

Recertification Report: Recommendation for the Pawtucket No. 2 Hydroelectric Project
Prepared by Pat McIlvaine
August 5, 2014

This report contains my recommendation for recertification of the Pawtucket No. 2 Hydroelectric Project (P- 3689) (the “Project”). The Project also goes by the name of “the Main Street Dam.”

I. Recertification Standards

Chapter 2, Section 2.25 of the Low Impact Hydropower Institute (LIHI)’s Certification Handbook (Updated April 2014) regarding Applications for Recertification (“Recertification Standards”) provides that a request for renewal of a previously-issued LIHI certification (“re-certification”) will be granted at the conclusion of the term of the existing certification, so long as (1) there have been no “material changes” at the facility that would affect the certification and (2) LIHI’s certification criteria have not been revised since the previous certification was issued by LIHI.”

The process also states that if no information is missing from the Re-Certification application package, and if the Application Reviewer has determined that there are no material changes or changes in LIHI’s criteria, than the project is eligible for recertification action by the Executive Director.

II. Adequacy of the Recertification Application Package

The Pawtucket No. 2 Hydroelectric Project (the “Project”) received a license exemption (P-3689) from the Federal Energy Regulatory Commission on March 23, 1981. Attachment No. 1 illustrates the location of the facility on the Blackstone River along with the nearest upstream dams. The project was initially certified as "low impact" by LIHI on July 28, 2004 (LIHI #11) and was re-certified on March 26, 2010. This application is for a second recertification. The Project also goes by the name of “the Main Street Dam.”

I have reviewed the materials submitted by Charles Rosenfield, of Pawtucket Hydropower LLC, (Applicant) in support of its application dated December 31, 2013 for recertification of the Pawtucket No. 2 Hydroelectric Project. Effective, March 14, 2014, ownership of and holder of the license exemption for this Project was transferred to Gravity Renewables. As a result of my review, I requested additional information, which was supplied by the Jonathan Miller of Gravity Renewables via several emails between June 27 through July 9, 2014. I also reviewed the LIHI file containing the past certification and re-certification decisions and FERC’s public information file on the Project. I solicited comments from state and federal agencies and two Non-Governmental Organizations (NGOs) knowledgeable of the Project, none of which reported any changes, known compliance issues or new concerns associated with the Project. These communications, which were initiated on July 9, 2014, included the individuals listed below. A telephone record of these conversations is included as Attachment No. 2.

- Jay McGinn, P.E – RI Department of Environmental Management

- Joseph Bachand – USDA, Natural Resource Conservation Service (NRCS)
- Mellisa Grader – US Fish & Wildlife Service
- Lawrence Oliver – US Army Corps of Engineers
- Frank Geary – Blackstone River Watershed Council
- Wenley Ferguson, PhD – Save-the-Bay

One comment letter was received from the Blackstone River Watershed Council. In summary it recommended that the certification of the Project be withheld until the planned upstream fish passage proves successful at which time LIHI certification could be considered. The letter also includes the statement by the Blackstone River Watershed Council that their ultimate goal “is to see the Main Street Dam removed from operation.” My discussion with Frank Geary, author of this comment letter, is summarized in Attachment No. 2. My assessment is that LIHI’s criteria do not require that a project’s certification be withheld until effective fish passage is proven, but instead requires that the Project is in compliance with mandatory fish passage requirements established for the Project, and commitments are in place that satisfy LIHI’s criteria. In many situations, such fish passage facilities have future construction dates (including at Pawtucket No. 2) but the certification review confirms that progress is being made on the plans for passage construction, and that the resource agencies are satisfied with that progress and existing commitments. Regarding dam removal recommendations, these must be made by a “resource agency” under LIHI’s Criterion H to prohibit certification, which the Blackstone River Watershed Council is not. No new “official” recommendations for dam removal were expressed in my conversations with the resource agencies.

In my opinion, the follow-up materials provided are sufficient to make a recertification recommendation and no further application review is needed.

III. There have been no “material changes” at the facility that would affect the certification.

In accordance with the Recertification Standards, “material changes” mean non-compliance and/or new or renewed issues of concern that are relevant to LIHI’s criteria. Based on my review of materials provided, review of FERC’s public records, and consultation with the noted agencies and NGOs, I found that there are no instances of non-compliance or new or renewed issues of concern.

A key element of the recertification review for “material changes” was associated with the status of the planned upstream fish passage facility. A Memorandum of Agreement signed and amended on May 30, 2007 (attached at the end of Attachment No. 3) outlines the responsibilities of the various parties for the construction, operation and maintenance of the structure. An unusual aspect of the Agreement is that the majority of the costs for passage construction is non-applicant funding. This MOA also indicates that fish passage operation and responsibility for ensuring its effectiveness as specified by the US Fish and Wildlife is the responsibility of RI DEM and not the Applicant. Delays have occurred from what was the original planned construction date, but a new target date has not yet been established by the ACOE, who is responsible for alternatives review and re-design of the fish passage at this site. A key alternative would entail removal of the dam at the Pawtucket powerhouse, development of some means of

water transport to draw water from the impoundment behind the upstream Slater Mill Dam (hereby increasing the head available for generation capability) and re-development of a historical “Sargent’s trench” as bypass around the Slater Mill Dam. As noted in Attachment No 2, Mr. Oliver of ACOE stated this would restore an important, nationally significant historic feature (the Sargent’s trench), provide for better upstream fish passage and likely be more economical than building a standard passage structure at the Main Street dam as such construction must be “in the wet”. All agencies consulted have indicated that the delays currently being experienced are not being caused by the Applicant, although the NRCS representative did comment that the former owner did cause some delays when the discussions and agreements for passage installation were first initiated. The conversation summaries included in Attachment No. 1 provide more background on the status of the fish passage project. I believe that the MOA sufficiently serves as written commitment addressing LIHI’s requirements for ensuring effective fish passage. However, due to some concern raised as to continued funding availability, and therefore the possibility of the fish passage not being installed, I am recommending that an additional condition be added to the existing conditions for this Project’s certification, as discussed further below.

No other changes have occurred at the facility which affects LIHI’s certification criteria.

IV. LIHI’s certification criteria have not been revised since the previous certification was issued by LIHI in 2007.

It is my understanding that LIHI’s criteria, or the Board’s interpretation of one or more criteria, that are applicable to the circumstances of the Pawtucket No. 2 Hydroelectric Project have not changed in meaningful ways since the date of the original certification.

