

October 16, 2015

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

Subject: Recertification Recommendation for the Ware River Hydroelectric Project

Dear Mike:

Please see the attached report which contains my recommendation for recertification of the Ware River Hydroelectric Project (P-3127) (the “Project”).

Please contact me if you have any questions.

Sincerely,



Patricia B. McIlvaine

Reviewer's Report for the Recertification of the Ware River Hydroelectric Project (P- 3127)

This report contains my recommendation for recertification of the Ware River Hydroelectric Project (P- 3127) (the "Project").

Background

Initial applications to the Federal Energy Regulatory Commission (FERC) for license exemptions were submitted separately for the Upper Dam and Lower Dam. The Order approving a license exemption for the Upper Dam (P-3127-002) as issued on October 15, 1981, and on February 12, 1982 for the Lower Dam (P-3127-003). Wording in both orders are identical except for project descriptions and dates. The current FERC list of issued Exemptions combines these as Exemption P-3127 issued to the Ware River Project and an issuance date of October 15, 1981.

The Ware River Project, owned and operated by Pioneer Hydro Electric Co. Inc. (Pioneer), was initially certified by the Low Impact Hydropower Institute (LIHI), with no conditions, for a five-year period, expiring on August 24, 2014, which was extended to March 31, 2015.

Attachment #1 includes a site location map of the Project relative to other dams in the watershed.

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

Pioneer submitted its application for recertification in April 2014. Following some initial changes in reviewer assignment, I began my review in late September 2015. My initial review found that some limited additional information was required to complete the recertification review. This data was received on October 12, 2015. 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 knowledgeable of the Project, as noted in Attachment #2. Communications with agencies are summarized in this same Attachment.

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. Based on my review of materials provided, review of FERC's public records, and consultation with the noted agencies, I found that there are no instances of non-compliance or new or renewed issues of concern at this time, as discussed below.

Compliance Status

My recertification assessment of the Project included review of compliance with FERC License during the period of LIHI certification: February 2010 through September 2014.

Article 2 of the License Exemption requires that the Project be operated in compliance with resource agency requirements, which prior to LIHI certification in 2009, was passage of 20 cubic feet per second (cfs) minimum flow from the Upper Dam to its bypass reach. The Lower Dam is operated as run-of-river. An agreement signed in December 2010 with the MA Division of Fisheries and Game, in part due to negotiations conducted during the initial LIHI certification process. This Agreement requires minimum flow releases from the Upper Dam to be proportioned directly to the percentage of capacity that qualifies for MA Class 1 RECs. The resultant minimum flows based on this Agreement were increased by 34% to 26.8 cfs rather than 20 cfs. Minimum stream flow is released by a 10 foot by 12 inch opening in the Upper Dam flashboards that is monitored by pond leveling sensors that control turbine actuation. In case of low pond level, an automatic dialer notifies operators. If response is not delivered manually, the facility trips offline before a violation of minimum stream flow occurs.

Review of documents issued by Pioneer has demonstrated that the required minimum flows have been released. In a February 3, 2015 email, FERC informed Pioneer that while deviations from minimum flow requirements are still required to be submitted to FERC, annual compliance (i.e. certification) statements that the Project has been in compliance with are no longer needed, if such statements are not specifically requested by the Exemption, as in the case of the Ware River exemptions. (A copy of this email is contained in Appendix #2.)

Fish passage is not yet required at the site as upstream passage is blocked by several downstream dams, and water quality does not appear to be negatively affected by Project operations (see R. Kubit email). There are no specific recreational requirements in the FERC exemption due to river and adjacent land use conditions. While the Ware River is used extensively for recreational purposes, Greenville Park is the only publicly sanctioned river access in Ware. The Applicant, in cooperation with the Massachusetts Department of Fish and Wildlife annually stocks 500 catchable (6 to 12 inch) rainbow and brown trout on a voluntary basis. No cultural resources were identified at the Project in the past and no construction activities necessitating new cultural resource review have occurred since certification in 2009.

None of the agency representatives reached during this recertification review identified any non-compliance issues associated with any LIHI criterion. See discussion below for discussion of the lack of impacts to environmental and cultural resources due to a planned future project, which supports the position that no impacts from the existing project operations are occurring.

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.

