

May 27, 2015

Mr. Michael Sale
Low Impact Hydropower Institute
704 Potters Falls Road
Wartburg, TN 37887

Subject: Recertification Recommendation for the Fifteen Mile Falls Hydroelectric Project

Dear Mike:

This letter contains my recommendation for recertification of the Fifteen Mile Falls Hydroelectric Project (P- 2077) (the “Project”).

I. Recertification Standards

Chapter 2, Section 2.25 of the Low Impact Hydropower Institute (LIHI)’s Certification Handbook (Updated April 2014) regarding Applications for Recertification (“Recertification Standards”) provides that a request for renewal of a previously-issued LIHI certification (“re-certification”) will be granted at the conclusion of the term of the existing certification, so long as (1) there have been no “material changes” at the facility that would affect the certification and (2) LIHI’s certification criteria have not been revised since the previous certification was issued by LIHI.”

The process also states that if no information is missing from the Re-Certification application package, and if the Application Reviewer has determined that there are no material changes or changes in LIHI’s criteria, than the project is eligible for recertification action by the Executive Director.

II. Adequacy of the Recertification Application Package

The Fifteen Mile Falls Hydroelectric Project (the “Project”) received a license (P-2077) from the Federal Energy Regulatory Commission (FERC) on April 8, 2002. The project was initially certified by LIHI as “low impact”, with no conditions, effective December 15, 2008, for a five-year period, expiring on December 15, 2013. In 2008, the Project was, and remains, owned and operated by TransCanada Hydro Northeast, Inc.

I have reviewed the materials submitted in December 2013 by TransCanada Hydro Northeast Inc., (the “Applicant” or “TransCanada”), in support of its application for recertification of the Fifteen Mile Falls Hydroelectric Project. My review of the application, which was started in June 2014, found insufficient supporting detail relative to a number of LIHI criteria. Since June 2014, I have been coordinating with Shawn Keniston and Jennifer Griffin of TransCanada to obtain the required data, although most of the requested data was not received until October 2014 and



January 2015. On February 6, 2015, I received the last set of missing information. I also reviewed the LIHI file containing the original certification files and FERC's public information file on the Project. I solicited comments from the state and federal agencies and Non-Governmental Organizations (NGOs) knowledgeable of the Project, as noted in Attachment #1. Unfortunately, most did not respond to my request for comment on the re-certification of the Project. The most active commenting agency was the Vermont Department of Environmental Conservation (VT DEC), who submitted two written letters, both of which are included as Attachment #2. Oral communications with agencies are summarized in Attachment #1. Also, several conference calls were held during this process with Management from TransCanada to discuss a few outstanding issues.

Two key issues have been identified by VT DEC:

- numerous events where deviations from the minimum flow requirements specified in the FERC License and Water Quality Certification (WQC) were experienced; and
- concern over the reported plan of TransCanada to discontinue operation of the "fish sampler" or "fish trap", possibly as early as 2015, a trap and truck operation which provides for downstream passage at the Moore Dam as the USF&WS's restoration program for Atlantic Salmon in the Connecticut River has ended.

The latter issue was also identified by VT Department of Fish and Wildlife as a concern. More detailed discussion of both issues is contained in Section III below.

In my opinion, the materials now in LIHI's possession are sufficient to make a recertification recommendation.

III. There have been no "material changes" at the facility that would affect the certification.

In accordance with the Recertification Standards, "material changes" mean non-compliance and/or new or renewed issues of concern that are relevant to LIHI's criteria.

Compliance Status

My recertification assessment of the Project included review of TransCanada's compliance with the Settlement Agreement, License and WQC during the period of LIHI certification: December 2008 through October 2014. During this period, the Applicant had a number of study, reporting and related obligations under issues important to LIHI including cultural resources protection, water quality monitoring, forestry management activities to support wildlife enhancement, recreational facility improvements, implementation of fisheries mitigation enhancements and downstream fish passage at the Moore and McIndoes dams. With the exception of those discussed below, TransCanada appears to be in compliance with their requirements.

