

APPLICATION REVIEW FOR  
LOW IMPACT HYDROPOWER INSTITUTE CERTIFICATION  
of the  
BLACK BEAR HYDRO PARTNERS  
MILFORD PROJECT  
HYDROELECTRIC PROJECT NO. 2534



December 26, 2013

Application Reviewer: Patricia McIlvaine



**APPLICATION REVIEW FOR LOW IMPACT HYDROPOWER  
INSTITUTE CERTIFICATION**

**MILFORD PROJECT - FERC PROJECT NO. P-2534**

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# **REVIEW OF APPLICATION FOR CERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE MILFORD PROJECT HYDROELECTRIC PROJECT**

Prepared by:  
Patricia McIlvaine  
December 26, 2013

## **I. INTRODUCTION AND OVERVIEW**

This report reviews the original application submitted Black Bear Hydro Partners (BBHP or Applicant) in May 2013 to the Low Impact Hydropower Institute (LIHI) for Low Impact Hydropower Certification for the Milford Hydroelectric Project (Milford Project or Project). BBHP provided supplemental information for review in response to the Intake Review completed on October 16, 2013 and subsequent inquiries from the application Reviewer.

The Milford Project was originally licensed to Bangor Hydro Electric Company. That license expired in December 1990. The project was operated under an annual license until a new license was issued on April 20, 1998. Ownership of the facility changed in 2000 to Penobscot Hydro LLC, which later became PPL Maine, LLC, and was subsequently purchased by BBHP with the license transfer on September 17, 2009. The Project is licensed by the Federal Energy Regulatory Commission (FERC) as Project Number 2534. The current license expires on March 31, 2038.

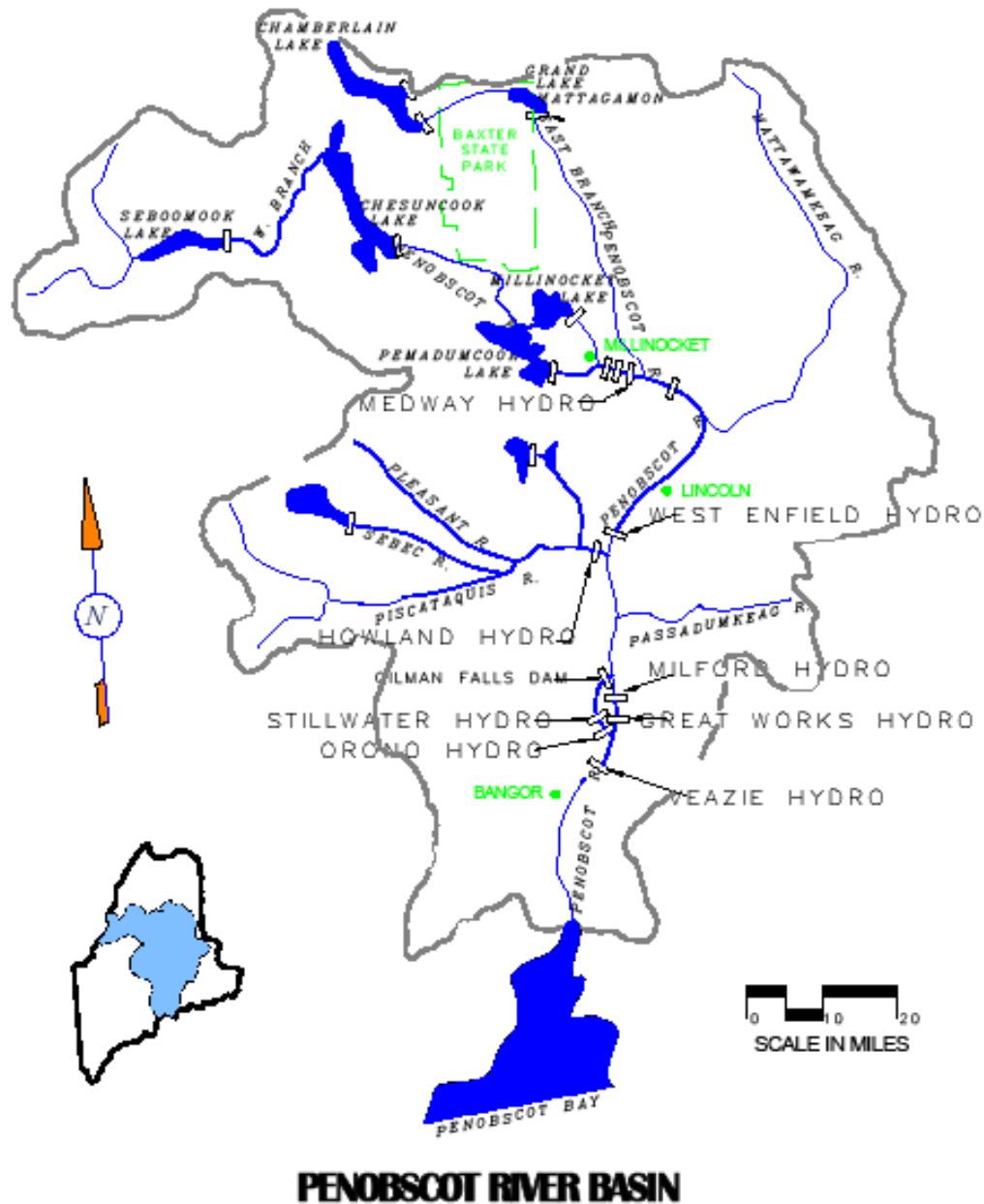
The Milford Project consists of both an existing 6.4 MW facility, plus 1.4 MW of generation capacity which was added in 2011. Pursuant to the Lower Penobscot River Multiparty Settlement Agreement and a FERC order dated April 18, 2005, two new units were added to the Milford Project, which commenced commercial operation in November 2011. As discussed below under *Regulatory and Compliance Status*, the 2004 Settlement Agreement involved five hydropower projects owned and operated by BBHP located within the Penobscot River Basin. Three of these other sites have received LIHI certification: the Orono Project, Midway Project and both the original units and Powerhouse B of the Stillwater Project. The Milford Project has an estimated annual production of 55,186 MWh.

## **II. PROJECT'S GEOGRAPHIC LOCATION**

The Milford Project consists of two dams, the Milford Dam, on the main stem of the Penobscot River ("River") at river mile 33.25, and the Gilmans Falls Dam, located on the Stillwater Branch. The Project is in Milford and Old Town, Penobscot County, Maine. The Penobscot River Basin ("Basin") is New England's second largest river system with a drainage area of 8,570 square miles. Upstream storage dams on both the West and East Branches control a large portion of flows within the drainage area. The Basin includes the East and West Branches of the Penobscot River, the Piscataquis River, the Sebec River, the Pleasant River, the Mattawamkeag River, the Passadumkeag River, the Stillwater Branch and the main stem of the Penobscot River, as illustrated on the following page. The Milford Project is located approximately 22 miles

downstream of the West Enfield Hydro Project (FERC P-2600). Two dams that had been located downstream of the Milford Dam (Great Works Dam and Veazie Dam) have been removed as part of the 2004 Settlement Agreement. The Milford Dam is now the most downstream dam on the Penobscot River. The Mattawamkeag River remains free-flowing, while there are a total of 20 run-of-river dams located on the other Basin waterways.