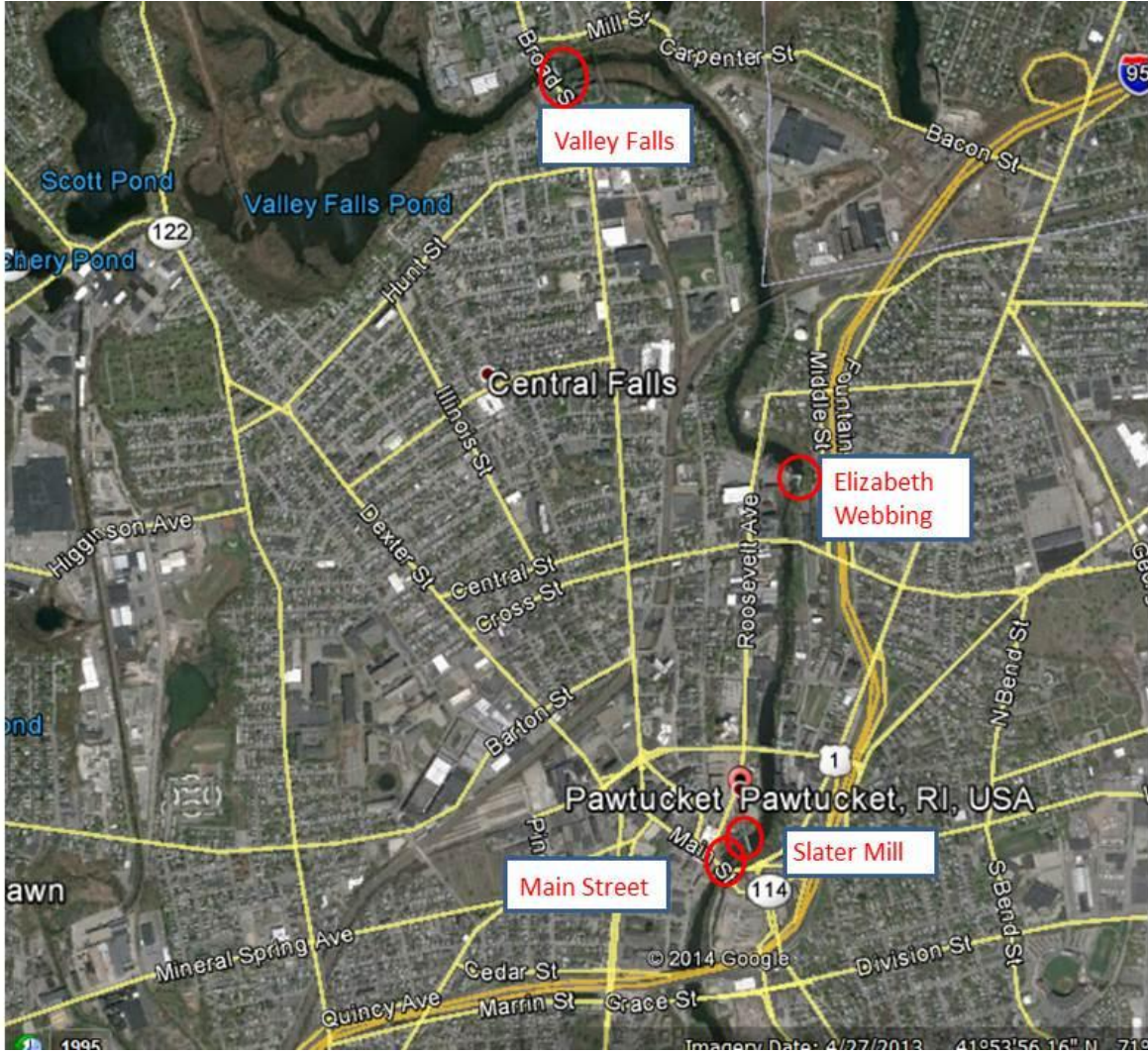
V. Conclusion

In light of the above, I recommend conditioned recertification of the Pawtucket No. 2 Hydroelectric Project. These conditions were included in the initial certification of the Project, with the exception of Condition E. This additional condition is recommended due to the fact that there is a potential that the funding provided by the NRCS for construction of the upstream fish passage could be eliminated if sufficient progress towards the facility’s construction is not made. The financial ability or desire by Gravity Renewables to assume all costs associated with the construction of the passage structure has not been examined as part of this review, and instead Condition E was added for recertification as proposed below:

- A. The Rhode Island Department of Environmental Management (RIDEM) has implemented a plan for restoring anadromous fish to the Blackstone River. If the Applicant contests a requirement developed under Exemption Standard Article 2 (which incorporates the U.S. Fish and Wildlife Service’s May 21, 1981 comment letter), LIHI certification of the Pawtucket Project shall be suspended subject to the project’s continuing compliance with other requirements of LIHI certification.
- B. If the resource agencies prevail in the dispute, and the project complies with the resource agencies’ orders, LIHI will restore the project’s certification.

- C. If the resource agencies prevail in the dispute, and the project refuses to comply with the resource agencies' orders, LIHI will revoke the project's certification.
- D. If the project prevails in the dispute and the resource agencies' recommendations are overturned by a legal proceeding, those recommendations will cease to be valid and LIHI will restore the project's certification subject to the project's continuing compliance with other requirements of LIHI certification.
- E. The development of the fish passage is currently contingent upon funding provided primarily through a grant from the NRCS and such funding at this time has been reported to only be available for about 18 months from July 2014. As development of the fish passage structure is critical to re-certification, the Applicant must submit an annual status report on the fish passage facility, including a schedule for final design selection and structure installation. This report shall also demonstrate to LIHI that means are in place to ensure timely construction and effectiveness testing of the fish passage structure and other obligations contained within the MOA associated with this fish passage program. Any revisions to the MOA, if needed, shall also be provided to LIHI. The first status report shall be provided starting 6 months from the recertification date of the Project, and annually thereafter, to maintain LIHI certification. Any revised MOA shall be provided within 3 months of its execution. Absent such commitment, the Project can no longer be found to be in compliance with LIHI's fish passage and protection criteria. LIHI also reserves to assess whether the construction schedule for structure satisfactorily meets LIHI criteria.

