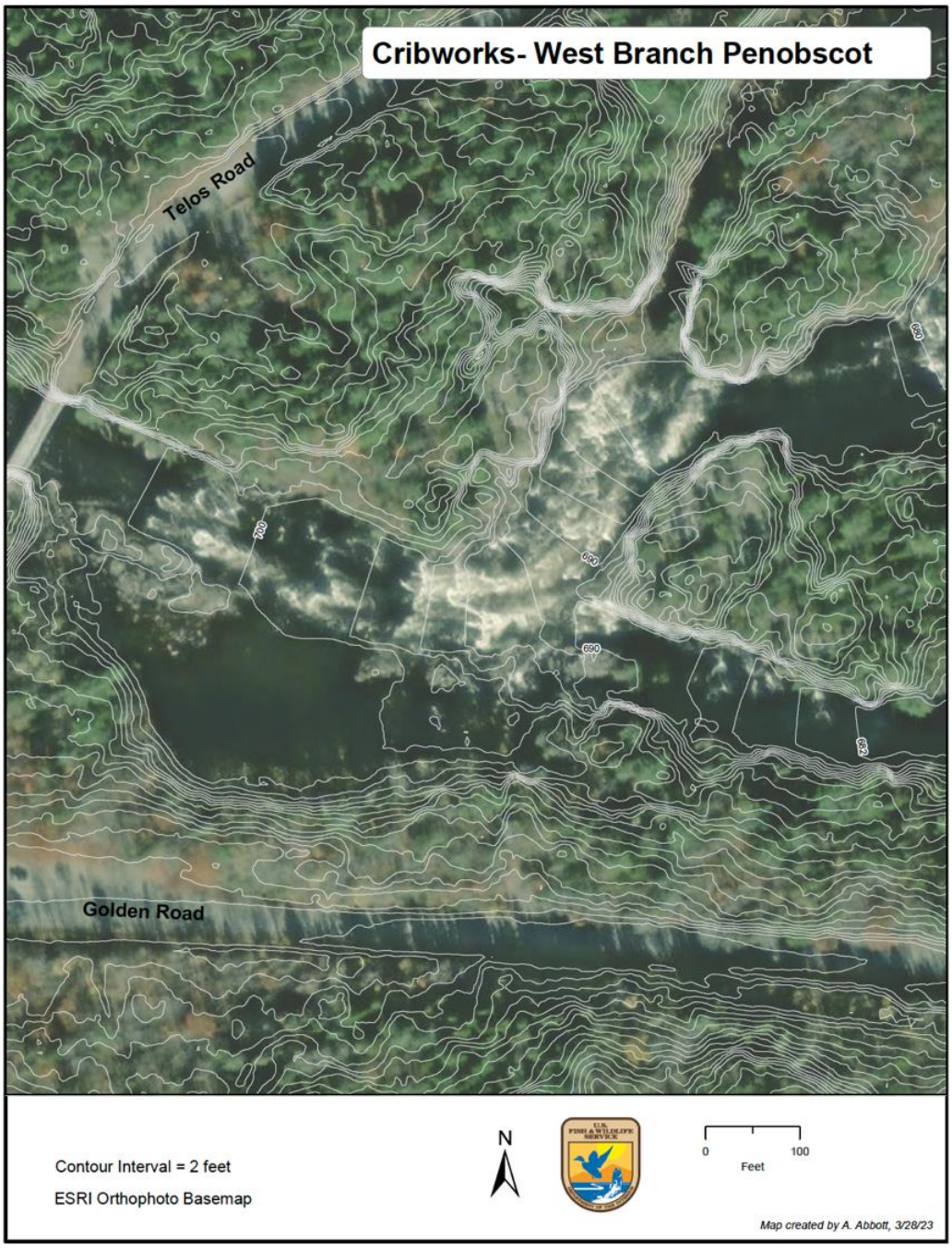
[34] Inland Woods and Trails, the Appalachian Mountain Club, Maine Rivers, the Friends of Richardson Lake, American Whitewater and Maine Council of Trout Unlimited (NGOs) letter dated September 29, 2022, Subject: Additional NGO Comments on Rumford Falls Project Updated Study Report with Study Requests.
[35] FERC Issuance dated November 21, 2022, Reference: Determination on Requests for Study Modifications for the Rumford Falls Hydroelectric Project.
[36] Rumford Falls Trail photo accessed at https://www.mainetrailfinder.com/trails/trail/rumford-falls-trail.

