GABRIELA GOLDFARB CONSULTING

503.23.1711 ■ gabriela@goldfarbconsulting.com ■ 6307 SE Stephens Street ■ Portland, OR 97215

May 1, 2012

Mr. Fred Ayer, Executive Director
Low Impact Hydropower Institute
34 Providence St.
Portland, ME 04103
VIA EMAIL

RE: Application Reviewer Report for Martinsville Upper Hydroelectric Project (FERC 7373)

Dear Fred:

Attached please find my final reviewer's report regarding the application by Mr. John "Jay" Boeri, Jr. for certification of the Martinsville Upper Hydroelectric Project by the Low Impact Hydropower Institute (LIHI).

Sincerely,

/s/ Gabriela

GABRIELA GOLDFARB

Attachment: As stated.

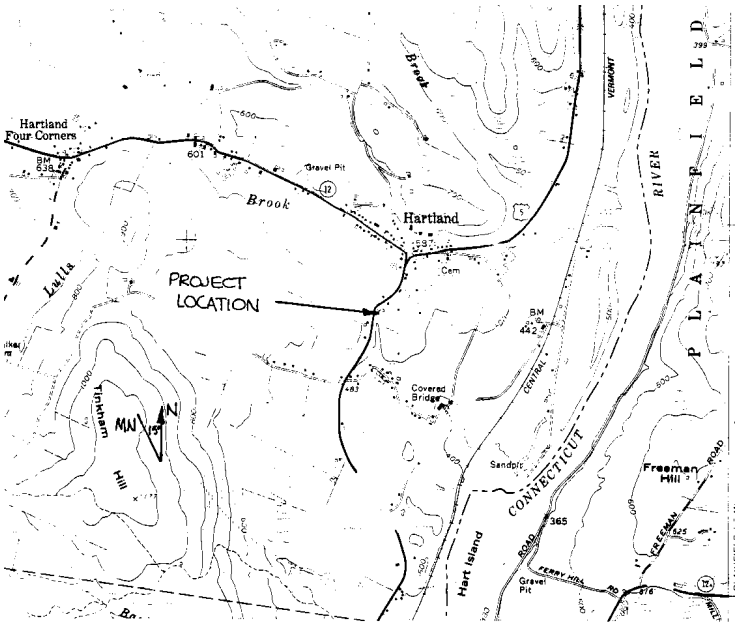
REVIEW OF APPLICATION FOR CERTIFICATION
BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE
MARTINSVILLE UPPER HYDROELECTRIC PROJECT (FERC LIC. 7373)

Prepared by:
Gabriela Goldfarb, Principal, Gabriela Goldfarb Consulting
April 30, 2012

This report reviews the application submitted by Mr. John L. "Jay" Boeri, Jr. (Applicant) to the Low Impact Hydropower Institute (LIHI) for Certification of the Martinsville Upper Hydroelectric Project Hydroelectric Project (Project or Facility).

I. PROJECT'S GEOGRAPHIC LOCATION

The Project is located on Lulls Brook, a tributary of the Connecticut River, in Windsor County in the west-central part of Vermont. The Project dam is located 1.2 miles upstream of the confluence with the Connecticut River. (Coordinates +43 32.264, -72 24.083). The drainage area at the intake is 22 square miles. There is an unmaintained dam a half-mile below the project that formerly powered a saw mill demolished in 1952; the reservoir spills directly into Lull Brook with no bypass or diversion. There are no other hydroelectric facilities on Lull Brook. See below for a location map.



II. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

Project characteristics. In 1984 the Applicant obtained A 50-year FERC license to construct, operate, and maintain the dam and associated 250 kW hydroelectric project at the former site of a

timber crib dam whose remains were washed away in 1973. (Lat/Lon coordinates N43 32.264, W72 24.083.) The project began commercial operation in 1986. The run-of-river project consists of a 15-foot-high, 49-foot-long concrete gravity dam with 4-foot-high flashboards along a 37-foot-long spillway section of the dam; an impoundment 1/5 acre in area and 1/3 acre-foot in volume; an intake structure at the west side of the dam; a 3-foot-diameter, 455-foot-long wood-stave penstock section leading to a 3-foot-diameter, 100-foot-long steel penstock section; a powerhouse approximately 26 feet long and 14 feet wide containing two 125-kW generating units powered by two Ossberger turbines; and appurtenant facilities. Average annual generation is 800,000 kWh.