**Attachment 1
Project Location Map**



Attachment 2
Pawtucket No. 2 Recertification Agency Communications

Telephone Conversations

Date: July 9, 2014
Contact Person: Frank Geary, Executive Director
Agency: Blackstone River Watershed Council
Contact Information: 401-333-2123

When I inquired as to his thoughts on the plans to install fish passage at the Project he said he was pleased that the past owner had finally agreed to the passage installation and that he was hopeful that the passage facility would be successful in restoring anadromous species use of the river. His preference is to have the Main Street dam removed to better ensure use of the river but he accepted the fact that may not happen. He is disappointed that that the original construction bids significantly exceeded the budget and is hoping that a re-design by the ACOE can significantly reduce these costs down to where the passage project can move forward. He stated that involvement of ACOE also helps with the funding of the project. I explained the LIHI criterion requirements and he understood the criteria do not specifically require passage to be operational in order to be certified.

Date: July 9, 2014
Contact Person: Melissa Grader, Fisheries Biologist
Agency: US Fish and Wildlife Service
Contact Information: 413-548-9138 x 124

Melissa stated she was not aware of any concerns regarding non-compliance with the project's minimum flow requirements nor did she have any concerns regarding impacts to threatened or endangered species. She did not want to comment on the fish passage aspect until she had an opportunity to discuss it with RIDEM. As of July 30, 2014, a follow-up response from Melissa was not received despite several requests.

Date: July 15, 2014
Contact Person: Jay McGinn, Fish Passage Project Manager
Agency: RI Department of Environmental Management
Contact Information: 401-222-2776 X 4313

Jay reported that the fish passage project was taken over from NRCS in the Spring of 2011 as NRCS could not manage the bidding process or oversee construction. The bid process which occurred in the fall of 2012 resulted in only one bid at \$7.1 million well over the budgeted \$3.5 million due to the need to construct the structure "In the wet". Hurricane Sandy remediation projects delayed RIDEM's ability to focus on the project until the summer 2013. ACOE was brought in to assess alternative designs that could hopefully be considerably less expensive. That review by the ACOE has not yet been completed. A new target date for passage construction cannot be identified until the ACOE complete their assessments. Gravity Renewable has been trying to set-up a meeting with RIDEM but Jay stated they are

hoping to delay the meeting until the ACOE review has been completed. Jay stated he is pleased with Gravity Renewables' interest in moving the project along. NRCS is now only providing funding. Jay believes that Gravity Renewables is obligated to own the structure and RIDEM can be given permission to operate. When questions about any new concerns associated with state threatened and endangered species he stated he did not believe there were any concerns as they would have been identified in the Environmental Assessment process NRCS was required to go through for the design of the fish passage efforts. He identified that new trashracks and screens were recently installed by the former owner of Pawtucket. He did not have any particular position as to whether the Project should receive LIHI certification.

Date: July 15, 2014
Contact Person: Joseph Bachand, State Conservationist
Agency: USDA – Natural Resource Conservation Service
Contact Information: 401-822-8818

Joseph is the WHIP contract manager for the fish passage project for NRCS. He commented that Gravity Renewables has been active in trying to keep the project moving forward. He has found them very responsive to questions he has asked, considerably moreso than the past owner of the Project. He noted that he was surprised that RIDEM allowed the former owner to use the \$100,000 that the owner was to dedicate to fish passage construction to install trash racks. He stated he is concerned that he will not be able to keep the WHIP contract open longer than another 18 months from now. If the contract closes the funding commitment is dissolved. His concern in part has to do with the amount of time it has been taking for the ACOE to complete their review. Joseph briefly described the alternative involving re-development of Sargent's trench (see ACOE discussion for details on this alternative). He identified that if this option were selected, than a potential obstacle may be ownership of the Slater Mill Dam since it is his understanding that a FERC License-Exemption requires that the owner own all of the features of the hydropower project and that it would be unlikely that the ownership of this dam would be transferred due to its historical significance.

Date: July 15, 2014
Contact Person: Wenley Ferguson, Habitat Restoration Coordinator
Agency: Save-the-Bay
Contact Information: 401-272-3540

Wenley's position on the fish passage project was similar to that expressed by the other agencies contacted. She had concerns over the delays that have been experienced but believes that restoration of anadromous species to the Blackstone River is very important so she is hopeful that the passage facility will ultimately be installed. The location of the dam under a bridge makes design of the passage extremely difficult. She did not express any opinion on LIHI's certification of the project. She also stated that given the small size of the power facility, she wonders if it will be economical to run once the fish passage is installed. She does not believe that plant should be allowed to continue to operate if passage is not installed. She asked if LIHI can require that the applicant pay a larger share of the costs of the fish passage project and I stated I did not think we had such authority, especially since the cost-sharing is part of the MOA. We did briefly discuss "conditioning" of a certification approval at which

time she suggested that a condition should be developed that would require that passage be installed regardless of who pays for it and that specific progress-milestones be incorporated in any conditions.

Date: July 17, 2014
Contact Person: Lawrence Oliver, Supervisor of ACOE Fish Passage Project Mgr.
Agency: Army Corps of Engineers
Contact Information: 401-272-3540

Lawrence shared the same background of shifting responsibility of the fish passage project. He stated that although the ACOE studies are not yet complete, his opinion is that the alternative of removing the Main Street Dam, constructing some means of water transfer from the impoundment behind the upstream Slater Mill Dam (hereby increasing the head available for generation capability) and re-development of a historical "Sargent's trench" as bypass around the Slater Mill Dam. Lawrence stated this would restore an important, nationally significant historic feature (the Sargent's trench), provide for better upstream fish passage and likely be more economical than building a standard passage structure at the Main Street Dam, as such construction must be "in the wet". He also believes the alternative would provide more effective passage. We briefly discussed the potential issue of ownership of the Slater Mill Dam. His position is that the historical value of the Slater Mill Dam and the very high interest at the federal level of restoring anadromous fish runs to the Blackstone River would "trump" such potential FERC obstacles, and that some manner of waiver would undoubtedly be secured to allow this alternative passage project to move forward. He could not provide a current target date that the ACOE has for installation of the passage facility at this site.

Attachment No. 3
Memorandum of Agreement and Amendment

C of 5/30/07

MEMORANDUM OF AGREEMENT

This MEMORANDUM OF AGREEMENT (the "Agreement") is made and entered into as of May 30, 2007, by and between the RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (the "DEM") and PAWTUCKET HYDROPOWER, LLC ("Pawtucket"), (collectively, the "Parties").

