**Nautilus Hydro, LLC**
**c/o William P. Short III**
**44 West 62nd Street, P.O. Box 237173**
**New York, New York 10023-7173**
**(917) 206-0001; (201) 970-3707**
**w.shortiii@verizon.net**

June 23, 2018

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

Re: Application of Red Bridge Project for Re-Certification by the Low Impact Hydropower Institute

Dear Ms. Ames:

Attached please find an application for re-certification by the Low Impact Hydropower Institute ("LIHI") of the Red Bridge Project (the "Project" or the "Facility") of Nautilus Hydro, LLC ("Nautilus").[1] On March 20, 2012, North America Energy Alliance, LLC ("NAEA"), the then name of the current owner of the Project, filed its application for certification of the Project by LIHI. On September 16, 2012, after a thorough review, LIHI certificated the Red Bridge Project as low impact for a five-year term, effective March 27, 2012 and expiring March 27, 2017**.** Its certificate number is 96. On March 1, 2017, November 30, 2017 and June 14, 2018, Red Bridge Project was granted an extension of the current certificate term with a new expiration date of November 30, 2017, June 30, 2018 and November 30, 2018, respectively. Copies of all extension letters are available for review on the portion of the LIHI website devoted to the Project

For purposes of responding to inquiries regarding this re-certification application, persons should contact the persons on the following page:

[1] On April 13, 2017, Essential Power Massachusetts, LLC ("Essential") transferred the direct ownership of its hydroelectric power facilities, including Red Bridge Project, to Nautilus Hydro, LLC.

**Primary Contact**

William P. Short III
Consultant
44 West 62nd Street
P.O. Box 237173
New York, New York 10023-7173
(917) 206-0001 Office
(201) 970-3707 Cell
w.shortiii@verizon.net

**Secondary Contact**

Matthew Willis
Partner
Nautilus Hydro, LLC
c/o Hull Street Energy LLC
4920 Elm Street, Suite 205
Bethesda, Maryland 20814
(240) 800-3218 (office)
(202) 904-0332 (cell)
mwillis@hullstreetenergy.com

This application relies materially on the documents and descriptions initially filed in the initial application for certification. As such, reference will be made to those documents and descriptions rather than simply restate them here in this re-certification. Accordingly, any reviewer is strongly urged first to read the initial application for certification before reviewing the balance of this application.

In certain sections of this application, very little has changed in the initial application since 2012. Where it has, it is updated and noted. The latest compliance filing or periodic public reports have been added. Where the application calls for new documentation that too has been provided.

To summarize what has changed since Certification, the chart below shows the status of the Project at the time of the Certification application and now for the Re-Certification application with notes on the changes, if any.

| Criteria | Certification | Re-Certification | Notes |
|---|---|---|---|
| Ecological Flow Regimes | FERC and US FWS-approved 237 cfs minimum flow or inflow if less | Same criteria | 237 cfs minimum flow at Project is appropriate. |
| Water Quality | While no new water quality certificate has been issued, Support for all activities has been verified by MDEP | While no water quality certificate has been issued, awaiting report from MDEP verifying status of the water quality for the Project. | Latest MDEP water quality study of this section of the river shows non-compliance due to the acts of others, namely CSO of upstream towns. |
| Upstream Fish Passage | No requirement but a requirement could be imposed by US FWS after a complete review and finding of fish passage need. | No requirement but a requirement could be imposed by US FWS after a complete review and finding of fish passage need. | |
| Downstream Fish Passage | No requirement but a requirement could be imposed by US FWS after a complete review and finding of fish passage need. | No requirement but a requirement could be imposed by US FWS after a complete review and finding of fish passage need. | |
| Watershed and Shoreline Protection | No watershed or shoreline activities have occurred | No watershed or shoreline activities have occurred | |
| Threatened and Endangered Species Protection | No threatened or endangered species found Project area in surveys of US FWS or DFW | Both US FWS and NHESP reports no T&ES present in Project area. | |

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|---|---|---|---|
| Cultural and Historic Resources Protection | Historic structure is present and protected in current condition | Historic structure is present and protected in current condition | |
| Recreational Resources | The then latest FERC report showed full compliance | The latest FERC reports showed full compliance | |

We request that you review this application and let us know if anything additional is needed in order to place this application in front of the board of directors of LIHI for consideration.

Sincerely yours,

*William P. Short III*

enclosures

**Table B-1. Facility Description Information for Red Bridge Project (LIHI #96 if a recertification).**

| *Information Type* | *Variable Description* | *Response (and reference to further details)* |
|---|---|---|
| ***Name of the Facility*** | Facility name (use FERC project name if possible) | Red Bridge Project[2] |
| ***Location*** | River name (USGS proper name) | Chicopee River |
| | River basin name | Chicopee River |
| | Nearest town, county, and state | Towns of Wilbraham, Ludlow, Palmer and Belchertown in Hampden and Hampshire Counties, Massachusetts |
| | River mile of dam above next major river | river mile 15.2 |
| | Geographic latitude | $42^0$ 10'33.71" N |
| | Geographic longitude | $72^0$ 24'34.26" W |
| ***Facility Owner*** | Application contact names (IMPORTANT: you must also complete the Facilities Contact Form): | William P. Short III |
| | - Facility owner (individual and company names) | Nautilus Hydro, LLC |
| | - Operating affiliate (if different from owner) | Ware River Power, Inc. |
| | - Representative in LIHI certification | Matthew Willis |
| ***Regulatory Status*** | FERC Project Number (e.g., P-xxxxx), issuance and expiration dates | FERC No. P-10676; issued September 11, 1992 and subsequently amended on December 29, 1999 and November 8, 2001. |
| | FERC license type or special classification (e.g., "qualified conduit") | Exemption From License |
| | Water Quality Certificate identifier and issuance date, plus source agency name | While there is no Water Quality Certificate issued for Red Bridge Project, FERC Project No. 10676, Massachusetts Department of Environmental Protection has listed Red bridge Impoundment as Category 5, "Water requiring a TMDL." Pollutants needing TMDLs: pathogens. The other ZoEs are listed as Category 2, "Support" for all uses but shellfish harvesting. |
| | Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.) | Copies of key records are attached to this application or are available on the LIHI website under the application filed for LIHI certification in March 2012. |

[2] See Attachment 1 for aerial photographs of Red Bridge Project.