Immediate site characteristics. A FERC license amendment notes the dam and powerhouse "were constructed on exposed bedrock that underlies Lulls Brook. The penstock is positioned along a steep, wooded embankment between U.S. Route 5 and Lulls Brook." According to the Water Quality Certification (WQC) issued by the state of Vermont, "the penstock-bypassed section of stream is a steep gradient channel of chutes and shallow pools on largely scoured ledge. Such habitat has little direct value for fish production due to a lack of adequate spawning and nursery areas." The WQC later notes "The proposed dam would not constitute an obstruction to the upstream migration of fish as the steep gradient of chutes in the bypass present a natural barrier for fish passage."

Flow regime. The Project's 1984 FERC license approves a run-of-river operation with a continuous minimum flow of 2 cubic feet per second (cfs) to protect water quality and aquatic

habitat in the bypass reach, and an instantaneous discharge below the project of 11 cfs or inflow to the project, whichever is less, to protect downstream aquatic resources. These flows were recommended by the U.S. Fish and Wildlife Service (USFWS) in a 1984 timely comment to FERC and also reflected in the State of Vermont's water quality certification (WQC), which referenced confirmation from the state fish and wildlife agency that these flows would be protective of fishery resources. The WQC also states that all flows are to be spilled at the dam if inflow to the project falls below 4 cfs.

III. REGULATORY AND COMPLIANCE STATUS

FERC issued the project license Dec 28, 1984, and an amended license April 25, 1995 to reconcile as-built differences in the project, including changed locations of the dam and powerhouse and a change in turbine type. State and federal resource agencies reviewed and commented on the revised project at the time of the amendment, noting that the changes did not raise any resource protection concerns. The State of Vermont issued its WQC November 28, 1983. There is no settlement agreement associated with this project, and there have been no post-licensing proceedings since the 1995 license amendment. A review of documents submitted by the applicant, a review of documents available on the FERC website, and written and verbal consultations with agency staff reveal no recent compliance issues.

IV. PUBLIC COMMENTS RECEIVED BY LIHI

LIHI received no public comments on this application.

V. SUMMARY OF COMPLIANCE WITH CRITERIA AND ISSUES IDENTIFIED

This project appears to raise no issues of concern in regard to compliance with the LIHI criteria at present. However, there may be a fish passage issue that arises in the future involving fish passage for the catadromous American eel. This issue is addressed in a special certification condition. See section VI. Reviewer Recommendation and section VII. Detailed Criteria Review, below, for more detail.

VI. REVIEWER RECOMMENDATION

Based on my review of information submitted by the applicant, the additional documentation noted herein, and my consultations with resource agency staff and other entities, and for the reasons stated above, I recommend that the Martinsville Hydroelectric Facility be certified to be in compliance with LIHI's criteria with a certification term of five (5) years subject to the following condition:

> Recommended Condition: If during the certification period American eel upstream passage facilities are constructed and become operational at Bellows Falls Dam on the Connecticut River, or the U.S. Fish and Wildlife Service or the Vermont Fish and Wildlife Department request passage facilities at the Project, the Project owner shall so notify LIHI within 30 days and shall enter into, and provide LIHI with a copy of, an agreement reached among the Project owner, the U.S. Fish and Wildlife Service, and/or the Vermont Fish and Wildlife Department to provide both interim (if requested by an

agency) and permanent safe, timely, and effective passage for American eel. The Agreement must be finalized within 120 days of the request for passage and must include a description of the planned passage and protection measures and the implementation schedule for design, installation, and operations. The agreement shall be filed with LIHI within 30 days of its execution.*

VII. DETAILED CRITERIA REVIEW

A. FLOWS

***Goal**:* The Flows Criterion is designed to ensure that the river has healthy flows for fish, wildlife and water quality, including seasonal flow fluctuations where appropriate.

