

REVIEW OF APPLICATION FOR CERTIFICATION OF DOWNERS MILL HYDROELECTRIC PROJECT

This report provides review findings and recommendations related to the application submitted to the Low Impact Hydropower Institute (LIHI) by Simon Pearce (U.S.), Inc. (Applicant) for Low Impact Hydropower Certification of the Downers Mill Hydroelectric Project (the Project) on the Ottauquechee River at Quechee village in the town of Hartford, Vermont.

I. PROJECT'S GEOGRAPHIC LOCATION

The Downers Mill Hydroelectric Project is located at Quechee village in the town of Hartford, Vermont approximately seven miles upstream of the Ottauquechee River's confluence with the Connecticut River. With a watershed area of 223 square miles and a length of 38 miles, the Ottauquechee River is a major tributary of the Connecticut River. The river descends from the Green Mountain range near Killington Peak and flows generally in an easterly direction to its outlet in the town of Hartland. The Project dam is the fourth one upstream of the confluence: the White Current Company dam, or the Ottauquechee Woolen Mill dam (FERC Project No. 2787) is located at river mile 0.3; the Corps of Engineers North Hartland Flood Control dam (site of FERC Project No. 2816) is located at river mile 1.6; and the Deweys Mill dam (FERC Project No. 5313) is located at the head of Quechee Gorge at river mile 6.0.

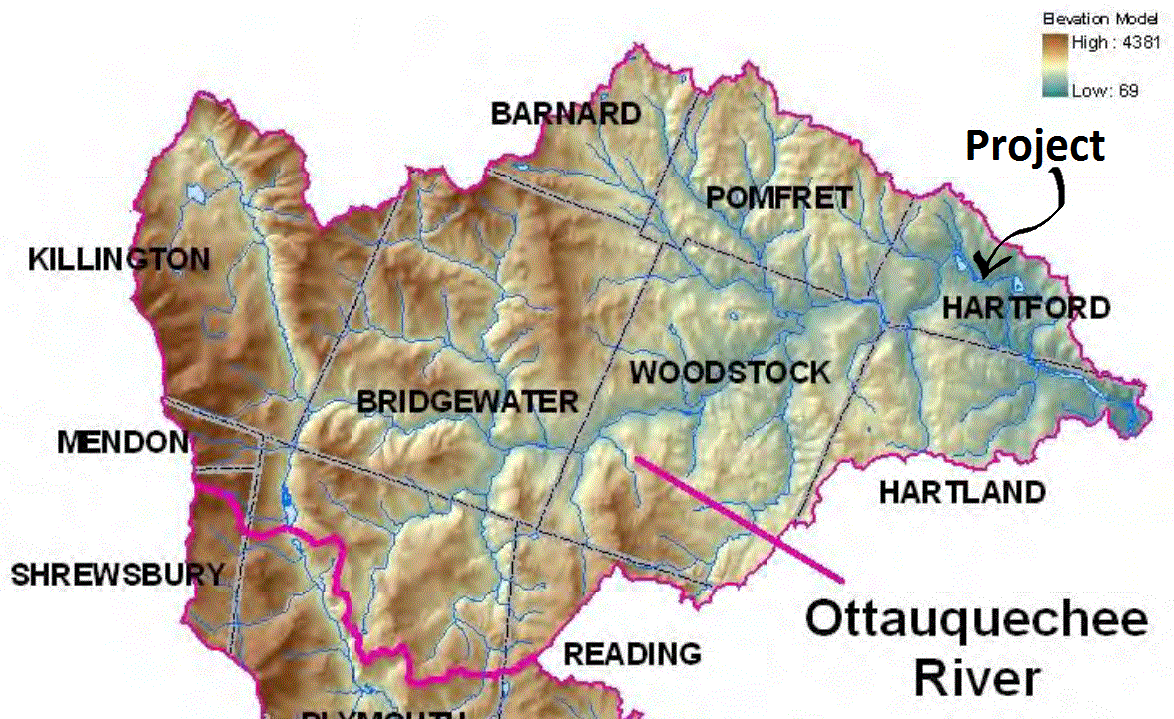


Figure 1. Ottauquechee River basin showing project location.

