December 16, 2022

Ms. Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Avenue, Suite 2
Lexington, MA 02420

Transmitted via e-mail to comments@lowimpacthydro.org

Subject: **Comments on Application for LIHI Certification for the South Berwick Project**

Dear Ms. Ames:

On behalf of its six chapters and over 2,000 members, Maine Council of Trout Unlimited (TU) submits these comments on the Green Mountain Power (GMP) Application for LIHI Certification for the South Berwick Project dated December 8, 2022. The project is located on the Salmon Falls River that forms the boundary between Maine and New Hampshire. TU members fish in and otherwise enjoy the use of the watershed. TU was engaged with the relicensing action involving the Rollinsford Project and is continuing to follow the pending surrender application and relicensing for the Somersworth Project. Both projects are located immediately upstream of the South Berwick Project.

LIHI Certification Requirements

LIHI requirements for upstream and down stream fish passage are:

> ***"3.2.3 Criterion C - Upstream Fish Passage***
>
> ***Goal****: The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy populations in areas affected by the facility.*
>
> ***Introduction to Standards****: The applicant shall list all migratory fish species (anadromous, catadromous, and potamodromous species) that are present or historically occurred at the facility. To pass the upstream fish passage criterion the applicant must demonstrate that upstream passage provisions are sufficient to support healthy populations of migratory species through compliance with at least one of the following standards (C-1 through C-4). Note that impoundments typically qualify for Standard C-1 unless there are additional facility-related barriers to upstream passage once fish have passed the dam.*
>
> • ***STANDARD C-1****. Not Applicable/De Minimis Effect: The facility applicable Zone of Effect does not create a barrier to upstream passage, or there are no migratory fish in the*

vicinity of the facility. If such species were present historically, the facility did not contribute to the extirpation of such species; or

• ***STANDARD C-2****. Agency Recommendation: The facility is in compliance with science-based fish passage resource agency recommendations for the facility and which may include provisions for appropriate monitoring and effectiveness determinations; or*

• ***STANDARD C-3****. Best Practice/Best Available Technology: In the absence of applicable resource agency recommendations, the facility includes well-designed, well-operated upstream fish passage methods or technologies that are appropriate for the species that occur in the area affected by the facility. These methods should enable safe, timely and effective passage at all barriers associated with the facility and should include provisions for appropriate monitoring and effectiveness determinations; or*

• ***STANDARD C-4****. Acceptable Mitigation: In the absence of science-based fish passage resource agency recommendations and in lieu of upstream passage provisions at the facility, the facility employs approved, alternative fish passage mitigation measures that support the species affected by the facility. These measures could be in-kind or out-of-kind mitigation. In all cases, resource agencies must approve the measures and must have determined that the total benefits provided by them equal or exceed the benefits of providing upstream passage provisions at the facility, measured in terms of reproductive success (for example, numbers of fish produced) or area of suitable fish habitat provided.*

• ***STANDARD C-PLUS****: In addition to satisfying one or more of the standards above, the facility has deployed an advanced technology, the primary purpose of which is to increase upstream passage; or is part of a basin-scale redevelopment strategy; or is operating an adaptive management program to regularly evaluate the effectiveness of the measures implemented. The program should include monitoring of the overall passage effectiveness and correction of deficiencies in effectiveness.*

3.2.4 Criterion D - Downstream Fish Passage and Protection

Goal*: The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by facility operations. Migratory species can successfully complete their life cycles and maintain healthy populations in the areas affected by the facility.*

Introduction to Standards*: The applicant shall list all fish species (riverine, anadromous, catadromous, and potamodromous) that occur now or have occurred historically in the area affected by the facility. To pass the downstream fish passage and protection criterion, the applicant must demonstrate compliance with at least one of the following standards (D-1 through D-4). Note that the downstream reach (but not a bypassed reach) typically qualifies for Standard D-1 unless there are additional facility-related*

barriers to downstream passage once fish have passed below the dam and/or bypassed reach.