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|---|---|---|
| ***Power Plant Character-istics*** | Date of initial operation (past or future for operational applications) | **1901 for initial operations** |
| | Total name-plate capacity (MW) | **4.50 MW** |
| | Average annual generation (MWh) | **12,715 MWh (average for 2002-2017)** |
| | Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit | **Two turbines;**<br>**Unit #3: General Electric; 3000 hp; 615 cfs Maximum hydraulic capacity**<br>**Unit #4: General Electric; 3000 hp; 615 cfs Maximum hydraulic capacity** |
| | Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.) | **Limited pond-and-release (operates with a year-round maximum 1.0 feet drawdown)** |
| | Dates and types of major equipment upgrades | **1934 Unit #3 Turbine-Generator 2,250 KW**<br>**1926 Unit #4 Turbine-Generator 2,250 KW** |
| | Dates, purpose, and type of any recent operational changes | **None** |
| | Plans, authorization, and regulatory activities for any facility upgrades | **Since its certification by LIHI in September 2012, there have no new plans, authorizations or regulatory activities for any facility upgrades. There was the construction of the higher power canal wall between the gatehouse and the Red Bridge bridge. This project was completed in February 2013. This construction is not considered a facility upgrade since it did not increase any potential power production from the Facility.** |
| ***Character-istics of Dam, Diversion, or Conduit*** | Date of construction | **1901 initial** |
| | Dam height | **The dam, built ca. 1901, crosses the Chicopee River in a roughly north to south direction, and is composed of three sections. The northern section of the dam is composed of a 165-foot-long earthen embankment with a concrete core. The top of the embankment is at El. 285.8'. The middle section of the dam is a 300-foot-long overflow spillway, consisting of rubble stone with cut-granite facing with a crest elevation of 272.3'. The southern section is a 362-foot-long earthen embankment with a concrete core. The top of the embankment is at El. 285.8'. The maximum height of the dam is approximately 51 ft. Cut-stone abutments separate the two earthen sections from the middle spillway section.** |
| | Spillway elevation and hydraulic capacity | **272.3 feet msl; 45,200 cfs** |
| | Tailwater elevation | **The flows from the two operating units discharge through two tailrace bays into the** |

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| | | tailrace canal. The normal tailrace elevation is 222.7' feet MSL. The tailrace canal runs 735 feet in a southerly direction to where the flow re-enters the Chicopee River. Flow at tailrace equals maximum hydraulic flow of the station's turbines, which is 1,230 cfs. |
| | Length and type of all penstocks and water conveyance structures between reservoir and powerhouse | The canal headgate house is a wooden structure on a granite block foundation, housing the 10 intake gates that control the flow from the impoundment to the power canal. The headgates are all steel construction, 5.5 feet wide by 8.5 feet high. Each is equipped with single stem lead screw gate operator. All of the headgates require manual operation. The power canal extends from the headgates to the penstock intake structure. The canal is approximately 340 feet long by 73 feet wide by 13 feet deep. The inner sidewalls are constructed of cut-granite. Sloped earthen embankments create the outer walls. The floor of the canal is concrete.<br><br>The canal leads to the penstock intake structure for the two operating and two abandoned penstocks. Adjacent to the trashracks on the upstream face of the intake is a cut-stone ice sluice that crosses beneath the Red Bridge Road and discharges back into the Chicopee River. There is one cast iron drain gate, 3 feet wide by 2 feet high, operated by a lead screw mechanism. Two operable and two inoperable 13-foot-diameter, 100-foot-long steel penstocks lead underground to the powerhouse. The two inoperable penstocks were taken out of service in 1938. |
| | Dates and types of major, generation-related infrastructure improvements | 1934 Unit #3 Turbine-Generator 2,250 KW<br>1926 Unit #4 Turbine-Generator 2,250 KW |
| | Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.) | Power generation |
| | Water source | Chicopee River |
| | Water discharge location or facility | Powerhouse tailrace |
| ***Characte-ristics of Reservoir*** | Gross volume and surface area at full pool | At normal pond elevation, the Red Bridge Project impoundment extends approximately 1.8 miles upstream of the dam. At normal pond condition, the maximum surface area is |

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| ***and Watershed*** | | **approximately 185 acres at El. 272.3'. Although the permitted storage is approximately 530 acre-feet and the permitted daily drawdown is two feet except during annual energy audits and system emergencies when a drawdown of as much as three feet may be used, the Project uses only one foot of its drawdown and 185 acre-feet of its storage**. |
| | Maximum water surface elevation (ft. MSL) | **Maximum water surface elevation of 272.3' mean sea level (msl).** |
| | Maximum and minimum volume and water surface elevations for designated power pool, if available | **Although the permitted storage is approximately 530 acre-feet and the permitted daily drawdown is two feet except during annual energy audits and system emergencies when a drawdown of as much as three feet may be used, the Project uses only one foot of its drawdown and 185 acre-feet of its storage**. |
| | Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile | **The Red Bridge Project is situated downstream of other dams on the Ware, Swift and Quaboag Rivers. The first dam on the Ware River is Thorndike Dam river mile 20.5 while the first dam on the Swift River is the Upper Bondsville Dam river mile 20.1. (No dams were identified on the Quaboag River).** |
| | Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile | **The Red Bridge project is situated upstream of five other hydroelectric facilities located on the Chicopee River. The order of the hydroelectric dams, starting with the lowest dam, on the Chicopee River is Dwight Station Project (P-10675) river mile 1.2, Chicopee Falls Project (P-6522) river mile 3.0, Indian Orchard Project (P-10678) river mile 7.8, Putts Bridge Project (P-10677) river mile 9.2, Collins Hydro Project (P-6544) river mile 12.6 and Red Bridge Project (P-10676) river mile 15.2. Immediately downstream of the Red Bridge Project is Collins Dam Project (P-6544) while immediately upstream of Dwight Station Project is Chicopee Falls Dam (P-6522). The Project and the other Nautilus dams on the Chicopee River have little to no control over their inflows. Collins Hydro and Chicopee Falls dams are owned and controlled by unrelated entities as are all of the** |

| | | |
|---|---|---|
| | | hydroelectric projects on the upstream tributaries of the Chicopee River. |
| | Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility operation | None |
| | Area inside FERC project boundary, where appropriate | 189 acres of which approximately 185 acres are impoundment and the balance of 4 acres are land. |
| ***Hydrologic Setting*** | Average annual flow at the dam | 936 cfs at dam; 971 cfs at gage; flow at dam is a straight drainage area ratio adjustment from the gage. |
| | Average monthly flows | January 973 cfs at dam; 1,010 cfs at gage<br>February 982 cfs at dam; 1,020 cfs at gage<br>March 1,542 cfs at dam; 1,600 cfs at gage<br>April 1,753 cfs at dam; 1,820 cfs at gage<br>May 1,137 cfs at dam; 1,180 cfs at gage<br>June 804 cfs at dam; 834 cfs at gage<br>July 482 cfs at dam; 500 cfs at gage<br>August 442 cfs at dam; 459 cfs at gage<br>September 471 cfs at dam; 489 cfs at gage<br>October 536 cfs at dam; 556 cfs at gage<br>November 716 cfs at dam; 743 cfs at gage<br>December 909 cfs at dam; 943 cfs at gage |
| | Location and name of relevant stream gauging stations above and below the facility | Indian Orchard Gage; LOCATION--Lat 42° 09'38", long 72° 30'52", Hampden County, Hydrologic Unit 01080204, on left bank 1,000 ft downstream from West Street Bridge at Indian Orchard, 1.1 mi upstream from Fuller Brook, and 7.2 mi upstream from mouth of the Chicopee River. |
| | Watershed area at the dam | 664 square miles at dam;<br>689 square miles at gage |
| ***Designated Zones of Effect*** | Number of zones of effect | Three |
| | Upstream and downstream locations by river miles | Dam -- river mile 15.2<br>Tailrace – river mile 15.0 |
| | Type of waterbody (river, impoundment, by-passed reach, etc.) | Impoundment – above river mile 15.2<br>Bypassed Reach – between river mile 15.2 and river mile 15.0<br>River – below river mile 15.0 |
| | Delimiting structures | 1)Impoundment – from the impoundment of Red Bridge to dam of Red Bridge[3]<br>2) Bypassed Reach – Red Bridge Dam to tailrace of Red Bridge[4] |

[3] See Attachment 2, "Aerial Photograph of Red Bridge Impoundment ZoE."
[4] See Attachment 3, "Aerial Photograph of Red Bridge Bypassed Reach ZoE."

