LOW IMPACT HYDROPOWER INSTITUTE RECERTIFICATION APPLICATION

Rolfe Canal Hydroelectric Project (FERC No. 3240, LIHI No. 104)

Prepared for:
LOW IMPACT HYDROPOWER INSTITUTE

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PART I. FACILITY DESCRIPTION

The Rolfe Canal Hydroelectric Project (FERC No. 3240) ("Rolfe Project" or "Project") was certified by the Low Impact Hydropower Institute ("LIHI") on December 4, 2012 for a period of five years, through December 4, 2017. Briar Hydro Associates ("BRHA"), the facility owner and operator hereby submits this application to recertify the Project for an additional five years. There are no material changes to project operations that should be noted during recertification.

The Project is located on the Contoocook River in the north end of the city of Concord, New Hampshire. The Contoocook River is a major tributary of the Merrimack River. From the Contoocook River confluence, the Merrimack River flows south to Massachusetts where it turns northeastward to empty into the Atlantic Ocean at Newburyport, travelling a total distance of 101 miles from where the Contoocook enters. The Project is located 2.1 miles upstream of the mouth of the Contoocook River. The Contoocook has a total river length of 71 miles and drains 766 square miles of land.

The Project diverts water from an impoundment created by York Dam, a state-owned structure (See lease agreement, Appendix 1-3). Rolfe Canal is a headrace channel. Flow into the canal is controlled by an intake structure ("Rolfe Canal Gate Inlet") located at the Island Road bridge. The gate inlet is only closed during flood conditions or to dewater the canal for maintenance purposes. At the lower end of the canal, the Project headworks and intake are located at the Briar hydro dam where generation flows are conveyed to the powerhouse through a 940-foot-long steel underground penstock. A channel about 2,400 feet in length is bypassed by the penstock; the reach includes the old Briar Pipe factory dam, which is about 500 downstream of the penstock intake structure. A 1,200-foot-long tailrace channel carries flows back to the main channel of the Contoocook River. The Project is unmanned, but operation is monitored on a 24/7 basis. The tailrace backs up to the impoundment formed by the immediately-downstream Penacook Upper Falls dam (FERC No. 6689, "PUF")[1]. Immediately downstream of PUF is the Penacook Lower Falls (FERC No. 3342, "PLF")[2] project. Rolfe, PUF and PLF are all owned and operated by BRHA.

Project works consist of: (a) a 300-foot-long, 10-foot-high diversion dam (York Dam); (b) a reservoir with negligible storage, a surface area of 50-acres, and normal water surface elevation of 346.0 feet NGVD; (c) a 7,000-foot-long, 75-foot-wide, and 9-foot deep power canal; (d) a roughly 950-foot-long buried penstock; (e) a roughly 4,000-foot-long bypass reach; (f) a 130-foot-long, 17-foot-high granite block generation dam (Briar hydro dam); (g) a reservoir with surface area of 3-acres with negligible storage, and a normal water surface elevation of 334.5 feet NGVD; (h) a powerhouse containing one generating unit with a total installed capacity of

[1] This project is certified by LIHI (certificate #52): effective September 25, 2014 and expires September 25, 2019.
[2] This project is certified by LIHI (certificate #64): effective August 13, 2015 and expires August 13, 2020.

4,300 kW; (i) 100-foot-long, 4.16-kV generator leads; (j) the 4.16/34.5 kV 3.8 MVA three-phase transformer; (k) the 650-foot-long, 34.5-kV transmission line; and (l) appurtenant facilities.

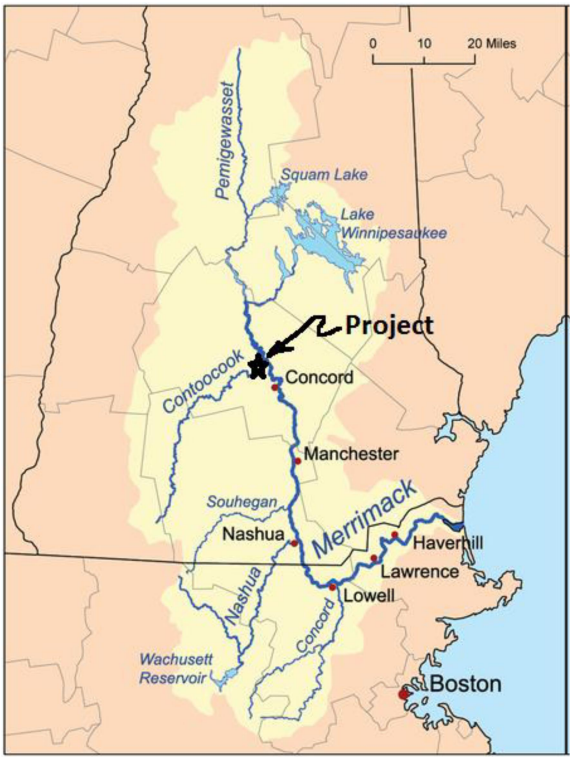

Figure 1 - Merrimack River Basin showing Project location.

Figure 2 - Rolfe Canal Hydroelectric Project and nearby dams.