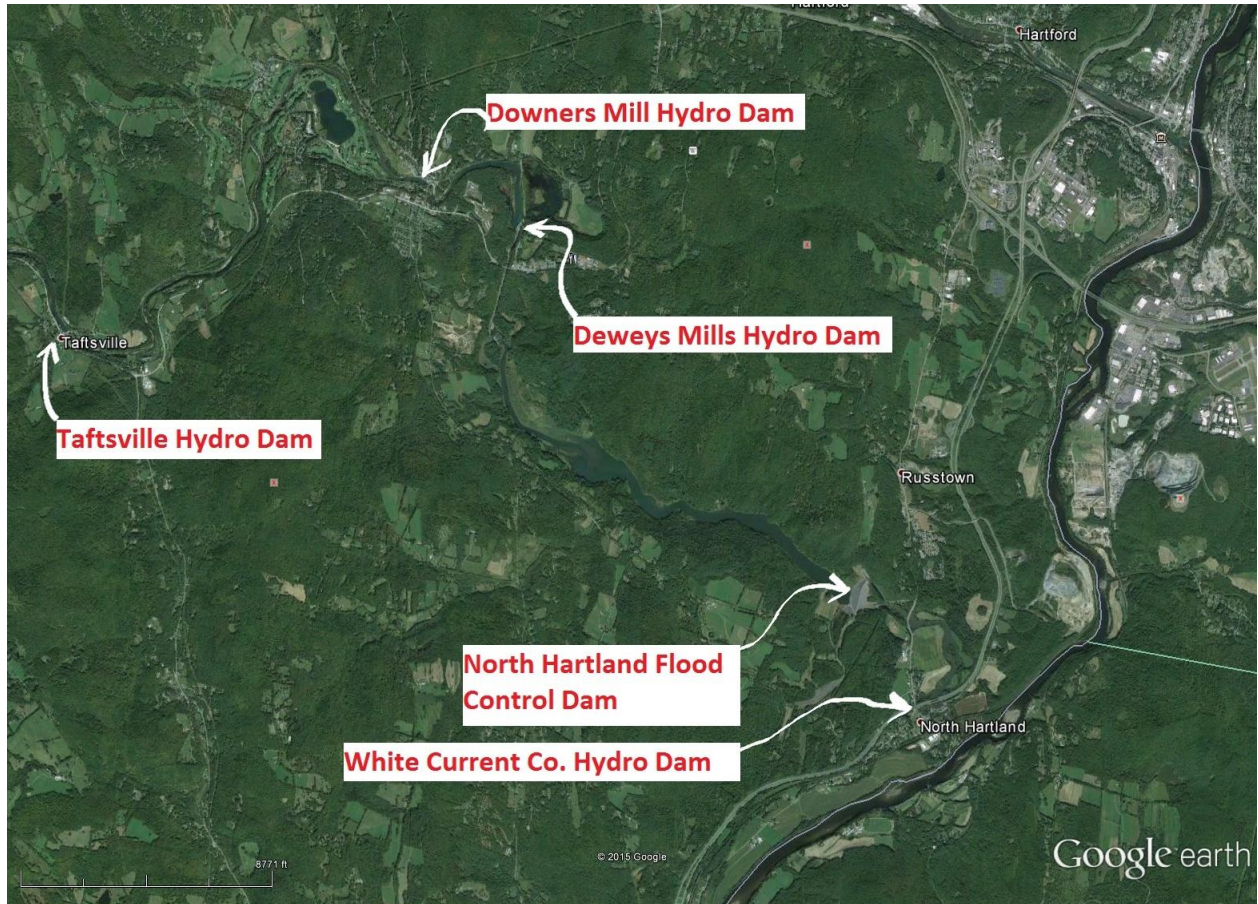


Figure 2. Location of the Downers Mill Hydroelectric Project dam in relation to other dams on the Lower Ottawaquechee River.

II. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

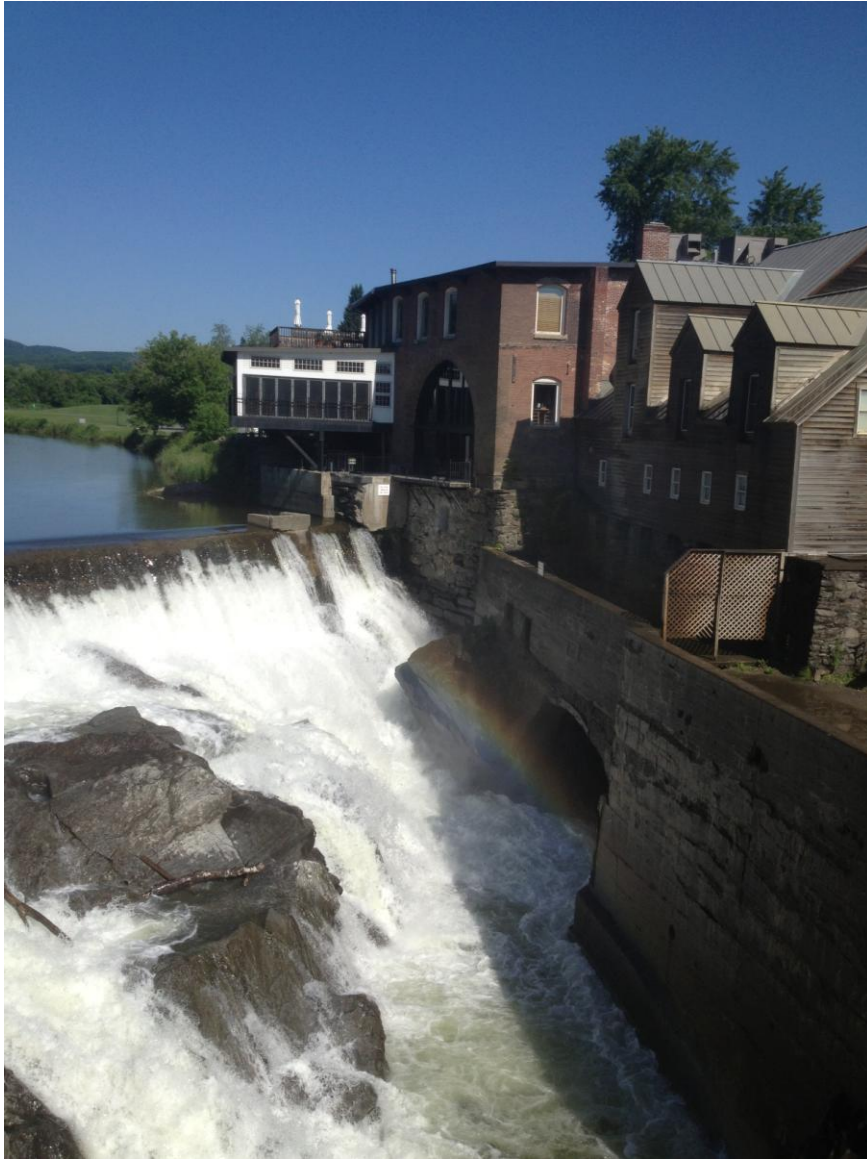


Figure 3. Downers Mill dam and tailrace.

The hydroelectric station was constructed at the site of the existing Emory Mill dam (also known as Downers Mills). The dam was originally built in the early 1800s to power a grist mill. In 1983, the generator was put back into service, and the power from the site has subsequently been used to melt the glass used in production by Simon Pearce (U.S.), Inc.'s glass-blowing business, with excess power being sold to Central Vermont Public Service Corporation, then to its acquirer, Green Mountain Power Corporation.

The concrete gravity dam is 185 feet long with an uncontrolled spillway. The crest elevation of the dam is 562 feet NGVD and is about 14 feet above the bedrock streambed at the downstream toe. The powerhouse, located in the basement of the mill building, houses a single generator with a capacity of 645 kW.

At full pool, the impoundment extends about half a mile upstream and covers approximately nine acres¹ with an average depth of about six feet.

The Project has an average annual production of 2 GWh.



Figure 4. Looking downstream from left dam abutment. Arrow indicates Quechee covered bridge.

III. REGULATORY AND COMPLIANCE STATUS

On May 4, 1982, the Federal Energy Regulatory Commission (FERC) issued an exemption from licensing of a small hydroelectric project of 5 megawatts or less (Project No. 5195) to the Applicant. The Project is subject to terms and conditions set forth by the U.S. Fish and Wildlife Service (USFWS) (letter of March 16, 1982 from USFWS to FERC) and the Vermont Agency of Natural Resources (VANR) (letter of March 3, 1982 from VANR to FERC) as part of the exemption process. The Applicant also provided a copy of the state water quality certification issued by VANR on May 11, 1982. Resource agency terms for post construction include:

¹ The application indicates that the impoundment extends upstream to Taftsville and has a surface area of 40 acres. This information appears to be incorrect.

- Instantaneous run-of-river operation (USFWS: provide aquatic base flow of 102 cfs below the project)
- Minimum spillage of 7Q10 flow, or 22 cfs
- Spillage of all inflows during periods of non-generation
- Review and approval by VANR of method for flow release at dam (prior to start of operation)
- Prohibition of flashboard installation
- No drawdowns without prior VANR approval
- Fish passage for anadromous fish upon request
- Investigation of the need for reaeration downstream, with remediation measures if dissolved oxygen deficiency
- Proper disposal of debris
- Access to project lands for angling, except where risk to personal safety

No compliance issues were revealed in my review of the last ten years of documents in eLibrary. The only self-certification report of minimum-flow compliance filed within the last ten years was for calendar year 2005.