BBHP owns and operates the Stillwater, West Enfield, Milford, Medway and Orono Projects. Under the June 2004 Settlement Agreement, the ownership of the Veazie, Great Works and Howland Projects were sold to the Penobscot River Restoration Trust (PRRT). In addition to removal of the Great Works and Veazie Dams, PRRT is planning to construct a fish bypass at the Howland Dam.



### **III. PROJECT AND IMMEDIATE SITE CHARACTERISTICS**

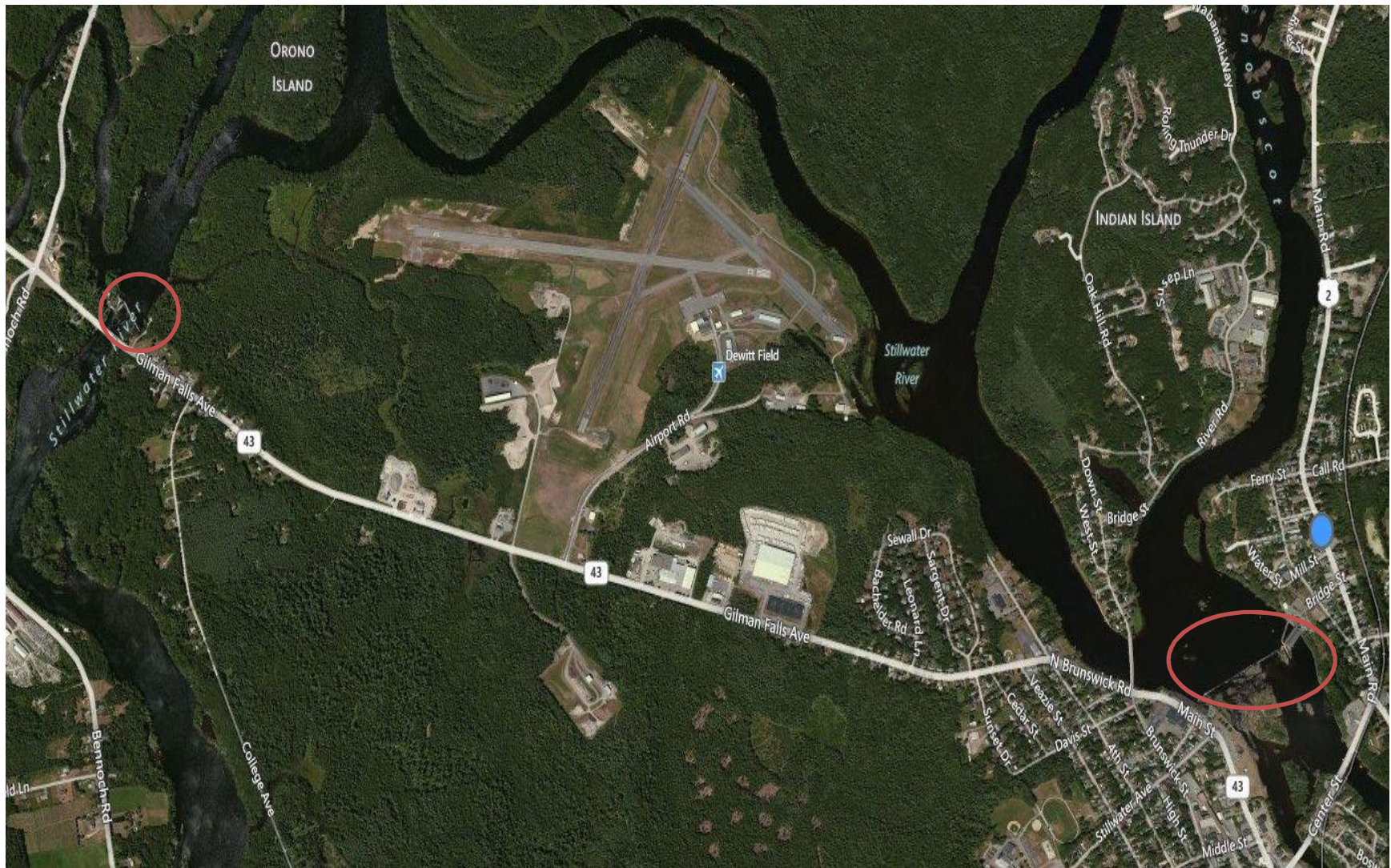
The Milford Project consists of (1) a 1,159-foot-long, 30-foot-high, concrete gravity Milford dam located across the main stem of the Penobscot River, topped with 4.5-foot-high flashboards, (2) a 397 feet long concrete gravity spillway, (3) a concrete sluiceway and 25 foot gate, and (4) a 226 foot by 85 foot powerhouse. The powerhouse contains four original and two new 700 kilowatt (kW) turbine/generator units. The new units went operational in 2011. The original units have an installed capacity of 6.4 megawatts (MW) and the new units are rated at 1.4 MW. The units operate over a range of flows from the minimum hydraulic capacity of 500 cfs to 6,730 cfs).

The Gilman Falls dam, at the head of the Stillwater Branch, consists of (1) a 49-foot-wide non-overflow section; (2) a 311-foot-long primary spillway with 4.4 foot high flashboards; (3) a 6-foot-wide sluice gate with a top at elevation 100.8 feet; and (4) two taintor gates, one 30 feet wide and the other 20 feet wide.

The Project presently includes a downstream bypass that discharges to the tailrace, a 4-foot Denil style upstream fishway located at the outboard side of the powerhouse tailrace and a downstream bypass fishway. As summarized below and discussed in ***Section VIII, Criterion C, Fish Passage and Protection***, additional upstream and downstream fish passage facilities are being installed. After construction of the new facilities, the Denil will remain in place as a backup fishway for emergency purposes, and the expanded downstream bypass will incorporate the existing system.

The aerial photographs on the next two pages illustrate the location of the two dams. The locations of the new fishways are illustrated on the site plan following the photographs.





**Gilman Falls Dam is located at the left side of the photograph. The Milford dam is located at the right side of the photograph.**