This image of the reach includes LIDAR data and shows three large pools in the reach. Rumford falls is mostly a series of cascades with approximately a 12% gradient overall and approximately a 2 % gradient where pools form.

Current science indicates that these gradients support communities of aquatic life. While the gradient of the entire reach is 12 percent, there are flatter sections in the upper and middle parts of the reach where three large pools are apparent. Velocities in these areas would be lower, but studies show that even a "12 percent slope does provide habitat for most stonefly

species, mayflies, and both net-building and free-living caddis. Numerous species have been documented in assemblage studies of high gradient waters."[37]

These gradients are similar to gradient at the Cribworks on West Branch of the Penobscot River below Ripogenus Dam.



[37] Benthic assemblage variation among channel units in high-gradient streams on Vancouver Island, British Columbia, Karen L. Halwas, Michael Church, and John S. Richardson, Journal of the North American Benthological Society, Volume 24, Number 3.

A stranding study conducted in October 0f 2022 showed abundant and varied aquatic life to be present.[38] This was despite the fact that much of the substrate lacked the roughness of the reach below the Rumford Project's Upper Dam shown on page 2 of this report.

salmon parr stranded on moss after jumping out of pool

stranded crayfish

stranded stonefly nymph

live salmon parr stranded in small pool

live salmon parr stranded on ledge

[38] Stranding Study of West Branch of the Penobscot River below McKay Station, Report of Observations – October 5, 2022, Stephen G. Heinz, Maine Maine TU Council FERC Coordinator, October 19, 2022, Attachment I.

Comparing the gradients associated with the reaches below the upper Dam and Middle dams, they are similar. The reach below Middle Dam (labeled as "Lower Falls") provides habitat for a stocked fishery that MDIFW has requested additional flow be provided to better support the fishery.[39] Please note difference in graphic scales.

[39] MDIFW letter dated April 19, 2023, Subject: Rumford Falls Hydroelectric Project (FERC No. 2333-094) Response to MDIFW Comments on the Final License Application, Attachment A-2, "MDIFW is concerned that the current and proposed minimum flows for the Middle Dam bypass are extremely low and unacceptable given the drainage area, physical character, length, area, biota, and fisheries potential of the bypass reach, not to mention the aesthetic concerns raised by numerous parties.


Rumford Lower Falls
Approximate Water Elevation = 425'
Approximate Water Elevation = 480'
Contour Interval = 2 feet
ESRI Orthophoto Basemap
N
0
100
200
Feet
Map created by A. Abbott, 9/20/22

Conclusion.

These data demonstrate conclusively that (if watered) the reach below the Rumford Falls Project Upper Dam would support communities of aquatic life.

Exhibit 2

Modified Terms and Conditions Request

Minimum whitewater flows of 1500 cfs over the lower falls from 10:00 a.m. to 5:00 p.m. Friday through Sunday during the months of July, August and September

Minimum aesthetic flows of 1000 cfs over both the upper falls and lower falls from 10:00 a.m. to 8:00 p.m. Friday through Sunday during the months of July, August and September

Additional aesthetic flows of at least 1000 cfs during the Rumford Pumpkinfest Event held annually in mid-October and during up to two additional events not to exceed three days if/when determined by the Town of Rumford

Minimum flows of 250 to 500 cfs from both Upper Dam and Lower Dam at all times to prevent dewatering, reduce strandings, and maximize the aquatic habitat

Appropriate additional studies to determine the environmental effects of these changes to project operations

An improved trail from the vicinity of the Rumford Public Library to the water to provide access for white water activities in the lower falls (when watered) and to the pools providing fishing opportunities within the falls during favorable flow conditions

Restoration of the traditional 'fisherman's trail' to access the tail of the lower falls during favorable flow conditions. Located in an area originally acquired by the Town for parkland, the area is currently used by the Town of Rumford for accommodation of the snow it plows from town roads.