IV. PUBLIC COMMENTS RECEIVED BY LIHI

The LIHI application was deemed complete and publicly noticed on March 6, 2015. During the notice period, which ended May 11, 2015, formal comments were filed by the VANR (letter dated May 8, 2015). VANR had previously provided comments to the Applicant during preparation of the application. The May 8, 2015 comments related to bypass conservation flows.

V. LIHI CRITERIA REVIEW

Under each of the issue sections that follow, I include a table that contains the related LIHI questionnaire sections and my analysis and conclusions.

General Conclusions and Recommendations.

I recommend that the facility be conditionally certified for the standard period of five years, with three recommended conditions to address issues related to bypass flows, flow monitoring, and fish passage. If these conditions are attached to the certification, in my opinion the Project will meet all of LIHI's criteria for the reasons summarized below.

Regarding flows, the facility maintains true run-of-river operation and releases a minimum bypass flow of 22 cfs (7Q10). VANR and the Applicant are arranging a flow demonstration to determine whether the bypass flow is appropriately protective of habitat. If insufficient, the minimum bypass flow may need to be increased to comply with the LIHI criteria. Also, no record keeping system is in place to demonstrate ongoing compliance.

Regarding water quality, the Applicant completed water quality sampling to enable VANR to determine Project compliance with quantitative state water quality standards for the purpose of

the LIHI application. VANR reviewed the sampling results and determined that the Project was in compliance.

Regarding fish passage, the no fish passage facilities exist at this dam or at any of the other dams on the Ottauquechee River. There is no present need for such facilities according to the USFWS; however, circumstances could change with future development of passage facilities for American eel at mainstem Connecticut River dams.

Regarding other LIHI criteria, there are no known listed T&E species at the site. Recreational access is available with no fees charged. No outstanding cultural resource issues are apparent in the record. The watershed protection criteria do not apply, and there is no watershed enhancement fund that would qualify the facility for extension of the certification term by three years. No dam removal has been recommended.

Issue 1. The current minimum flow released into the bypass may not be appropriately protective of fish and other aquatic biota.

Recommended Condition No. 1. Simon Pearce (U.S.), Inc. shall cooperate with the Vermont Agency of Natural Resources (VANR) in scheduling and completing a flow demonstration study for the bypassed reach to determine an appropriately protective minimum flow for aquatic habitat support. The outcome of the study, including VANR recommendations, shall be reported to LIHI within 90 days of the grant of LIHI certification. Since this certification is being granted without the minimum bypass flow having been deemed appropriately protective by the resource agencies, LIHI may withdraw certification if it determines that Simon Pearce (U.S.), Inc. is failing to make a good faith effort to cooperate with the resource agencies in determining a final minimum bypass flow. Any increase in the bypass minimum flow to meet the appropriately protective standard shall be implemented within 14 days of receipt of the VANR recommendation.

Issue 2. The Facility does not maintain records for monitoring compliance with the flow management requirements of the exemption.

Recommended Condition No. 2. Simon Pearce (U.S.), Inc. shall develop a system for producing and maintaining records sufficient to demonstrate compliance with the headpond elevation and flow management limitations for an instantaneous run-of-river operation and bypass conservation flows. Within 90 days of the grant of LIHI certification, Simon Pearce (U.S.), Inc. shall provide LIHI with a copy of the operations and flow monitoring plan. Prior to filing the plan, Simon Pearce (U.S.), Inc. shall obtain plan approval from U.S. Fish and Wildlife Service (USFWS) and VANR; written confirmation of the approvals will be filed with the plan. Should the minimum bypass flow be increased after the plan is completed, the plan shall be revised accordingly and resubmitted to VANR, USFWS, and LIHI.

Issue 3. The Facility does not provide fish passage measures. Although not a current need, fish passage may become necessary in the future to meet resource agency fish restoration and protection strategies for the Connecticut River basin.

Recommended Condition No. 3. During the term of this certification, should a resource agency request implementation of upstream and/or downstream fish passage at the Facility, Simon

Pearce (U.S.), Inc. shall so notify LIHI within 14 days and provide LIHI with a copy of the request and its response.

A. Flows

Artificial flow management of the Ottauquechee River upstream of the Project is very limited. In the headwaters, Killington Resort uses several streams for snowmaking. The only sizable hydroelectric station upstream is the Green Mountain Power Corporation plant at Taftsville about 4.5 miles upstream of Downers Mill. The Taftsville station initiated instantaneous run-of-river operation as part of the 1994 relicensing. The Downers Mill facility is operated in a run-of-river mode. Outflows from the project equal inflows on an instantaneous basis, and water levels of the impoundment are maintained 0.5 inch above the crest of the dam through operation of a pond level control system, resulting in a minimum spillage of 7Q10.