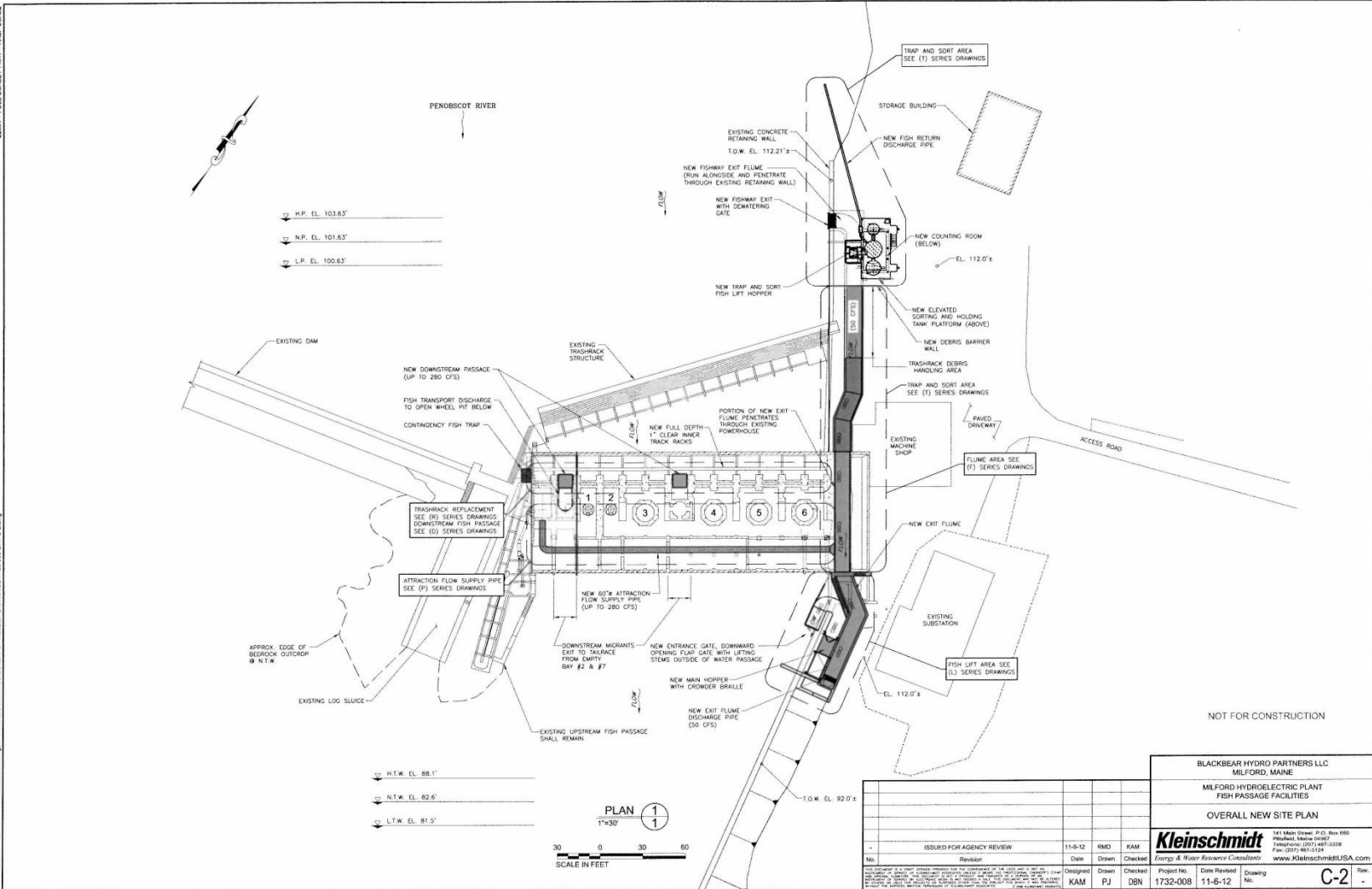


**Gilman Falls Dam across the Stillwater River is located just above Rt 43 or Gilman Falls Avenue.**



**Milford Dam across the Penobscot River.**

11/17/2008 Drawing WORKING DRAWING/GENERAL PROJECT DRAWING 173-008 BHT C-2.dwg  
 Nov 7, 2012 2:20 AM



Site Plan showing location of existing and new fish passage facilities.



The Milford Project is operated as a run-of-river development with discharge from the turbines and spillway equivalent to inflow. Flows are reallocated between the main stem of the Penobscot River and the Stillwater Branch through operation of the Milford Project. To accommodate the installation of new generation at the downstream Stillwater and Orono projects, more water now flows to the Stillwater Branch. The flow reallocation is within the range of operations allowed by the current licenses for these Projects. The Project also provides a minimum flow of 3,800 cfs or inflow, whichever is less, and a headpond elevation limit of one foot of the normal full pond when flashboards are in place. These requirements are further discussed in *Section VIII Criterion A, Flows*.

There is a 235 acre reservoir with a gross storage of 2,250 acre-feet. Land area occupied by the features described above is estimated at 1.2 acres. Approximately 145.4 acres of land, of which only a small portion is owned by BBHP, is contained in a 200-foot zone extending around the impoundment.

In summary, modifications at the Milford Project consist of:

- Installation of two new 700 kw turbine/generator in the existing powerhouse;
- installation of trashracks with angled 1-in clear spacing;
- installation of upstream passage for eels, upstream anadromous passage through a lift system and trap and truck facility, a downstream passage structure, and a rubber dam on the 390 foot spillway to enhance passage at the lift; and
- improvements at the log sluice and adjacent ledge area to enhance lift attraction flows.

#### **IV. REGULATORY AND COMPLIANCE STATUS**

##### FERC License

The original FERC license was issued to Bangor Hydro Electric Company (Bangor Hydro) and expired in December 1990. The project was operated under an annual license until license renewal was approved on April 20, 1998. A 40-year term was approved by FERC to coordinate expiration dates for projects on the same river basin, in support of their policy to consider cumulative impacts of projects in the same river basin collectively at relicensing. Thus, the Milford license was issued with the same expiration date as the Stillwater and Veazie Projects. The Milford license was transferred to Penobscot Hydro LLC, which later became PPL Maine, LLC, (PPL Maine) in October 2000. The Milford Project was subsequently purchased by BBHP and the license transferred on September 17, 2009.

Relicensing and pending appeals for several hydropower projects in the Penobscot River Basin, including the Milford Project, occurred over the period from license issuance in 1998 until 2004. After extensive studies, consultations and legal challenges, the re-licensing process culminated in the signing of the Lower Penobscot River Basin Comprehensive Settlement Accord, which included a number of agreements, including the Lower Penobscot River Multiparty Settlement Agreement (Settlement Agreement). The Settlement Agreement was jointly entered into and signed on June 25, 2004, by: PPL Maine, PPL Great Works, PPL Generation (the owners of Stillwater at this time), the Penobscot River Restoration Trust (PRRT), Penobscot Indian Nation

(PIN), United States Department of Interior, acting through the Fish and Wildlife Service (USFWS), Bureau of Indian Affairs (BIA) and the National Park Service (NPS), Maine State Planning Office, Maine Atlantic Salmon Commission (MASC), Maine Department of Inland Fish and Wildlife (MIFW), Maine Department of Marine Resources (MDMR), American Rivers, Inc, Atlantic Salmon Federation, Maine Audubon Society, Natural Resources Council of Maine (NRCM), and Trout Unlimited (TU). The Nature Conservancy joined the partnership in 2006. BBHP assumed applicable responsibilities from PPL in 2009 with the FERC license transfer of the Project.

The National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) was not a party to the settlement, although they were involved in the earlier licensing proceedings of the Milford Project, and had issued a mandatory fish passage prescription under Section 18 of the Federal Power Act (FPA) on February 16, 1995. This prescription is discussed further under **Section VIII, Criterion C - Fish Passage and Protection**.