Figure 3 - Project Layout

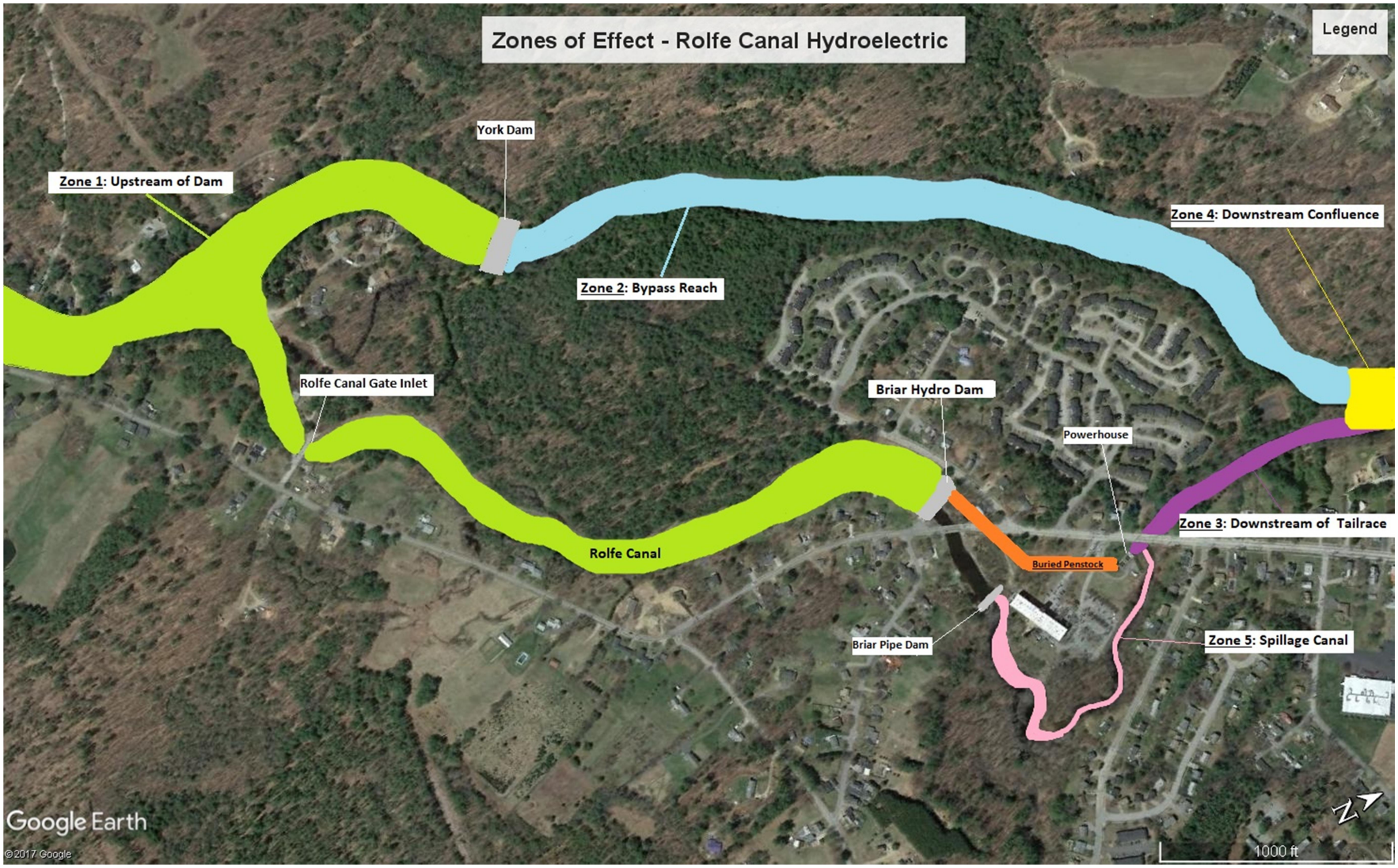

Figure 4 - Designated Zones of Effect

Table B-1. Facility Description Information for Rolfe Canal Hydroelectric Project

Information Type	*Variable Description*	*Response(and reference to further details)*
Name of the Facility	Facility name (use FERC project name if possible)	Rolfe Canal Hydroelectric Project
Location	River name (USGS proper name)	Contoocook River
	River basin name	Contoocook River Watershed
	Nearest town, county, and state	City of Concord, Merrimack County, New Hampshire
	River mile of dam above next major river	River Mile 68
	Geographic latitude	43°16'29"N
	Geographic longitude	71°36'14"W
Facility Owner	Application contact names:	Andrew Locke, President, Essex Hydro Associates, A General Partner Briar Hydro Associates
	- Facility owner (individual and company names)	Briar Hydro Associates (Owner and Operator) c/o Essex Hydro Associates, LLC 55 Union Street, 4th Floor Boston, MA 02108
	- Operating affiliate (if different from owner)	N/A
	- Representative in LIHI certification	Elise Anderson, Regulatory Analyst, Essex Power Services, Inc.
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates	FERC Project No. P-3240 issued December 5, 1984, Expires 2024
	FERC license type or special classification (e.g., "qualified conduit")	Subsequent Major License
	Water Quality Certificate identifier and issuance date, plus source agency name	N/A
	Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.)	N/A – Recent submissions include min flow compliance filings, dam safety reports and inspection reports. Other key documents are available on microfilm or provided in Exhibits.
Power Plant Characteristics	Date of initial operation (past or future for operational applications)	1987
	Total name-plate capacity (MW)	4.285 MW
	Average annual generation (MWh)	21,418 MWh (1988-2017)
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	1 Full Kaplan Turbine Hydraulic capacity: max. 2,000 and min. 150 cfs
	Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.)	Run-of-river
	Dates and types of major equipment upgrades	On February 28, 1986, FERC authorized a change in the proposed powerhouse location;

		construction of a new inlet control structure; installation of a single turbine/generator unit, instead of two units as originally licensed; and an increase in the installed generating capacity (4.285 MW instead of 3.350 MW) and max. hydraulic capacity (2,000 cfs instead of 1,600 cfs).
	Dates, purpose, and type of any recent operational changes	There have been no recent operational changes.
	Plans, authorization, and regulatory activities for any facility upgrades	There are no plans for facility upgrades.
Characteristics of Dam, Diversion, or Conduit	Date of construction	1984 – Authorized 1986 – Changed construction plan 1987 – Construction completed
	Dam height	York Dam – 10 feet Briar Hydro Dam (Intake Structure) – 17 feet
	Spillway elevation and hydraulic capacity	York Dam – EL 342.21 feet msl, capacity 14,147 cfs
	Tailwater elevation	Min – 306.0 feet msl
	Length and type of all penstocks and water conveyance structures between reservoir and powerhouse	There is an underground penstock that conveys water from the power canal to the powerhouse, which is roughly 950 feet long.
	Dates and types of major, generation-related infrastructure improvements to dam	None
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power generation
	Water source	Contoocook River
	Water discharge location or facility	Contoocook River
Characteristics of Reservoir and Watershed	Gross volume and surface area at full pool	**Gross Reservoir Volume:** 32 acre-feet **Surface Area:** 5 acres
	Maximum water surface elevation (ft. MSL)	346.0 feet msl
	Maximum and minimum volume and water surface elevations for designated power pool, if available	The gage height above York dam ranges from 10.40 feet (min) to 15 feet (max)[3]
	Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile	1. Hopkinton Dam – U.S. Army Corps of Engineers, Hopkinton Lake, located on the Contoocook River in Hopkinton, River Mile 17
	Downstream dam(s) by name, ownership, FERC number (if applicable), and river	Penacook Upper Falls (FERC No. 6689) – Briar Hydro Associates, River Mile 1.0

[3]USGS 01087850 CONTOOCOOK RIVER AT RIVER HILL, NEAR PENACOOK, NH
https://nwis.waterdata.usgs.gov/nh/nwis/uv/?cb_00065=on&format=gif_default&site_no=01087850&period=&begin_date=2010-08-02&end_date=2017-08-09