My review of the application materials and FERC’s eLibrary data supports Pioneer’s position that no material changes which affect LIHI’s certification criteria have occurred since 2009. My review did identify that modifications to the Lower Dam powerhouse are in the planning stage, with expected construction initiation in the summer of 2016. Proposed modifications to the Lower powerhouse will include:

- Upgrading the existing turbine
- Installing a minimum flow turbine
- Upgrading the trashrack

Pioneer has been pro-active in reviewing the project plans with MA Division of Fisheries and Wildlife and US Fish and Wildlife Service. I also reviewed a draft of an Initial Consultation Document / Draft Amendment Application and Exemption Capacity Amendment that is being reviewed with the agencies. Studies and findings discussed in this document, and other communications between Pioneer and the agencies served to confirm that no impacts to protected species, flows, water quality or cultural resources are expected as a result of the proposed project modification. It was reported to LIHI that water quality studies will be required following installation of the planned modifications, to confirm the expectation that the modifications will not impact water quality. Such requirements are expected to be identified during the amendment process as resource agency recommendations/conditions.

As these changes have not yet occurred, they do not yet constitute “material changes” to the Project at this time.

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

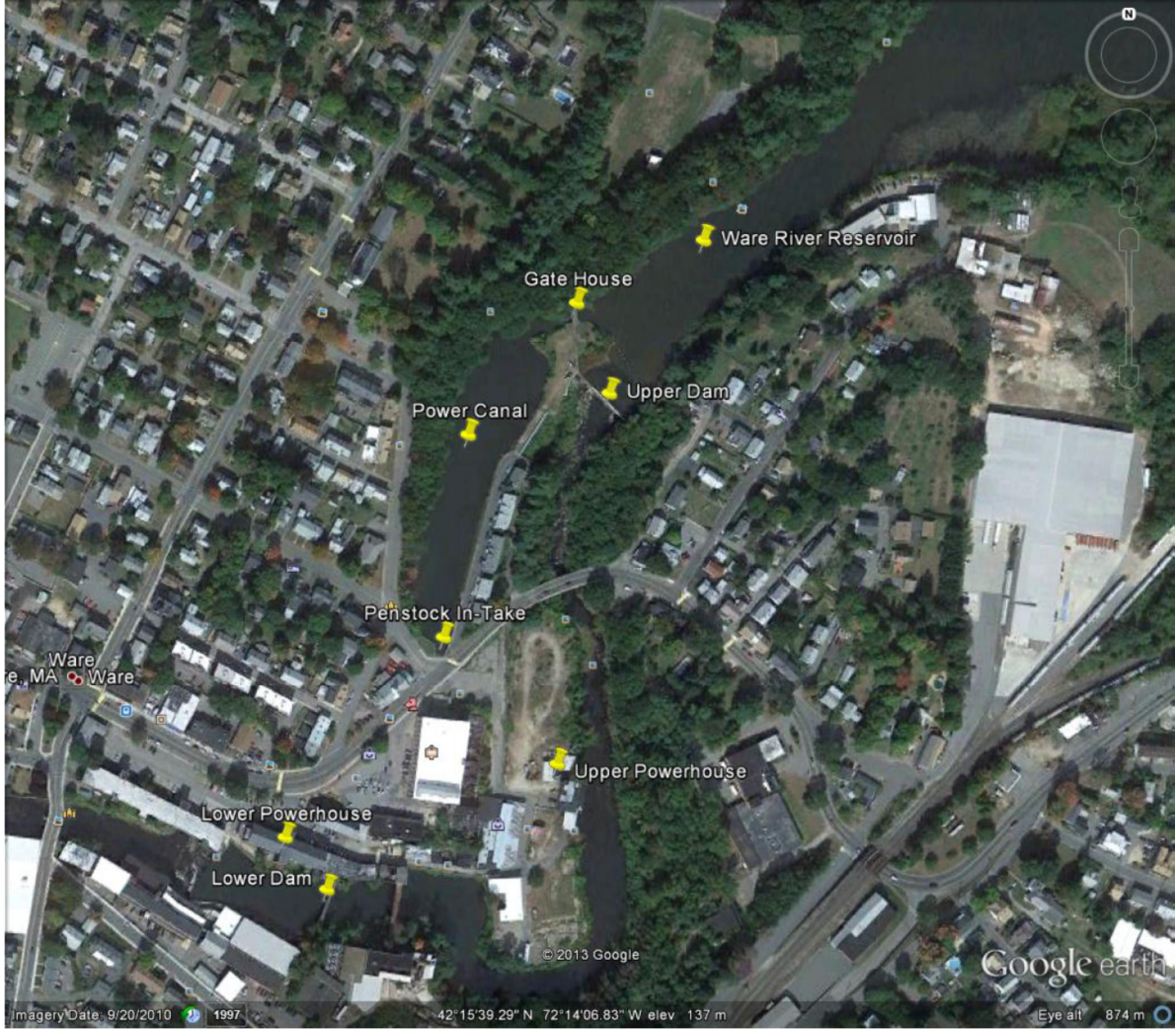
It is my understanding that neither LIHI’s criteria, nor the Board’s interpretation of one or more criteria that are applicable to the circumstances of the Ware River Hydroelectric Project, have changed in meaningful ways since the date of the original certification.