***Standard**:* For instream flows, a certified facility must comply with recent resource agency recommendations for flows. If there were no qualifying resource agency recommendations, the applicant can meet one of two alternative standards: (1) meet the flow levels required using the Aquatic Base Flow methodology or the "good" habitat flow level under the Montana-Tennant methodology; or (2) present a letter from a resource agency prepared for the application confirming the flows at the facility are adequately protective of fish, wildlife, and water quality.

Criterion:

1) **Is the facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?**

NOT APPLICABLE, *go to A2*

The flow conditions for this project were issued before December 31, 1986.

2) **If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or "good" habitat flow standards calculated using the Montana-Tennant method?**

NO, *go to A3.*

The applicant did not attempt to pass this criterion by documenting flows that meet LIHI's specified standards.

* Underlined text represents the amendment of the proposed condition by the Governing Board at its May 3, 2012 meeting certifying the project with the condition.

3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?

YES, *Pass, go to B*

In an email April 2012 email Vermont Agency of Natural Resources (VANR) staff wrote "the project is in compliance with respect to flows."

PASS

B. WATER QUALITY

Goal: The Water Quality Criterion is designed to ensure that water quality in the river is protected.

Standard*:* The Water Quality Criterion has two parts. First, an Applicant must demonstrate that the facility is in compliance with state water quality standards, either through producing a recent Clean Water Act Section 401 certification or providing other demonstration of compliance. Second, an applicant must demonstrate that the facility has not contributed to a state finding that the river has impaired water quality under Clean Water Act Section 303(d).

Criterion:

1) Is the Facility either:

a) In compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the facility after December 31, 1986? Or
b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?

YES, go to B2

VANR staff consulted during this review stated "Based on available information, there is reasonable assurance that the waters at the Martinsville Project and in the downstream reach are in compliance Vermont's quantitative water quality standards."

2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?

NO, *Pass, go to C*

Lulls Brook does not appear on either the approved 2010 or draft 2012 Clean Water Act (CWA)

section 303(d) list of impaired surface waters. The state's "List Of Priority Surface Waters Outside the Scope of Clean Water Act Section 303(d)" does include Lulls Brook both in the 2010 approved list and 2012 draft list as being in need of further assessment for inclusion on a future 303(d) list if assessment results indicate impairment. However, the possible source is noted as "sedimentation from gravel road runoff & [sic] other sources; needs additional assessment." The Project does not appear to be a contributor to this possible problem.

PASS

C. FISH PASSAGE AND PROTECTION

Goal: The Fish Passage and Protection Criterion is designed to ensure that, where necessary, the facility provides effective fish passage for riverine, anadromous and catadromous fish, and protects fish from entrainment.

Standard: For riverine, anadromous and catadromous fish, a certified facility must be in compliance with both recent mandatory prescriptions regarding fish passage and recent resource agency recommendations regarding fish protection. If anadromous or catadromous fish historically passed through the facility area but are no longer present, the facility will pass this criterion if the Applicant can show both that the fish are not extirpated or extinct in the area due in part to the facility and that the facility has made a legally binding commitment to provide any future fish passage recommended by a resource agency. When no recent fish passage prescription exists for anadromous or catadromous fish, and the fish are still present in the area, the facility must demonstrate either that there was a recent decision that fish passage is not necessary for a valid environmental reason, that existing fish passage survival rates at the facility are greater than 95% over 80% of the run, or provide a letter prepared for the application from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service confirming the existing passage is appropriately protective.

Criterion:

1) **Is the facility in compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?**

NOT APPLICABLE, *go to C2*

Resource Agencies reviewed the project and issued recommendations prior to December 31, 1986.

2) **Are there historic records of anadromous and/or catadromous fish movement through the facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish run is extinct)?**

YES, *go to C2a*

The State of Vermont's WQC notes "the steep gradient of chutes in the bypass present a natural barrier for fish passage" and the National Marine Fisheries Service at the time of Project licensing indicated no species under the agency's purview would be affected by dam construction. Therefore, anadromous fish do not appear to have populated the Project stream historically.

However, USFWS staff consulted during this review confirmed that "Historically, eels inhabited nearly every drainage along the Atlantic coast, from the estuaries to far inland. There is no reason to believe that they did not inhabit Lulls Brook at one time."

a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?