Based on my review of materials provided, review of FERC's public records, and consultation with the noted agencies and NGOs, I found that there were a number of deviations from the minimum flow requirements experienced at the Project, mostly at the Comerford and McIndoes



dams. FERC's position on all incidents to which they have responded in writing, found that was that the event that prevented release of the minimum flow was beyond the control of the licensee and therefore not considered a violation. The WQC requirement for notification of the events appears to have been satisfied, as John Warner, USF&WS, Brian Fitzgerald, VTDEC and Greg Comstock, NHDES are copied on correspondence sent to FERC reporting these deviations. The events were caused by a variety of incidents, mostly unit tripping due to storms or some other equipment failure, although other causes included actions taken to facilitate rescue of two boaters, response to an oil leak, and two agency approved events to temporarily reduce the minimum flow amount due to Project repairs or exceptionally low river flows. Events on November 28, December 7 and December 13, 2011 were all tied to inconsistencies between station flow gages and the upstream USGS gage, and the operators attempts, based on flow conversion calculations, to make station adjustments to meet minimum flow requirements. Initially in their letter dated August 29, 2012, FERC found these to be considered violations of the license with the cause being "operator error". Subsequently, in their letter dated July 15, 2013, based on data provided by TransCanada, FERC stated that it was found that the flow conversion calculations used by the operators were incorrect, and in fact, the required flows were consistently released. Therefore there were no deviations on these dates. Because of the number of deviations that appear to be occurring, including at least one in six of the twelve months of 2014 (none to date found to be FERC license violations), I have recommended inclusion of a condition regarding this issue. Section V discusses this condition.

New/Renewed Issues of Concern

The second key element of the recertification review for "material changes" is associated the existence of new or renewed issues of concern relative to LIHI's certification.

The original certification review of the Project found some dissatisfaction on part of the resource agencies regarding "frustration with ongoing delays in resolving downstream fish passage at the project, with causes identified as a mix of site conditions that make passage technically difficult, circumstances beyond the applicant's control, and insufficient or untimely follow up by the applicant (though not to a degree that would warrant legal action to determining a violation of settlement agreement or license provisions)".

My review of the materials provided, comment letters received and agency consultation finds continued concern with downstream fish passage, especially at the Moore Dam. The key concern however is the reported plan of TransCanada to discontinue operation of the trap and truck operation which provides for downstream passage at the Moore Dam, in response to cessation of the restoration program for Atlantic Salmon in the Connecticut River. TransCanada has committed to continue its operation through 2015 to provide passage for 2-year old smolts released upstream of the Moore Dam, as noted in their letter dated December 19, 2014 *Report on Downstream Passage 2014 Monitoring and Plans for 2015*. However, as noted in VT DEC's letters of March 28, 2014 and January 28, 2015, the fisheries specialists have suggested that passage should be continued through at least 2016 for passage of the 3-year old smolts. This need for passage through 2016 was also identified at the March 7, 2013 Agency Consultation Conference Call, according to available meeting minutes.



The cessation of the trap and truck operation was highlighted in the two VT DEC comment letters, and from consultation with Len Gerardi of VT Department of Fish & Wildlife as a concern as it was described as important in facilitating resident fish movement from the upper to the lower reservoirs. Mr. Gerardi additionally suggested that it was never the intent that the requirements for downstream fish passage would apply strictly to salmon. My review of the wording of the Settlement Agreement, FERC License and Water Quality Certification shows that the stated trigger for initiating downstream passage was upstream stocking of Atlantic salmon, but all are silent on specifically stating salmon were the only intended species, or that the downstream passage would not be needed if salmon were not present. TransCanada's position is that salmon were the primary of this requirement. Review of various years of reports on the operation of the trap and truck operation, which are all reviewed by the fisheries agencies, indicated that that resident fish were not transported downstream, but instead returned to the upper reservoir from which they entered the structure. This appears to support that position that the downstream passage was focused only on salmon. Nonetheless the state fisheries experts felt that continued operation of the trap and truck facilities would provide meaningful enhancement for resident fish species for the reasons stated by VT DEC. Unfortunately, I was not able to obtain any feedback from the USFWS contact after numerous attempts.