V. Conclusion

In light of the above, I recommend recertification of the Ware River Hydroelectric Project for a five-year period with the following condition:

“The proposed modifications to the Lower Dam may be completed during the term of the new LIHI certification. Should this occur during the five-certification period as currently planned, the facility owner shall provide LIHI a copy of any License Exemption Amendment, along with resource agency comments and a schedule of the project’s planned initiation and completion dates, within 30 days of receipt of the Amendment. The results of any sampling or monitoring studies required by the Amendment or resource agencies shall be provided to LIHI within 60 days of results documentation. At that time, LIHI will review the new certification and make changes if appropriate.”

**Attachment #1
Project Location Map**



Attachment #2 Agency Consultation

The following lists direct consultation initiated by the Reviewer and a summary of these communications in the attached emails. As no facility changes have occurred since certification in 2009, consultation with the Massachusetts Historical Commission was not needed. Likewise no watershed issues or recreational issues were reviewed with any agencies as no watershed protection plans or recreational facilities are required for the Ware River Project under the License Exemption.

LIHI CRITERION	PRIMARY CONTACT INFORMATION
Flows	Caleb Slater, MA Division of Fisheries and Wildlife
Water Quality	Robert Kubit, MA Department of Environmental Protection
Fish Passage & Protection	Caleb Slater, MA Division of Fisheries and Wildlife and Melissa Grader, US Fish and Wildlife Service
Watershed Protection	None required
Threatened & Endangered Species	Caleb Slater, MA Division of Fisheries and Wildlife and Melissa Grader, US Fish and Wildlife Service
Cultural Resources Protection	None required
Recreation	None required
Facilities Recommended for Removal	None required

RECORD OF CONTACTS

Date: 10/13/15

Contact Person: Dr. Caleb Slater, MA Division of Fisheries and Wildlife

Contact Information: 508-389-6300; caleb.slater@state.ma.us

Area of Expertise: Fish passage, protected species and flows

See attached email.

Date: 10/16/15

Contact Person: Ms. Melissa Grader, US Fish and Wildlife Service

Contact Information: 413-548-8002 x 124; Melissa_grader@fws.gov

Area of Expertise: Fish passage and protected species

See attached email.

Date: 10/13 and 14/15

Contact Person: Robert Kubit, MA Department of Environmental Protection

Contact Information: 508-767-2854; robert.kubit@state.ma.us

Area of Expertise: Water quality

See attached emails.

**FEDERAL ENERGY REGULATORY COMMISSION
MEMORANDUM**

DATE: February 3, 2015

FROM: Robert Bell

Civil Engineer

Office of Energy Projects, DHAC

TO: Public files for Project Nos. 5824, 3127, 4320, and 9728

SUBJECT: Record of phone conversation regarding annual minimum flow certification notification.

On February 2, 2015, Commission staff spoke with Mr. Wright from Ware River Power Inc. regarding its annual minimum flow certification notification filing for the above referenced projects. We advised Mr. Wright that we no longer require certification of minimum flows unless required by an exemption requirement. This also applies for any of the exemptee's other projects. We reminded Mr. Wright that the exemptee must continue to file reports, with the Commission, of all deviations that occur throughout the year, within the required reporting time. We also reminded Mr. Wright that the exemptee may still be required to file the reports with the resource agencies as per their request or requirement.

Patricia McIlvaine

From: Slater, Caleb (MISC) <caleb.slater@state.ma.us>
Sent: Tuesday, October 13, 2015 12:47 PM
To: Patricia McIlvaine
Subject: RE: LIHI review of Ware River Project

Pat,

RE your questions:

- Are you aware of any non-compliance issues regarding the Ware River Project (which include an upper and lower dams and powerhouses) dealing with the area of expertise you handle?

No

- Is there any reason why you believe the project should not be recertified as a "low impact" hydro facility? In other words, has something changed about the project (again specific to your area of expertise) that you feel would prevent the project from again satisfying LIHI's certification criteria?

No

- In general, do you believe Pioneer has been operating the facility in "good faith" to meet its environmental and license exemption requirements?