Relocation of the Logan Brook Access to the impoundment above Upper Falls

Retention and improvement of the carry-in launch and parking below the U.S. Route 2 in Mexico to continue access to the trout fishing opportunities downstream at the confluence of the Swift River and the Androscoggin River as well as upstream in the Swift River

Retention and improvement of the new Rumford Falls Trail segment replacing the segment that Brookfield had closed. This will provide a very satisfactory replacement for the old trail below that had been used by area residents to view the upper falls (when watered).

Retention and improvement of the other recreational facilities currently under study as recommended by the Recreation Facilities Focus Group

IN THE MATTER OF

Brookfield White-Pine Hydro LLC)
Project No. P-2333-091)
Application for Major New License)
Rumford Falls Hydroelectric Project)

EXHIBIT 3

AFFIDAVIT OF MARK WHITING, PhD

I, Mark Whiting, hereby declare the following statements are true and accurate to the best of my knowledge, information and belief:

1. My name is Mark Whiting. I am a Senior scientist with 50 years of experience in biology, ecology, conservation, and fisheries restoration. I was formerly employed by Maine DEP and as part of my employment worked in the Division of Licensing and Enforcement (for approximately 8 years) and as a biologist in DEP's Salmon Program (for approximately 16 years). I am a Member of the Board for the Downeast Chapter of Trout Unlimited. I am also Chair of the Board for the Hancock County Soil & Water Conservation District. As such, I am an elected official for Hancock County. My Curriculum Vitae is attached to this affidavit.

2. I have reviewed the Rumford Falls Project and other documents in the public record and my professional opinion regarding the License Application is as follows:

3. The Applicant has failed to conduct the studies or tests required to show that the License Application's proposed minimum water flows are sufficient to sustain fisheries and aquatic habitat. This is large part due to the fact that (1) the proposed minimum flows do not provide enough oxygenated water over a sustained daily period of time; and (2) the Applicant has thus far failed to demonstrate that it will meet the state of Maine's water quality standards, specifically in the State classified Class C waters below the dams.

4. The Androscoggin River at Rumford below the upper dam consists of two critical reaches, the Falls (the almost dry and bypassed riverbed) and the Bypass (which has almost all of the upstream river water contained in a man-made channel). Both reaches are subject to the above described conditions that impact fisheries and aquatic habitat.

5. To sustain fisheries and aquatic habitat, the Androscoggin River at Rumford needs minimum flow requirements like those upstream at Gorham, New Hampshire. The river in Rumford is downstream of - and has a larger watershed than Gorham, and so the Falls should have at a very minimum the same requirements as the upstream site. At Gorham, the minimum flows in the bypassed river channel are 400 cfs from May – Jun, and 200 cfs the rest of the year[1]. This flow regime supports fish migration and spawning, recreational fishing, maintains the integrity of aquatic communities, and protects other public uses for Maine's third largest river.

6. The Applicant did not investigate the numerical water quality criteria (dissolved oxygen (DO), temperature, and bacteria) below the upper dam that will be required as part of the state of Maine's Water Quality Certification (WQC) process. It is my understanding that the water quality standards, requirements or conditions imposed under the WQC will be later incorporated into the FERC License; therefore the Applicant should conduct the tests and studies to show that these standards are being met. Because of a lack of consistent oxygenation, I do not believe that areas that are dewatered during low flows or minimum flows allowed under the current or proposed license will meet state water quality standards or sustain any meaningful fishery or aquatic habitat. To show that the river reaches in the Project area meets state standards, both the river and the Bypass must be tested and documented. I believe the natural river channel in its entirety throughout the Project area will clearly support fisheries and aquatic communities if a consistent minimum flow of at least 200 cfs is established. The applicant also needs to do water quality, fish studies, and macroinvertebrate studies to confirm that it is in the public interest to maintain or improve the water quality consistent with hydropower operations.