The Settlement Agreement provided the PRRT, a non-profit organization, a 5-year option to acquire the Veazie, Howland and Great Works Projects, which was exercised on January 6, 2009. The PRRT has decommissioned and removed the Great Works Dam, and is in the process of decommissioning and removing the Veazie Dam. While a state-of-the-art fish bypass is currently being planned for the Howland dam, if the bypass is found insufficient for successful fish passage, the Settlement Agreement includes the option of having the dam removed. As the Penobscot River is home to about 99% of the federally endangered Gulf of Maine Distinct Population Segment (GOM-DPS) of Atlantic salmon in the country, restoration of passage to the river was a key focus of the Settlement Agreement. Incorporated into the Settlement Agreement is maintenance of approximately 90% of the current river basin power production owned by BHHP through enhancements at the Milford Project and other hydropower facilities in the basin.

A separate agreement, the Comprehensive Settlement Agreement (PIN Agreement) signed in June 2004 by PIN, BIA and PPL Maine, LLC (the former owner) resolves mitigation measures that are to be implemented by BBH to address certain impacts to PIN lands, resources, and interests from operation of the Milford Project and the West Enfield Project. The PIN Agreement focuses on:

- navigation issues associated with logs in the river and log removal commitments;
- provision of monetary compensation to PIN; and
- development of a new canoe portage trail around the west end of the Milford Dam, if found appropriate two years after the removal of the Great Falls and Veazie Dams.

An amended FERC license was issued on April 18, 2005 which:

- deferred installation of the additional turbine/generation unit until sale and planned removal of the Veazie and Great Works dams were completed, pursuant to requirements of the Settlement Agreement;
- modified several license articles to incorporate the terms of the Settlement Agreement including deletion of article 410 regarding mitigation of unavoidable losses to Atlantic salmon;

- modified the previously approved log removal plan to reflect provisions of the PIN Agreement; and
- incorporated a new reservation of authority to prescribe fishways under section 18 of the Federal Power Act.

No other license amendments were issued after 2005.

It should be noted that according to the FERC license issued to PPRT for surrender of the Great Works, Veazie and Howland licenses, the Veazie dam was not to be removed until after the Milford upstream passage facility was completed. However, the PPRT has already removed the Veazie dam, and the Milford fish passage is not yet complete. That action was not the responsibility of BBHP, and therefore not the subject of this certification review. However, this “early removal” does reflect on the timing of the effectiveness testing to be implemented by BBHP under its FERC license and related requirements. This is further discussed under *Section VIII, Criterion C - Fish Passage and Protection*.

#### Water Quality Certification (WQC)

On March 10, 2005, the Maine Department of Environmental Protection (MEDEP) issued a revised WQC adopting the applicable provisions of the Settlement Agreement and the PIN Agreement, resulting in conditions equivalent to those discussed above. The 2005 WQC was made part of the FERC Order. In response to a May 12, 2005 letter from NMFS, FERC issued an Order dated May 16, 2005 correcting Article 409, noting that that NMFS' prescription is consistent only with Attachment A of the Settlement Agreement (see *Section VIII, Criterion C - Fish Passage and Protection for further discussion*.)

The applicant reports that the current Project has been in continuous compliance with its operating requirements since the license amendment in April 2005. A review of the FERC database from April 2005 through December 2013 found no reported compliance issues.

Construction reports filed by BBHP during construction of the units and fishways did not report any environmentally related concerns, nor were any reported by the resource agencies consulted as part of this certification review. Based on this review, BBHP appears to have demonstrated conscientious attention to the environmentally-related issues associated with the Milford Project's current FERC License.

#### **V. PUBLIC COMMENT RECEIVED BY LIHI**

The deadline for submission of comments on the certification application is January 12, 2014. As of December 26, 2013, no comments had been filed, and given the email communications already received from the key resource agencies, no comment letters are expected. Recommendations will be re-visited and revised, if appropriate, if any comment letters are received.



## **VI. SUMMARY OF COMPLIANCE WITH CRITERIA AND ISSUES IDENTIFIED**

**Criterion A - Flows** - The Milford Project appears to be operated in compliance with the established run-of-river operation, headpond water levels, and minimum flows requirements. No compliance deviations have been reported since 2005. The resource agencies had no negative comments on flow issues; although NOAA declined to comment either way.

**Criterion B - Water Quality** – To date, the construction activities and operation of the facility appears to be in compliance with all requirements of the amended WQC. Based on review of the draft MEDEP 2012 Integrated Water Quality Monitoring and Assessment Report, the project waters are not listed as impaired.

**Criterion C - Fish Passage and Protection.** Both specific fish passage facilities have been mandated via the Settlement Agreement (which was adopted in the FERC license), and a Section 18 reservation of authority to prescribe fish passage, are provided by/for USFWS and NMFS. It appears that all required plans and associated resource agency consultations have been developed and conducted. Upstream eel passage has been installed and operating since 2009. The downstream passage facilities are expected to be completed by January 2014 while the lift system for the anadromous species is targeted for February 2014 completion. Fish passage effectiveness studies, including the need to meet specific numerical performance standards for Atlantic salmon, are scheduled for the next three years (downstream passage) and two years (upstream passage) to confirm adequacy of the facilities installed. Because of reliance on the effectiveness testing, a condition requiring summary reporting of these study results performed each year during the term of this certification has been recommended. Required fish screens have been installed.

**Criterion D - Watershed Protection** - There are no requirements for a buffer zone, shoreline protection fund or typical shoreline management plan for the Facility. A Shoreline Stabilization Plan to control erosion issues along certain areas of the impoundment was been developed and approved, and is in the process of being implemented. Thus, this Facility passes for this criterion. No additional term for certification is appropriate.

**Criterion E - Threatened and Endangered Species Protection** –The GOM-DPS Atlantic salmon is in the project area, and with the removal of the Veazie and Great Works dams, shortnose sturgeon and Atlantic Sturgeon may someday move upstream to the area. The Biological Opinion developed by NMFS found that the proposed actions may adversely affect, but are not likely to jeopardize, the continued existence of the Atlantic salmon, shortnose sturgeon or Atlantic Sturgeon. This opinion is based on the assumption that passage facilities will provide safe passage for the species, as defined by numerical standards. Proof of safe passage will not be confirmed until this testing is completed and the results assessed. Because of reliance on this testing, a condition requiring summary reporting of the testing has been recommended. A second condition has been recommended due to the possible presence of three state threatened mussel species that could be impacted during significant impoundment lowering.

**Criterion F - Cultural Resources** –The Project was found to be in compliance with the existing Programmatic Agreement and Cultural Resources Management Plan.

**Criterion G - Recreation** - The Project was found to be in compliance with all recreational requirements. Per the 2005 amended FERC license, consultation within the next two years regarding development of a canoe portage trail around Milford Dam must be initiated. A certification condition tracking the status of this consultation and possible trail development is recommended.

**Criterion G - Facilities Recommended for Removal** - No resource agencies have recommended dam removal.

## **VII. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION**

Based on my review of information submitted by the applicant, the additional documentation collected from the FERC eLibrary and comments submitted by email through my consultations with various resource agencies and other entities, I believe that the Project would be in compliance with the LIHI criteria, provided the information identified in the recommended conditions are provided.

LIHI's criteria require that a project be developed and/or operated in compliance with the latest resource agency recommendations pursuant to a legal proceeding. It is unclear if all of the fisheries agencies' latest recommendations have been incorporated into the design, construction and plan for effectiveness testing of the passage facilities. However, as USFWS, NMFS, MDMR and PIN all are willing to base their acceptance of the fishways on the results of the effectiveness testing, then first condition is recommended to fulfill this LIHI criterion.