Yes, The Division is working with the owner on an amendment to the exemption to modify the unit at the lower dam, install a minimum flow turbine and replace the trash racks.

Caleb Slater



Caleb Slater, PhD
Anadromous Fish Project Leader
Massachusetts Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581
508-389-6331
www.mass.gov/masswildlife

From: Patricia McIlvaine [<mailto:Pat.McIlvaine@wright-pierce.com>]
Sent: Tuesday, October 13, 2015 12:39 PM
To: Slater, Caleb (FWE); Melissa_grader@fws.gov; Kubit, Robert (DEP)
Subject: LIHI review of Ware River Project

Hi folks

I have been assigned to be the reviewer of the recertification application made by Pioneer Hydro Electric Company for their Ware River Project. I have already placed a call to Caleb and Mellisa and hope to give a call to Bob Wednesday or Thursday. I am aware that Caleb and Mellisa have been working with Luke Wright of Pioneer regarding a proposal to modify the unit at the lower dam, install a minimum flow turbine and replace the trash racks so they are actively "familiar with" this project. Bob, hopefully this email will give you a few days to refresh your memory on this project.

The key points I would like to discuss with you are:

- Are you aware of any non-compliance issues regarding the Ware River Project (which include an upper and lower dams and powerhouses) dealing with the area of expertise you handle?
- Is there any reason why you believe the project should not be recertified as a "low impact" hydro facility? In other words, has something changed about the project (again specific to your area of expertise) that you feel would prevent the project from again satisfying LIHI's certification criteria?
- In general, do you believe Pioneer has been operating the facility in "good faith" to meet its environmental and license exemption requirements?

I have attached a link to LIHI's current certification criteria if you wish to review these. The detailed description of the current criteria can be found on pages 48-59. The new criteria have not yet been finalized.

http://lowimpacthydro.org/wp-content/uploads/2014/08/LIHI_Handbook-INTERIM_DRAFT_CLEAN_040914.pdf

If you prefer, please feel free to respond by email or call me at 207-798-3785.

Thanks again for your time

Pat McIlvaine

Patricia McIlvaine | Project Manager

99 Main Street | Topsham, ME 04086
Office 207.725.8721 | **Direct** 207.798.3785 |

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Patricia McIlvaine

From: Kubit, Robert (DEP) <robert.kubit@state.ma.us>
Sent: Tuesday, October 13, 2015 2:19 PM
To: Patricia McIlvaine
Subject: RE: Some specific questions

Hi Patricia,

1. There was no WQC issued for this Project (P-3127) and as a result, when the project was undergoing its initial certification review, you provided the following letter. So my first question is would you still say that the project is in compliance with the state water quality criteria for this stretch of the Ware River? [Yes, the 2014 Integrated List shows the river segments above and below the Ware River Project require a TMDL for bacteria, otherwise state water quality standards are met. The Ware River Project is not the cause nor contributes to this water quality impairment.](#)
2. Is this stretch of river still meeting standards set by the state or is it considered as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act? [See #1 above.](#)
3. If the answer to #2 is that the river section is Section 303(d) listed, is the cause for the impairment associated with the Project operation or some cause unrelated to the Project? [Unrelated.](#)

I hope this helps.

Bob

Robert Kubit, P.E.
MassDEP
Division of Watershed Management
8 New Bond Street
Worcester MA 01606
Telephone: (508) 767-2854
Email: robert.kubit@state.ma.us
Fax: (508) 791-4131

From: Patricia McIlvaine [<mailto:Pat.McIlvaine@wright-pierce.com>]
Sent: Tuesday, October 13, 2015 12:56 PM
To: Kubit, Robert (DEP)
Subject: Some specific questions

Hi Bob

I thought I'd send this second mail with some specific questions for you.

4. There was no WQC issued for this Project (P-3127) and as a result, when the project was undergoing its initial certification review, you provided the following letter. So my first question is would you still say that the project is in compliance with the state water quality criteria for this stretch of the Ware River?

5. Is this stretch of river still meeting standards set by the state or is it considered as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?
6. If the answer to #2 is that the river section is Section 303(d) listed, is the cause for the impairment associated with the Project operation or some cause unrelated to the Project?

Thanks

Pat

Patricia McIlvaine | Project Manager

99 Main Street | Topsham, ME 04086
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Patricia McIlvaine

From: Kubit, Robert (DEP) <robert.kubit@state.ma.us>
Sent: Wednesday, October 14, 2015 10:13 AM
To: Patricia McIlvaine
Subject: RE: Any comment on the following questions?