<table>
<tr><td></td><td>mile</td><td>Penacook Lower Falls (FERC No. 3342) – Briar Hydro Associates, River Mile 0.5</td></tr>
<tr><td></td><td>Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility operation</td><td>N/A</td></tr>
<tr><td></td><td>Area inside FERC project boundary, where appropriate</td><td>138 acres (estimate)</td></tr>
<tr><td rowspan="4">Hydrologic Setting</td><td>Average annual flow at the dam</td><td>15,047 cfs</td></tr>
<tr><td>Average monthly flows (cfs)</td><td><table>
<tr><td>January</td><td>1,050</td></tr>
<tr><td>February</td><td>1,060</td></tr>
<tr><td>March</td><td>2,170</td></tr>
<tr><td>April</td><td>3,890</td></tr>
<tr><td>May</td><td>1,920</td></tr>
<tr><td>June</td><td>982</td></tr>
<tr><td>July</td><td>475</td></tr>
<tr><td>August</td><td>334</td></tr>
<tr><td>September</td><td>465</td></tr>
<tr><td>October</td><td>501</td></tr>
<tr><td>November</td><td>1,000</td></tr>
<tr><td>December</td><td>1,200</td></tr>
</table></td></tr>
<tr><td>Location and name of relevant stream gauging stations above and below the facility</td><td>USGS Stream Gage 01085500 at West Hopkinton, NH on the Contoocook River</td></tr>
<tr><td>Watershed area at the dam</td><td>766 miles</td></tr>
<tr><td rowspan="5">Designated Zones of Effect</td><td>Number of zones of effect</td><td>Zone 1 – Upstream of Dam
Zone 2 – Bypassed Reach
Zone 3 – Downstream of Tailrace
Zone 4 – Downstream Confluence
Zone 5 – Spillage Canal</td></tr>
<tr><td>Upstream and downstream locations by river miles</td><td>Zone 1 – River Mile 2.0
Zone 2 – River Mile 2.0
Zone 3 – River Mile 1.46
Zone 4 – River Mile 1.3
Zone 5 – River Mile 1.63</td></tr>
<tr><td>Type of waterbody (river, impoundment, by-passed reach, etc.)</td><td>Zone 1 –Impoundment
Zone 2 – Bypassed Reach
Zone 3 – Tailwater & Impoundment of Downstream dam
Zone 4 – Downstream Confluence of Bypassed Reach and Tailwater & Impoundment of Downstream Dam
Zone 5 – Spillage Canal (Bypassed reach)</td></tr>
<tr><td>Delimiting structures</td><td>York Dam, Briar Hydro Dam, Briar Pipe Dam</td></tr>
<tr><td>Designated uses by state water quality agency</td><td>According to NHDES’s 2016 303(d) list, the Penacook Upper Falls impoundment (Assessment</td></tr>
</table>

		Unit NHIMP700030507-06) is currently listed as a Category 5 impaired water for Aquatic Life support due to pH. This includes the reach below York Dam and the Project tailrace. The Rolfe Project impoundment (Assessment Unit NHIMP700030507-09) is not listed as impaired, but is a Category 3 water, which are those waters for which there is insufficient information upon which to base a determination of designated-use support.
Additional Contact Information	Names, addresses, phone numbers, and e-mail for local state and federal resource agencies	See "PART IV: FACILITY CONTACTS FORM"
	Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders	See "PART IV: FACILITY CONTACTS FORM"
Photographs and Maps	Photographs of key features of the facility and each of the designated zones of effect	See Appendix 5 – Site Photos
	Maps, aerial photos, and/or plan view diagrams of facility area and river basin	See Figures 2 & 3, Section I - Facility Description

* Hyperlinks to facility FERC records on FERC e-library website are preferred whenever possible.

PART II. STANDARDS MATRICES

Zone of Effects #1 – Upstream of York Dam (Impoundment)

		Alternative Standards Applied				
	Criterion	***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			

Zone of Effects #2 – Bypassed Reach

		Alternative Standards Applied				
	Criterion	***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			

Zone of Effects #3 – Downstream of Tailrace

		Alternative Standards Applied				
	Criterion	***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			

Zone of Effects #4 – Downstream Confluence

		Alternative Standards Applied				
	Criterion	***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			

Zone of Effects #5 – Spillage Canal

		Alternative Standards Applied				
	Criterion	***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			

PART III. SUPPORTING INFORMATION

III.A.1 Ecological Flows

Zone of Effects #1 – Upstream of York Dam (Impoundment)

A	2	Agency Recommendation (see Appendix A for definitions): • 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). • 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. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • 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).

Supporting Information:

The FERC License for the Project prescribes minimum flows under Article 32 for the purposes of protecting and enhancing aquatic resources in the Contoocook River. 285 cubic feet per second was prescribed to be measured at the confluence of the Contoocook River and the outlet of Rolfe Canal and at least 50 cfs of this minimum flow is to be discharged from York Dam. Article 32 also requires a minimum flow of 400 cfs at York Dam for May and June (or some other 60 day period to be coordinated with New Hampshire Fish and Game Department ("NHFG")) at such time that upstream fish passage facilities are constructed and operational.

The minimum flows prescribed in the license are less than the U.S. Fish and Wildlife Service's ("USFWS") summer aquatic base default flow of 0.5 cfs/sq. mile, or csm, as prescribed in the Interim Regional Policy for New England Streams Flow Recommendations.[4] Based on the recommendation of USFWS, BRHA increased the minimum flow released at York Dam to 100 cfs effective with the receipt of its LIHI certification in 2012. USFWS staff observed the 100 cfs in 2014 and verbally approved of the flows being protective of fish and aquatic life. Calculations were provided to USFWS to document the 100 cfs flow at the York dam and the 5 cfs flow at the Project intake which is passed down the spillage canal.

In early 2015, BRHA's review of the bypass flow calculations at the York Dam revealed that 150 cfs was actually being passed over the dam. Briar met with USFWS on July 14, 2015 and updated USFWS of the new information. At that time both parties agreed to schedule a site visit to view the flows at 100 cfs (based on the new calculations). Briar has attempted to schedule a site visit with USFWS during a time when flows are adequately low but has

[4] https://www.fws.gov/newengland/pdfs/Flowpolicy.pdf

unfortunately been unsuccessful in finding a mutually agreeable time.[5] The Project has continued to bypass 150 cfs over the York Dam by passing 50 cfs over the spillway and 100 cfs through a stop log bay gate fixed in an open position. The minimum flow over the spillway is measured via a fixed staff gage on the abutment. This gage allows the operators to measure the spillage of water over the dam crest as part of their daily log checks of the facility to ensure that the minimum flow is being maintained over the spillway. Additionally, there is an automatic pond level control system in the pond behind York dam that ensures the project maintains a pond level of EL 342.45 msl.

Zone of Effects #2 – Bypassed Reach

A	2	Agency Recommendation (see Appendix A for definitions): • 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). • 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. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. 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).

Supporting Information:

The Project maintains a minimum flow release of 150 cfs through and over the York Dam into the bypassed reach. This is achieved by passing 50 cfs over the York dam spillway and 100 cfs through a stop log bay gate fixed in an open position. The minimum flow over the spillway is measured via a fixed staff gage on the abutment. This gage allows the operators to measure the spillage of water over the dam crest as part of their daily log checks of the facility to ensure that the minimum flow is being maintained over the spillway.

[5] **Certification Condition 2 Language:** Prior to the site visit, Briar Hydro Associates will provide the resource agencies with the gate setting used to pass the 100 cfs and the 5 cfs and the underlying hydraulic calculations. During the field exercise, the gates shall be adjusted as necessary to attain appropriately protective condition if the resource agencies deem these flows to be inadequate. A report on the results, including documentation of resource-agency concurrence, shall be filed with LIHI within 30 days of the field exercise but no later than September 1, 2013.

Zone of Effects #3 – Downstream of Tailrace

A	1	Not Applicable / De Minimis Effect: • Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility. • If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained. • In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located. 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.

Supporting Information:

Zones 3 and 4 include areas of water that are impounded by the downstream Penacook Upper Falls ("PUF") dam. The Rolfe and PUF projects are both operated as run-of-river projects that are regulated using automated pond level control systems. Normal backwater from the PUF project extends to the lower end of the canal but does not impact operations of the Rolfe Project. There is no tailwater affect downstream of the Rolfe Project powerhouse and no free flowing stretches of river between the projects.

Zone of Effects #4 – Downstream Confluence

A	2	Agency Recommendation (see Appendix A for definitions): • 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). • 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. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. 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).