As apparent in Figure 3, flows over the dam discharge onto a precipitous rock cascade that ends at the plant tailrace. Since there is little or no viable fish habitat in the bypassed reach, during the exemption process the bypass minimum flow was set based on water quality to provide a source of reoxygenation. The 7Q10 flow of 22 cfs is substantially lower than the default summer aquatic base flow of 102 cfs (0.5 cfs/sq. mile of the 207 square mile watershed area) set by the USFWS for the below-project reach.

By letter dated May 8, 2015 to LIHI, VANR indicated its intention to participate in a flow demonstration study for the bypassed reach in order to determine whether the 22 cfs minimum flow is appropriately protective of fish, wildlife, and water quality. Although the field work was planned for completion by mid-June, high flows have resulted in postponement.

Since the Facility currently does not maintain bypass conservation flows that conform with the LIHI flow criteria, I recommend that LIHI certification be subject to Recommended Condition #1.

Since the Applicant currently does not maintain records that can be used to demonstrate compliance with the LIHI flow criteria, I recommend that LIHI certification be subject to Recommended Condition #2. The application indicates that the Applicant is amenable to this condition.



Figure 5. Reach below Project dam and Quechee covered bridge.

LIHI Questionnaire: Flows	
A.1	Is the Facility in <i>Compliance with Resource Agency Recommendations</i> issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?
	<i>Reviewer Analysis/Conclusions:</i> This subcriterion only applies when Resource Agency Recommendations were made in or after 1987. Since the current minimum bypass flow and run-of-river operating requirement stem from the 1982 FERC exemption, this

	subcriterion does not apply. N/A = Go to A.2
A.2	<p>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?</p> <p>Reviewer Analysis/Conclusions: With respect to the below-tailrace reach, the Facility meets the Flow criterion under A.2, as the Facility is operated strictly run-of-river manner; however, the 7Q10 cfs bypass flow (22 cfs) is substantially less than the USFWS summer Aquatic Base Flow (ABF) of 103 cfs. To assure compliance, Recommended Condition #2, which requires on-site record keeping, should be adopted. YES with respect to the below-tailrace reach (so long as Recommended Condition #2 is attached to the certification) NO with respect to the bypassed reach = Go to A.3</p>
A.3	<p>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?</p> <p>Reviewer Analysis/Conclusions: With respect to the bypassed reach, a flow study is to be completed to establish appropriate conservation flows. YES with respect to the bypassed reach (so long as Recommended Condition #1 is attached to the certification) = PASS</p>

B. Water Quality

While VANR did issue a water quality certification as part of the exemption process, it is too old for consideration under the LIHI certification criteria. However, VANR’s Department of Environmental Conservation (VTDEC) did comment on the LIHI application by letter dated January 10, 2014, stating that it did not have “any information suggesting that the project is not operating in full compliance with the conditions in [the Applicant’s] water quality certification.”

After obtaining VTDEC approval of its sampling plan, the Applicant completed a water quality sampling program in 2013 for the purpose of demonstrating compliance with the quantitative state water quality standards. Water temperature and dissolved oxygen were monitored in the impoundment and at the tailrace during a low-flow period from August 22-31, 2013, and impoundment temperature/dissolved oxygen profiles were done on the 22nd and 31st. In its comment letter, VTDEC noted that, “during the sampling period, the water quality in the impoundment and tailrace met Vermont Water Quality Standards for dissolved oxygen under current operating conditions.”

The Ottauquechee River in the Project vicinity is not listed as a Category 5 water (impaired in need of a TMDL) in the 2014 303(d) list.

LIHI Questionnaire: Water Quality	
B.1	<p>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?</p> <p>Reviewer Analysis/Conclusions: The Project does not have a water quality certification issued during or after 1987. VTDEC reviewed data collected by the Applicant in 2013 and determined that the Facility was compliant with quantitative state water quality standards under current operation. YES to (b) = Go to B.2</p>
B.2	<p>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?</p> <p>Reviewer Analysis/Conclusions: The Ottauquechee River is not presently 303(d) listed in the vicinity of the Facility dam. NO = PASS</p>

C. Fish Passage and Protection

Although it is no longer actively trying to restore Atlantic salmon to the Connecticut River basin, the USFWS, along with cooperating state agencies, is working to restore several other species of sea-run fish, including American shad, river herring, American eel, shortnose sturgeon, and sea lamprey. Atlantic salmon were fully extirpated from the Connecticut River as a result of dam construction and pollution. Sea lamprey, which are non-parasitic during freshwater spawning runs, persist in the basin, entering the larger tributaries of the Connecticut River; reproduction has been documented as far north as the White River, which is the next Vermont tributary north of the Ottauquechee River. American eel continue to be well distributed in the Connecticut River basin, although they may be extirpated from the Ottauquechee basin due to dam barriers. The USFWS is engaged in an ongoing effort to protect and enhance the depleted coastwise stock of American eel, and eel passage facilities may be constructed at the Vernon, Bellows Falls, and Wilder dams on the mainstem Connecticut River as an outcome of the current relicensing process (TransCanada's licenses expire in 2018).