• ***STANDARD D-1****. Not Applicable/De Minimis Effect: The facility applicable Zone of Effect does not create a barrier to downstream passage, or there are no migratory fish in the vicinity of the facility. If such species were present historically, the facility did not contribute to the extirpation of them; the facility does not contribute adversely to riverine fish populations or to their access to habitat necessary for the completion of their life cycles, or*

• ***STANDARD D-2****. Agency Recommendation: The facility is in compliance with a science-based resource agency recommendation for downstream fish passage and/or fish protection, which may include provisions for appropriate monitoring and effectiveness determinations; or*

• ***STANDARD D-3****. Best Practice/Best Available Technology: In the absence of science-based resource agency recommendations for downstream fish passage or protection, the facility includes well-designed, well-operated downstream fish passage methods or technologies that are appropriate for the migratory species that occur in the area affected by the facility, and technologies that minimize loss of riverine species. These methods should enable safe, timely and effective passage at all barriers associated with the facility and should include provisions for appropriate monitoring and effectiveness determinations; or*

• ***STANDARD D-4****. Acceptable Mitigation: In the absence of science-based resource agency recommendation for downstream fish passage and in lieu of downstream passage and/or protection provisions at the facility, the applicant employs approved alternative fish passage mitigation measures that support migratory and native non-migratory fish species affected by the facility.*

These measures might include in-kind or out-of-kind mitigation. In all cases, resource agencies must approve the measures and must have determined that the total benefits provided by them are likely to equal or exceed the benefits of installing and operating downstream passage and/or protection provisions, measured in terms of reproductive success (for example numbers of fish produced) or areas of suitable fish habitat provided.

• ***STANDARD D-PLUS****: In addition to satisfying one or more of the standards above, the facility has deployed an advanced technology, the primary purpose of which is to increase downstream passage; or is part of a basin-scale redevelopment strategy; or is operating an adaptive management program to regularly evaluate the effectiveness of*

the measures implemented. The program should include monitoring of the overall passage effectiveness and correction of deficiencies in effectiveness."[1]

Substantive Fish Passage Issues

The South Berwick Project was last relicensed in 1997 for a period of 40 years. GMP has based achievement of LIHI fish passage standards on studies conducted incident to the relicensing that are now about 20 years old:

> *"Observations of river herring using the fish passage facilities were made during two years of qualitative studies conducted by the Licensee in 2002 and 2003. [FERC Accession Number: 20040405 0022. https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20040405-0022.] The Licensee's qualitative observations of fish passage confirmed that river herring ascended the fishway during the spring to spawn in the Project impoundment."*[2]

This is well beyond the 10-year period within which study data submitted for FERC relicensing is considered valid.[3] We believe that the standard is reasonable and should apply to LIHI certification as well.

The application also notes:

> *"River herring and American eel have been observed to successfully utilize the respective passage facilities. According to the NHFGD, American shad are known to be present below the Project, but to date have not been observed utilizing the upstream fish passage facility because monitoring has been inconsistent through the years."*[4]

All fish species historically present must be addressed (introduction to both upstream and down stream standards). The information GMP provides is anecdotal and does not constitute a reasonable basis for LIHI certification.

Fish passage for the South Berwick Project was recently addressed in the relicensing of the Rollinsford Project, P- 3777:

> ***"2.0 Modified Prescription for Fishway Terms***
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> *The Service agrees to file a Modified Prescription as set forth Section 1.9 above reflecting the following terms.*

[1] LIHI Handbook 2nd Edition – Revision 2.05, 01/01/2022, pages 8 through 10.
[2] GMP Low Impact Hydropower Institute Certification Application for South Berwick Hydroelectric Project, FERC Project NO. 11163 Submitted October 12, 2022, page 22.
[3] American Rivers and Alabama Rivers Alliance v. FERC, No. 16-1195 (D.C. Cir. 2018) (American Rivers III), page 29.
[4] [4] GMP Low Impact Hydropower Institute Certification Application for South Berwick Hydroelectric Project, FERC Project NO. 11163 Submitted October 12, 2022, page 22.

2.1 Initial Requirement to Construct, with Exception for Trap and Truck Operations

The Licensee shall construct and begin operation of a Denil Fishway at the Rollinsford Project, as described in the USFWS June 25, 2020 Preliminary Prescription filed with FERC, prior to the fourth full passage season1 after license issuance UNLESS, within two years of license issuance,