I am recommending that an additional condition be added for this Project's re-certification to address this fish passage issue, as discussed further below. However, it is important to recognize that LIHI's certification program is based on compliance with current Project requirements. Until/if TransCanada stops its trap and truck operations, the Fifteen Mile Project appears to be in compliance with their current FERC License, WQC and Settlement Agreement. These documents appear to meet LIHI's definition of "latest resource agency recommendations" upon which LIHI depends for satisfying their certification criteria.

No other changes have occurred at the facility which affects LIHI's certification criteria.

IV. LIHI's certification criteria have not been revised since the previous certification was issued by LIHI in 2007.

It is my understanding that LIHI's criteria, or the Board's interpretation of one or more criteria, that are applicable to the circumstances of the Fifteen Mile Falls Hydroelectric Project have not changed in meaningful ways since the date of the original certification.

V. Conclusion

In light of the above, I recommend conditioned recertification of the Fifteen Mile Falls Hydroelectric Project.

It is important to note that as both the FERC License and WQC address operation of the trap and truck facility that a License amendment and possible modification of the WQC would likely be needed, so that these documents reflect current status of these activities, and TransCanada remains in compliance with these legal requirements. It is unclear if the Settlement Agreement



would also need to be modified, although provisions in paragraph N under Section II General Provisions allow changes:

“N. This Agreement may be amended at any time with the unanimous consent of all parties for a period of 5 years after the Completion of Licensing and may be thereafter amended, after notice to all parties, with the consent of three fourths of the parties still in being, provided however, that no amendment will be effective which does not have the consent of the Project Owner and the State and Federal agencies. ‘

The following re-certification conditions are recommended:

Condition 1. Pertaining to the particular interest of the trap and truck operation for downstream passage of Atlantic salmon smolts stocked upstream of the Moore Dam, the facility owner shall remain in full compliance with its FERC license and the associated Settlement Agreement (SA) and Water Quality Certificate. If the licensee requests to amend the FERC license or the WQC, or reopen the SA, with regard to use of this operation, the facility owner shall notify LIHI within seven days, including a description of the proposed changes and schedules for pursuing them. LIHI shall also be provided a copy of any amendments, along with resource agency comments, to confirm continued compliance with LIHI’s criterion

Condition 2. The facility owner shall report to LIHI on an annual basis about the occurrence of all deviations from requirements defined in its FERC license for pond levels and downstream flow releases from dams. It is expected that the owner shall maintain a proactive approach to problem solving that will lead to a reduction in the frequency and severity of such deviations. The annual report will be used by LIHI as confirmation that TransCanada is conducting the necessary actions to minimize such events and ensure compliance with LIHI’s flow and water quality criteria. LIHI may share such information with VT DEC and NH DES, if requested by these agencies, although it is understood that such data is already provided to NHDES and VTDEC.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Patricia B. McIlvaine".

Patricia B. McIlvaine

Attachment #1

Re-certification Communication Outreach

The following agency and Non-Governmental Organizations (NGOs) were contacted by email to solicit their comment on the application made by TransCanada for the re-certification of the Fifteen Mile Falls Project. Follow-up telephone calls were also made to USF&WS as well as the Vermont and New Hampshire agencies. Most individuals were recommended by the Applicant as signatories to the 1997 Settlement Agreement associated with the Project, which formed the basis of the FERC license and Water Quality Certificate requirements. Connecticut and Massachusetts agencies were originally involved due to the Connecticut River Atlantic Salmon restoration program in place when the Settlement Agreement was negotiated. The individuals noted in bold are those with whom I was successful in reaching by phone or email. Those communications are summarized below. As noted in the letters contained in Attachment 2, several other agency personnel were kept abreast of the comments being issued by copy of the comment letters.