YES, *Go to C2b*

USFWS staff consulted during this review stated "FWS consulted with VT DFW [Vermont Department of Fish and Wildlife] to determine if any eels had been collected from Lulls Brook. We were told by Ken Cox that he did not recall ever collecting any from that stream. Therefore, we conclude that eels have been extirpated from that system (presumably… by the presence of several very large dams on the mainstem Connecticut River)."

b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?

NOT APPLICABLE, *Go to C3*

Resource Agencies did not recommend any fish passage measures at the time of Project licensing.

3) If, since December 31, 1986:

a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C2a above), and

b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,

c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous

fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?

NOT APPLICABLE, *Go to C4*

In 1987 a FERC final construction inspection of the Project revealed that it had not been constructed in conformance with the Applicant's 1984 FERC license. There were changes to the location of the dam and powerhouse and type of turbines compared with those approved in the license. According to FERC documents, the Applicant notified federal and state fish and wildlife agencies concerning the changes to the project features, and obtained an April 1987 letter from the Vermont Agency of Environmental Conservation stating that they did not consider the changes to be significant, and an August 1987 letter from USFWS that they had no objection to the changes in location of the project facilities and turbines. It therefore appears that Resource Agencies had the opportunity to issue mandatory fish passage prescriptions after December 31, 1986 and chose not to do so. There is no indication they declined to do so for any of the reasons above.

4) If C3 was not applicable:

a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or

b) If the Facility is unable to meet the fish passage standards in 4.a, has the Applicant either i) demonstrated, and obtained a letter from the U.S. Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource, or ii) committed to the provision of fish passage measures in the future and obtained a letter from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service indicating that passage measures are not currently warranted?

YES, *Go to C5*

In the course of this review USFWS stated "The Service does not have plans to require catadromous fish passage at the Martinsville Project within the next five years. However, the Service will be pursuing eel passage as part of the relicensing of the mainstem Connecticut River Projects (including Turners Falls, Vernon, Bellows Falls and Wilder). Lulls Brook enters the mainstem between Bellows Falls and Wilder. Therefore, the Martinsville Project likely will need to provide eel passage after eel passage at the mainstem dams has been implemented (i.e., a short time after 2018)."

This statement from the USFWS indicates that there is no need for catadromous fish passage at the Project at the present time. However, this situation appears likely to change after 2018, when passage will be required in the course of relicensing downstream mainstem dams that were responsible for the extirpation of American eel from the vicinity of the project.

In the event circumstances (e.g., earlier-than-anticipated implementation of passage on the mainstem dams, or discovery of remnant eel populations in Lulls Brook) warrant passage implementation before 2018, this review recommends a special condition:

> Recommended Condition: If during the certification period American eel upstream passage facilities are constructed and become operational at Bellows Falls Dam on the Connecticut River, or the U.S. Fish and Wildlife Service or the Vermont Fish and Wildlife Department request passage facilities at the Project, the Project owner shall so notify LIHI within 30 days and shall enter into, and provide LIHI with a copy of, an agreement reached among the Project owner, the U.S. Fish and Wildlife Service, and/or the Vermont Fish and Wildlife Department to provide both interim (if requested by an agency) and permanent safe, timely, and effective passage for American eel. The Agreement must include a description of the planned passage and protection measures and the implementation schedule for design, installation, and operations. The agreement shall be filed with LIHI within 30 days of its execution.

5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream or downstream passage of riverine fish?

NOT APPLICABLE, *go to C6*

The Project license has no mandatory fish passage prescriptions for riverine fish.

6) Is the facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?

NOT APPLICABLE *Pass, go to D*

The Project license requirements for fish entrainment protection.

PASS

D. WATERSHED PROTECTION

***Goal**:* The Watershed Protection criterion is designed to ensure that sufficient action has been taken to protect, mitigate and enhance environmental conditions in the watershed.