WHEREAS, Pawtucket is the owner of the Main Street Dam (also known as Pawtucket No. 2), located in Pawtucket, Rhode Island more fully described in deeds recorded in Volume 1094, pages 155 - 162, of the City of Pawtucket Land Evidence Records; and

WHEREAS, the Parties desire to provide upstream and downstream fish passage at the Main Street Dam; and

WHEREAS, the passage of anadromous fish at the dam will enhance the population of anadromous fish in the Blackstone River watershed; and

WHEREAS, the Parties recognize the importance of promoting renewable energy resources in Rhode Island and the value of preserving the energy production and economic viability of this hydroelectric plant as contributing to the state's renewable energy goals; and

WHEREAS, the Parties agree that this Agreement will further the mutual interests of all Parties;

NOW THEREFORE, in consideration for the foregoing promises and other good and valuable consideration, the receipt and sufficiency whereof being hereby acknowledged, the Parties agree as follows:

SECTION 1: SCOPE OF AGREEMENT

1. The Parties agree to perform the tasks assigned below in accordance with the terms and conditions contained herein.
2. Pawtucket agrees to make the payments required below in accordance with the terms and conditions contained herein.

SECTION 2: APPLICABILITY

The provisions of this Agreement shall apply to and be binding upon DEM, Pawtucket and their agents, servants, employees, successors, assigns, designees, and all persons, firms and corporations acting under, through and for them in the performance of work relating to or

08/15/2011 MON 12:03 FAX 783 7490
08/15/2011 12:36 011

RI DEM FISH&WILDLIFE

004

Impacting the requirements of this Agreement. Each party to this Agreement represents that they are fully authorized to enter into the terms and conditions of this Agreement and to legally bind such Party to such terms and conditions.

SECTION 3: PAWTUCKET'S OBLIGATIONS

1. Pawtucket shall enter into a mutually acceptable contract with the U.S. Department of Agriculture, Natural Resources Conservation Service ("NRCS") to implement a Wildlife Habitat Incentive Program fish passage project at the Main Street Dam. Said contract shall be signed by June 1, 2007. Failure to sign said contract by stated date will render this Agreement null and void.
2. Pawtucket agrees to work with NRCS towards mutually acceptable fishway designs developed by NRCS, which shall be based on, and adhere to, U.S. Fish and Wildlife Service fishway design criteria for upstream and downstream passage. These fishway designs, and ultimate construction of the fish passage facilities, will be compatible with continued viable operation of the hydroelectric plant.
3. Pawtucket will contribute One Hundred Thousand (\$100,000) Dollars to be used as a contribution to the matching funds required by the NRCS, in compliance with the NRCS schedule, to assist with the capital costs of constructing fish passage facilities at the Main Street Dam. The Parties agree that this amount will constitute the entire sum Pawtucket will make towards the capital costs of designing and constructing any upstream and downstream fish passage facilities at the Main Street Dam. Further, the Parties agree that if the additional required matching funds for the capital costs to the complete fish passage project cannot be obtained, the project will not go forward, and all monies contributed by Pawtucket pursuant to this paragraph will be returned to Pawtucket.
4. Within thirty (30) days of receipt by Pawtucket of written notice by DEM that the construction of the fish passage facilities has been completed, Pawtucket shall begin making annual payments to the DEM in the amount of Four Thousand (\$4,000) Dollars to compensate the DEM for assuming responsibility for the annual operation and maintenance of the fishways. Said payments shall continue for each year that the fish passage facilities are operational and shall be adjusted annually based on the increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers.
5. Pawtucket shall provide all flows necessary to operate the fishways (upstream and downstream) effectively during the passage seasons, defined in Appendix A, provided that all flows are also compatible to provide flow consistent with the viable operation of the hydro plant. This will be accomplished by incorporating data and results of the NRCS's Engineering and Design Services Study: Hydrology and Hydraulic Analysis Impacts to Hydro Generation Facilities and Environmental Assessment for the Blackstone River Fish Passage Restoration Project, to be completed in January 2008. The Scope of Work for this study will include development and analysis of hydrology and hydraulic models to determine the design parameters for the three fish passage

projects contemplated for the Blackstone River and to determine and mitigate impacts to the generation of hydro-electric power. A mutually agreed upon project alternative will be selected by Pawtucket, NRCS, and DEM to maximize fish passage restoration while maintaining hydropower generation viability.

6. Within sixty (60) days of receipt by Pawtucket of written notice by DEM that the construction of the fish passage facilities has been completed, Pawtucket shall develop and submit for DEM's review and approval an operation and maintenance plan to ensure flows necessary to operate the fishways (upstream and downstream) effectively during the passage seasons defined in Appendix A.
7. The initial year of operation of the fish passage facilities shall be used as a "shakedown period" intended to ensure that the facilities are operating as designed and to make minor adjustments to the facilities and operation. At the end of the shakedown period, Pawtucket shall have a licensed engineer certify that the facilities are constructed as designed in all material respects.
8. Pawtucket shall allow any representative of the DEM to enter the property on which the dam and fishways are located at any reasonable time for the purpose of monitoring and performing the actions required by this Agreement.
9. Pawtucket shall be responsible for all maintenance activities not directly related to fish passage operations (e.g., trashrack cleaning).

SECTION 4: DEM'S OBLIGATIONS

1. Upon completion of fishway construction, DEM shall assume responsibility for the operation and maintenance of upstream and downstream fish passage facilities at the Main Street Dam, including ensuring the fishways are free of debris, gates and/or stoplogs are installed or removed as necessary, etc.
2. Recognizing that one of the mutually agreed upon goals of this Agreement is to establish the monetary contribution sought from Pawtucket towards this fish passage project, the DEM covenants not to take any other administrative, judicial or other action, either alone or together with other state and/or federal agencies, to obtain further funding from Pawtucket towards the design, construction, or operation of the subject NCRS/PH fish passage project at this location, beyond the amounts specifically committed by Pawtucket in this Agreement.

SECTION 5: GENERIC

1. If the Main Street Dam is sold or otherwise transferred by Pawtucket to another entity, all of the rights, obligations, and responsibilities under this Agreement shall be assigned to

that entity and Pawtucket shall be released from its obligations and responsibilities under this Agreement.