Federal Agencies

John Warner - USF&WS, New England Field Office - John.Warner@fws.gov

Ken Sprankle - USF&WS, Connecticut River Coordinator's Office - Ken.Sprankle@fws.gov

Kevin Mendik - National Park Services - kevin_mendik@nps.gov

Vermont

Rod Wentworth - Vermont Department of Fish & Wildlife - rod.wentworth@state.vt.us

Len Gerardi - Vermont Department of Fish & Wildlife - len.garardi@state.vt.us

Eric Davis - Vermont Department of Environmental Conservation, Watershed Management Division - eric.davis@state.vt.us

Jeff Crocker - Vermont Department of Environmental Conservation, Watershed Management Division - jeff.crocker@state.vt.us

New Hampshire

Gregg Comstock - New Hampshire Department of Environmental Services, Water Quality Planning - gregg.comstock@des.nh.gov

Glenn Normandeau - NH Department of Environmental Services - director@wildlife.nh.gov

Andrew Schafermeyer - NH Fish & Wildlife - andrew.schafermeyer@wildlife.nh.gov

Connecticut

Steve Gephard - Connecticut Department of Energy & Environmental Protection (DEEP), Inland Fisheries Division - steve.gephard@ct.gov

Brian Golembiewski - CT DEEP, Water Quality - brian.golembiewski@ct.gov

Massachusetts

Caleb Slater - Massachusetts Department of Fish and Game - caleb.slater@state.ma.us

Robert Kubit - MA Department of Environmental Protection - robert.kubit@state.ma.us

NGOs

David Deen - Connecticut River Watershed Council - ddeen@ctriver.org

Ken Kimball - Appalachian Mountain Club - kkimball@amcinfo.org

Jim MacCartney - Trout Unlimited - jmaccartney@tu.org

Telephone Conversations

Date: 1/8/15 and 1/23/15 - Telephone conversations
Contact Person: Eric Davis
Agency: Vermont Department of Environmental Conservation
Telephone: 802-490-6180
Area of Expertise: Watershed Management

Mr. Davis reiterated his concerns identified in his original comment letter submitted to LIHI dated March 28, 2014, about the numerous minimum flow violations experienced at the Project. He pointed out that in addition to those identified in this letter up to March 2014, six additional events occurred between March and November 2014, which appears to indicate an increased frequency in such events. He also stressed the importance of maintaining downstream fish passage for resident species, given TransCanada's plan to cease operation of downstream passage at the Moore Dam. This concern was the emphasis of his second letter dated January 28, 2015. (Both letters are contained in Attachment #2.)

Date: 2/18/15 - Telephone conversation
Contact Person: Gregg Comstock
Agency: NH Department of Environmental Services
Telephone: 603-271-2983
Area of Expertise: Water Quality

After several rounds of missed calls in January, a discussion was held with Gregg Comstock in February. Unfortunately he reported that at this time, he could not offer any comments on the project.

Date: 1/15/15 - Telephone conversation; 1/28/15 email
Contact Person: Len Gerardi
Agency: Vermont Department of Fish & Wildlife
Telephone: 802-751-0108
Area of Expertise: Fisheries

In response to a second email sent to the lead fishery contacts (John Warner - USF&WS; Andrew Schafermeyer - NH Fish & Wildlife; and Len Gerardi - Vermont Department of Fish & Wildlife) regarding downstream passage needs at the Moore, Comerford and McIndoes dams, Len and I discussed this topic. He stated there are no concerns with the passage method at McIndoes Dam. His position is that the downstream passage at the Moore dam (referred to as the "fish sampler" or "fish trap") was intended to provide passage resident fish species in addition to salmon, even though the original primary focus was for salmon passage as part the USF&WS Atlantic Salmon restoration program for the Connecticut River. His position is that the meeting held on March 7, 2013 was to only discuss salmon restoration, and as a result, comments made about how long the fish sampler needs to continue to operate were focused just on salmon smolt and the need for passage of other species was not discussed. As a result of our

discussion, I asked Len if he could provide documentation that indicated the need for passage for other than salmon was previously discussed as part of legal proceedings associated with the Project. He stated he would coordinate with USF&WS and NH Fish & Wildlife and provide a joint response from these agencies providing this information. On 1/28/15 I received an email stating such a letter could not be provided due to an inability to coordinate with the agencies within the two week period I asked for such a response. A copy of this email follows.