Due to the potential presence of three threatened mussel species in the impoundment, a second recommendation to protect these species, should they exist, is recommended.

The third condition is recommended to track compliance with the requirement to consult with the PIN, BIA and City of Old Town regarding the need for and possible development of a canoe portage trail around the Milford Dam within two years of removal of the Veazie Dam.

I recommend that the Milford Project Project be certified to be in compliance with LIHI's criteria with a certification term of five years with the following conditions.

1. The owner shall report on the results of fish passage effectiveness testing conducted, including any changes in operation of the passage facilities, as recommended or required by the resource agencies and/or the PIN. This reporting shall summarize opinions of USFWS, NMFS, MDMR and PIN on the results of the effectiveness studies.
2. This condition will be triggered if significant drawdowns are scheduled, other than those needed for normal maintenance activities, that may adversely affect mussels. Should this occur, the owner shall notify LIHI of the license-required consultation with FERC and applicable state resource agencies, along with mitigation actions developed to ensure if these species are present, that impacts would be minimized.
3. The owner, shall report on the status and results of the consultations regarding the canoe portage trail, as well as the status of development of the trail.

### **THE MILFORD PROJECT CONDITIONALLY MEETS THE LIHI CRITERIA FOR CERTIFICATION**



## VIII. DETAILED CRITERIA REVIEW

### A. FLOWS

**Goal:** The Flows Criterion is designed to ensure that the river has healthy flows for fish, wildlife and water quality, including seasonal flow fluctuations where appropriate.

**Standard:** For instream flows, a certified facility must comply with recent resource agency recommendations for flows. If there were no qualifying resource agency recommendations, the applicant can meet one of two alternative standards: (1) meet the flow levels required using the Aquatic Base Flow methodology or the “good” habitat flow level under the Montana-Tennant methodology; or (2) present a letter from a resource agency prepared for the application confirming the flows at the facility are adequately protective of fish, wildlife, and water quality.

**Criterion:**

**1) Is the facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?**

**YES.** As discussed below, the project appears to meet these criteria thresholds.

Articles 402 and 403 of the FERC license requires BBHP to file for FERC approval, a plan for providing and monitoring run-of-river operation, headpond water level, and minimum flows. Article 402 requires that the Project is operated in run-of-river mode with inflows to be passed downstream. This Article also requires the headpond elevation to be maintained within  $\pm 1$  foot. Article 403 requires BBHP to release a minimum flow of 3,800 cfs or inflow, whichever is less, from the Milford Project with the following distribution: 3,468 cfs from the Milford powerhouse, 60 cfs from the Gilman Falls dam and 472 cfs into the West Channel.

The Operation and Flow Compliance Monitoring Plan must include:

- A detailed description of how the impoundment level, minimum flows, generation flows, and inflows will be measured or calculated in order to comply with the requirements of the license;
- A provision to provide minimum flows at all times and impoundment elevations;
- A description of how fish passage flows will be provided during the passage seasons and at all impoundment elevations;
- A description of how the licensee will minimize the level of impoundment fluctuation;
- A provision to notify the FERC, resource agencies, and PIN when deviations from license requirements occur; and
- A provision to provide reports and data to the FERC, resource agencies and the PIN.

The amended WQC did not modify any requirements for flows or headpond level management. Conditions 1 and 2 of the 1992 WQC requires the same minimum flows and headpond limits as

discussed above. These requirements must be satisfied whenever possible, unless the facility is subject to operating emergencies beyond the licensee's control, or otherwise approved.

BBHP's Operations and Flow Monitoring Plan was filed on July 9, 2013 and approved by FERC on August 27, 2013. The draft Operations and Flow Monitoring Plan was reviewed by the resource agencies; however no comments were received, reportedly due to extensive discussions regarding other project compliance requirements. The Plan indicates that BBHP will operate the Milford Project utilizing BBHP roving operator staff to monitor and record headpond elevations and adjust generating units and gates to ensure run of river operation. Adjustments made by plant automation equipment that controls the two new units, or roving operators allow the headpond levels to be maintained within the license allowances (1-foot +/- of 101.7 ft NGVD). As river flow increases, the plant automation systems, or the roving operator will open generating unit gates to allow more water to pass through. This will maintain the level of the water upstream of the dam thereby approximating inflow. Conversely, if the river flow into the project area reduces, the gates will be closed to restrict water flow through the units which will also keep the headpond level stable. Headpond elevations are noted and recorded using headpond transducers and a staff gage immediately adjacent to the trashrack structure.

Minimum flows from the Milford Powerhouse are passed through the units or over the dam, through the gate, and through the fish passage facilities. If the station is off-line, then minimum flows are passed as spill over the dam or through a gate, and/or via the fish passage facilities.

The reallocation of flows between the Stillwater and Penobscot River originated by the Settlement Agreement occurs at the Gilman Falls Dam, and did not require any facility changes. This change involved a 10% decrease of flow to the Penobscot River. The Gilman Falls dam already passes flows through an open, free flowing breach section with the higher percentage to be managed by opening a gate at Gilman Falls dam. As part of the Settlement agreement, it was agreed that there would be no effect on environmental conditions downstream. Maintenance of headpond elevations behind the dam assures that at least minimum flows are passed downstream as required.

The fishway flows will be set and adjusted as necessary during operations of the facility by the Maine Department of Marine Resources who will operate the fish passage facility to collect Atlantic salmon broodstock and manage other species on a daily basis. When the DMR is not operating the fishway, BBHP's roving operator will adjust the gate positions at the fishways as needed to maintain proper flows.

Review of the 2010 through 2012 flow monitoring reports for the existing powerhouse found that no deviations were reported. Consultation with applicable resource agencies did not indicate any concerns with the current operations at the facility in terms of flows, although several declined to specifically comment on this issue.

***This Project passes Criterion A - Flows- Go to B***

## **B. WATER QUALITY**

**Goal:** The Water Quality Criterion is designed to ensure that water quality in the river is protected.

**Standard:** The Water Quality Criterion has two parts. First, an Applicant must demonstrate that the facility is in compliance with state water quality standards, either through producing a recent Clean Water Act Section 401 certification or providing other demonstration of compliance. Second, an applicant must demonstrate that the facility has not contributed to a state finding that the river has impaired water quality under Clean Water Act Section 303(d).

**Criterion:**

**1) Is the Facility either:**

**a) In compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the facility after December 31, 1986? Or in compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?**

**Yes.** The original WQC was issued in October 1992 by the MEDEP. On March 10, 2005, the MDEP issued a revised WQC adopting the applicable provisions of the Settlement Agreement and PIN Agreement. The 2005 WQC was made part of the FERC Order. The amended WQC revised all of the conditions except for those (Section 1 and 2) addressing minimum flows and headpond level maintenance within one foot of full-pond elevation while flashboards are in place.

Most of the special conditions were associated with fish passage requirements. Special Condition 12 addressed PIN Agreement issues associated with compensation payment to the Penobscot Indian Nation, management of logs in the river, and potential future development of a canoe portage trail. (Note that the latter two are recreational related; the compensation funds are for general PIN monitoring activities at the Milford Project.)