As part of the exemption proceeding, the USFWS reserved authority to prescribe fish passage at Downers Mills, although it specified anadromous fish species at that time. Several mainstem Connecticut River dams are currently in the relicensing process with licenses set to expire in 2018. One issue under consideration is provision of passage for American eel, which is a catadromous species. When certifying the Upper Martinsville Hydroelectric Project (LIHI Certificate No. 85) in 2012, LIHI incorporated a special condition related to eel passage. That project is on Lulls Brook, a small Connecticut River tributary to the south of the Ottauquechee River basin.

By email dated February 5, 2015, the USFWS commented that it considered the current absence

of passage measures to be *appropriately protective* for the purposes of LIHI certification.

While passage of migratory fish is not a current need, nor expected to be within the next five years, I do recommend conditioning any certification to provide for notice to LIHI should a resource agency request passage facilities (Condition #3).

LIHI Questionnaire: Fish Passage and Protection	
C.1	<p>Are anadromous and/or catadromous fish present in the Facility area or are they known to have been present historically?</p> <p>The Applicant did not provide citations or documentation with respect to anadromous species, particularly Atlantic salmon, which are known to have used many of the Vermont tributaries for spawning. Significant ledge cascades exist at the Project site and downstream. For the purpose of fish passage review, I assume these cascades were not barriers to upstream migration.</p> <p>Yes with respect to both = Go to C.2</p>
C.2	<p>Is the Facility in Compliance with <i>Mandatory Fish Passage Prescriptions</i> for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?</p> <p>Reviewer Analysis/Conclusions: No prescription exists.</p> <p>N/A = Go to C.3</p>
C.3	<p>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)?</p> <p>Reviewer Analysis/Conclusions: Several migratory fish species historically ascended the Connecticut River and used Vermont tributary basins for spawning. Natural access to the Ottauquechee River upstream of Downers Mill is no longer possible due to the many dams downstream. The North Hartland Flood Control dam likely blocks even American eel, which generally has the ability to negotiate past many dams if conditions are favorable.</p> <p>Yes with respect to both anadromous and catadromous fish = Go to C.3.a</p>
C.3.a	<p>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?</p> <p>Reviewer Analysis/Conclusions: Downstream dams created a barrier for upstream fish migration.</p> <p>Yes = Go to C.3.b</p>
C.3.b	<p>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?</p> <p>Reviewer Analysis/Conclusions: Such a request has not been made to date.</p> <p>N/A = Go to C.4</p>
C.4	If, since December 31, 1986:

	<p>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 C3a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p> <p>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?</p> <p>Reviewer Analysis/Conclusions: The agencies have had an opportunity to prescribe fish passage as a reserved right under the exemption terms and conditions but have not done so to date. None of the three factors apply to this Facility. N/A = Go to C.5</p>
C.5	<p>If C4 was not applicable:</p> <p>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</p> <p>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?</p> <p>Reviewer Analysis/Conclusions: The USFWS considers the lack of passage facilities to be appropriately protective at this time; however, passage for American eel may be triggered by future installation of upstream passage facilities at mainstem Connecticut River dams. YES to (b) (so long as Recommended Condition #3 is attached to the certification) = Go to C.6</p>
C.6	<p>Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?</p> <p>Reviewer Analysis/Conclusions: There are no prescriptions for riverine fish. N/A = Go to C.7</p>
C.7	<p>Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?</p> <p>Reviewer Analysis/Conclusions: There are no Resource Agency Recommendations for entrainment protection measures. Should downstream passage measures be necessary in the future for eels, entrainment protection would be a consideration. N/A = PASS</p>

D. Watershed Protection

The impoundment extends upstream about half a mile and is contained within the riverbanks. The Applicant's ownership, however, only extends about 300 feet upstream of the dam as shown in Figure 6. The Facility is located in the developed Quechee village area. No protected buffer zones have been created along the riverine impoundment through a settlement agreement or the federal exemption, and there is no shoreland protection plan.