| | | |
|---|---|---|
| | | **3) River -- Tailrace of Red Bridge to the confluence with the Bypassed Reach**[5] |
| | Designated uses by state water quality agency | **Impoundment ZoE waters are now classified as Category B, "Waters Requiring A TMDL;" Bypassed Reach and tailrace ZoEs waters are classified as Category 2, "Support" in all categories but shellfish harvesting.** |
| ***Additional Contact Information*** | Names, addresses, phone numbers, and e-mail for local state and federal resource agencies | **See Section 2. of the Facility Contacts Form for this information on relevant governmental officials.** |
| | Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders | **See original LIHI certification application for the names of the local non-governmental stakeholders involved with the Chicopee River.** |
| ***Photographs and Maps*** | Photographs of key features of the facility and each of the designated zones of effect | **No new photographs have been provided since the application for certification contained nearly 40 photographs and none of those have changed since they were taken.** |
| | Maps, aerial photos, and/or plan view diagrams of facility area and river basin | **See attachments** |

[5] See Attachment 4, "Aerial Photograph of Red Bridge Tailrace Zoe."

## FACILITY CONTACTS FORM

**1. All applications for LIHI Certification must include complete contact information to be reviewed.**

| | |
|---|---|
| **Project Owner: Nautilus Hydro, LLC** | |
| Name and Title | **Matthew Willis, Partner** |
| Company | **Nautilus Hydro, LLC, c/o Hull Street Energy, LLC** |
| Phone | **(202) 904-0332** |
| Email Address | **mwillis@hullstreetenergy.com** |
| Mailing Address | **4920 Elm Street, Suite 205, Bethesda, Maryland 20814** |
| **Project Operator (if different from Owner):** | |
| Name and Title | **Lucas W. Wright, President** |
| Company | **Ware River Power, Inc.** |
| Phone | **(978) 852-6034** |
| Email Address | **lwright@wareriverpower.com** |
| Mailing Address | **P.O. Box 512, Barre, Massachusetts 01005** |
| **Consulting Firm / Agent for LIHI Program (if different from above):** | |
| Name and Title | **William P. Short III, Consultant** |
| Company | |
| Phone | **(917) 206-0001** |
| Email Address | **w.shortiii@verizon.net** |
| Mailing Address | **P.O. Box 237173, New York, New York 10023-7173** |
| **Compliance Contact (responsible for LIHI Program requirements):** | |
| Name and Title | **Ryan McQueeney, Chief Financial Officer** |
| Company | **Nautilus Hydro, LLC, c/o Hull Street Energy, LLC** |
| Phone | **(301) 664-7702** |
| Email Address | **rmcqueeney@milepostpower.com** |
| Mailing Address | **4920 Elm Street, Suite 205, Bethesda, Maryland 20814** |
| **Party responsible for accounts payable:** | |
| Name and Title | **Ryan McQueeney, Chief Financial Officer** |
| Company | **Nautilus Hydro, LLC, c/o Hull Street Energy, LLC** |
| Phone | **(301) 664-7702** |
| Email Address | **rmcqueeney@milepostpower.com** |
| Mailing Address | **4920 Elm Street, Suite 205, Bethesda, Maryland 20814** |

2. **Applicant must identify the most current and relevant state, federal, provincial, and tribal resource agency contacts (copy and repeat the following table as needed).**

| **Agency Contact** (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, **Recreation X**): | |
|---|---|
| Agency Name | **Massachusetts Department of Fish and Game** |
| Name and Title | **John ("Jack") P. Sheppard, Director & Chief Engineer** |
| Phone | **(508) 389-7810** |
| Email address | **jack.sheppard@state.ma.us** |
| Mailing Address | **1 Rabbit Hill Road, Westborough, Massachusetts 01581** |

| **Agency Contact** (Check area of responsibility: **Flows X, Water Quality X, Fish/Wildlife Resources X**, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __): | |
|---|---|
| Agency Name | **United States Fish and Wildlife Service** |
| Name and Title | **Melissa Grader, Fish and Wildlife Biologist** |
| Phone | **(413) 548-9138** |
| Email address | **Melissa_Grader@fws.gov** |
| Mailing Address | **103 East Plumtree Road, Sunderland, MA 01375** |

| **Agency Contact** (Check area of responsibility: **Flows X, Water Quality X**, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __): | |
|---|---|
| Agency Name | **Massachusetts Department of Environmental Protection** |
| Name and Title | **Robert Kubit** |
| Phone | **(508) 767-2854** |
| Email address | **robert.kubit@state.ma.us** |
| Mailing Address | **627 Main Street, Worcester, Massachusetts 01608** |

| **Agency Contact** (Check area of responsibility: **Flows X**, Water Quality __, **Fish/Wildlife Resources X**, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __): | |
|---|---|
| Agency Name | **Massachusetts Division of Fisheries and Wildlife** |
| Name and Title | **Caleb Slater, Massachusetts Division of Fisheries and Wildlife** |
| Phone | **(508) 389-6331** |
| Email address | **Caleb.Slater@MassMail.State.MA.US** |
| Mailing Address | **100 Hartwell Street, Suite 230, West Boylston, MA 01583** |

| **Agency Contact** (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, **T/E Spp. X,** Cultural/Historic Resources __, Recreation __): | |
|---|---|
| Agency Name | **Massachusetts Division of Fisheries and Wildlife** |
| Name and Title | **Thomas French, Asst. Director of DFW - for NHESP** |
| Phone | **(508) 389-6360** |
| Email address | **tom.french@state.ma.us** |
| Mailing Address | **1 Rabbit Hill Road, Westborough, Massachusetts 01581** |

| **Agency Contact** (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, **Cultural/Historic Resources X**, Recreation __): | |
|---|---|
| Agency Name | **Massachusetts Historical Commission** |
| Name and Title | **Brona Simon, State Historic Preservation Officer** |
| Phone | **(617) 727-8470** |
| Email address | **mhc@sec.state.ma.us** |
| Mailing Address | **220 Morrissey Blvd, Boston, MA 02125** |

**Matrix of Alternative Standards Template:**
**(Please duplicate this table for each Zone of Effect)**

**Facility Name:** Red Bridge Project **Zone of Effect:** Impoundment

| | Criterion | *Alternative Standards* | | | | |
|---|---|---|---|---|---|---|
| | | *1* | *2* | *3* | *4* | *Plus* |
| A | Ecological Flow Regimes | X | | | | |
| B | Water Quality | | X | | | |
| C | Upstream Fish Passage | X | | | | |
| D | Downstream Fish Passage | X | | | | |
| E | Watershed and Shoreline Protection | X | | | | |
| F | Threatened and Endangered Species Protection | | X | | | |
| G | Cultural and Historic Resources Protection | | X | | | |
| H | Recreational Resources | | X | | | |

*Applicants must complete a Standards Matrix for each designated zone of effect; shaded cells indicate no such standard is available for that criterion.*

**Matrix of Alternative Standards Template:**
**(Please duplicate this table for each Zone of Effect)**

**Facility Name:** Red Bridge Project **Zone of Effect:** Bypassed Reach

| | Criterion | *Alternative Standards* | | | | |
|---|---|---|---|---|---|---|
| | | *1* | *2* | *3* | *4* | *Plus* |
| A | Ecological Flow Regimes | | X | | | |
| B | Water Quality | | X | | | |
| C | Upstream Fish Passage | X | | | | |
| D | Downstream Fish Passage | X | | | | |
| E | Watershed and Shoreline Protection | X | | | | |
| F | Threatened and Endangered Species Protection | | X | | | |
| G | Cultural and Historic Resources Protection | | X | | | |
| H | Recreational Resources | | X | | | |