A Shoreline Erosion Control Plan was required, developed, reviewed by the PIN and BIA and approved by FERC. Its focus was on erosion caused by normal run-of-river operations, primarily on lands owner by the PIN. The Plan identifies specific stabilization measures to be placed at noted areas. Reports documenting monitoring performed and stabilization activities completed in 2006-2008 and 2009-2011 activities were issued. Consultation with John Banks of PIN by the Reviewer did not identify any issues with this program.

Article 405 of the FERC license required development and implementation of a plan to conduct dissolved oxygen (DO) monitoring downstream of the Milford Project for at least one year before and one year after the new capacity installation and repeated every five years for the term of the license. The DO monitoring Plan was reviewed by the resource agencies. By email dated August 9, 2005, the PIN provided comments which were incorporated into the final plan. By



letter dated August 4, 2005, the MDEP stated that the new capacity will not affect compliance with the State of Maine's water quality standards and that no further consultation with the MDEP on this issue is required. BBH has conducted the monitoring in August of 2010 and 2012 (one year before and after installation/operation of the new units). These results showed no dissolved oxygen issues. The Reviewer attempted to reach Kathy Howatt of MDEP, but neither the email nor phone message were returned.

### **Go to B2**

#### **2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?**

**NO.** Based on review of the draft MEDEP 2012 Integrated Water Quality Monitoring and Assessment Report, the project waters are not listed as impaired.

The existing water quality at the Milford Project is classified by the MDEP as a Class B. Class B waters are general-purpose waters and are managed to attain good physical, chemical and biological water quality; aquatic life use goal approximately Tier 3 on the Biological Condition Gradient. Well-treated discharges with ample dilution are allowed.

### **Go to B3**

#### **3) If the answer to question B.2. is yes, has there been a determination that the Facility is not a cause of that violation?**

**NOT APPLICABLE**

*The Project Passes Criterion B - Water Quality - Go to C*

## **C. FISH PASSAGE AND PROTECTION**

**Goal:** The Fish Passage and Protection Criterion is designed to ensure that, where necessary, the facility provides effective fish passage for riverine, anadromous and catadromous fish, and protects fish from entrainment.

**Standard:** For riverine, anadromous and catadromous fish, a certified facility must be in compliance with both recent mandatory prescriptions regarding fish passage and recent resource agency recommendations regarding fish protection. If anadromous or catadromous fish historically passed through the facility area but are no longer present, the facility will pass this criterion if the Applicant can show both that the fish are not extirpated or extinct in the area due in part to the facility and that the facility has made a legally binding commitment to provide any future fish passage recommended by a resource agency. When no recent fish passage prescription exists for anadromous or catadromous fish, and the fish are still present in the area, the facility must demonstrate either that there was a recent decision that fish passage is not necessary for a valid environmental reason, that existing fish passage survival rates at the facility

are greater than 95% over 80% of the run, or provide a letter prepared for the application from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service confirming the existing passage is appropriately protective.

***Criterion:***

**1) Is the facility in compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?**

**CONDITIONALLY, YES.** Mandatory fish passage prescriptions under FPA Section 18 were initially submitted by NMFS in February 1995, revised in June 1995 and again in May 1997. USFWS issued their prescription in 1995. These were issued relative to the licensing renewal proceedings. The majority of the agencies' recommendations, which were similar, were incorporated into the 1998 license by FERC.

As a signatory to the 2004 Settlement Agreement, the USFWS prescription requirements were incorporated into the Agreement, and as such, were incorporated into the amended FERC license issued on April 18, 2005. In a letter dated March 21, 2005, NMFS confirmed that its fishway prescription (issued pursuant to the 2005 license) is consistent with the intent of the USFWS's prescription. This letter also states that the need to monitor and evaluate the effectiveness of the fishways, and possible structural, or operational changes to improve their effectiveness, an integral part of the NMFS' prescription, was agreed to by both the USFWS and PP&L Maine LLC (the owner of Milford at that time) as being included in Attachment A of the Settlement Agreement. Thus, NMFS modified its preliminary prescription "in a manner that maintains consistency with fish passage requirements outlined in the Settlement Agreement, with the only change being that the process prescription (i.e. the effectiveness studies) for referenced projects may be omitted". NMFS also maintained that reserving authority to be consistent only with Attachment A of the Settlement Agreement is appropriate. FERC adopted this position in its 2005 Order, thus the license has both mandatory fish passage requirements under Articles 407 through 409, and reservation of authority for both the USFWS and NMFS under Article 411.

In accordance with these requirements, the target species of the passage facilities are American shad, alewife, blueback herring, the federally endangered Atlantic salmon and American eel. BBHP is installing the new downstream passage facilities (for anadromous species and eel) and a new fish lift and handling facility on the shore side of the powerhouse tailrace. Upstream eel passage has also been installed and operating since 2009. The downstream passage facilities are expected to be completed by January 2014 while the lift system for the anadromous species is targeted for February 2014 completion. Effectiveness testing is also required to ensure that the passage facilities provide for safe passage of these species.

The upstream fish lift facility will consist of an entrance at the east end of the powerhouse tailrace. Fish will travel past a counting window into a sorting facility before being released to the headpond or transferred into trucks for transport to hatchery and stocking programs. The log sluice will also be altered and the supporting ledge outcrop removed to enhance attraction to the fish lift entrance within 10 years of the effective date of the Settlement Agreement.

It appears that all required plans and associated resource agency consultations have been developed and conducted over a several year period through a series of meetings and draft plan reviews. This is supported by data provided by the applicant, review of FERC's eLibrary, review of the plans and agency consultation records.

It is unclear as to whether all of the fisheries agencies' latest recommendations have been incorporated into the design and subsequent construction of the passage facilities, or into the effectiveness testing plan, which was approved by FERC. This may be due in part to the fact that numerous discussions were held with the resource agencies which may have resulted in decisions which superseded previous recommendations. To address this concern, BBHP consulted with applicable resource agencies and based on email responses received from USFWS, NMFS, MDMR and PIN, which are contained in Appendix A, it appears that all of these agencies agree that, in essence, if the fishways satisfactorily pass fish based on the effectiveness testing conducted, then they would be satisfied with the structures as constructed and operated. Studies for upstream eel passage have been taking place since 2009. Qualitative study of downstream eel and downstream and upstream passage for anadromous (except Atlantic salmon) will start in 2014. When sufficient numbers of fish are available, quantitative testing will be initiated after consultation with the resource agencies regarding the details of the methodology to be used.

The testing for the Atlantic salmon is governed by the Biological Opinion issued on August 31, 2012. Numerical performance standards have been established for downstream passage of Atlantic salmon to be measured during a three year testing period. The performance standard for downstream migrating Atlantic salmon smolts at the Milford Project is 96% survival, evaluated by being within the lower and upper 75% confidence limit. The performance standard for upstream fish passage effectiveness is 95%. Testing for upstream passage was to be conducted for two years, once before and once after removal of the Veazie dam. However, as the Veazie Dam has already been removed by PRRT, the Applicant has reported that as discussed in the revised Species Protection Plan dated September 13, 2013, two years of testing will still be conducted once the lift system is operational. with the specific timeframe to be coordinated with the resource agencies. Specific action plans have also been established if these standards are not met each consecutive year. Renewed agency consultation will be established if the standard is not met at the end of the third years' enhancement implementation.