LIHI Questionnaire: Watershed Protection	
D.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 high water mark in an average water year around 50 - 100% of the impoundment, and for all of the undeveloped shoreline?
	<i>Reviewer Analysis/Conclusions:</i> There are no buffer zones at this project. NO = Go to D.2
D.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?
	<i>Reviewer Analysis/Conclusions:</i> There is no watershed enhancement fund. The facility does not qualify for an extension of the LIHI certification term by three years. NO = Go to D.3
D.3	Has the facility owner/operator established through a settlement agreement with appropriate stakeholders and that has 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).
	<i>Reviewer Analysis/Conclusions:</i> There is no settlement agreement. NO = Go to D.4
D.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?
	<i>Reviewer Analysis/Conclusions:</i> The Applicant has neither records of agency recommendations nor a shoreline management plan. N/A = PASS

E. Threatened and Endangered Species Protection

There is no record that T&E species use the Project area. The USFWS is currently reviewing a 2010 petition by the Council for Endangered Species Act Reliability to determine whether American eel should be listed. A prior review, completed in 2007, determined that listing was not warranted at that time. (<http://www.fws.gov/northeast/newsroom/eels.html>) By letter dated May 13, 2014, the Vermont Department of Fish and Wildlife confirmed that no federal- or state-listed species are known to occur in the Project area.

LIHI Questionnaire: Threatened and Endangered Species Protection

E.1	Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?
	Reviewer Analysis/Conclusions: There is no record of state or federally listed T&E species at the Project presently. NO = PASS

F. Cultural Resource Protection

There is no evidence of conflicts with respect to cultural resources protection. The exemption order does not cite any archeological or historic resource issues having been raised.

LIHI Questionnaire: Cultural Resource Protection

F.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?
	Reviewer Analysis/Conclusions: No conflicts were identified in the record. YES = PASS

G. Recreation

No recreational facilities are provided at the Project. According to the application, a boater safety cable is installed at the dam seasonally, although a 2012 FERC inspection report indicates that FERC instead had accepted an upstream warning sign (shown on the north bank in Figure 6) with no boat barrier as the Applicant had raised concerns about the impact of a cable on aesthetics. Boaters can portage the dam via Quechee Main Street, although apparently there is no formal takeout. Access on Project lands is not limited except where safety is a concern.

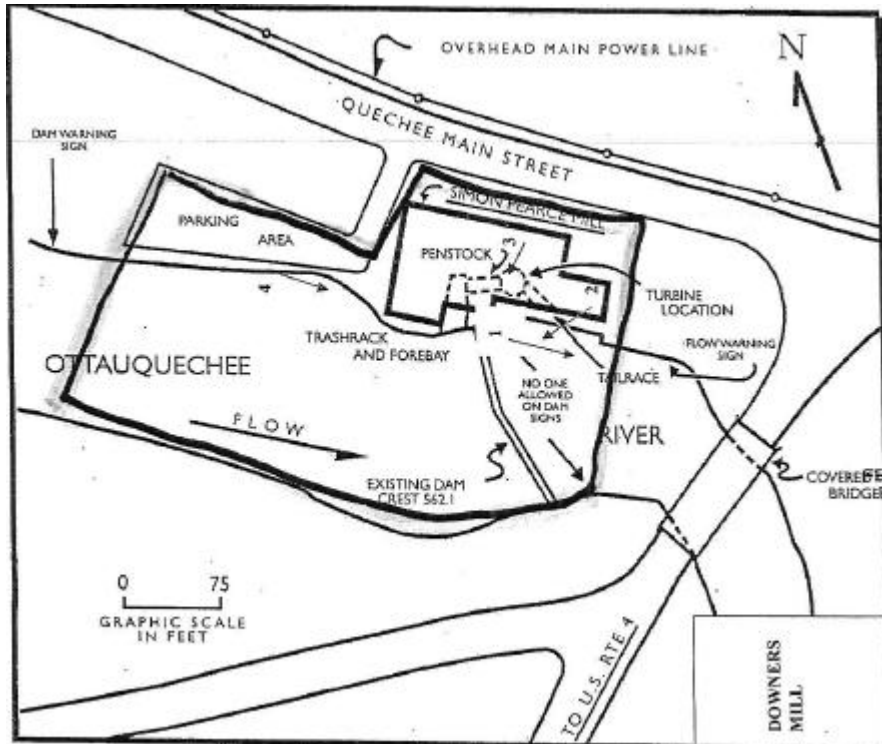


Figure 6. Project ownership map.