*Applicants must complete a Standards Matrix for each designated zone of effect; shaded cells indicate no such standard is available for that criterion.*

**Matrix of Alternative Standards Template:**
**(Please duplicate this table for each Zone of Effect)**

**Facility Name:** Red Bridge Project **Zone of Effect:** Tailrace to the Confluence with the Bypassed Reach

| | Criterion | *Alternative Standards* | | | | |
|---|---|---|---|---|---|---|
| | | *1* | *2* | *3* | *4* | *Plus* |
| A | Ecological Flow Regimes | | X | | | |
| B | Water Quality | | X | | | |
| C | Upstream Fish Passage | X | | | | |
| D | Downstream Fish Passage | X | | | | |
| E | Watershed and Shoreline Protection | X | | | | |
| F | Threatened and Endangered Species Protection | | X | | | |
| G | Cultural and Historic Resources Protection | | X | | | |
| H | Recreational Resources | | X | | | |

*Applicants must complete a Standards Matrix for each designated zone of effect; shaded cells indicate no such standard is available for that criterion.*

# Table B-2

### *B.2.1 Ecological Flow Standards*

The instructions in Table B-2 identify information needed to meet the Ecological Flow Regimes criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

**Table B-1. Information Required to Support Ecological Flows Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| A | 1 | <u>Not Applicable / De Minimis Effect:</u><br>• Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility.<br>• If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained.<br>• In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located.<br>• For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – ***NOTE:*** this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion. |
| A | 2 | <u>Agency Recommendation (see Appendix A for definitions):</u><br>• Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).<br>• Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement.<br>• Explain how the recommendation relates to agency management goals and objectives for fish and wildlife.<br>• Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations). |
| A | 3 | <u>Limited Storage:</u><br>• Explain the calculation of active storage capacity and retention time (storage/flow), including data sources.<br>• Provide the name and published reference for the methodology used, including developer of the methodology and several successful, recent applications, and how it has been regionally accepted.<br>• Provide the calculations used to derive the final flow, including data |

| Criterion | Standard | Instructions |
|---|---|---|
| | | sources and any pre-processing applied. |

There has been no change in the mode of operation of the Facility (limited pond-and-release) since it was certified by LIHI on September 16, 2012 for any of the ZoE. The latest demonstration of compliance of the Project's minimum flow requirement is attached at the end of the Application and specifically applies to the Bypassed Reach ZoE but indirectly applies both to the Upper Impoundment ZoE and the Tailrace to the Confluence with the Bypassed Reach ZoE.[6]

The Facility has a bypassed reach with a length of approximately 0.4 mile. Except when the spillway is flowing, the bypassed reach is solely fed by the flow passing through the automatic slide gate located on the crest of the spillway. The slide gate regulates the 237 cfs minimum flow for the bypassed reach. These statements apply to the Bypassed Reach ZoE. The powerhouse lies about 430 feet downstream of the dam fed by water from the power canal then into two penstocks. Waters from the powerhouse, after passing through the turbines, are fed into the facility's tailrace, which flows about 735 feet before the tailrace flows meet with the bypassed reach flows and becomes again the Chicopee River. These statements apply to the Tailrace ZoE.

The various FERC's Inspection Reports were reviewed that were issued subsequent the LIHI certification of the Red Bridge Project.[7] [8] Since these reports contain CEII materials, they are not attached to this application. A review of the items listed in these reports showed that all items that pertain to Red Bridge Project were minor in nature and were remedied by the end of 2017.[9] [10] [11] [12] These reports apply to all of the ZoE. In addition, nothing in these reports mentioned that that the Exemptee appeared to be in non-compliance with any Article of its Exemption, including any flow standards. This statement applies to all ZoE.

The Ecological Flows Standards for the Facility were developed during the late 1980 and early 1990s FERC licensing process as well the FERC licensing process for the other dams on the Chicopee River that were owned and operated by WMECO. There is a brief description of the determination of the Facility's minimum flow in a letter from the Department of the Interior, dated July 14, 1989. The minimum flow standard is again mentioned in a second letter from the Department of the Interior, dated July 31, 1992. While not specifically mentioned in the FERC Exemption from License issued September 11, 1992, the FERC Order Amending Exemption issued December 29, 1999 specifically mentioned a minimum flow standard of 237 cfs for Red Bridge Project. These statements apply to all ZoE.

A Massachusetts Division of Fisheries and Wildlife letter, dated February 15, 2000,[13] confirmed the 237 cfs as the minimum flow for Red Bridge Project with a maximum drawdown of 1-foot for the 2nd quarter and a 2-foot maximum drawdown for the balance of the year. In addition, after

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6 See Attachment 5, "2017 Demonstration of Minimum Flow, Dated March 28, 2018."
7 See Attachment 6, "FERC Environmental Inspection Report, Dated June 17, 2015." **(CEII Protected)**
8 See Attachment 7, "FERC Dam Safety Inspection Report, Dated June 29, 2016." **(CEII Protected)**
9 See Attachment 8, "Essential Letter, Dated September 30, 2016."
10 See Attachment 9, "FERC Follow-Up Letter, Dated April 6, 2017."
11 See Attachment 10, "Cogentrix Letter, Dated April 13, 2017."
12 See Attachment 11, "FERC Follow-Up Letter, Dated May 17, 2017."
13 See Attachment 12, "MDFW Letter, Dated February 15, 2000"

dam maintenance and emergency drawdown, certain minimum flows will be maintained downstream of the Project at all times with additional requirements for maximum withholding if the minimum flows are not attained. This letter applies to all ZoE.

Update letters have been requested from the US Fish & Wildlife Service,[14] Massachusetts Division of Fisheries and Wildlife[15] and the Massachusetts Department of Environmental Protection[16] on the adequacy of the minimum flow standard and impoundment fluctuation. As those letters are received, they will be appended to this application. These statements apply to all ZoEs.

Since its initial submission of the LIHI application on March 20, 2012, FERC has approved Red Bridge Minimum Flow and Impoundment Fluctuation Plan. This plan had not been formally approved when it was first proposed in October 2001. A copy of the Minimum Flow and Impoundment Fluctuation Monitoring Plan,[17] e-mail correspondence with FERC Staff[18] and the FERC Order[19] are appended to this application. These statements apply to all ZoEs.

As the Project is currently operated, the Facility has limited storage, 185 acre-feet of usable storage (approximately 185 acres of reservoir surface times 1 feet of drawdown). At 237 cfs of minimum flow and no inflow, it takes just over 10 hours to empty the Facility's useable storage. These statements apply to the Red Bridge Impoundment ZoE.