2. Nothing in this Agreement shall preclude the DEM from complying with its obligations under the National Environmental Policy Act, the Fish and Wildlife Coordination Act or any other applicable state or federal laws or regulations. However, by entering into this Agreement the DEM represents that it believes its statutory obligations are, or can be, met consistent with this Agreement.
3. Nothing in this Agreement shall be construed as binding the DEM to expend in any one fiscal year any sum in excess of appropriations made by the Rhode Island legislature or administratively allocated for the purpose of this Agreement for the fiscal year, or to involve the DEM in any contract or other obligation for the future expenditure of money in excess of such appropriations or allocations.
4. Nothing in this Agreement shall relieve Pawtucket or any entity to whom the Main Street Dam is otherwise transferred from its legal duties, obligations and liabilities resulting from ownership or operation of the Main Street Dam. No action for damages sustained through the partial or total failure of these structures or their maintenance shall be brought or maintained against the State of Rhode Island, the Director of Environmental Management, or his employees or agents. Nothing in this Agreement shall be construed as a waiver of the sovereign immunity of the State of Rhode Island.
5. Pawtucket or any entity to whom the Main Street Dam is otherwise transferred shall indemnify, defend and hold harmless the State of Rhode Island from and against all actions, claims or liabilities arising, directly or indirectly, out of Pawtucket's or its guarantor's acts, duties and obligations as set forth in the Agreement; and from all damages, losses, costs and expenses, including but not limited to attorney's and other professional's fees that may arise out of such claims and/or liabilities for bodily injury, death and/or property damage. Specifically, the State of Rhode Island shall not bear any liability for costs of design, construction or of maintenance, or other costs stemming from the operation of fish passage facilities at the Main Street Dam.

SECTION 6: GOVERNING LAW AND COMPLIANCE WITH LAWS

The Parties agree that the law governing this Agreement shall be that of the State of Rhode Island. Both shall comply with all applicable laws, ordinances, codes, and regulations of the federal, state, and local governments.

SECTION 7: OWNERSHIP OF MATERIALS

All reports, documents, or other materials developed or discovered in the course of the performance of the activities required hereunder shall be and remain the property of the Parties without restriction or limitation upon their use.

SECTION 8: WAIVER

The Parties agree that waiver by either party of any breach or violation of any term or condition of this Agreement shall not be deemed to be a waiver of any other term or condition contained herein or a waiver of any subsequent breach or violation of the same or any other term or condition. The acceptance by a party of the performance of any work or services by the other party shall not be deemed to be a waiver of any term or condition of this Agreement.

SECTION 9: TERMINATION

If either party fails to perform any of its material obligations under this Agreement, in addition to all other remedies provided by law, the other party may terminate this Agreement immediately upon written notice. This shall be the sole remedy of the parties for any default to the terms and conditions of this agreement. In the event that this Agreement is terminated, the DEM's obligations as set forth in Section 4 Paragraph 2 shall be deemed voided and nothing in this Agreement shall be deemed to prevent the DEM from seeking other available relief, including but not limited to, filing requests for assistance with the Federal Energy Regulatory Commission ("FERC").

SECTION 10: BOOKS AND RECORDS

1. The Parties shall maintain all documents and records which demonstrate performance under this Agreement for a minimum period of three (3) years, or for any longer period required by law, from the date of completion of the subject performance.
2. Any records or documents required to be maintained pursuant to this Agreement shall be made available for inspection or audit, at any time during regular business hours, upon written request by a designated representative of either party.
3. Each party shall make available to the other party such other records under its control as may be reasonably required for the Parties to perform under this AGREEMENT.

SECTION 11: NOTICES

All notices and other communications required or permitted to be given under this Agreement shall be in writing and shall be personally served or mailed, postage prepaid, and addressed to the representative Parties as follows:

For DEM: Mr. John O'Brien Deputy Chief
State of Rhode Island Department of Environmental Management
Division of Fish and Wildlife
4808 Tower Hill Road
Wakefield, Rhode Island 02879

For Pawtucket: Mr. Charles Rosenfield
Pawtucket Hydropower, LLC
87 Senexet Road
Woodstock, Connecticut 06281

Notice shall be deemed effective on the date personally delivered or, if mailed, three (3) days after deposit in the mail.

SECTION 12: VENUE

In the event that suit is brought by either party to this AGREEMENT, the Parties agree that venue shall be exclusively vested in the state courts of the County of Providence, or where otherwise appropriate.

SECTION 13: PRIOR AGREEMENTS AND AMENDMENT

This Agreement, including all exhibits attached hereto, represents the entire understanding of the Parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder.

This Agreement may only be modified by a written amendment duly executed by the Parties to this Agreement.


Duly Authorized Representatives:

State of Rhode Island
Department of Environmental Management


W. Michael Sullivan, PhD, Director

Date: 5-30-07

Pawtucket Hydro, LLC


Charles Rosenfield,
Secretary-Treasurer of Sole Member

Date: 5/30/07

APPENDIX A

BLACKSTONE RIVER
FISH PASSAGE OPERATIONAL CRITERIA

Table 1. Upstream and downstream migration periods for target fish species to be restored to the Blackstone watershed.

Species	Upstream Migration Period	Downstream Migration Period
American shad	April 1 - June 30	Sept. 1 - November 15 (juv.)
Alewife		June 1 - July 15 (adult)
Blueback herring		

Table 2. Flows required to operate fishways effectively

Fishway Type	Flow required (in cfs)
Denil ladder (standard 4-ft. wide)	2' min. to 4' max. depth (7-35 cfs) in ladder plus attraction flow combined to equal at least 3% of hydraulic capacity at project (44 cfs for Main Street)
Downstream bypass facility	2-3% of hydraulic capacity if angled racks; up to 5% of hydraulic capacity if racks perpendicular to flow (from 30-74 cfs at Main Street depending on rack orientation)

Table 3. Upstream fishway design capacity (rounded to nearest thousand)

Species	Phase I Design Population
Alewife and blueback herring	202,000
American shad	10,000

Project Information

Attached (taken from Blackstone Valley Electric's Operating Procedures Plan)

FIRST AMENDMENT TO
MEMORANDUM OF AGREEMENT
BETWEEN
THE STATE OF RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AND
PAWTUCKET HYDROPOWER, LLC

This FIRST AMENDMENT to the Memorandum of Agreement (the "Amendment") is made and entered into as of the 17th day of July, 2009, by and between the STATE OF RHODE ISLAND, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, ("DEM") and PAWTUCKET HYDROPOWER, LLC ("Pawtucket").