***Standard**:* A certified facility must be in compliance with resource agency and Federal Energy Regulatory Commission ("FERC") recommendations regarding watershed protection, mitigation or enhancement. In addition, the criterion rewards projects with an extra three years of certification that have a buffer zone extending 200 feet from the high water mark or an approved watershed enhancement fund that could achieve within the project's watershed the ecological and recreational equivalent to the buffer zone and has the agreement of appropriate stakeholders and state and federal resource agencies. A Facility can pass this criterion, but not receive extra

years of certification, if it is in compliance with both state and federal resource agencies recommendations in a license-approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.

Criterion:

1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?

NO, *go to D2*

2) Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1), and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?

NO, *go to D3*

3) Has the facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies' agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)

NO, *Go to D4*

4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.

YES, *Pass, go to E*

Neither the FERC license nor the WQC included any requirements regarding shoreland protection, mitigation, or enhancement.

PASS

E. THREATENED AND ENDANGERED SPECIES PROTECTION

Goal*:* The Threatened and Endangered Species Protection Criterion is designed to ensure that the facility does not negatively impact state or federal threatened or endangered species.

Standard: For threatened and endangered species present in the facility area, the Applicant must either demonstrate that the facility does not negatively affect the species, or demonstrate

compliance with the species recovery plan and receive long term authority for a "take" (damage) of the species under federal or state laws.

Criterion:

1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?

NO, *Pass, go to F*

Letters from USFWS and the National Marine Fisheries Service at the time of project licensing indicated that, except for occasional transient individuals, no known federally listed endangered or threatened species were known to exist in the vicinity of the project. A current (3/12/2012) list of federally-listed species in Vermont, available from the website of the USFWS New England Field Office, indicates there are no currently-listed species in the vicinity of the Project. A review of the Vermont Agency of Natural Resources Environmental Interest Locator environmental mapping tool indicates there are no state threatened, endangered, or rare species currently in the vicinity of the project.

PASS

F. CULTURAL RESOURCE PROTECTION

Goal: The Cultural Resource Protection Criterion is designed to ensure that the facility does not inappropriately impact cultural resources.

Standard: Cultural resources must be protected either through compliance with FERC license provisions, or through development of a plan approved by the relevant state or federal agency.

***Criterion*:**

1) If FERC-regulated, is the Facility in compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?

YES, *Pass, go to G*

At the time of Project licensing and construction there appear to have been no known cultural, historic, or archeological resources discovered at the Project site. The Project's FERC license includes a provision requiring the Applicant to notify the state historic preservation office if future activities reveal the presence of such resources. The Applicant made a good faith effort to obtain a letter from the state historic preservation office (Vermont Division for Historic Preservation, VDHP) confirming compliance with that requirement. VDHP's response, while not explicitly affirming compliance, appears to indicate that the Project has not raised any concerns for VDHP.

PASS

G. RECREATION

Goal: The Recreation Criterion is designed to ensure that the facility provides access to the water without fee or charge, and accommodates recreational activities on the public's river.

Standard. A certified facility must be in compliance with terms of its FERC license or exemption related to recreational access, accommodation and facilities. If not FERC-regulated, a certified facility must be in compliance with similar requirements as recommended by resource agencies. A certified facility must also provide the public access to water without fee or charge.

Criterion:

1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?

YES, *Go to G3*

The Environmental Assessment prepared for the FERC license application notes "Because of the general lack of accessibility and steep terrain within the project boundaries, there is a very limited interest in bank fishing, typically for brook trout. The project will not interfere with this bank fishing…" The EA also states, in connection with aesthetic resources, that the project "…is totally obscured from outside public viewing by steep terrain, a band of trees and vegetation, and a narrow highly traveled state highway." Finally, the EA references a November 30, 1983 letter from the Vermont Agency for Environmental Conservation that "access to the site is practically impossible and dangerous at best." These statements explain the lack of recreational access, accommodation, and facilities requirements at the Project.

3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?

YES, *Pass, go to H*

Yes, the Applicant charges no fees to access the vicinity of the Project.

PASS

H. FACILITIES RECOMMENDED FOR REMOVAL

***Goal**:* The Facilities Recommended for Removal Criterion is designed to ensure that a facility is not certified if a natural resource agency concludes it should be removed.

Standard: If a resource agency has recommended removal of a dam associated with the facility, the facility will not be certified.

Criterion:

1) Is there a Resource Agency recommendation for removal of the dam associated with the Facility?