In response to the request for previous documentation related to Flows, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item [20] | Title of Document |
|---|---|
| **18 (5)** | **Appendix 1-4, FWS letter setting minimum flows, dated July 14, 1989** starts at page **7** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **19 (6)** | **Appendix 1-5, DOI letter setting mandatory terms and conditions, dated July 31, 1992** starts at page **8** of 60 of the 2012 Application of Red Bridge Project for |

[14] See Attachment 13, "US F&WS Letter, Dated June ____, 2018."
[15] See Attachment 14, "MDFW Letter, Dated June ____, 2018"
[16] See Attachment 15, "MDEP Letter, Dated June___, 2018"
[17] See Attachment 25, "Minimum Flow and Impoundment Fluctuation Monitoring Plan, Dated February 20, 2012."
[18] See Attachment 16, "FERC E-Mail Correspondence Regarding Minimum Flow and Impoundment Fluctuation Monitoring Plan, Dated July 24, 2012."
[19] See Attachment 17, "FERC Order Approving Minimum Flow and Impoundment Fluctuation Plan, Dated August 3, 2012."
[20] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

| | |
|---|---|
| | Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **20 (9)** | **Appendix 3-2, Mode of Operation** starts at page **16** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **21 (11)** | **Appendix 3-4, Site Plan of the Facility s**tarts at page **18** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **22 (15)** | **Appendix A, Flows s**tarts at page **22** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **23 (21)** | **Appendix A-6, FWS E-mail, dated October 13, 2011 s**tarts at page **30** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **24 (22)** | **Appendix A-7, MDEP Letter, dated October 19, 2011 s**tarts at page **31** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **25 (23)** | **Appendix A-8, Minimum Flow Monitoring Plan, dated February 20, 2012 s**tarts at page **32** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application specifically applies to the Bypassed Reach ZoE as well as indirectly applies both to the Upper Impoundment ZoE and the River Below Tailrace ZoE.

# Table B-3

### *B.2.2 Water Quality Standards*

The instructions in Table B-3 identify information needed to meet the Water Quality criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

**Table B-2. Information Required to Support Water Quality Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| B | 2 | Agency Recommendation:<br>• If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation.<br>• Provide a copy of the most recent Water Quality Certificate, including the date of issuance.<br>• Identify any other agency recommendations related to water quality and explain their scientific or technical basis.<br>• Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations. |

There has been no change in the Water Quality of the Facility since it was certified by LIHI in 2012 except that the waters in the Red Bridge Impoundment ZoE are now classified as Category B, "Waters Requiring A TMDL."[21] The latest Massachusetts DEP report (2016) on the status of the Project's Water Quality is attached at the end of the Application and applies to each of the ZoE. [22] The status for the Project's waters in the Bypassed Reach ZoE and Tailrace to the Confluence with the Bypassed Reach ZoE is Support for all relevant categories except for shellfish harvesting. The Red Bridge Impoundment ZoE is impaired with Escherichia coli and mercury in fish tissue.

The Bypassed Reach ZOEs appears not to be located on a Water Quality Limited river reach. There are no agency recommendations related to water quality for any of the ZoE. Given these conditions, there are no compliance activities related to water quality, including on-going monitoring, in any of the ZoE.

While there is no Water Quality Certificate, letters from the Massachusetts Department of Environmental Protection and United States Fish & Wildlife Service has been requested verifying that none of the ZoEs of the Red Bridge Project contribute or cause to the violations of state water

[21] Previously, the waters of the Red Bridge Impoundment ZoE appear to be classified as Category 2, support for all uses but for the harvesting of shellfish.
[22] See Attachment 26, "Draft Massachusetts Year 2016 List of Integrated Waters."

quality standards. Once those letters have been obtained, they will be appended to this application.[23] [24] These statements will apply to all ZoE.

In response to the request for previous documentation related to Water Quality, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item [25] | Title of Document |
|---|---|
| **27 (24)** | **Appendix B, Water Quality** starts at page **33** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **28 (25)** | **Appendix B-1, Dissolved Oxygen at Gatehouse** starts at page **37** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to the Impoundment ZoEs. |
| **29 (26)** | **Appendix B-2, WMECO Exhibit E -- Environmental Report, dated November 1989** starts at page **38** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **30 (27)** | **Appendix B-3, WMECO Exhibit E -- Environmental Report, Appendix D -- Water Quality Report, dated November 1989** starts at page **39** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **31 (28)** | **Appendix B-4, Chicopee River Watershed 2003 Water Quality Assessment Report** starts at page **40** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies to the each of the ZoE.

[23] See Attachment 15, "MDEP Letter, Dated June___, 2018"

[24] See Attachment 12, "US F&WS Letter, Dated June ____, 2018."

[25] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

# Table B-4

### *B.2.3 Upstream Fish Passage Standards*

The instructions in Table B-4 identify information needed to meet the Upstream Fish Passage criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

In all cases, the applicant shall list all ***migratory fish*** species (for example, ***anadromous***, ***catadromous***, and ***potamodromous*** species) that occur now or have occurred historically at the Facility.

**Table B-3. Information Required to Support Upstream Fish Passage Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| C | 1 | Not Applicable / De Minimis Effect:<br>• Explain why the facility does not impose a barrier to upstream fish passage in the designated zone.<br>• Document available fish distribution data and the lack of migratory fish species in the vicinity.<br>If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this. |

There has been no change in the Upstream Fish Passage requirement of the Facility since it was certified by LIHI in 2012 for any of the ZoE. At that time, no Upstream Fish Passage requirement had been imposed. This lack of an upstream fish passage requirement applies to all ZoE.

The Chicopee River, A Comprehensive Watershed Assessment, 2003,[26] lists no migratory fish that occur now or have occurred historically at the Facility for any of the ZoE. Specifically, the fish mentioned are the Atlantic salmon, the American shad and the blueback herring. There is no mention of the American eel or the sea lamprey. None of these fish appear now to be present in any of the ZoE.

While the Red Bridge Project does impose a barrier to upstream fish passage on the Chicopee River, it is the sixth dam on the river with five other dams downstream within 15 miles. The oldest of these dams dates to the late 1800s and was constructed well before there were any hydro-electric generating facilities constructed on the river. Thus, Red Bridge Project was constructed well after migratory fish were extirpate from the project area.

Both MDFW and FWS have been asked if the Project was in compliance with its Fish Passage and Protection. Once those letters have been obtained, they will be appended to this application. Previously, both entities responded that the Project was in compliance and, despite the fact the

[26] See Attachment 32, "Chicopee River, A Comprehensive Watershed Assessment, 2003, dated July 29, 2003."

agencies could request appropriate passage at any time, there were no pending agency requests for passage. [27] [28]

In response to the request for previous documentation related to the Upstream Fish Passage requirement, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item [29] | Title of Document |
|---|---|
| **12 (NA)** | **C. Slater Letter to Mark Noyes, dated February 15, 2000** is attached as Attachment 8 to this Application for Re-Certification. This document applies to all ZoEs. |
| **33 (NA)** | **C. Slater E-mail to F. Ayer, dated May 11, 2012** may be found in the comment section of LIHI website pertaining to Red Bridge Project. This document applies to all ZoEs. |
| **34 (29)** | **Appendix C, Fish Passage and Protection** starts at page **41** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **23 (21)** | **Appendix A-6, FWS E-mail, dated October 13, 2011 s**tarts at page **30** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies to the each of the ZoE.

[27] See Attachment 33, "MDFW E-Mail, Dated May 11, 2012"

[28] See Attachment 23, "US F&WS Letter, Dated October 13, 2011."

[29] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF APPENDICES FROM LIHI RE-CERTIFICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

# Table B-5

### *B.2.4 Downstream Fish Passage and Protection Standards*

The instructions in Table B-4 identify information needed to meet the Downstream Fish Passage and Protection criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

In all cases, the applicant shall list all fish species (for example, riverine, ***anadromous***, ***catadromous***, and ***potamodromous***) that occur now or have occurred historically in the area affected by the Facility.