LIHI Questionnaire: Recreation	
G.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? <i>Reviewer Analysis/Conclusions:</i> The categorical exemption does not require any specific provisions for recreation. No formal requirements or Recommendations apparently exist. YES = Go to G.3
G.3	Does the Facility allow access to the reservoir and downstream reaches without fees or charges? <i>Reviewer Analysis/Conclusions:</i> Access is provided without charge. YES = PASS

H. Facilities Recommended for Removal

The record does not indicate an interest on the part of resource agencies in removing the dam.

LIHI Questionnaire: Facilities Recommended for Removal	
H.1	Is there a Resource Agency Recommendation for removal of the dam associated with the Facility? <i>Reviewer Analysis/Conclusions:</i> No. NO = PASS

APPENDIX

Contents

Contacts.....	A-1
Correspondence	A-2

CONTACTS

Entity	Authorized Representatives	Contact Information
Simon Pearce (U.S.), Inc. (applicant)	William Browne Production and Facilities Manager Stephen Hickey	PO Box 799 Quechee, VT 05059 Telephone: (802) 295-2711 ext. 3326 Email: wbrowne@simonpearce.com Essex Power Services, Inc. 55 Union Street, 4th Floor Boston, MA 02108 Telephone: (617) 367-0032 Email: sjh@essexhydro.com
United States Fish and Wildlife Service	John P. Warner Assistant Supervisor	Conservation Planning Assistance and Endangered Species New England Field Office, U.S. Fish and Wildlife Service 70 Commercial Street, Suite 300 Concord, NH 03301 Telephone: (603) 223-2541 - ext.15 Email: John.Warner@fws.gov
VT Department of Environmental Conservation	Jeff Crocker Eric Davis	1 National Life Drive, Main 2 Montpelier, VT 05620-3522 Telephone: 802-490-6151 Email: Jeff.Crocker@state.vt.us
VT Department of Fish and Wildlife	Rod Wentworth Aquatic Habitat Scientist	1 National Life Drive Floor North 2 Montpelier, VT 05620-3702 Tel: 802-241-3700 Email: rod.wentworth@state.vt.us
VT Department of Fish and Wildlife	Timothy Appleton Fish & Wildlife Specialist John Austin Wildlife Biologist	Vermont Dept. of Fish and Wildlife 5 Perry Street, Suite 40 Barre, VT 05641-4266 Telephone: 802-476-0199 Email: Tim.Appleton@state.vt.us JohnM.Austin@state.vt.us
State Historical Preservation Office	Devin Coleman	Division for Historic Preservation 1 National Life Drive 6th Floor Montpelier, VT 05620 Telephone: 802-828-3043 Email: Devin.Coleman@state.vt.us
National Park Service Rivers and Special Studies Branch	Kevin Mendik	Telephone: (617) 223-5299 Email: kevin_mendik@nps.gov

From: Wentworth, Rod [mailto:rod.wentworth@state.vt.us]
Sent: Tuesday, June 23, 2015 11:03 AM
To: 'Jeffrey Cueto'
Cc: Melissa Grader (melissa_grader@fws.gov); Crocker, Jeff; Davis, Eric
Subject: RE: Downers Mill Hydro - Ottauquechee River

Jeff, I've attached a document that has info on this river. No eels there (now) and downstream dams lack passage. Probably a deferred need. See what MG says.

The flow demo must occur under low flow conditions and as you might expect, it has been postponed yet again.

Rod Wentworth • VT Dept. of Fish & Wildlife
1 National Life Drive, Davis 2, Montpelier VT 05620-3702
Office/cell: (802) 595-5179 • Email: rod.wentworth@state.vt.us
Vermont: Respect. Protect. Enjoy
Visit our brand new website!! ytfishandwildlife.com

From: Jeffrey Cueto [mailto:ompompanoo@aol.com]
Sent: Monday, June 22, 2015 9:14 AM
To: Wentworth, Rod; Crocker, Jeff; Davis, Eric
Cc: 'Grader, Melissa'
Subject: Downers Mill Hydro - Ottauquechee River

Rod, Jeff, and Eric –

I am completing a review of the Downers Mill Project for LIHI. With respect to conservation flows, my understanding is that a flow demonstration has been scheduled for Wednesday to determine appropriate flows for habitat support in the bypassed reach.

In Eric's letter from January 2014, he indicated that fish passage is not a present need at the site. If you wouldn't mind, could you confirm that this is correct with respect to American eel specifically. I'd expect that eel access to this reach of the Ottauquechee River may be somewhat problematic due to the flood control dam. Perhaps eels are no longer present(?) Where eels persist, we have normally been requiring dam owners to provide for safe outmigration.

Thanks,
Jeff