Supporting Information:

See Zone 3, Section III.A.1

A minimum flow of 285 cfs (0.37 cfs/sq. mile, or csm) is maintained below the confluence of the tailrace and the main river channel per the recommendation of USFWS and NHFG staff.

Zone of Effects #5 – Spillage Canal

A	2	Agency Recommendation (see Appendix A for definitions): • 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). • 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. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. 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).

Supporting Information:

In 1986, FERC issued a letter concerning the proposed design changes to the Project as licensed (Appendix 1-2). Per the recommendations of the NHFG and USFWS, the license was amended to include a minimum of 5 cfs to be spilled at the intake control structure (penstock intake structure located at Briar Hydro Dam) in the bypassed section of the power canal ("Spillage Canal").

During the 2012 LIHI certification review, USFWS and NHFG staff was unfamiliar with the penstock-bypassed reach and could not verify the sufficiency of the 5 cfs minimum flow to support habitat in the penstock bypass and downstream through the tailrace. USFWS has not yet been able to visit the site and verify the sufficiency of these flows through observation and the project continues to pass 5 cfs in this zone.

III.B.1 Water Quality

ZoE #1 - Impoundment

B	3	Site-Specific Monitoring Studies: • Document consultation with appropriate water quality agency to determine what water quality parameters and sampling methods are required. • Present recent water quality data, explain how it satisfies applicable water quality standards, and provide a letter from the appropriate state of other regulatory agency accepting these results.

Supporting Information:

To support its LIHI application, BRHA performed water quality sampling in August and September of 2012 in accordance with a New Hampshire Department of Environmental Services ("NHDES") sampling protocol (Appendix 2-1) to demonstrate compliance with state water quality standards. Instantaneous handheld meter readings were taken for water temperature and dissolved oxygen in the impoundment, directly above the Briar-Hydro dam (Assessment Unit NHIMP700030507-09) (Station ID 03K-CTC). NHDES, in its letter from December 31, 2012 (Appendix 2-2), stated that the Project is not adversely impacting water quality standards for dissolved oxygen, phosphorus and chlorophyll-a. Figure 5 below shows the locations of the 3 monitoring stations, including station 03K-CTC in Zone 1.

The Rolfe Project impoundment is not listed as impaired, but it is listed as a Category 3 water in the 2016 Assessment Report,[6] which are those waters for which there is insufficient information upon which to base a determination of designated-use support.

The Project does not have a water quality certification issued after 1986 (Appendix 1-5). Due to the fact that the 2012 sampling data and letter from NHDES is approaching 5 years old, BRHA is prepared to retest according to DES protocols at station 03K-CTC during the summer of 2018 and share the findings with LIHI upon receipt. Once the data has been reviewed by NHDES, BRHA will provide an updated letter upon receipt or by the end of 2018.

[6] https://www.des.nh.gov/organization/divisions/water/wmb/swqa/2016/index.htm (See "2016 Draft Status of Each Assessment Unit")

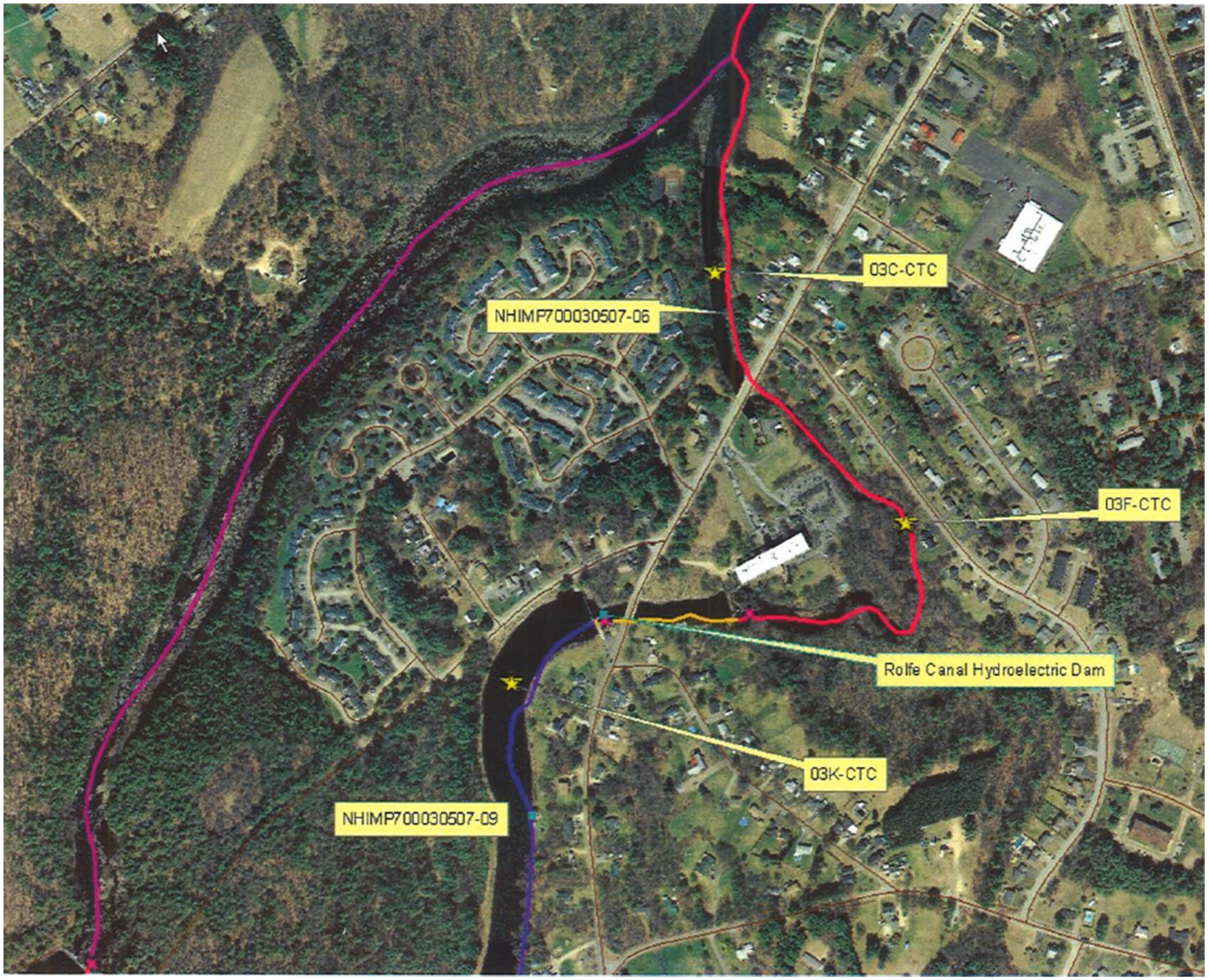

Figure 5 - Water Quality Monitoring Locations

Zone of Effects #2 – Bypassed Reach

B	3	Site-Specific Monitoring Studies: • Document consultation with appropriate water quality agency to determine what water quality parameters and sampling methods are required. • Present recent water quality data, explain how it satisfies applicable water quality standards, and provide a letter from the appropriate state of other regulatory agency accepting these results.