**Table B-4. Information Required to Support Downstream Fish Passage Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| D | 1 | Not Applicable / De Minimis Effect:<br>• Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines).<br>• For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles.<br>• Document available fish distribution data and the lack of migratory fish species in the vicinity.<br>• If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this. |

There has been no change in the Downstream Fish Passage requirement of the Facility since it was certified by LIHI in 2012 for any of the ZoE. At that time, no Downstream Fish Passage requirement had been imposed. This lack of a downstream fish passage requirement applies to all ZoE.

The Chicopee River, A Comprehensive Watershed Assessment, 2003,[30] lists no migratory fish that occur now or have occurred historically at the Facility for any of the ZoE. Specifically, the fish mentioned are the Atlantic salmon, the American shad and the blueback herring. There is no mention of the American eel or the sea lamprey. None of these fish appear now to be present in any of the ZoE.

While the Red Bridge Project does impose a barrier to downstream fish passage on the Chicopee River, there are dams on each of the upstream tributaries of the Chicopee River. None of these dams have any downstream fish passage. While not a certified downstream passage, the Project's minimum flow gate does permit the passage downstream of riverine fish.

[30] See Attachment 32, "Chicopee River, A Comprehensive Watershed Assessment, 2003, dated July 29, 2003."

Both MDFW and FWS have been asked if the Project was in compliance with its Fish Passage and Protection. Once those letters have been obtained, they will be appended to this application. Previously, both entities responded that the Project was in compliance and, despite the fact the agencies could request appropriate passage at any time, there were no pending agency requests for passage. [31] [32]

In response to the request for previous documentation related to the Downstream Stream Fish Passage requirement, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item[33] | Title of Document |
|---|---|
| **12 (NA)** | **C. Slater Letter to Mark Noyes, dated February 15, 2000** is attached as Attachment 8 to this Application for Re-Certification. This document applies to all ZoEs. |
| **33 (NA)** | **C. Slater E-mail to F. Ayer, dated May 11, 2012** may be found in the comment section of LIHI website pertaining to Red Bridge Project. This document applies to all ZoEs. |
| **34 (29)** | **Appendix C, Fish Passage and Protection** starts at page **41** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **24 (21)** | **Appendix A-6, FWS E-mail, dated October 13, 2011 s**tarts at page **30** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies to the each of the ZoE, directly to the Upper Impoundment ZoE and the Bypassed Reach ZoE and indirectly to the River Below Tailrace ZoE.

[31] See Attachment 33, "MDFW E-Mail, Dated May 11, 2012"

[32] See Attachment 23, "US F&WS Letter, Dated October 13, 2011."

[33] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

# Table B-6

### *B.2.5 Shoreline and Watershed Protection Standards*

The instructions in Table B-6 identify information needed to meet the Shoreline and Watershed Protection criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

**Table B-5. Information Required to Support Shoreline and Watershed Protection Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| E | 1 | Not Applicable / De Minimis Effect:<br>• If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary).<br>• Document that there have been no Shoreline Management Plans or similar protection requirements for the facility. |

There has been no change in the Shoreline and Watershed Protection requirement of the Facility since it was certified by LIHI in 2012 for any of the ZoE. (There is no *per se* Shoreline Management Plan for the Project or any shoreline or watershed protection items. There are no shoreline or watershed protection items in the Project area. Rather, any prospective change in land use in the Project area must first be reported to the various agencies).

In response to FERC concerns on the potential complete collapse of the gatehouse, Essential Power (the then Exemptee) constructed a higher wall downstream of the gatehouse along the north side of the power canal until the power canal reached Red Bridge bridge. This construction commenced in late 2012 with completion in early 2013.[34] Neither this construction nor the operation of this wall had any impact on the Project's shoreline, watershed, minimum flow or impoundment fluctuation.[35] Given that some of the documents pertaining to this construction contain CEII material, only limited correspondence is attached to this application.[36] [37] These statements apply to the Red Bridge Impoundment ZoE.

Other various FERC's Inspection Reports were reviewed.[38] [39] Since these reports contain CEII materials, they are not attached to this application. A review of the items listed in these reports showed that all items that pertain to Red Bridge Project were minor in nature and were remedied

[34] See Attachment 35, "Construction Photographs of Red Bridge Power Canal Wall,"
[35] See Attachment 36, "FERC Letter order authorizing NAEA Energy Massachusetts, LLC to proceed with construction at the Red Bridge and requesting them within 45 days of completion to submit a final construction report, dated October 3, 2012."
[36] See Attachment 37, "Essential Power Letter, Dated March 22, 2013." **(CEII Protected)**
[37] See Attachment 38, "Kleinschmidt Letter, Dated March 26, 2013."
[38] See Attachment 6, "FERC Environmental Inspection Report, Dated June 17, 2015." **(CEII Protected)**
[39] See Attachment 7, "FERC Dam Safety Inspection Report, Dated June 29, 2016." **(CEII Protected)**

by the end of 2017.[40] [41] [42] [43] These reports apply to all of the ZoE. In addition, nothing in these reports mentioned that that the Exemptee appeared to be in non-compliance with any Article of its Exemption, including any shoreline and watershed protection standards. This statement applies to all ZoE.

In response to the request for previous documentation related to the Shoreline and Watershed Protection requirement, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item[44] | Title of Document |
|---|---|
| **39 (30)** | **Appendix D, Watershed Protection** starts at page **43** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **40 (31)** | **Appendix D-1, Kleinschmidt Letter, dated March 19, 2001** starts at page **45** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies to the each of the ZoE.

[40] See Attachment 8, "Essential Letter, Dated September 30, 2016."
[41] See Attachment 9, "FERC Follow-Up Letter, Dated April 6, 2017."
[42] See Attachment 10, "Cogentrix Letter, Dated April 13, 2017."
[43] See Attachment 11, "FERC Follow-Up Letter, Dated May 17, 2017."
[44] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

# Table B-7

### *B.2.6 Threatened and Endangered Species Standards*

The instructions in Table B-7 identify information needed to meet the Threatened and Endangered Species criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

In all cases, the applicant shall identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies.

**Table B-6. Information Required to Support Threatened and Endangered Species Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| F | 2 | Finding of No Negative Effects:<br>• Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies.<br>• Provide documentation of a finding of no negative effect of the facility on any listed species in the area from an appropriate natural resource management agency. |

The US FWS reports that there are no threatened and endangered fish species located in the Project's area. A copy of that report may be found at the end of the Application as well as at https://www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm.[45] This report applies to all of the ZoE.

According to a Massachusetts DFW e-mail, most of the area around the Red Bridge Project is no longer mapped as Priority Habitat for rare species. [46] This e-mail applies to all of the ZoE.

A reply to MESA Information Request Form for the Project area is attached. [47] This reply applies to all of the ZoE. The MESA report for the Project Area states that none of the ZoEs are mapped as Priority or Estimated Habitat. In addition, the NHESP database did not contain any state-listed species records in the immediate vicinity of the Project Area.