WHEREAS, Pawtucket is the owner of the Main Street Dam, also known as Pawtucket Dam No. 2, located in Pawtucket, Rhode Island; and

WHEREAS, DEM and Pawtucket have entered into a Memorandum of Agreement dated May 30, 2007 (the "MOA"); and

WHEREAS, Pursuant to Section 3 (5) of the MOA, DEM and Pawtucket agreed to mutually agree with United States Department of Agriculture, Natural Resources Conservation Service ("NRCS") on a selected project alternative to enhance fish passage while maintaining hydropower generation viability ("Project"); and

WHEREAS, in connection with the Project certain federal agencies, including but not limited to the United States Fish and Wildlife Service ("USFWS") cannot provide assurances that in connection with the Project USFWS will not require additional Remedial Measures (as hereinafter defined) to meet USFWS criteria once constructed; and

WHEREAS, in discussions with DEM and NRCS, Pawtucket expressed concern regarding the financial burden attendant on any required Remedial Measures (hereinafter defined), in connection with the Project and beyond the financial commitments made by Pawtucket in the MOA, and

WHEREAS, in connection with the selection of the Project, Pawtucket has agreed to accept certain identified operational losses limited to those losses referenced in Section 3 of this

Amendment; and

WHEREAS, to induce Pawtucket to agree on the Project, DEM and its partners have agreed to assume all fiscal responsibility for any required Remedial Measures (as hereinafter defined) and to amend the MOA as required; and

WHEREAS, in consideration of the assurances and covenants provided in this Amendment to the MOA, Pawtucket, NRCS and DEM have agreed on the Project; and

WHEREAS, DEM, NRCS, and Pawtucket continue to desire to provide upstream and downstream fish passage at the Dam while maintaining hydropower generation viability and to carry out the provisions of the MOA as amended herein;

NOW THEREFORE, for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, DEM and Pawtucket hereby enter into this Amendment, on the terms and conditions contained herein:

1. Pursuant to Section 3 (5) of the MOA, DEM and Pawtucket and NRCS have agreed that the Project will be based on an Engineering Design by EA Science and Technology as agreed to by the parties and NRCS and evaluated by the USFWS, and in substantially the same form as contained in the draft Engineering Design by EA Science and Technology, dated June 2009 and titled: "Natural Resources Conservation Service, Blackstone River Fish Passage Restoration Project, Main Street Fishway - 95% Design Review Plans, Pawtucket, Rhode Island."

2. In addition to DEM's obligations under Section (4) of the MOA, DEM agrees that they shall be responsible (together with NRCS) for assessing and determining Project success, and making any recommendations to Blackstone River Partners, concerning any adaptive management measures that may be necessary to improve fish passage efficiency measures or correct any deficiencies relating to the Project (all such measures, including any requested performance or criteria based modifications identified, sought or suggested by any authorized government agency in connection with the Project are referred to herein as "Remedial

Measures").

3. In addition to Pawtucket's obligations under Section 3 (3) of the MOA, Pawtucket shall accept those reasonable revenue losses in the form of operational losses and hydropower generation reduction incurred in connection with the Project projected in the draft Engineering Design by EA Science and Technology, dated May 14, 2009; it being agreed and understood that in no circumstances shall Pawtucket have any obligation to provide funding towards the Project in excess of the contribution of One Hundred Thousand Dollars (\$100,000) as set forth in the Section 3 (3) of the MOA and the obligations of the MOA set forth Section 3(4). For the avoidance of any doubt, Pawtucket shall not be responsible for any additional funding in connection with any Remedial Measures.

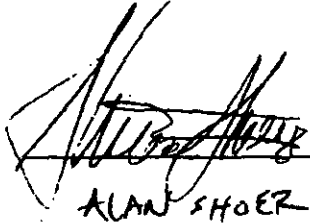
4. In connection with the Project, DEM further agree and acknowledge that in the event USFWS, or any other authorized government agency, makes additional recommendations seeking Remedial Measures to the Federal Energy Regulatory Commission, or any other authorized government agency, DEM will work with NRCS (within its existing Federal Authorities (as the Contracting Agent with Pawtucket Hydro and as further described in the attached letter from NRCS to DEM and Pawtucket, attached as Addendum A to this Amendment) and their partners, including but not limited to Blackstone River Partners, to assume responsibility for any required Remedial Measures, so that any required Remedial Measures imposed or required to further enhance fish passage will also provide for reasonable hydropower generation viability for Pawtucket.

All other terms and conditions of the MOA shall remain in full force and effect, except as amended hereby.

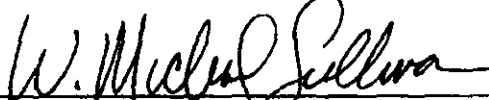
IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first above written.

WITNESS:





ALAN SHOER

STATE OF RHODE ISLAND, DEPARTMENT
ENVIRONMENTAL MANAGEMENT

By: 

W. Michael Sullivan, Ph.D., Director

PAWTUCKET HYDROPOWER, LLC

By: 

Charles Rosenfield
Secretary-Treasurer of Sole Member

Addendum A

United States Department of Agriculture



Natural Resources Conservation Service
60 Quaker Lane, Suite 46
Warwick, RI 02886
Phone 401.828.1300, fax 401.828.0433



Helping People Help the Land...

Dr. Michael Sullivan, Director
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

July 16, 2009

Mr. Charles Rosenfield
Pawtucket Hydropower LLC
87 Senexet Road
Woodstock, CT 06281

Dear Sirs,

I am pleased to offer Natural Resources Conservation Service's (NRCS) support in conjunction with the *The First Amendment to Memorandum of Agreement Between RIDEM and Pawtucket Hydropower, LLC*. Pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended, 16 U.S.C. 661) NRCS and the U.S Fish and Wildlife Service (USFWS) have entered into an Intersagency Agreement (Agreement no. 67110601) to develop and provide engineering design assistance for Rhode Island fish passage projects. Under this Agreement, FWS has provided specialized fish passage engineering services for the fish passage facility at Pawtucket Hydro. NRCS is confident that engineering design plans furnished by EA Engineering Science and Technology Inc., under the supervision of NRCS engineers and Richard Quinn, Hydraulic Engineer for USFWS; meet USFWS design criteria and will successfully provide migratory passage for the target diadromous fish species that we are all working cooperatively to restore.

NRCS and USFWS have developed a proposed engineering alternative that has minimized hydro-generation power losses and still meet USFWS fish passage design criteria. NRCS understands that this amended MOA provides acceptable assurances to Pawtucket Hydropower should additional future fish passage measures be required if the implemented fish passage facility does not meet success criteria. NRCS is also committed to realizing successful fish passage implementation in concert with an economically viable hydro-generation facility. Should the need arise, NRCS is committed to work with Pawtucket Hydropower, RIDEM, and Local project partners in a collaborative effort to address any future fish passage design or construction deficiencies.