Attachment #2
Comment Letters Received

Vermont Department of Environmental Conservation*Agency of Natural Resources*

Watershed Management Division

1 National Life Drive, Main 2

[phone] 802-490-6180

Montpelier, Vermont 05620-3522

[fax] 802-241-4537

<http://www.vtwaterquality.org>

DISTRIBUTED ELECTRONICALLY

March 28, 2014

Dana Hall
Low Impact Hydropower Institute
PO Box 194
Harrington Park, New Jersey 07640

RE: Fifteen Mile Falls Hydroelectric Project (FERC No. 2077)
Comments on LIHI Certification

Dear Ms. Hall:

Thank you for the opportunity to comment on TransCanada's application to the Low Impact Hydropower Institute (LIHI) for recertification of the Fifteen Mile Falls Hydroelectric Project as a *low impact* hydroelectric project.

The Fifteen Mile Falls Hydroelectric project consists of the Moore, Comerford and McIndoes developments. The project received a water quality certification in 2001 from the New Hampshire Department of Environmental Services. The certification was the result of a settlement agreement, of which the Vermont Department of Environmental Conservation was also a party. The project alters stream flow and aquatic habitat across a 26-mile reach of river, including three reservoirs and a 1.5 mile riverine reach between the Comerford and McIndoes developments. As recognized in the settlement agreement, project operations "have an environmental cost" on "a highly significant area from an environmental perspective" and further noted that the impoundments have "fundamentally changed the nature of this reach of river". Not only have the projects impacted this reach of the river through its initial conversion from a free flowing system to one with expansive flatwater reservoirs, but the project continues to contribute on-going impacts in the form of major seasonal water level fluctuations in the impoundments. These water level fluctuations are a direct result of project operations and prevent the created reservoirs from being able to function with any semblance of a natural regime or productivity. These impacts should have bearing on whether the project is considered "low impact".

Documented violation of the Fifteen Mile Falls Water Quality Certification

Under condition 2 of the water quality certification, the applicant is required to maintain conservation flows below each of the developments. The Department's compliance records document the following certification compliance issues during the applicant's initial term of LIHI certification.

- Moore Development
 - June 24, 2011: Minimum flow violation resulting in a 21 minute non-compliance event.
- Comerford Development
 - March 24, 2014: Minimum flow violation of undetermined duration.
 - October 7, 2013: Minimum flow violation resulting in a 2 hour and 3 minute non-compliance event.
 - June 2, 2013: Minimum flow violation resulting in a 3 hour and 26 minute non-compliance event.

- December 21, 2012: Minimum flow violation resulting in a 1 hour and 52 minute non-compliance event.
- McIndoes Development
 - March 14, 2014: Minimum flow violation of undetermined duration
 - June 19, 2013: Minimum flow violation resulting in a 1 hour and 32 minute non-compliance event.
 - April 10, 2012: Minimum flow violation resulting in a 5 hour non-compliance event.
 - November 19, 2012: Minimum flow violation resulting in a 41 minute non-compliance event.
 - August 17, 2010: Minimum flow violation resulting in a 27 minute non-compliance event
 - September 15, 2010: Minimum flow violation resulting in an 11 minute non-compliance event

Fish Passage

Under condition 15 of the water quality certification for the Fifteen Mile Falls hydroelectric project, the applicant is required to provide upstream passage for Atlantic Salmon. The condition explicitly states:

“The Applicant shall provide upstream fish passage past McIndoes Dam after 20 Atlantic salmon migrating upstream reach the East Ryegate Dam for two consecutive years and the New Hampshire Fish and Game Department, Vermont Department of Fish and Wildlife, U.S. Fish and Wildlife Service and Connecticut River Atlantic Salmon Commission determine that upstream fish passage is justified. At the discretion of the above-named agencies, the passage may consist of facilities located at McIndoes Dam or participation in trap-and-truck facility construction and operation at East Ryegate Dam. If the above-named agencies determine it is justifiable, at the same time or subsequently, a fish trap shall be constructed at Comerford Dam, and a trap-and-truck operation instituted.”