Supporting Information:

In the testing protocol, DES did not recommend a monitoring station in the bypassed reach (Zone 2) below York dam. However, the river assessment unit (NHIMP700030507-06) that encompasses Zone 2 was sampled in 2015 and 2016 because it is the impoundment of the downstream Penacook Upper Falls ("PUF") project.

According to the 2016 Assessment Report,[7] the PUF impoundment is currently listed as a Category 5 impaired water for aquatic life support due to pH impairment. The water quality sampling conducted in 2015 and 2016 included deploying data sondes to collect 10 days of continuous dissolved oxygen and temperature data and grab sampling of chlorophyll and phosphorus. The results of 2016 sampling at PUF have been received by NHDES and verbally accepted as within the standard range. A letter confirming that "the (PUF) Project does not appear to be causing or contributing to violations of state water quality standards" is forthcoming in the fall of 2017.[8] Below is a table showing the overlapping river assessment units and the most recent date of sampling.

PUF River Assessment Units - Sampled in 2015 & 2016	
NHIMP700030507-06	Penacook Upper Falls Dam Impoundment
NHRIV700030505-09	Downstream of Penacook Upper Falls Dam
Rolfe Canal River Assessment Units - Sampled in 2012	
NHIMP700030507-09	Rolfe canal dam impoundment
NHIMP700030507-06	Spillage canal after Briar pipe dam
NHIMP700030507-06	Downstream of Rolfe Canal dam bypass reach - downstream of powerhouse

[7] https://www.des.nh.gov/organization/divisions/water/wmb/swqa/2016/index.htm (See "2016 Draft Status of Each Assessment Unit")

[8] This letter will satisfy an active condition of the LIHI certification for PUF, and therefore will be provided to LIHI upon receipt.

Zone of Effects #3 – Downstream of Tailrace

B	3	Site-Specific Monitoring Studies: • Document consultation with appropriate water quality agency to determine what water quality parameters and sampling methods are required. • Present recent water quality data, explain how it satisfies applicable water quality standards, and provide a letter from the appropriate state of other regulatory agency accepting these results.

Supporting Information:

This river assessment unit (NHIMP700030507-06) that encompasses Zone 3 was sampled in 2015 and 2016 because it is the impoundment of the PUF project. *See Zone 2, Section III.B.1*

Zone of Effects #4 – Downstream Confluence

B	3	Site-Specific Monitoring Studies: • Document consultation with appropriate water quality agency to determine what water quality parameters and sampling methods are required. • Present recent water quality data, explain how it satisfies applicable water quality standards, and provide a letter from the appropriate state of other regulatory agency accepting these results.

Supporting Information:

Monitoring station 03C-CTC is in Zone 4. It is within the assessment unit (NHIMP700030507-06) that was sampled in 2015 and 2016 because it is the impoundment of the PUF project. *See Zone 2, Section III.B.1*

Zone of Effects #5 – Spillage Canal

B	3	Site-Specific Monitoring Studies: • Document consultation with appropriate water quality agency to determine what water quality parameters and sampling methods are required. • Present recent water quality data, explain how it satisfies applicable water quality standards, and provide a letter from the appropriate state of other regulatory agency accepting these results.

Supporting Information:

See Zone 1, Section III.B.1

During the 2012 sampling effort, a water quality monitoring station was set up in the spillage canal (referred to as "bypass reach", 03F-CTC, in Figure 5) to monitor dissolved oxygen and temperature continuously for a 10 day period under critical low flow/high temperature conditions. However, due to the fact that the sampling data at this station is 5 years old, BRHA

is prepared to retest according to DES protocols at station 03F-CTC during the summer of 2018. BRHA will provide an updated letter from NHDES by the end of 2018.

III.C.1 Upstream Fish Passage

ZoE #1 - Impoundment

C	2	Agency Recommendation: • 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). • 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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

Shad, Herring and Salmon

According to the *Strategic Plan & Status Review, Anadromous Fish Restoration Plan, Merrimack River,*[9] anadromous fish, including Atlantic salmon, American shad, and river herrings (alewives and blueback herring) have historically populated the Merrimack River basin. Salmon were present in most of the major tributaries, including the Contoocook River, although the Pemigewasset River watershed in the upper Merrimack basin served as the principal salmon spawning and rearing area. Shad and river herrings likely occurred upstream as far as the Winnipesaukee River watershed. In 1847, the Essex Dam in Lawrence, Massachusetts was constructed at River Mile 30, blocking anadromous fish access to critical upstream habitat. Atlantic salmon became extirpated, while shad and river herring maintained diminished populations by using available habitat downstream of Essex Dam.

Article 30 of the Rolfe Project's FERC license provided for the construction of fish passage facilities after consultation with the USFWS and NHFG. Both upstream and downstream fish passage facilities were required within one year after completion of fish passage facilities at the downstream Garvins Falls Dam, the Hooksett Dam, the Amoskeag Dam and the Pawtucket Dam. At the time the license was issued, a fish lift had already been installed at Essex Dam (1982) and facilities are now in place at the Pawtucket and Amoskeag dams as well. The license required the Project, after consultation with the NHFG and the USFWS, to file functional design drawings with the Commission no later than July 1, 1988.

On September 25, 1986, the FERC amended Article 30, requiring functional design drawings be filed within two years after the annual passage of 15,000 adult American shad at the Garvins Falls Project (FERC No. 1893)[10], or through the fish facilities of the proposed Sewalls Falls

[9] Technical Committee for Anadromous Fishery Management of the Merrimack River Basin and Advisors to the Technical Committee, October 16, 1997

[10] FERC No. 1983, "Merrimack River Project," includes Garvin Falls, Hookset and Amoskeag Dams

Project (FERC No. 7216) if constructed, but in no case later than July 1, 2004, and installation of fish passage facilities within 5 years of the same triggering event. The Sewalls Falls Project was not constructed and is no longer licensed.

The USFWS fishway prescription (December 20, 2006) that applies to the Eversource-owned dams on the Merrimack River mainstem requires operational anadromous upstream passage at Hooksett Dam within three years after annual passage of either 9,500 shad or 22,500 river herring at Amoskeag Dam. It also requires upstream passage at Garvins Dam after annual passage of either 9,800 shad or 23,200 river herring at Hooksett Dam (unless the Hooksett passage facility is built without a fish counting facility, in which case the trigger will be either 19,300 shad or 45,800 river herring at Amoskeag).

According to the latest annual report to FERC from Eversource (February 23, 2017[11]), USFWS declared in January 2017 that based on 2016 passage numbers, the trigger for constructing fish passage at Hooksett has been met. Currently, Eversource is evaluating the results of their Upstream Fish Passage Feasibility Study and has not yet constructed upstream passage. The earliest that the Rolfe Canal Project will be required to install fish passage facilities is 2020.

American Eel

There have been some studies of baseline catadromous American eel populations in the Contoocook basin; however, according to John Magee, a NHFG fisheries biologist, eel were found in 2001 in Clement Pond (Hopkinton), which is upstream of the Facility, and are present in other Merrimack River tributaries to the north and south. Additionally, electrofishing conducted by NHFG and USFWS staff collected 48 eels in the Contoocook River from July 2015 through August 2016.