Given that all study plan requirements, agency consultation requirements and construction deadlines have been met, and that USFWS, NMFS, MDMR and PIN all are willing to base their acceptance of the fishways on the results of the effectiveness testing, then it appears that this criterion will be met.

While LIHI requires annual certification that a Project remains in compliance with all regulatory conditions, this recommendation for Project certification includes a "condition" requiring summary reporting of the effectiveness testing results performed each year during the term of this certification.

*Go to C5*

**2) Are there historic records of anadromous and/or catadromous fish movement through the facility area, but anadromous and/or catadromous fish do not presently move**

through the Facility area (e.g., because passage is blocked at a downstream dam or the fish run is extinct)?

NOT APPLICABLE

- a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?

NOT APPLICABLE

- b) If a Resource Agency recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?

NOT APPLICABLE

- 5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream or downstream passage of riverine fish?

NOT APPLICABLE. No fish passage requirements have been issued for riverine fish.  
*Go to C6*

- 6) Is the facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?

YES. As established in the Settlement Agreement and incorporated into the FERC license, BBHP installed new trashracks having angled 1-in clear spacing.

*The Project Conditionally Passes Criterion C - Fish Passage and Protection - Go to D*

## **D. WATERSHED PROTECTION**

**Goal:** The Watershed Protection criterion is designed to ensure that sufficient action has been taken to protect, mitigate and enhance environmental conditions in the watershed.

**Standard:** A certified facility must be in compliance with resource agency and Federal Energy Regulatory Commission (“FERC”) recommendations regarding watershed protection, mitigation or enhancement. In addition, the criterion rewards projects with an extra three years of certification that have a buffer zone extending 200 feet from the high water mark or an approved watershed enhancement fund that could achieve within the project’s watershed the ecological and recreational equivalent to the buffer zone and has the agreement of appropriate stakeholders and state and federal resource agencies. A Facility can pass this criterion, but not receive extra

years of certification, if it is in compliance with both state and federal resource agencies recommendations in a license-approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.

***Criterion:***

**1 ) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?**

**NO, go to D2**

**2 ) Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1), and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?**

**NO, go to D3**

**3 ) Has the facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies' agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)**

**NO, Go to D4**

**4 ) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.**

**YES.** A typical Shoreland Management Plan was not required for the Project. However under FERC license Article 417, a Shoreline Stabilization Plan to control erosion along stream bank areas within the jurisdiction of the PIN was required. As identified in the Plan, since the Project operates as a run-of-river facility with minimal headpond fluctuations, the erosion has been attributed to normal river flow changes and not project operations. The Plan was developed, approved and is in the process of being implemented.

***The Project Passes Criterion D - Watershed Protection - Go to E***

**E. THREATENED AND ENDANGERED SPECIES PROTECTION**

**Goal:** The Threatened and Endangered Species Protection Criterion is designed to ensure that the facility does not negatively impact state or federal threatened or endangered species.

**Standard:** For threatened and endangered species present in the facility area, the Applicant must either demonstrate that the facility does not negatively affect the species, or demonstrate compliance with the species recovery plan and receive long term authority for a “take” (damage) of the species under federal or state laws.

**Criterion:**

**1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?**

**YES.** The endangered GOM-DPS Atlantic Salmon is a federally endangered species found in the Milford Project area. Two other federally listed species, Shortnose Sturgeon and Atlantic Sturgeon are located in the lower reaches of the Penobscot River, but have been blocked from reaching the Milford Project by two dams, both which have been removed. The BO states that the run-of-river operation of Milford likely minimizes impact to sturgeon. However a sturgeon handling plan was developed in the event of incidental taking of a sturgeon.

Three threatened mussel species, tidewater mucket, yellow lampmussel and brook floater, may be found in the area of the Milford Project according to the 1998 Environmental Assessment, however no specific studies were conducted for these species then, or in 2004. Tidewater mucket and yellow lampmussel were found in the Great Works impoundment just downstream of Milford based on PRRT studies; thus they may also occur in the Milford impoundment.

**Go to E2**

**2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?**

**YES.** A recovery plan for the GOM DPS Atlantic salmon was developed in 2005. NMFS and USFWS are writing a new recovery plan that will include the expanded GOM-DPS designated critical habitat and will update the list of significant threats affecting this species. A recovery plan for the shortnose sturgeon was issued in 1998. None currently exists for the Atlantic sturgeon; conservation efforts for this species are guided by a Fisheries Management Plan created in 1998. No recovery plans have been developed for the state threatened mussels.

The Biological Opinion issued August 31, 2012 incorporated the requirements of the recovery plans for the Atlantic salmon and shortnose sturgeon.

**Go to E3**

**3) If the Facility has received authority to Incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental take statement; (ii) Obtaining an incidental take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority**



**pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authorization?**

**YES.** A The Biological Opinion developed by NMFS was issued August 31, 2012. The Biological Opinion was issued to address issues at Milford, Orono, Stillwater, Medway and West Enfield Projects. The NMFS found that the proposed actions may adversely affect but are not likely to jeopardize the continued existence of the GOM DPS of Atlantic salmon, shortnose sturgeon, or the GOM and New York Bight DPSs of Atlantic sturgeon.

The Biological Opinion includes an Incidental Take Statement (ITS) for all three protected species. The ITS also specifies Reasonable and Prudent Measures (RPMs) and implementing Terms and Conditions necessary to minimize and monitor the impact of these activities on these species. The ITS specifies five RPMs necessary to minimize and monitor take of listed species. The RPMs and implementing Terms and Conditions outlined in the ITS are non-discretionary.

As previously described under *Section VIII Criteria C, Fish Passage and Protection*, effectiveness testing of the downstream passage will be conducted over a three year period so proof of safe passage will not be confirmed until this testing is completed and the results assessed. Effectiveness testing for upstream passage appears to be limited to a two-year period. Also as previously noted, certification is recommended to be conditional regarding the fish passage facilities. As the Biological Opinion depends on the safe passage of Atlantic salmon, a satisfaction of this criterion has been conditioned to ensure that the latest agency recommended design features have been incorporated as confirmed by the testing.

*Go to E5*

**5) If E2 and E3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?**

**YES.** In 1997/1998 when the EA was developed for the license renewal process, the listed mussel species were only proposed for “listing” as a protected species. No specific studies were done at that time. Since tidewater mucket and yellow lampmussel were found in the Great Works impoundment, they could also occur in the Milford Project impoundment. As dewatering of these species can negatively affect them, a condition is recommended to address this potential impact to these species should they occur in the Milford impoundment.

*The Project Conditionally Passes Criterion E - Threatened and Endangered Species Protection - Go to F*

## **F. CULTURAL RESOURCE PROTECTION**

**Goal:** The Cultural Resource Protection Criterion is designed to ensure that the facility does not inappropriately impact cultural resources.

**Standard:** Cultural resources must be protected either through compliance with FERC license provisions, or through development of a plan approved by the relevant state or federal agency.