NO, *Pass, Facility is Low Impact*

There is no recommendation for removal of the Project.

PASS

FACILITY MEETS THE LIHI CRITERIA FOR CERTIFICATION WITH THE FOLLOWING PROPOSED CERTIFICATION CONDITION:

Recommended Condition: If during the certification period American eel upstream passage facilities are constructed and become operational at Bellows Falls Dam on the Connecticut River, or the U.S. Fish and Wildlife Service or the Vermont Fish and Wildlife Department request passage facilities at the Project, the Project owner shall so notify LIHI within 30 days and shall enter into, and provide LIHI with a copy of, an agreement reached among the Project owner, the U.S. Fish and Wildlife Service, and/or the Vermont Fish and Wildlife Department to provide both interim (if requested by an agency) and permanent safe, timely, and effective passage for American eel. The Agreement must include a description of the planned passage and protection measures and the implementation schedule for design, installation, and operations. The agreement shall be filed with LIHI within 30 days of its execution.

INDEX OF CONTACT INFORMATION FOR LIHI CRITERIA

LIHI CRITERION	PRIMARY CONTACT INFORMATION
Flows	Brian T. Fitzgerald, Streamflow Protection Coordinator, Vermont Agency of Natural Resources
Water Quality	Brian T. Fitzgerald, Streamflow Protection Coordinator, Vermont Agency of Natural Resources
Fish Passage & Protection	Melissa Grader, Fish and Wildlife Biologist, US FWS/New England Field Office, c/o CT River Coordinator's Office
Watershed Protection	N/A
Threatened & Endangered Species	N/A
Cultural Resources Protection	Devin Colman, Historic Buildings Specialist, Vermont Division for Historic Preservation
Recreation	N/A
Facilities Recommended for Removal	N/A

RECORD OF CONTACTS

(in alphabetical order, by last name of contact)

NOTE: The information presented below was gathered from contacts via email and/or telephone in the course of reviewing this application. (See below for agency letters obtained by the applicant). Telephone interviews were conducted either when the reviewer determined a response received by email or public comment was not available, insufficient, or when a contact preferred a telephone conversation.

Date:	April 24, 2012
Contact Person:	Melissa Grader, Fish and Wildlife Biologist, US FWS/New England Field Office, c/o CT River Coordinator's Office
Contact Information:	Melissa_Grader@fws.gov, 413-548-8002, x124
Area of Expertise:	Fish and wildlife

See email exchange below:

From: *Melissa_Grader@fws.gov*
Subject: *Re: American Eel Passage and Martinsville Hydro Project*
Date: *April 24, 2012 11:55:24 AM PDT*
To: *Gabriela Goldfarb <gabriela@goldfarbconsulting.com>*
Cc: *ken.cox@state.vt.us, rod.wentworth@state.vt.us*

Hello Gabriela,
Below are responses to your questions regarding American eels in the vicinity of the Martinsville Hydro Project:

1) *Were eels historically present in Lulls Brook above the Martinsville dam? Historically, eels inhabited nearly every drainage along the Atlantic coast, from the estuaries to far inland. There is no reason to believe that they did not inhabit Lulls Brook at one time.*

2) *2) Are eels still present at times in Lulls Brook the vicinity of the Martinsville Hydro Project* ***OR*** *have they been extirpated? FWS consulted with VT DFW to determine if any eels had been collected from Lulls Brook. We were told by Ken Cox that he did not recall ever collecting any from that stream. Therefore, we conclude that eels have been extirpated from that system (presumably, as you note, by the presence of several very large dams on the mainstem Connecticut River).*

I hope this has been responsive to your request. If you have further questions please feel free to contact me.
Regards, Melissa
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Melissa Grader, Fish and Wildlife Biologist, US FWS/New England Field Office
c/o CT River Coordinator's Office, 103 East Plumtree Road Sunderland, MA 01375
413-548-8002, x124 413-548-9622 (FAX) melissa_grader@fws.gov www.fws.gov/newengland
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Gabriela Goldfarb <gabriela@goldfarbconsulting.com> *04/24/2012 01:16 PM*
To: Melissa_Grader@fws.gov
Subject: American Eel Passage and Martinsville Hydro Project