GMP has submitted

> *A. A request to the Commission for approval of plans to construct facilities necessary to support a trap and truck operation from the South Berwick Project. This facility shall be substantially as described in the Alternative Fishway Prescription filed July 24, 2020 ("Alternative Prescription"), but must be designed such that the capacity is adequate, fish are moved within 24 hours of reaching the facilities to the extent practicable, fish may pass volitionally into the South Berwick Project impoundment when trapping operations for the trap and truck program are not in progress, and shall include facilities for counting fish that pass through the fishway, whether directly into the impoundment or upstream via trap and truck. Such plans shall be approved by the Service during the conceptual, 30 percent, and 90 percent design stages, prior to submission to the Commission of the 90 percent drawings, with approval not to be unreasonably withheld.*
>
> *B. For Service approval (with such approval not to be unreasonably withheld), and Commission approval as necessary, a draft operations and maintenance plan for a trucking operation substantially as described in its Alternative Prescription, to begin in the third year after license issuance at the Project. The draft operations and maintenance plan should be provided to the Service one year before trapping and trucking operations begin, and be revised, as needed, upon completion of trap construction, and include: details regarding stocking (i.e., GMP will stock over the course of the run), specifically where fish will be released into the Rollinsford Project, and the upstream Lower Great Falls Project (FERC Project No. 4451) and Somersworth Project (FERC Project No. 3820) impoundments. It will also include provisions for counting fish using the South Berwick Project fishway, with data reported both on a daily basis (real time, daily counts) and annually (annual count), both total and by destination.*

2.2 Contingency if Permission Denied to Begin Trap and Truck from South Berwick Project

If GMP submits a request for approval for construction of the trap and truck operation at the South Berwick Project, but the Commission denies the request, the Licensee's

obligation to construct and operate the Denil Fishway at the Project must be fulfilled by the fourth full passage season after such denial.

2.3 Delay of Denil Fishway Construction Obligation During Trap and Truck Operations

If GMP begins trap and truck operations from the South Berwick Project in the third full passage season from Rollinsford Project license issuance, the obligation to have the Denil Fishway functional and operational at Rollinsford will be delayed. In 2032, the Licensee and GMP will consult with the Service to determine whether continued trap and truck operations are appropriate in light of data on the resulting population growth of American shad and river herring in the Salmon Falls River over the period of the interim trap and truck program, the status of the Somersworth Project dams, and fish passage efficiency rates at the South Berwick Project, as well as any other factors relevant at that time. If the Licensee, GMP, and the Service agree that continued trap and truck operation is appropriate, then the obligation to implement fish passage facilities at the Rollinsford Project will be delayed for two more years. The Licensee, GMP, and the Service shall meet for further discussion every two years thereafter. GMP may continue trap and truck operation as long as GMP and the Service agree, at each successive twoyear meeting, that trap and truck continues to be appropriate in light of the data and factors relevant at that time. If at any point a determination is made that GMP is to discontinue trapping and trucking, or the Service determines, at a two-year meeting, that trap and truck operations will no longer provide for shad and/or herring population growth at the levels to be expected by volitional passage or better, the Licensee shall construct a Denil Fishway, as set forth in the Modified Prescription, and begin operations four years after the cessation of the trap and truck operation. GMP will continue trap and truck operations until the Denil Fishway is operational.

If the river herring and shad populations decline, due to factors unrelated to fish passage efforts on the Salmon Falls River, to a level that causes the Service to determine that further trapping and trucking is unwarranted, the Licensee, GMP and the Service will consult to discuss appropriate next steps, including potential discontinuation of the trap and truck operation.

2.4 Meeting Obligation During Duration of Trap and Truck

The Licensee will meet with the Service and GMP annually to discuss the trap and truck operations. This meeting will occur no later than January 31 each year unless the Licensee, GMP, and the Service agree on a different date. The purpose of the meeting will be to discuss the trap and truck operation results from the previous year, and discuss logistics and planning for the upcoming fish passage season. Every two years after 2032, the continuation of trap and truck (and therefore the potential delay of volitional fish

passage installation at the Rollinsford Project and Lower Great Falls Project) will also be discussed."[5]

While recognizing that upstream and down stream fish passage may be provided should this complex arrangement come to pass, it makes little sense to certify the project while the ongoing method of effecting fish passage is subject to change.

Conclusion

Accordingly, TU asks that LIHI withhold LIHI certification to the South Berwick Project until such time as fish passage arrangements have become stable and GMP submits current data demonstrating that the South Berwick project meets LIHI criteria for upstream and down stream fish passage for all fish species known to be historically present, especially river herring, American shad and American eels. Only then can effective fish passage and compliance with agency recommendations be demonstrated.

Maine TU Council appreciates the opportunity to comment on this application.

Respectfully,

Stephen G. Heinz
Maine TU Council FERC Coordinator

Reply to: heinz@maine.rr.com

[5] Town of Rollinsford, Rollinsford Hydroelectric Project, Project No. 3777, Settlement Agreement for Modified Prescription for Fishways dated 1/31/21, pages 4 through 6.