Per Condition 4[12] of Rolfe's 2012 LIHI certification, BRHA has been working collaboratively with NHFG and USFWS on a downstream and upstream eel passage plan for the Rolfe, Penacook Upper and Penacook Lower Falls Projects. Since Penacook Lower Falls is the first dam above the confluence of the Merrimack and Contoocook Rivers, upstream passage for Rolfe canal is tied to the Penacook Lower Falls facility. USFWS staff conducted a site visit at Penacook Lower Falls on June 26, 2017 to evaluate potential locations for upstream Irish traps and eel ramps in the

[11] https://elibrary.ferc.gov/idmws/doc_info.asp

[12] **Certification Condition 4 Language**: By August 1, 2013, BRHA shall enter into and provide LIHI with a copy of an agreement reached between the U.S. Fish and Wildlife Service, the New Hampshire Department of Fish and Game and BRHA for providing safe, timely and effective interim and permanent downstream passage and permanent upstream passage for American eel. The agreement shall address 1) measures to be taken to provide interim downstream passage, which shall be operational by August 15, 2013; 2) the consultative process for design and implementation of a permanent downstream passage, which shall be operational by August 1, 2016, subject to a reserved right by the resource agencies to amend that deadline as they deem necessary; and 3) the consultative process and schedule for design and implementation of permanent upstream passage. BRHA shall notify LIHI within two weeks of completion of permanent passage measures. In the event that the USFWS and NHDFG determine prior to the installation of permanent downstream passage that the initial interim downstream passage measures are not providing safe, timely and effective interim passage for out-migrating eels, BRHA shall implement other reasonable interim measures as requested by these agencies.

bypass reach of Penacook Lower Falls. Since that meeting, BRHA manufactured Irish traps in close consultation with USFWS (Doug Smithwood) and they are currently operational as upstream eel passage routes (See Figure 6 below); however, USFWS has proposed additional changes to the locations of upstream passage (See report on upstream passage, Appendix 4-5). BRHA continues to work collaboratively with USFWS to implement the suggested changes.

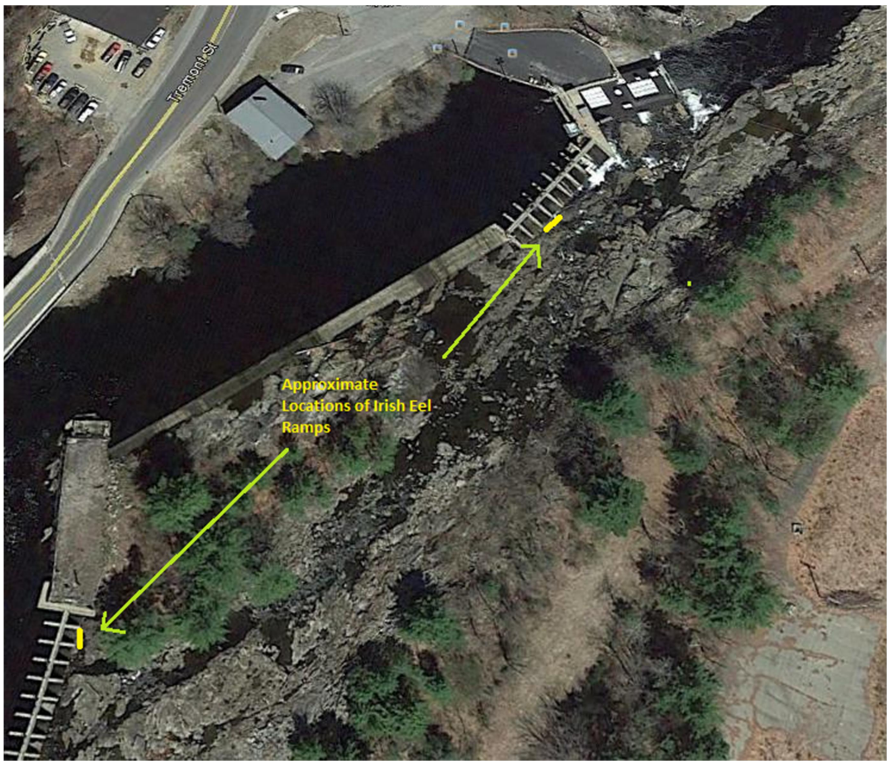

Figure 6 - Location of Upstream Eel Passage at Penacook Lower Falls

Zone of Effects #2 – Bypassed Reach

C	2	<u>Agency Recommendation:</u> • 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). • 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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

See Zone 1, Section III.C.1

Zone of Effects #3 – Downstream of Tailrace

C	2	Agency Recommendation: 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). 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. Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

See Zone 1, Section III.C.1

Zone of Effects #4 – Downstream Confluence

C	2	Agency Recommendation: • 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). • 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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

See Zone 1, Section III.C.1

Zone of Effects #5 – Spillage Canal

C	2	Agency Recommendation: • 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). • 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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

See Zone 1, Section III.C.1

III.D.1 Downstream Fish Passage

ZoE #1 - Impoundment

D	2	Agency Recommendation: • 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). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

It has been difficult to understand the baseline population of eel attempting to move upstream and therefore difficult to establish a baseline population from which to test the efficacy of any downstream passage. Downstream passage for American eel is currently provided via the 50 cfs gate release at York Dam and a bypass pipe at the facility headworks.

As part of condition number 4 of the 2012 certification, BRHA was required to meet certain obligations for downstream and upstream eel passage starting August 1, 2013. In order to meet these obligations, BRHA investigated various downstream solutions, including trap and truck, underwater barrier and guidance systems and altering plant operations. In addition, BRHA hired a former Maine Department of Marine Fisheries eel expert who has developed and implemented over twenty eel passages to evaluate the site and develop a plan for downstream passage.

Due to the very limited number of eel observed at the project, in 2013 BRHA consulted with John Warner at U.S. Fish and Wildlife Services and asked for his approval to delay implementation of downstream passage until we could gather more information about the existing eel population.

In 2014-2016, BRHA implemented a formal process to monitor the eel population at the project. Specifically, BRHA deployed fyke nets in the power canal and bypass reach and a trap at the York Dam to capture any eels. Project operators recorded any observations of eels at the trash racks at the inlet to the penstock and in traps. (See Appendix 4-6 for 2015-2016 Conditions Update on Eel passage).

On June 13, 2017, following a collaborative design review process, USFWS approved BRHA to move forward with construction of a screen and traps for downstream eel passage to be located at the first gate inlet of Rolfe Canal (See Appendix 4-3 for consultation record and 4-4 for preliminary design). BRHA and agency staff agreed that due to the novelty of the design application in New England, the screen and associated traps will need to undergo operational testing and may require operational or structural changes in future years based upon experience gained through operation. BRHA intends to begin site preparation work in August

2017 to utilize the low water season for construction activities that require access to areas that are normally inaccessible during the spring high water season. BRHA intends to have the eel screen operational by the beginning of the 2018 downstream passage season, on or before August 1, 2018. As an interim approach, BRHA has installed fyke nets at Rolfe Canal for downstream trapping and monitoring for the remainder of 2017.

The salmon restoration program in the Merrimack River basin has been abandoned (See Appendix 4-1), therefore downstream salmon smolt passage does not need to be operated. Additionally, NHFG did not stock herring above the Rolfe canal project and therefore downstream passage for other species is also not required at this time.