Dear Melissa: You and I were in contact many years ago (2004, to be exact) when I was the Low Impact Hydropower Institute's reviewer on the Pawtucket project. I'm the assigned reviewer for the Martinsville Hydro Project, and Jay Boeri forwarded the exchange you and he had regarding catadromous fish. I did a quick search online and found the following information regarding American eel distribution in the Connecticut River basin (from USFWS Connecticut River Coordinator's Office, "Fish Facts - American Eel" at http://www.fws.gov/R5Crc/Fish/zj_anro.html#distribution):

> ***Distribution*** *American eels range from Greenland to South America, occurring in all major streams along the coastline. The females migrate far inland, and have been documented in nearly all states east of the Rocky Mountains. This is possible because eels are able to live out of water for short periods of time. Their ability to slither up a moist slope allows them to circumnavigate major obstructions (e.g. dams and waterfalls) along their routes. In the Connecticut River, they are ubiquitous in Connecticut and Massachusetts being found in nearly all water bodies. Eels are common to infrequent in southern Vermont and New Hampshire, and uncommon in the northern part of the watershed.*

Based on this information and your comment below implying that USFWS is seeking restoration of American eel to the Connecticut River mainstem and tributaries in the vicinity of Lulls Brook, can you clarify their status in the vicinity of the project? In particular, can you clarify that American eels:
1) Were historically present in Lulls Brook above the Martinsville dam?
*2) Are still present at times in Lulls Brook the vicinity of the Martinsville Hydro Project **OR** have been extirpated?*

If they are extirpated, I assume the cause can be attributed to the mainstem Connecticut River dams, since Mr. Boeri constructed the Martinsville dam in the mid-1980s.

If it would be more convenient to discuss this by phone, let me know when might be convenient. Many thanks in advance for your assistance!

Best regards,

Gabriela

Date: April 25, 2012
Contact Person: Eugene Gall, FERC NY Regional Office
Contact Information: 212-273-5950
Area of Expertise: FERC Flows Reporting Requirements

FERC eLibrary records indicated FERC had requested in a 2010 letter from Mr. Boeri verifying minimum flows, but there was no record of a response from Mr. Boeri in that year or since. I contacted the FERC NY Regional Office to inquire about this issue and was told that in 2008, FERC changed from requiring annual verification of minimum flows, to requiring reporting only when a violation of minimum flows occurs. In 2010 a FERC contractor performing a dam safety inspection requested and in his follow up letter noted the lack of such a verification, but he did so in error.

RECENT AGENCY COMMENTS OBTAINED BY APPLICANT AND PROVIDED TO LIHI

(in order received)

Date: *12 March 2012*
Contact Person: *Melissa Grader, Fish and Wildlife Biologist, US FWS/New England Field Office, c/o CT River Coordinator's Office*
Contact Information: *Melissa_Grader@fws.gov, 413-548-8002, x124*
Area of Expertise: *Fish and wildlife*

From: Melissa_Grader@fws.gov
To: Jay Boeri <jboeri@vermontel.net>
Cc: brian.fitzgerald@state.vt.us, rod.wentworth@state.vt.us, John_Warner@fws.gov
Date: Mon, 12 Mar 2012 09:29:51 -0400
Subject: Re: Martinsville Hydro - One simple question.

Hello Jay,

This responds to your question "Does the USFWS have any plans within the next five years (or longer time if you know) to require catadroumous passage at Martinsville?"

The Service does not have plans to require catadromous fish passage at the Martinsville Project within the next five years. However, the Service will be pursuing eel passage as part of the relicensing of the mainstem Connecticut River Projects (including Turners Falls, Vernon, Bellows Falls and Wilder). Lulls Brook enters the mainstem between Bellows Falls and Wilder. Therefore, the Martinsville Project likely will need to provide eel passage after eel passage at the mainstem dams has been implemented (i.e., a short time after 2018).