7. Rapid increases and decreases in river flow, such as those proposed for whitewater recreation, are major stressors for fisheries and other aquatic life. Studies have shown that rapid changes in water level will strand fish in isolated pools, expose invertebrates and plants to desiccation, reduce spawning success, and decrease biodiversity and abundance[2]. A ramping study should be used to find a way to manage the changes to minimize these impacts which can also be mitigated remedied with a consistent, oxygenated minimum flow.

8. At the Middle Dam, the Applicant proposes increases in minimum flows from around 21 cfs to 95 cfs. This would be inadequate to establish fisheries and aquatic species habitats which here will require at least a daily minimum flow of at least 200 cfs. Greater flows will help the Applicant meet state water quality DO and biological criteria. Higher minimum flows will support aquatic life, increase DO, and stabilize habitat so that plants and animals can grow, and the river will look like a natural river[2]. In contrast, dewatered or stagnant water areas are not likely to meet state water quality criteria which may preclude a FERC license from issuing. Similarly, the environmental considerations in FERC licensing process, particularly the development of an Environmental Assessment (EA) will be affected by Project areas that are untested, unstudied and present numerous environmental challenges particularly with respect to the detrimental effects low to minimally existent low flows and periodic high discharge flows have on fisheries and aquatic habitat.

9. The Applicant appears to assert that sampling the Bypass and trailrace are not needed because they are not representative of the river conditions. State DEP sampling protocols require the sampling of bypasses and the tailrace, and that is where most of the water is. The Applicant is required to show that the river (including bypass and tailrace) meet state water quality criteria[3]. FERC protocols also required and assessment of the project's flow discharge, distinct from other discharges into the same water body as is common in many water sheds where dams, mills and municipal dischargers are co-located on the same riverine section. Here the Town of Rumford discharges in the river pursuant to an NPDES discharge permit and, in contrast to the Rumford Dam's flow discharge, the nature and quantity of its discharge are well documented and easily distinguished from dam flow discharge.

10. The remedies for fisheries and aquatic species habitat degradation here are fairly straightforward. The original stream channel needs more daily minimum water flows and those

increased minimum flows need to be part of the license. A ramping study needs to be done to help minimize fish stranding. The water quality studies need to be done to ensure that the Project is not impairing water quality and will meet state water quality standards.

[1] FERC Final Environmental Impact Statement, Upper Androscoggin Basin Hydroelectric Projects, New Hampshire: FERC/EIS 0070 – D, summary page xviii.

[2] Widen, et al. 2021, Let it flow: Modeling ecological benefits and hydropower impacts of banning zero-flow events in a large, regulated river system. Science of the Total Environment 783 (2021) 147101

[3] Maine DEP, Methods for Biological Sampling and Analysis of Maine's Rivers and Streams, page 5.

APPENDIX TO AFFIDAVIT OF MARK WHITING

Curriculum Vitae

Mark C. Whiting (retired biologist)
145 Gary Moore Road, Ellsworth, ME 04605
207-664-0928
Mark.C.Whiting@gms.com

EDUCATION

Oregon State University, Corvallis, OR
Ph.D. in Marine Ecology **1983**

Brigham Young University, Provo, UT
M.S. Botany with Chemistry Minor **1977**

Brigham Young University, Provo, UT
B.S. Zoology and Ecology **1975**

OTHER EDUCATIONAL EXPERIENCES

- Postdoctoral Research Associate, diatom and algae specialist, acid rain research in New England and California Sierra Nevada, U of Maine, Indiana U, and UC Santa Barbara **1983-1991**
- Summer intern, ecology of marine algae, Chesapeake Bay Center for Environmental Studies, Smithsonian Field Station **1977**