In response to the request for previous documentation related to the threatened and endangered species requirement, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

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[45] See Attachment 41, "US FWS Federally Listed Endangered and Threatened Species in Massachusetts," updated February 5, 2016.
[46] See Attachment 42, "MDFW E-mail regarding Red Bridge Project," dated May 31, 2018.
[47] See Attachment 43, "Reply to Red Bridge MESA Information Request," dated June 5, 2018.

| Item[48] | Title of Document |
|---|---|
| **44 (32)** | **Appendix E, Threatened and Endangered Species Protection** starts at **page 46** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **45 (33)** | **Appendix E-1, MDFW Letter, dated October 26, 2011** starts at **page 48** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies directly to the each of the ZoE.

[48] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

# Table B-8

### *B.2.7 Cultural and Historic Resources Standards*

The instructions in Table B-8 identify information needed to meet the Cultural and Historic Resources criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

In all cases, the applicant shall identify all cultural and historic resources that are on facility owned property or that may be affected by facility operations.

**Table B-7. Information Required to Support Cultural and Historic Resources Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| G | 2 | Approved Plan:<br>• Provide documentation of all approved state, provincial, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility.<br>• Document that the facility is in compliance with all such plans. |

There has been no change in the Cultural Resources Management Plan of the Facility since it was certified by LIHI in 2012. For example, while improvements to the area around the Gatehouse were made,[49] [50] FERC officials found that no follow-up on any aspect of Cultural Resources matters was necessary. These statements apply to all ZoE.

In response to the request for previous documentation related to the Cultural and Historic Resources Standards requirement, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item[51] | Title of Document |
|---|---|
| **47 (34)** | **Appendix F, Cultural Resource Protection** starts at **page 49** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

[49] See Attachment 36, "FERC Letter order authorizing NAEA Energy Massachusetts, LLC to proceed with construction at the Red Bridge and requesting them within 45 days of completion to submit a final construction report, dated October 3, 2012."

[50] See Attachment 46, "FERC Letter to EP Energy Massachusetts, LLC regarding the pre-construction filing for the Red Bridge Penstock Repair Project, dated November 10, 2014.

[51] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

| | |
|---|---|
| **48 (35)** | **Appendix F-1, MHC Letter, dated July 2, 2002 s**tarts at **page 51** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **49 (36)** | **Appendix F-2, MHC Letter, dated September 27, 2011 s**tarts at **page 52** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies to the each of the ZoE.

# Table B-9

### *B.2.8 Recreational Resources Standards*

The instructions in Table B-9 identify information needed to meet the Recreational Resources criterion and to satisfy its goal. The applicant should provide only the information associated with the standard selected for a designated zone of effect. If the PLUS standard is also selected for this criterion, the information associate with that standard must also be provided. If more than one ZoE is designated for an application, this process should be repeated for other zones.

**Table B-8. Information Required to Support Recreational Resources Standards.**

| *Criterion* | *Standard* | *Instructions* |
|---|---|---|
| H | 2 | Agency Recommendation:<br>• Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations.<br>• Document that the facility is in compliance with all such recommendations and plans. |

There has been no change in the Recreational Resource requirement of the Facility since it was certified by LIHI in 2012 for any of the ZoE. The latest demonstration of compliance of the Project's Recreational Resource requirement is FERC's Environmental Inspection Report, dated November 4, 2010. [52] This report applies to all of the ZoE. After exchanging correspondence with FERC and Commonwealth of Massachusetts officials found that the Project was in full compliance of its recreational requirement. This statement applies to all ZoE.

The various FERC's Inspection Reports were reviewed that were issued subsequent the LIHI certification of the Red Bridge Project.[53] [54] Since these reports contain CEII materials, they are not attached to this application. A review of the items listed in these reports showed that all items that pertain to Red Bridge Project were minor in nature and were remedied by the end of 2017.[55] [56] [57] [58] These reports apply to all of the ZoE. In addition, nothing in these reports mentioned that that the Exemptee appeared to be in non-compliance with any Article of its Exemption, including any recreational standards. This statement applies to all ZoE.

The recreational facilities can be found throughout the Project area. The approximate location of each these facilities can be found in Appendix G-2 of the original LIHI certification application. This statement applies to all ZoE.

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52 See Attachment 52, "FERC Environmental Inspection Report, Dated November 4, 2010"
53 See Attachment 6, "FERC Environmental Inspection Report, Dated June 17, 2015." **(CEII Protected)**
54 See Attachment 7, "FERC Dam Safety Inspection Report, Dated June 29, 2016." **(CEII Protected)**
55 See Attachment 8, "Essential Letter, Dated September 30, 2016."
56 See Attachment 9, "FERC Follow-Up Letter, Dated April 6, 2017."
57 See Attachment 10, "Cogentrix Letter, Dated April 13, 2017."
58 See Attachment 11, "FERC Follow-Up Letter, Dated May 17, 2017."

In response to the request for previous documentation related to the Recreational Resource requirement, the following highlighted (in **blue**) text or computer files should be carefully read by the reviewer and are may be found in "Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute, dated March 20, 2012." If there is no website link to the LIHI website, then the document has been attached to the Application for LIHI Re-Certification.

| Item[59] | Title of Document |
|---|---|
| **50 (37)** | **Appendix G, Recreation s**tarts at **page 53** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **51 (38)** | **Appendix G-1, Existing Recreational Facilities s**tarts at **page 55** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **52 (39)** | **Appendix G-2, FERC Environmental Inspection Report, dated November 4, 2010 s**tarts at **page 56** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **53 (40)** | **Appendix G-3, NAEA Letter, dated March 7, 2011 s**tarts at **page 57** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **54 (41)** | **Appendix G-4, FERC Letter, dated October 12, 2011 s**tarts at **page 58** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |
| **55 (42)** | **Appendix G-5, MDFG Letter, dated December 1, 2011 s**tarts at **page 59** of 60 of the 2012 Application of Red Bridge Project for Certification by the Low Impact Hydropower Institute. This document applies to all ZoEs. |

Each of the aforementioned documents from the original LIHI application applies to the each of the ZoE.

[59] The first number applies to the numbering of the documents in the table at the end of this LIHI Re-Certification Application titled "LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT." The second number applies to the numbering of documents in the cover letter in the original Red Bridge LIHI application.

## Sworn Statement and Waiver Form

All applications for LIHI Certification must include the following sworn statement before they can be reviewed by LIHI:

**SWORN STATEMENT**

As an Authorized Representative of Central Rivers Power MA, LLC, the Undersigned attests that the material presented in the application is true and complete.

The Undersigned acknowledges that the primary goal of the Low Impact Hydropower Institute's Certification Program is public benefit, and that the LIHI Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions.

The undersigned further acknowledges that if certification of the applying facility is issued, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified.

The undersigned Applicant further agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications, from any consequences of disclosing or publishing any submitted certification application materials to the public, or on any other action pursuant to the Low Impact Hydropower Institute's Certification Program.

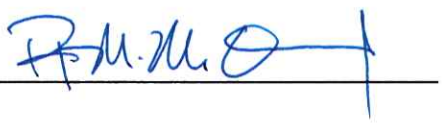
**PLEASE INSERT ONLY FOR PRE-OPERATIONAL CERTIFICATIONS** (See Section 4.5.3)**:**

For applications for pre-operational certification of a "new" facility the applicant must also acknowledge that the Institute may suspend or revoke the certification should the impacts of the project, once operational, fail to comply with the certification criteria.