Should adaptive measures or remedial actions become necessary because NRCS's proposed design does not result in meeting project success criteria, NRCS has a number of possible mechanisms to provide assistance to Pawtucket Hydro. Should additional design assistance and any additional construction funding be necessary, NRCS is committed to resolve additional financial burdens through our ability to modify our existing contract with Pawtucket Hydropower (Wildlife Habitat Incentives Program Contract 72110607070). Our Federal Authorities and the aforementioned federal contract with Pawtucket Hydropower allow us to fund future remedial

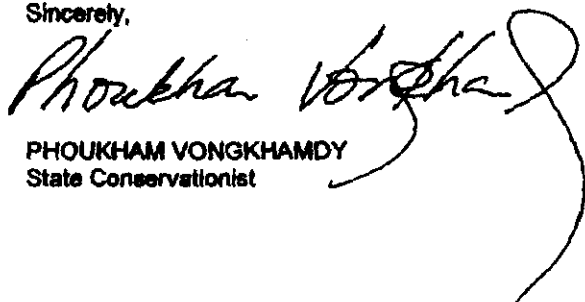
The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer

actions pursuant to current program rules and fund availability. It should be noted that NRCS has demonstrated the capacity to successfully modify these types of contracts should adaptive measures be required. Recently completed fish passage projects in Rhode Island, such as the Rising Sun Fish Ladder and Atlantic Mills Fish Ladder (constructed in 2007 and 2009 respectively and under WHIP agreements with NRCS and local entities) have been successfully modified to account for adaptive measures that required significant increases in additional NRCS cost share assistance.

Please know that the restoration of the Blackstone River is a priority of our Agency, and we look forward to working with both of your organizations and our collective restoration partners to ensure this project's success. If you require any further information or assistance into matters associated with developing this amended MOU, please do not hesitate to contact me directly.

Sincerely,

A handwritten signature in black ink, appearing to read "Phoukham Vongkhamdy". The signature is written in a cursive style and is positioned above the printed name and title.

PHOUKHAM VONGKHAMDY
State Conservationist



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

September 18, 2009

Pawtucket Hydropower
Attn: Mr. Charlie Rosenfield
87 Senexet Road
Woodstock, CT. 06281

And

Narragansett Electric
Attn: Michael F. Ryan
280 Melrose Street
Providence, RI 02901

RE: **Water Quality Certificate - Main Street Fish Passage Project**
WQC File No. 09-031

Dear Mr. Rosenfield and Mr. Ryan,

The RIDEM-Office of Water Resources has reviewed the above referenced project for compliance with the State Water Quality Regulations. The proposed activity consists of constructing a Denil-style fish ladder and eel ladder on the southeast side of the Main Street Dam within the Blackstone River. The project purpose is to allow unimpeded diadromous fish passage during adult and juvenile migration periods. Downstream bypass will be achieved by utilizing the existing powerhouse intake on the northwest side of the dam and installing a new downstream bypass sluice through the existing hydropower intake when traveling downstream and will travel through a new 3-ft wide bypass that will be installed through the building's stone foundation wall. A sluice will be installed to convey fish back to the river downstream of the rock ledge on the river bank adjacent to the intake building. The fish ladder and eel passage will be installed within the existing spillway and will be constructed in-place. Construction of the fish ladder, eel passage, and downstream bypass sluice will occur in two phases over a 3-year construction period. Phase I will include the construction of the fish ladder and eel passage and Phase II will consist of the construction of the downstream bypass sluice within the powerhouse building. Construction of the fish ladder and eel passage will occur over two seasons. During the first year, a cofferdam and bypass pumps will be installed on the southeast side of the dam to allow for the construction of the fishway exit at the dam sill. Water levels upstream of the dam and tailrace will be maintained at crest of dam during Phase I of construction by diverting the majority of river flow through the existing powerhouse. Concurrently with this work, the construction of the most downstream section of the fish ladder below the bedrock outcrops will occur via barge. During the second year, construction of the remainder of the fish ladder and eel passage will be completed. The cofferdam will be reinstalled and the construction of the remaining portion of the fish ladder and eel passage will occur via a barge. Phase II construction of the downstream bypass sluice will occur during the third year. Stop-logs will be used to keep fish from entering the fish ladder until Phase II is complete. As part of Phase II, new trash rack system will be installed within the existing powerhouse during Phase II construction. Sediment removal at the trash rack area will be required.

We have reviewed the subject application and site plans entitled "Blackstone River Fish Passage Restoration Project Main Street Fishway Pawtucket, Rhode Island," sheets 1 through 10, dated April, 2009. The State water associated with this project is the Blackstone River, Class SB1(a).

September 18, 2009
Pawtucket Hydropower/
Charlie Rosenfield
WQC File No. 09-031
Page 2 of 3

It is the determination of the Water Quality Certification Program that said project is in compliance with the requirements of the State Water Quality regulations provided that the applicant complies with the above plans and the following conditions.

1. Material used for fill and construction is clean and free of matter that could cause pollution of the waters of the State.
2. Proper erosion and sedimentation controls/procedures, as identified in the above referenced plans, are installed prior to construction and maintained in functional condition for the duration of construction activities.
3. Sediment dewatering shall occur within the parking lot associated with the hydroelectric facility. Sedimentation and erosion controls shall be installed prior to sediment excavation.
4. The sedimentation and erosion controls for the sediment dewatering area shall consist of filter socks which shall surround the dewatering site. No other dewatering site is authorized as part of this permit.
5. All sediment generated from the trash rack area shall be permanently disposed at the Rhode Island Resource Recovery Corporation. No other disposal area is authorized under this permit.
6. Sediment shall be transported to the permanent disposal location in lined trucks.
7. No sewage, refuse, or waste of any kind shall be discharged into waters of the State from this facility.
8. All in-water work in the waterway is restricted to the period between May 15 and December 15.
9. The staging and launching areas identified on the above referenced site plans shall be the only areas utilized for staging and launching.
10. Upon completion of each construction season, the temporary fill associated with the access ramp for working upstream of the dam shall be removed.
11. Upon completion of the project, the area utilized for the temporary access ramp shall be restored to pre-project conditions.
12. Upon completion of each construction year, the cofferdam, bypass pumps (if utilized), and all construction materials shall be removed and river flow will be returned to normal.
13. This WQC does not relieve your obligation to obtain any other applicable local, state, and federal permits prior to commencing construction.

In addition to any necessary enforcement actions stemming from the violation of any of the terms or conditions of this Water Quality Certificate, issuance of this Water Quality Certificate does not bar the Department, or any of its various Divisions, from instituting any investigation and/or enforcement actions that it may deem necessary for violations of any and all applicable statutes, regulations and/or permits, including but not limited to violations of the terms or conditions of any previous Water Quality Certificate(s) issued to you as an applicant or for this site.

This Water Quality Certificate shall expire three (3) years from the date of issuance if project construction is not initiated within that time.