Hi Pat,

The MA DEP relies on the MA DFW for their expertise on aquatic habitat issues including bypass reach minimum flow and fish passage. The MA DEP conducts water quality assessments and can speak to that. That said, I am not aware of non-compliance issues with the Ware River Project, I believe LIHI should recertify the Project and I believe Pioneer Hydro has been acting in good faith to meet their requirements.

Hope this helps.

Bob

Robert Kubit, P.E.
MassDEP
Division of Watershed Management
8 New Bond Street
Worcester MA 01606
Telephone: (508) 767-2854
Email: robert.kubit@state.ma.us
Fax: (508) 791-4131

From: Patricia McIlvaine [<mailto:Pat.McIlvaine@wright-pierce.com>]
Sent: Tuesday, October 13, 2015 3:11 PM
To: Kubit, Robert (DEP)
Subject: Any comment on the following questions?

Hi Bob

I received your response to the specific questions but was wondering if you had anything to share regarding these more general questions.

Thanks

Pat

From: Patricia McIlvaine
Sent: Tuesday, October 13, 2015 12:39 PM
To: 'caleb.slater@state.ma.us'; 'Melissa_grader@fws.gov'; 'robert.kubit@state.ma.us'
Subject: LIHI review of Ware River Project

Hi folks

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The key points I would like to discuss with you are:

- Are you aware of any non-compliance issues regarding the Ware River Project (which include an upper and lower dams and powerhouses) dealing with the area of expertise you handle?
- Is there any reason why you believe the project should not be recertified as a "low impact" hydro facility? In other words, has something changed about the project (again specific to your area of expertise) that you feel would prevent the project from again satisfying LIHI's certification criteria?
- In general, do you believe Pioneer has been operating the facility in "good faith" to meet its environmental and license exemption requirements?

I have attached a link to LIHI's current certification criteria if you wish to review these. The detailed description of the current criteria can be found on pages 48-59. The new criteria have not yet been finalized.

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Patricia McIlvaine

From: Grader, Melissa <melissa_grader@fws.gov>
Sent: Friday, October 16, 2015 1:08 PM
To: Patricia McIlvaine
Subject: Re: LIHI review of Ware River Project

Hello Pat,

Thank you for your response. Given that you are asking us to review and provide feedback on the project as it exists today, we offer the following comments regarding LIHI recertification.

- The Service is not aware of any compliance issues associated with the Project since it was originally granted LIHI certification in 2010.
- The Service is not aware of any reason why the Project should not receive LIHI recertification at this time. We do note that the Applicant is currently developing a Capacity Related Amendment application to upgrade the Ware Lower facility. Therefore, we recommend that any LIHI recertification include a requirement to the effect that any future changes to the project during the term of the new certification would need to be brought to LIHI's attention for additional review.

We hope this has been responsive to your request.

Regards,

Melissa Grader
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service - New England Field Office
103 East Plumtree Road
Sunderland, MA 01375
413-548-8002 x124
melissa_grader@fws.gov

On Tue, Oct 13, 2015 at 2:14 PM, Patricia McIlvaine <Pat.McIlvaine@wright-pierce.com> wrote:

Hi Mellisa

Your comments should reflect only the project as it is today. It's my understanding that grant funds are needed for the project changes to occur and since it is not certain if/when the project will be modified, it would be inappropriate to base our certification assessment on a "possibility". If the project is recertified, it would likely be conditioned with a requirement to the effect that any future changes to the project during the term of the new certification would need to be brought to LIHI's attention for additional review. At that time, LIHI would reach back out to the resource agencies for your comments.

Thanks

Pat

From: Grader, Melissa [mailto:melissa_grader@fws.gov]
Sent: Tuesday, October 13, 2015 1:26 PM
To: Patricia McIlvaine
Cc: caleb.slater@state.ma.us; robert.kubit@state.ma.us
Subject: Re: LIHI review of Ware River Project

Hi Pat,

Before we provide you with our response, I have a LIHI process question - the Licensee is in the process of seeking a Capacity Related Upgrade. They have consulted with us and we are anticipating a draft amendment to exemption application in the near future. However, it likely will take from 6 months to a year for FERC to issue an order on that application. So my question is, how do we deal with the amendment in the context of LIHI recertification? Do we just respond with respect to the existing project, or provide you with input in the context of the proposed upgrade too?

Regards,

Melissa Grader

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service - New England Field Office

103 East Plumtree Road

Sunderland, MA 01375

413-548-8002 x124

melissa_grader@fws.gov

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Pat McIlvaine

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