Zone of Effects #2 – Bypassed Reach

D	2	Agency Recommendation: • 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). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:
There are no downstream fish passage facilities specific to this zone. *See Zone 1, III.D.1*

Zone of Effects #3 – Downstream of Tailrace

D	2	Agency Recommendation: • 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). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:
There are no downstream fish passage facilities specific to this zone. *See Zone 1, III.D.1*

Zone of Effects #4 – Downstream Confluence

D	2	Agency Recommendation: • 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). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

There are no downstream fish passage facilities specific to this zone. *See Zone 1, III.D.1*

Zone of Effects #5 – Spillage Canal

D	2	Agency Recommendation: • 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). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

There are no downstream fish passage facilities specific to this zone. *See Zone 1, III.D.1*

III.E.1 Watershed and Shoreline Protection

Zone of Effects #1 – Impoundment

E	1	Not Applicable / De Minimis Effect: • 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). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

The Applicant does not own any of the land abutting the York Dam impoundment, the bypassed reach of the Contoocook River, the shoreline of the inlet canal, or the shoreline of the tailrace channel. The dam is leased from the State of New Hampshire (See Appendix 1-3). No protected buffer zones have been created along the riverine impoundment through a settlement agreement or the license. There is no shoreland protection plan. There have been no observed areas of high erosion during the 24 years that the Project has been operated. There are neither recommendations nor a shoreland management plan related to the Project.

Zone of Effects #2 – Bypassed Reach

E	1	Not Applicable / De Minimis Effect: • 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). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

The canal banks consist of sections that are riprapped with stone in areas of high flow and earthen banks in the remaining sections of the canal. *See Zone 1, III.E.1*

Zone of Effects #3 – Downstream of Tailrace

E	1	Not Applicable / De Minimis Effect: • 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). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

The tailrace banks immediately downstream of the powerhouse are stabilized with riprap. *See Zone 1, III.E.1*

Zone of Effects #4 – Downstream Confluence

E	1	Not Applicable / De Minimis Effect: • 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). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

See Zone 1, III.E.1

Zone of Effects #5 – Spillage Canal

E	1	Not Applicable / De Minimis Effect: • 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). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

See Zone1, III.E.1

III.F.1 Threatened and Endangered Species

Zone of Effects #1 –Impoundment

F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • 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.

Supporting Information:
BRHA a consultation memorandum dated May 27, 2017 from the New Hampshire Natural Heritage Bureau ("NHB") indicating that four state-listed species are present in the vicinity of the Project: wood turtle (species of concern), spotted turtle (threatened), Northern leopard frog (species of concern) and the rapids clubtail (species of concern). Carol Henderson of the NHFG was consulted on August 7, 2017 (See Appendix 6-1) for any suggested mitigation for these plant and animal species of concern.

As a condition of the Project's certification in 2012, BRHA is required to consult with the NHB prior to any dredging or drawdown that may imperil the long leaved pondweed, which was previously identified in the vicinity of the Project. However, this plant species was not identified in the 2017 plant and animal species record (See Appendix 6).

Zone of Effects #2 – Bypassed Reach

F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • 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.

Supporting Information: *See Zone 1, Section III.F.1*

Zone of Effects #3 – Downstream of Tailrace

F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • 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.

Supporting Information: *See Zone 1, Section III.F.1*

Zone of Effects #4 – Downstream Confluence

F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • 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.

Supporting Information: *See Zone 1, Section III.F.1*

Zone of Effects #5 – Spillage Canal

F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • 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.

Supporting Information: *See Zone 1, Section III.F.1*

III.G.1 Cultural and Historic Resources

Zone of Effects #1 – Impoundment

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

The Applicant submitted a Request for Project Review to the New Hampshire Division of Historical Resources in July 2017 (See Appendix 7). The Division has not yet responded to the review request, but the response will be forwarded to LIHI upon receipt. The Bureau noted that an archaeological site is located downstream (perhaps the old mill building and dam) and that the dam (probably York Dam) may be eligible for the National Register of Historic Places. Article 34 of the license requires, prior to any future construction, consultation with the State Historic Preservation Office. BRHA is currently in compliance with this license article and no future construction activities are planned.

Zone of Effects #2 – Bypassed Reach

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

See Zone 1, III.G.1

Zone of Effects #3 – Downstream of Tailrace

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

See Zone 1, III.G.1

Zone of Effects #4 – Downstream Confluence

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

See Zone 1, III.G.1

Zone of Effects #5 – Spillage Canal

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

See Zone 1, III.G.1

III.H.1 Recreational Resources

Zone of Effects #1 – Impoundment

H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

The Project provides limited recreational opportunities due to insufficient shorelands ownership by BRHA (see Figure 7 showing the Project lands). The City of Concord owns a large tract of forested land that is located immediately downstream of the intake to the Rolfe Canal and between the Contoocook River and the canal. Although the City has identified this land as a potential location for a park, no formal development has yet occurred, and the area is primarily used for hiking and serves as access for angling.

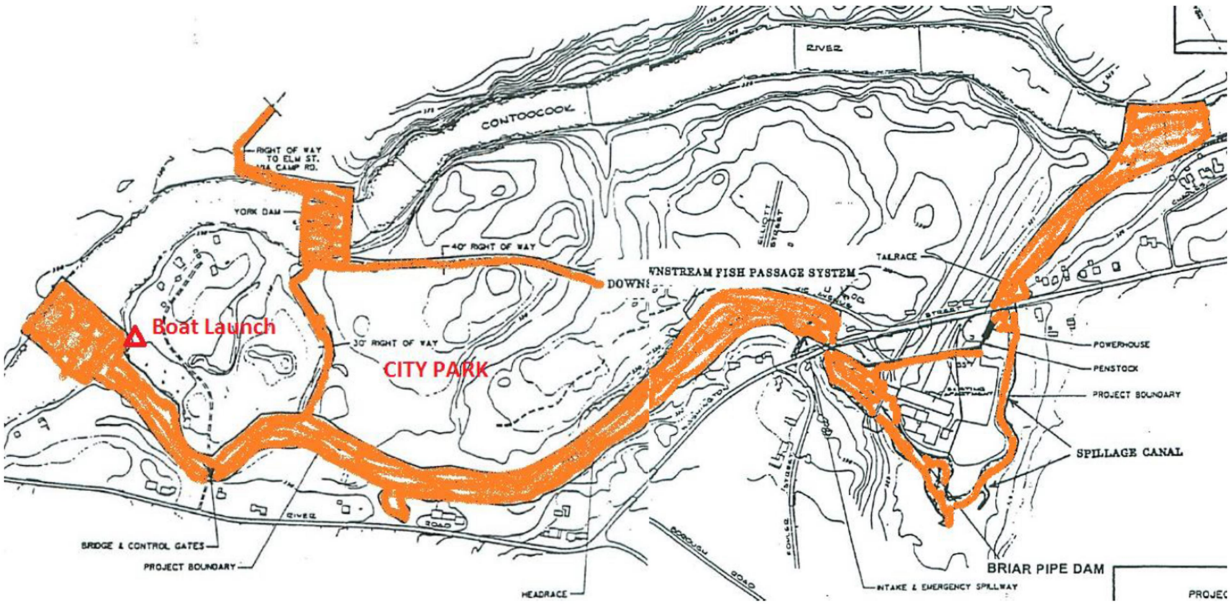

Figure 7 - Map of Project Lands and Recreation Access

Prior to Project development, the City of Concord maintained a boat launch (See Figure 8) on the riverbank at the canal inlet. The license indicated that BRHA would protect the City's existing boat launch during Project construction and operation; however, unsafe currents were identified during a FERC inspection in 1990 and an order was issued requiring the BRHA to relocate the boat launch. FERC subsequently issued an order on January 22, 1993 approving a redesign with the launch remaining in the original location but with a breakwater to create a slack-water area for safe launching. The order requires the completion of a study within nine

months to determine the maximum safe velocity for use of the launch with gating off of the launch when velocities exceed the safe level. FERC approved the boat launch operation plan by letter order dated June 24, 1993. The license does not require development of a recreation plan.