September 18, 2009
Pawtucket Hydropower/
Charlie Rosenfield
WQC File No. 09-031
Page 3 of 3

This is the State's Water Quality Certification, which shall have the full force and effect of a permit issued by the Director. Violation of the terms and conditions of this Certification may result in violation of the State's Water Quality Regulations and appropriate enforcement action.

Sincerely,



Russell J. Chateauf, P.E., Chief
Groundwater/Wetlands Protection

RJC/TJW

Ecopsy: Lisa McGreavy, RIDEM
WQ/WR Team, RIDEM
Terry Walsh, RIDEM
Meghan Walters, NRCS
Sam Whitin, EA Engineering

MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (the "Agreement") is made and entered into as of the 21 day of MAY, 2012, by and between PAWTUCKET HYDROPOWER, LLC ("PH"), a Connecticut limited liability company registered to do business within the State of Rhode Island, with a mailing address of 87 Senexet Road, Woodstock, CT 06281, and the STATE OF RHODE ISLAND, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (the "STATE"), a governmental agency with an address of 235 Promenade Street, Providence, RI 02908.

WHEREAS, PH is the owner of real property, the so-called Main Street Dam (also referred to as the Pawtucket Lower Dam, State Dam ID # 066, and Federal Dam ID # 04271) in the City of Pawtucket, County of Providence, State of Rhode Island; and

WHEREAS, the STATE is currently involved in the project design, construction, and project management and supervision of that which is known as the Main Street Dam Fish Passage (the "Project") on a portion of the Property; and

WHEREAS, funding for the project shall be administered by the Natural Resources Conservation Service ("NRCS") and shall require the approval of various Project payments (the "Payment Approval(s)") by PH; and

WHEREAS, PH has agreed to make such Payment Approvals as may be required for the completion of the Project; and

WHEREAS, PH and the STATE understand and are fully aware that time is of the essence in regard to the receipt and submission of requisite Payment Approvals.

NOW, THEREFORE in consideration of the Project and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. The STATE is responsible for reviewing and approving the content of the NRCS invoices prior to the submission of said invoice to PH for Payment Approval. The STATE is prohibited from requesting Payment Approval for any invoice amount that exceeds its approved NRCS-allocated grant award for Project costs.
2. After review and approval of the content of the NRCS invoices, and upon submission of said invoice by the STATE to PH, PH and its assigns shall make any and all Payment Approvals required within three (3) business days of the request thereof. Said Payment Approval shall be returned by either certified mail or email to James D. McGinn, P.E., R.I. Dept. of Environmental Management, 235 Promenade Street, Providence, RI 02908 (james.mcgin@dem.ri.gov) or as otherwise designated by the STATE.
3. Payment Approvals shall not be unreasonably withheld. If there is a dispute regarding a Payment Approval, PH shall submit the requested Payment Approval within

three (3) business days and subsequently submit the related dispute to an approved arbitrator of the American Arbitration Association for prompt resolution through arbitration. The parties may also choose to resolve the dispute through alternative means as mutually agreed upon by the STATE and PH.

4. If a Payment Approval cannot be made within three (3) business days, PH shall notify the STATE at its earliest convenience as to the reason for such delay.

5. If a Payment Approval cannot be made within three (3) business days of receipt, PH and the STATE shall take any and all actions necessary in order to complete such Payment Approval in the most expedient fashion available.

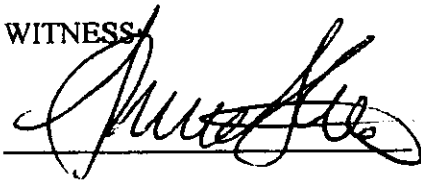
6. All construction and related Project activities shall be at the sole cost and expense of the STATE.

7. PH and the STATE acknowledge and agree that this Memorandum of Agreement does not grant any legal interest in the PH Property to the STATE.

8. PH and the STATE further acknowledge and agree that this Memorandum of Agreement is not intended to impose any additional liability on PH for the Project.

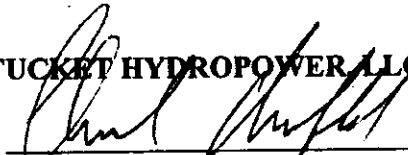
IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first above written.

WITNESS



PAWTUCKET HYDROPOWER, LLC

By:



Charles Rosenfield

Its:

Secretary-Treasurer

STATE OF RHODE ISLAND
COUNTY OF PROVIDENCE

In Providence, in said County and State, on the 2 day of March, 2012, before me personally appeared Charles Rosenfield, the Secretary of PAWTUCKET HYDROPOWER, LLC, to me known and known by me to be the party executing the foregoing instrument for and on behalf of PAWTUCKET HYDROPOWER, LLC and he acknowledged said instrument by him executed to be his free act and deed, his free act and deed in his capacity as aforesaid, and the free act and deed of PAWTUCKET HYDROPOWER, LLC.



Notary Public

My Commission Expires 6/28/13

**STATE OF RHODE ISLAND, DEPARTMENT
OF ENVIRONMENTAL MANAGEMENT**

Rayna Santoro

By:

Janet L. Coit
Janet L. Coit, Director

**STATE OF RHODE ISLAND
COUNTY OF PROVIDENCE**

In Providence, in said County and State, on the 19 day of March, 2012, before me personally appeared Janet L. Coit, Director of the STATE OF RHODE ISLAND, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, to me known and known by me to be the party executing the foregoing instrument for and on behalf of STATE OF RHODE ISLAND, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT and she acknowledged said instrument by her executed to be her free act and deed, her free act and deed in her capacity as aforesaid, and the free act and deed of the STATE OF RHODE ISLAND, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.

Rayna Santoro
Notary Public
My Commission Expires 3/2015



**RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

April 3, 2012

James McGinn
RIDEM Division of Planning and Development
235 Promenade Street
Providence, RI 02908

**RE: WQC File No. 09-031 – Request to Modify Construction Work Window
Main Street Fish Passage Project**

Dear Mr. McGinn:

The RIDEM Division of Water Resources has received your request to modify the existing Water Quality Certification (copy attached) to allow for in-water work to occur from May 15 through April 1 of each year that this approval is in effect.

This modification is hereby approved. In-water work is restricted to the May 15 through April 1 period of each year. All other conditions contained in the original WQC remain in full force and effect.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell J. Chateaucneuf".

Russell J. Chateaucneuf, P.E., Chief
Groundwater/Wetlands Protection

Cc: Martin Wencek, RIDEM
Grover Fugate, RICRMC
Michael Elliot, U.S. ACOE
Meghan Walters, NRCS
Sam Whitin, EA Engineering