Company Name: Central Rivers Power MA, LLC - Red Bridge Station

Authorize Representative Name: Ryan McQueeney

Title: CFO

Authorized Signature: 

Date: August 13, 2018

# LIST OF ATTACHMENTS FROM LIHI RE-CERTIFICATION APPLICATION FOR RED BRIDGE PROJECT

1. Aerial Photographs of Red Bridge Project.
2. Aerial Photograph of Red Bridge Impoundment ZoE.
3. Aerial Photograph of Red Bridge Bypassed Reach ZoE.
4. Aerial Photograph of Red Bridge Tailrace Zoe
5. 2017 Demonstration of Minimum Flow, dated March 29, 2018.
6. FERC Environmental Inspection Report, dated June 17, 2015 **(CEII Protected).**
7. FERC Dam Safety Inspection Report, dated June 29, 2016 **(CEII Protected).**
8. Essential Power Letter, dated September 30, 2016.
9. FERC Follow-Up Letter, dated April 6, 2017.
10. Cogentrix Letter, dated April 13, 2017.
11. FERC Follow-Up Letter, dated May 17, 2017.
12. C. Slater Letter to Mark Noyes, dated February 15, 2000.
13. US F&WS Letter, dated June ____, 2018.
14. MDFW Letter, Dated June ____, 2018
15. MDEP Letter, dated June ___, 2018.
16. FERC E-Mail Correspondence Regarding Minimum Flow and Impoundment Fluctuation Monitoring Plan, dated July 24, 2012.
17. FERC Order Approving Minimum Flow and Impoundment Fluctuation Plan, dated August 3, 2012.
18. **Appendix 1-4, FWS letter setting minimum flows, dated July 14, 1989.**
19. **Appendix 1-5, DOI letter setting mandatory terms and conditions, dated July 31, 1992.**
20. **Appendix 3-2, Mode of Operation.**
21. **Appendix 3-4, Site Plan of the Facility.**
22. **Appendix A, Flows.**
23. **Appendix A-6, FWS E-mail, dated October 13, 2011.**
24. **Appendix A-7, MDEP Letter, dated October 19, 2011.**

25. **Appendix A-8, Minimum Flow and Impoundment Fluctuation Monitoring Plan, Dated February 20, 2012.**

26. Draft Massachusetts Year 2016 List of Integrated Waters.

27. **Appendix B, Water Quality.**

28. **Appendix B-1, Dissolved Oxygen at Gatehouse.**

29. **Appendix B-2, WMECO Exhibit E -- Environmental Report, dated November 1989.**

30. **Appendix B-3, WMECO Exhibit E -- Environmental Report, Appendix D -- Water Quality Report, dated November 1989.**

31. **Appendix B-4, Chicopee River Watershed 2003 Water Quality Assessment Report.**

32. Chicopee River, A Comprehensive Watershed Assessment, 2003, dated July 29, 2003.

33. **C. Slater E-mail to F. Ayer, dated May 11, 2012.**

34. **Appendix C, Fish Passage and Protection.**

35. Construction Photographs of Red Bridge Power Canal Wall

36. FERC Letter order authorizing NAEA Energy Massachusetts, LLC to proceed with construction at the Red Bridge and requesting them within 45 days of completion to submit a final construction report, dated October 3, 2012.

37. Essential Power Letter, dated March 22, 2013 **(CEII Protected).**

38. Kleinschmidt Letter, dated March 26, 2013.

39. **Appendix D, Watershed Protection.**

40. **Appendix D-1, Kleinschmidt Letter, dated March 19, 2001.**

41. US FWS Federally Listed Endangered and Threatened Species in Massachusetts, updated February 5, 2016.

42. MDFW E-mail regarding Red Bridge Project, dated May 31, 2018.

43. Reply to Red Bridge MESA Information Request, dated June 5, 2018

44. **Appendix E, Threatened and Endangered Species Protection.**

45. **Appendix E-1, MDFW Letter, dated October 26, 2011.**

46. FERC Letter to EP Energy Massachusetts, LLC regarding the pre-construction filing for the Red Bridge Penstock Repair Project, dated November 10, 2014.

47. **Appendix F, Cultural Resource Protection.**

48. **Appendix F-1, MHC Letter, dated July 2, 2002.**

49. **Appendix F-2, MHC Letter, dated September 27, 2011.**

50. **Appendix G, Recreation.**

51. **Appendix G-1, Existing Recreational Facilities.**

52. **Appendix G-2, FERC Environmental Inspection Report, dated November 4, 2010.**

53. **Appendix G-3, NAEA Letter, dated March 7, 2011.**

54. **Appendix G-4, FERC Letter, dated October 12, 2011.**

55. **Appendix G-5, MDFG Letter, dated December 1, 2011.**

# LIST OF APPENDICES FROM INITIAL LIHI CERTIFICATION FOR RED BRIDGE PROJECT

1. Appendix 1-1, FERC order granting exemption from licensing, issued September 11, 1992
2. Appendix 1-2, FERC order amending exemptions, issued December 29, 1999
3. Appendix 1-3, FERC order amending exemptions, issued November 8, 2001
4. Appendix 1-4, FWS letter setting minimum flows, dated July 14, 1989
5. Appendix 1-5, DOI letter setting mandatory terms and conditions, dated July 31, 1992
6. Appendix 2, Agency Contacts
7. Appendix 3-1, Description of the Facility
8. Appendix 3-2, Mode of Operation
9. Appendix 3-3, Locations of Major Items of the Facility
10. Appendix 3-4, Site Plan of the Facility
11. Appendix 3-5, Aerial Photograph of the Facility
12. Appendix 3-6, Chicopee River Profile
13. Appendix 3-7, Chicopee River Watershed Map
14. Appendix A, Flows
15. Appendix A-1, Demonstration of Minimum Flows
16. Appendix A-2, Flow Duration Curve
17. Appendix A-3, Minimum Flow and Impoundment Fluctuation Monitoring Plan, dated October 2001
18. Appendix A-4, FWS Letter, dated November 6, 2001
19. Appendix A-5, MDFW Letter, dated November 15, 2001
20. Appendix A-6, FWS E-mail, dated October 13, 2011

21. Appendix A-7, MDEP Letter, dated October 19, 2011

22. Appendix A-8, Minimum Flow Monitoring Plan, dated February 20, 2012

23. Appendix B, Water Quality

24. Appendix B-1, Dissolved Oxygen at Gatehouse

25. Appendix B-2, WMECO Exhibit E -- Environmental Report, dated November 1989

26. Appendix B-3, WMECO Exhibit E -- Environmental Report, Appendix D -- Water Quality Report, dated November 1989

27. Appendix B-4, Chicopee River Watershed 2003 Water Quality Assessment Report

28. Appendix C, Fish Passage and Protection

29. Appendix D, Watershed Protection

30. Appendix D-1, Kleinschmidt Letter, dated March 19, 2001

31. Appendix E, Threatened and Endangered Species Protection

32. Appendix E-1, MDFW Letter, dated October 26, 2011

33. Appendix F, Cultural Resource Protection

34. Appendix F-1, MHC Letter, dated July 2, 2002

35. Appendix F-2, MHC Letter, dated September 27, 2011

36. Appendix G, Recreation

37. Appendix G-1, Existing Recreational Facilities

38. Appendix G-2, FERC Environmental Inspection Report, dated November 4, 2010

39. Appendix G-3, NAEA Letter, dated March 7, 2011

40. Appendix G-4, FERC Letter, dated October 12, 2011

41. Appendix G-5, MDFG Letter, dated December 1, 2011

42. Appendix H, Facilities Recommended for Removal