Even though direct US Fish and Wildlife Service support for the salmon restoration effort has ended, salmon are still an important component of the Connecticut River fish community and are of interest to the Vermont Agency of Natural Resources. Through the spring of 2013, salmon fry have been stocked upriver of the Fifteen Mile Falls project. Two-year smolts will be outmigrating in 2015 and the remaining 3-year smolts in 2016. Adult returns from this final stocking can be expected through 2019 or 2020. And more significantly, beginning in 2014, all returning adults, rather than one in ten, will be allowed to negotiate the Connecticut River fishways, and will be able to move up the mainstem as far as the Dodge Falls dam in East Ryegate. The spawning in the wild of this anticipated tenfold greater number of fish, will contribute natal production of anadromous fish in the Connecticut River system well into the future. Upstream and downstream fish passage will continue to be needed to support this natal production.

If the Fifteen Mile Falls hydroelectric project is certified by LIHI, given the status of the Atlantic Salmon program, VT ANR would consider it appropriate for the Institute to reinforce the applicant’s obligation to provide passage for Atlantic salmon by including a condition that explicitly states: “the applicant must provide upstream fish passage for Atlantic Salmon as deemed necessary by the Vermont Department of Fish and Wildlife”. This condition would be consistent with the project’s water quality certificate and LIHI fish passage criteria, while also providing clarity to the applicant regarding future fish passage obligations.

The only accommodation of resident fish passage at these facilities is through spillage at the dams or fish use of the downstream passage facilities provided seasonally for salmon smolt outmigration, for a roughly 2-month period of the year. Examination of the fish capture records at the Moore Dam smolt collection facility reveals that numerous fish representing many resident fish species are captured along with the salmon smolts.

As an example, consider three species:

| Year | Brown trout | Smallmouth bass | Yellow perch |
|------|-------------|-----------------|--------------|
| 2011 | 579 | 422 | 6004 |
| 2012 | 866 | 189 | 4674 |
| 2013 | 234 | 222 | 721 |

The ecological significance of the interference of the project dams with the movement of these and other fish has not been identified and quantified definitively. However, the mere fact of the interrupted movement of so many fish across species is indicative of a considerable population fragmentation impact.

Very truly yours,

Eric Davis
River Ecologist

Attachment

- c: Rod Wentworth, Department of Fish and Wildlife
- Len Gerardi, Department of Fish and Wildlife
- John Warner, U.S. Fish and Wildlife Service
- Melissa Grader, U.S. Fish and Wildlife Service
- Gregg Comstock, NH DES
- John Ragonese, TransCanada

Vermont Department of Environmental Conservation*Agency of Natural Resources*

Watershed Management Division

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Montpelier, Vermont 05620-3522

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<http://www.watershedmanagement.vt.gov>

DISTRIBUTED ELECTRONICALLY

January 28, 2015

Patricia McIlvaine
Wright-Pierce
99 Maine Street
Topsham, Maine 04086

RE: Fifteen Mile Falls Hydroelectric Project – FERC Project No. 2077
Comments on LIHI recertification

Dear Ms. McIlvaine,

Thank you for the opportunity to provide additional comments on TransCanada's application to the Low Impact Hydropower Institute (LIHI) for recertification of the Fifteen Mile Falls Hydroelectric Project as a low impact hydroelectric project.