Sincerely,
Melissa Grader
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Melissa Grader, Fish and Wildlife Biologist, US FWS/New England Field Office
c/o CT River Coordinator's Office, 103 East Plumtree Road, Sunderland, MA 01375
413-548-8002, x124, 413-548-9622 (FAX)
melissa_grader@fws.gov, www.fws.gov/newengland

Date: *26 March 2012*
Contact Person: *Devin Colman, Historic Preservation Review Coordinator, Vermont Division for Historic Preservation*
Contact Information: *Devin.Colman@state.vt.us, 802-828-3043*
Area of Expertise: *Cultural resources*

See email exchange below:
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

On Mar 26, 2012, at 6:57 PM, Jay Boeri wrote:

Gabriela,

This is the response from Vermont Division of Historic Preservation. Mr. Coleman and I have had a number of conversations and email exchanges and this is their position. The only definitive statement is they do not initiate additional studies (see latest email below) and FERC is the responsible party. I can only say FERC has never asked for any new studies I have attached Vermont SHPO's comment letter referenced in their original email shown below. The link Mr. Coleman noted below has no FERC Project 7373-VT information.

I understand the Divisions point of view, but is this a typical response from an agency? Does it suffice?

Thanks for your consideration.

Jay Boeri

802-356-2110

To: "'Jay Boeri'" <<mailto:jboeri@vermontel.net>jboeri@vermontel.net>
From: Jay Boeri <<mailto:jboeri@vermontel.net>jboeri@vermontel.net>
Subject: RE: Martinsville LIHI - a Simpler Question
Cc: "'Fred Ayer'" <<mailto:fayer@lowimpacthydro.org>fayer@lowimpacthydro.org>

Hi Jay,

Thanks for your message. In the Section 106 review process, however, the SHPO is just a consulting party, along with Native American tribes, local government officials, and the public. The lead entity in the Section 106 process is the federal agency that is providing funding, licenses or permits for the project. In this case, FERC is responsible for making sure its applicants are meeting the terms of the original license and any amendments. We simply do not have the capacity to track hydro projects to this level of detail, since it's not our responsibility to do so. Likewise, we would not initiate additional studies at a hydro site – that again is a FERC responsibility working in consultation with their licensee.

The LIHI really needs to connect with FERC, not the SHPOs, to get these answers. Another option is for LIHI or its applicants to hire a consultant to review the project licenses and materials on file at the SHPO office. In fact, most of these materials are available online at <<http://www.ferc.gov/docs-filing/ferconline.asp>http://www.ferc.gov/docs-filing/ferconline.asp>http://www.ferc.gov/docs-filing/ferconline.asp.

Sincerely,

Devin Colman
Historic Preservation Review Coordinator, Vermont Division for Historic Preservation
One National Life Drive, Floor 6, Montpelier, VT 05620-0501

(P) 802-828-3043, (F) 802-828-3206

Contact Person: *Brian T. Fitzgerald, Streamflow Protection Coordinator, Vermont Agency of Natural Resources*
Contact Information: *802.338.4852, brian.fitzgerald@state.vt.us*
Area of Expertise: *Flows, Water Quality*

From: "Fitzgerald, Brian" <Brian.Fitzgerald@state.vt.us>
To: Jay Boeri <jboeri@vermontel.net>
Date: Wed, 11 Apr 2012 09:32:17 -0400
Subject: Martinsville Hydroelectric Project - LIHI Certification
Thread-Topic: Martinsville Hydroelectric Project - LIHI Certification

Jay:
I'm responding to your inquiry regarding compliance of the Martinsville Hydroelectric Project (FERC No. 7373) as it relates to your application for LIHI certification.

The Agency issued a water quality certification for the project on November 28, 1983. Compliance with water quality certification conditions at the project includes meeting flow requirements, so the project is in compliance with respect to flows.

Based on available information, there is reasonable assurance that the waters at the Martinsville Project and in the downstream reach are in compliance Vermont's quantitative water quality standards.

Please contact me if you require additional information.

BT

Brian T. Fitzgerald, Streamflow Protection Coordinator, Vermont Agency of Natural Resources
Department of Environmental Conservation, Watershed Management Division
10 East Allen Street, Winooski, VT
Mailing address: 103 South Main Street, Waterbury, VT 05671-0408
802.338.4852, 802.793.0454 (cell)
brian.fitzgerald@state.vt.us
http://www.vtwaterquality.org