EMPLOYMENT HISTORY

Maine Dept. of Environmental Protection, Bangor **1998-2016**
Biologist with the Division of Environmental Assessment
Developed and managed a volunteer-based water quality monitoring program in the Maine salmon rivers to provide necessary background information to assist in salmon restoration, also co-managed DEP's volunteer river monitoring program (VRMP) for Maine, began liming salmon rivers to mitigate for acid rain in 2010

Maine Dept. of Environmental Protection, Bangor **1992-1998**
Environmental Specialist with the Bureau of Land and Water Quality, Division of Licensing and Enforcement

University of Maine at Machias **1991**
Assistant Professor, taught undergraduate chemistry labs

Eastern Maine Technical College, Marine Trades Center, Eastport **1990-1991**
Adjunct faculty, taught undergraduate classes in oceanography and marine biology

Maine Maritime Academy, Castine
Instructor, teaching undergraduate classes in oceanography and general college chemistry **1989-1990**

US National Park Service, Everglades National Park

Biologist, tagging sea turtles to assess population size, health and nesting success **1973**

Selected Publications: (monitoring, ecology and conservation)

Whiting, MC, JD Brotherson & SR Rushforth, 1978. Environmental interactions in summer algal communities in Utah Lake. Great Basin Naturalist 38: 32-41

Whiting, MC & CD McIntire, 1985. An investigation of the distributional patterns in the diatom flora of Netarts Bay, Oregon, by correspondence analysis. J Phycology 21 (4): 21-31

Whiting, MC & H Schrader, 19985. Late Miocene to Early Pliocene Marine Diatom and Silicoflagellate Floras from the Oregon Coast and Continental Shelf. Micropaleontology 31 (3): 249-270

Whiting, MC, DR Whitehead, RW Holmes & SA Norton, 1989. Paleolimnological reconstruction of recent acidity changes in four Sierra Nevada lakes. J Paleolimnology 2 (4): 285-304

Whiting, MC & E Linsey, 2006. Water Quality Summary for Kenduskeag Stream and Upper Watershed Tributaries. Maine DEP report DEPLW-0762 pp. 1-21

Whiting, MC & W Otto, 2008. Spatial and Temporal Patterns in Water Chemistry of the Narraguagus River: A Summary of Available Data from the Maine DEP Salmon Rivers Program. Maine DEP report DEPLW-0940 pp. 1-32

Whiting, MC, 2009. Penjajawoc Stream a Summary of Water Quality Data from the 2008 Field Season. Maine DEP report pp. 1-31

Whiting, MC, 2010. Katahdin Iron Works and its Effect on the Water Quality of the West Branch of the Pleasant River. Maine DEP report DEPLW-1172 pp. 1-23

Whiting, MC, 2015. Water quality survey of Maine salmon rivers: the 2015 field season, Downeast, the Union & the Aroostook Rivers. Mane DEP report, pp. 1-18

Whiting, MC, 2017. The Union River Turbidity Study in Relation to Graham Lake Level Management. A report to the Downeast Salmon Federation for relicensing of the Union R dams, FERC Hydroelectric project #2727

Whiting, MC, 2019. Maine Brook Trout and Water Quality. A report to the National Park Service, Acadia National Park

Whiting, MC & J Porada, 2020. Spat Boxes and Nursery Nets as Strategies for Enhancing Clam Harvest and Post-Harvest Recovery on Mudflats. Hancock County Soil & Water Conservation District report pp. 1-9

Signed at Ellsworth, Maine, this 3rd day of August 2023.

Mark Whiting

STATE OF MAINE

August 3, 2023

Personally appeared the above-named Mark Whiting, and made oath that the statements made by him in the above Affidavit are true and accurate and made on his personal knowledge, unless stated upon information and belief, in which case he believes them to be true.

Notary Public My Commission Expires:

Michelle Campbell
Notary Public, State of Maine
My Commission Expires January 26, 2030

Document Content(s)