On March 28, 2014, the Vermont Agency of Natural Resources (the Agency), provided initial comments on the pending recertification of the Fifteen Mile Falls Hydroelectric Project. In addition to background information on the project and its impacts, the Agency outlined numerous deviations from the conservation flows required by the Fifteen Mile Falls water quality certification during the project's initial term of LIHI certification, while also addressing fish passage at the project. Though concerns persist regarding potential impacts to aquatic resources stemming from increasingly frequent deviations from the conservation flow prescriptions for the project, these supplemental comments focus on the impacts of the project on fish movement and opportunities to address these impacts.

Condition 14 of the Fifteen Mile Falls water quality certification, requires the applicant to provide downstream passage at the Moore and Comerford developments in connection with the Atlantic Salmon stocking program. As part of this program, salmon fry have been stocked upriver of the Fifteen Mile Falls project through the spring of 2013. Two-year smolts will be outmigrating in 2015 and the remaining 3-year smolts in 2016. This outmigration schedule will require that downstream passage for Atlantic Salmon be provided through 2016. While the applicant has committed to continuing the smolt passage program in 2015, the applicant has not made the same commitment for 2016.¹ Given that downstream passage for Atlantic Salmon is required by the Fifteen Mile Falls water quality certification and LIHI's fish passage criteria require facilities to be in compliance with mandatory fish passage prescriptions, the Agency recommends that if LIHI recertifies this project, any recertification include a condition requiring the applicant to provide downstream passage for Atlantic Salmon through 2016.

Data collected during the Atlantic Salmon smolt migration period provides new insight into the project's considerable impact on the ability of resident species to move past Moore dam. During the 2014 monitoring period, 19 resident fish species, totaling 29,049 individuals, were collected at the Moore Dam smolt collection facility. This population fragmentation impact is reinforced through the examination of multiple years of data. As an example, consider the project's impact three species in particular:

¹ Normandeau Associates. 2014. Report on Atlantic Salmon Smolt Sampling Efforts at Moore Dam, Spring, 2014.

| Year | Brown Trout | Smallmouth Bass | Yellow Perch |
|------|-------------|-----------------|--------------|
| 2011 | 579 | 422 | 6004 |
| 2012 | 866 | 189 | 4674 |
| 2013 | 234 | 222 | 721 |
| 2014 | 2,111 | 207 | 9870 |

The Agency recognizes the importance fish movement during different times of the year and during different life history stages in order to access available riverine aquatic habitat. Maintaining a connected system allows fish to seek the best available habitat and food resources, as well as avoid predator interactions. Furthermore, movement within a river system promotes genetic diversity. Vermont's Wildlife Action Plan identifies a large number of aquatic species threatened by habitat fragmentation including 15 "species of greatest conservation need".² In recognition of the ecological importance of connectivity, the Agency is in the process of developing criteria to determine when passage for resident species is warranted.

While a post-2016 decision has not been made concerning the need for downstream passage at the Fifteen Mile Falls project, there is evidence that resident fish attempt to utilize the downstream facility at Moore Dam and are likely to benefit from effective passage. Given that LIHI's fish passage criteria require that a facility be in compliance with fish passage prescriptions for upstream and/or downstream passage for riverine fish, the Agency recommends that if LIHI recertifies the Fifteen Mile Falls project, any recertification include a condition requiring the applicant to notify LIHI within 14 days of a resource agency request to implement passage measures for riverine fish, to provide LIHI with a copy of the request, and to provide LIHI with the applicant's response.

Thank you for consideration of our comments.

Very truly yours,



Eric Davis
River Ecologist

c: Jeff Crocker, Department of Environmental Conservation
Rod Wentworth, Department of Fish and Wildlife
Len Gerardi, Department of Fish and Wildlife
Jud Kratzer, Department of Fish and Wildlife
John Warner, United States Fish and Wildlife Service
Gabe Gries, New Hampshire Fish & Game Department
Andrew Schafermeyer, New Hampshire Fish & Game Department
Diane Timmins, New Hampshire Fish & Game Department

² Kart, J., R. Regan, S.R. Darling, C. Alexander, K. Cox, M. Ferguson, S. Parren, K. Royar, B. Popp, editors. 2005. Vermont's Wildlife Action Plan. Vermont Fish & Wildlife Department.