During the licensing process, the USFWS recommended that the Applicant provide access across project lands for angling opportunities, especially as related to increased pressure once salmon[13] and shad are restored. BRHA does not consider its limited ownership of lands in the area conducive to such use. Standard Article 18 of the license requires free public access for public outdoor recreation, including hunting and fishing, except where such use would conflict with project operations or present a risk to public safety.

Figure 8 - Photo of the Boat Launch

[13] As stated in the Downstream Passage section and Appendix 4-1, the salmon restoration program has been discontinued.

Zone of Effects #2 – Bypassed Reach

H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

See Zone 1, section III.H.1. There are no additional recreational resources in this zone.

Zone of Effects #3 – Downstream of Tailrace

H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

See Zone 1, section III.H.1. There are no additional recreational resources in this zone.

Zone of Effects #4 – Downstream Confluence

H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

See Zone 1, section III.H.1. There are no additional recreational resources in this zone.

Zone of Effects #5 – Spillage Canal

H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

See Zone 1, section III.H.1. There are no additional recreational resources in this zone.

PART IV. FACILITY CONTACTS

Project Owner: Briar Hydro Associates, LLC	
Name and Title	Andrew Locke, President
Company	Essex Hydro Associates, A General Partner
Phone	(617) 367-0032
Email Address	alocke@essexhydro.com
Mailing Address	55 Union Street, Boston, MA 02108
Project Operator (if different from Owner):	
Name and Title	David Sherman, Operations Manager
Company	Essex Power Services, Inc.
Phone	617-367-0032
Email Address	dsherman@essexhydro.com
Mailing Address	c/o Essex Hydro Associates, 55 Union St, 4th Floor Boston, MA 02108
Consulting Firm / Agent for LIHI Program (if different from above):	
Name and Title	Elise Anderson, Regulatory Analyst
Company	Essex Power Services, Inc.
Phone	(617) 367-0032
Email Address	eanderson@essexhydro.com
Mailing Address	c/o Essex Hydro Associates, 55 Union Street, Boston, MA 02108
Compliance Contact (responsible for LIHI Program requirements):	
Name and Title	Elise Anderson, Regulatory Analyst
Company	Essex Power Services, Inc.
Phone	(617) 367-0032
Email Address	eanderson@essexhydro.com
Mailing Address	c/o Essex Hydro Associates, 55 Union Street, Boston, MA 02108
Party responsible for accounts payable:	
Name and Title	Maureen Donnelly
Company	Essex Power Services, Inc.
Phone	(617) 367-0032
Email Address	mdonnelly@essexhydro.com
Mailing Address	c/o Essex Hydro Associates, 55 Union Street, Boston, MA 02108

Agency Contacts

Agency Contact (Check area of responsibility: Flows_X_, Water Quality __, Fish/Wildlife Resources _X_, Watersheds _X_, T/E Spp. _, Cultural/Historic Resources __, Recreation __):	
Agency Name	US Fish and Wildlife Service
Name and Title	John Warner, Manager of Federal Activities
Phone	(603) 223-2541
Email address	john_warner@fws.gov
Mailing Address	70 Commercial Street, Suite 300 Concord, NH 03301-5087

Agency Contact (Check area of responsibility: Flows__, Water Quality _X_, Fish/Wildlife Resources __, Watersheds _X_, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	New Hampshire Department of Environmental Services, Water Division
Name and Title	Greg Comstock, Supervisor, Water Quality Planning Section
Phone	603-271-2983
Email address	Gregg.Comstock@des.nh.gov
Mailing Address	6 Hazen Drive P.O. Box 95

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _, Watersheds __, T/E Spp. _X_, Cultural/Historic Resources __, Recreation __):	
Agency Name	New Hampshire Natural Heritage Bureau
Name and Title	Amy Lamb
Phone	(603) 271-2214
Email address	Amy.lamb@des.nh.gov
Mailing Address	172 Pembroke Rd. Concord, NH 03301

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation _X_):	
Agency Name	National Parks Service, Rivers and Special Studies Branch
Name and Title	Kevin Mendik
Phone	(617) 223-5299
Email address	Kevin_mendik@nps.gov
Mailing Address	15 State Street, Boston, MA 02109

Agency Contact (Check area of responsibility: Flows_X_, Water Quality _ X _, Fish/Wildlife Resources _ X _, Watersheds _ X _, T/E Spp. _ X _, Cultural/Historic Resources _ X _, Recreation _ X _):	
Agency Name	Federal Energy Regulatory Commission
Name and Title	Kimberly Bose, Secretary
Phone	(202) 502-8400
Email address	Kimberly.bose@ferc.gov
Mailing Address	888 First Street, N.E., Washington, DC 20426

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _X_, Recreation _ _):	
Agency Name	New Hampshire Division of Historical Resources
Name and Title	Nadine Miller Preservation Project Reviewer
Phone	(603) 271-6628
Email address	Nadine.Miller@dcr.nh.gov
Mailing Address	19 Pillsbury Street - 2nd floor Concord, NH 03301-3570

Agency Contact (Check area of responsibility: Flows__, Water Quality _ _, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	National Marine Fisheries Service (NOAA)
Name and Title	Susan Tuxbury, Fisheries Biologist
Phone	978-281-9176
Email address	Susan.tuxbury@noaa.gov
Mailing Address	55 Great Republic Drive

Agency Contact (Check area of responsibility: Flows_X_, Water Quality __, Fish/Wildlife Resources _X_, Watersheds _X_, T/E Spp. _, Cultural/Historic Resources __, Recreation __):	
Agency Name	NH Fish and Game Department
Name and Title	Carol Henderson
Phone	(603) 271-3511
Email address	Carol.henderson@wildlfe.nh.gov
Mailing Address	11 Hazen Drive, Concord, NH 03301

PART V. SWORN STATEMENT

SWORN STATEMENT

As an Authorized Representative of Briar Hydro Associates, 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.

Company Name: Essex Hydro Associates, L.L.C., A General Partner Briar Hydro Associates

Authorized Representative Name: Andrew J. Locke Title President

Commonwealth
State of ~~Massachusetts~~)

County of Suffolk.)

On this, the 28 day of August, 2017, before me a notary public, the undersigned officer, personally appeared Andrew Locke, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained. In witness hereof, I hereunto set my hand and official seal.

Notary Public Liane M. Sherman

LIANE M. SHERMAN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 3, 2017

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