**Criterion:**

**1) If FERC-regulated, is the Facility in compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?**

**YES.** The Facility is in compliance with all requirements regarding cultural resource protection, mitigation or enhancement included in the 1998 FERC license (Article 415). No new issues were included in the Settlement or PIN Agreement.

There is a Programmatic Agreement between FERC, the Advisory Council on Historic Preservation, the State Historic Preservation Office and the applicant that includes development of a Cultural Resources Management Plan (CRMP). Requirements include filing of an annual report of activities conducted under the CRMP, which have been filed. As the potential existed for discovery of undiscovered cultural resources, the CRMP requires construction to stop and implementation of the applicable provisions of the CRMP. No such resources were discovered during recent construction activities. Reviewer consultation with the PIN and SHPO's office did not identify any concerns regarding cultural resource protection.

***The Project Passes Criterion F - Cultural Resource Protection - Go to G***

**G. RECREATION**

**Goal:** The Recreation Criterion is designed to ensure that the facility provides access to the water without fee or charge, and accommodates recreational activities on the public's river.

**Standard.** A certified facility must be in compliance with terms of its FERC license or exemption related to recreational access, accommodation and facilities. If not FERC-regulated, a certified facility must be in compliance with similar requirements as recommended by resource agencies. A certified facility must also provide the public access to water without fee or charge.

**Criterion:**

**1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?**

**YES.** Article 412 of the 1998 FERC license requires the construction or improvement to existing facilities, operation and maintenance, of a number of recreational facilities, all of which were constructed. These include:

- Project controlled portage trail at Milford and Gilmans Falls dams
- Old Town managed trailerable boat launch off North 4<sup>th</sup> street
- PIN managed trailerable boat launch off River Road on Indian Island
- Hand-carry boat launch off Route 2 near Sunkhaze Stream
- Trailerable boat launch off Route 2 in Costigan across from Feese Island

A Recreational Use and Facility Report is prepared according to license Article 414 obligations. The most recent report, dated May 7, 2010, did not identify a need for more facilities.

The 2005 amended license requires that within two years following removal of the Great Works and Veazie dams, BBHP shall consult with the PIN, the United States Bureau of Indian Affairs, the City of Old Town, Maine, and other affected landowners regarding whether a canoe portage trail should be constructed by the licensee around the Milford Dam on the west shore of the Penobscot River and file with the Commission a report on such consultation. If a canoe portage trail is needed, the licensee shall include in the report a plan to construct the trail, for Commission approval. A condition to monitor the status of this consultation and possible trail development is recommended.

Neither FERC environmental inspections conducted in September 2005 nor September 2011 identified any recreational facility deficiencies at the Project.

The FERC license (Article 413) and WQC also required development of a plan for removal of semi-buoyant logs found in the impoundment that may cause navigational safety concerns. The Plan was initially issued in 1998, revised in May 2005 and approved by MEDEP on May 4, 2005. The Plan involves identification of problematic logs by the PIN for removal by BBHP. Consultation with John Banks of PIN confirmed that this program is working well.

*Go to G3*

**3) Does the Facility allow access to the reservoir and downstream reaches without fees?**

**YES.** The applicant reported that such access is provided free of charge to the reservoir and downstream reaches of the river. Access to the powerhouse is not permitted.

*The Project Conditionally Passes Criterion G - Recreation - Go to G*

**H. FACILITIES RECOMMENDED FOR REMOVAL**

**Goal:** The Facilities Recommended for Removal Criterion is designed to ensure that a facility is not certified if a natural resource agency concludes it should be removed.

**Standard:** If a resource agency has recommended removal of a dam associated with the facility, the facility will not be certified.

**Criterion:**

**1) Is there a Resource Agency recommendation for removal of the dam associated with the Facility?**

**NO.** No resource agency has recommended removal of this dam.

*The Project Passes Criterion H -Facilities Recommended for Removal*

## APPENDIX A

### INDEX OF PRIMARY CONTACT INFORMATION FOR LIHI CRITERIA

The following lists direct consultation initiated by the Reviewer. Consultation with other resource agencies was initiated by the Applicant's representative and provided as follow-up to questions raised by the Reviewer. All Reviewer/stakeholder communications were by email. Both Applicant and Reviewer initiated emails are contained in this Appendix.

<b>LIHI CRITERION</b>	<b>PRIMARY CONTACT INFORMATION</b>
<b>Flows</b>	Sean McDermott of NMFS; Stephen Shepard of USFWS; Gail Wipplehouser of MDMR; John Banks of PIN
<b>Water Quality</b>	Kathy Howatt, MEDEP (no response received)
<b>Fish Passage &amp; Protection</b>	Sean McDermott of NMFS; Stephen Shepard of USFWS; John Banks of PIN; Gail Wipplehouser of MDMR (no response received)
<b>Watershed Protection</b>	None conducted
<b>Threatened &amp; Endangered Species</b>	None conducted other than those associated with fish passage consultation
<b>Cultural Resources Protection</b>	Arthur Speiss of ME SHPO; John Banks and Chris Sockalexix of PIN
<b>Recreation</b>	John Banks of PIN
<b>Facilities Recommended for Removal</b>	None conducted

## Scott Hall

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**From:** John Banks [John.Banks@penobscotnation.org]  
**Sent:** Friday, November 08, 2013 7:57 AM  
**To:** Scott Hall  
**Subject:** Milford LHI process

Dear Scott,

The Penobscot Nation agrees that the new fish passage facilities at the Milford Project were designed in consultation with the state and federal resource agencies and Penobscot Indian Nation. The facilities have been constructed in accordance with agreed upon design, as verified by NOAA during construction inspections. Final concurrence of the design and operation will await satisfactory completion of effectiveness testing per FERC license requirements for Atlantic salmon and other diadromous species.

Sincerely,

John S. Banks  
Director of Natural Resources  
Penobscot Nation  
12 Wabanaki Way  
Indian Island, ME 04468  
207-817-7330  
207-356-5022 (cell)  
[john.banks@penobscotnation.org](mailto:john.banks@penobscotnation.org)

## Scott Hall

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**From:** Wippelhauser, Gail [Gail.Wippelhauser@maine.gov]  
**Sent:** Thursday, November 07, 2013 12:08 PM  
**To:** Scott Hall; John.Banks@penobscotnation.org; Sean McDermott - NOAA Federal; Shepard, Steven  
**Subject:** RE: Milford Project - LIHI Process

Scott,

The Maine Department of Marine Resources agrees that the new fish passage facilities at the Milford Project were designed in consultation with the state and federal resource agencies and Penobscot Indian Nation. The facilities have been constructed in accordance with agreed upon design, as verified by NOAA during construction inspections. Final concurrence of the design and operation will await satisfactory completion of effectiveness testing per FERC license requirements for Atlantic salmon and other diadromous species.

Gail Wippelhauser, Ph. D.  
Marine Resources Scientist  
Maine Department of Marine Resources  
#172 State House Station  
Augusta, ME 04333

Phone: 207-624-6349 Fax: 207-624-6501  
email: [gail.wippelhauser@maine.gov](mailto:gail.wippelhauser@maine.gov)

**From:** Scott Hall [<mailto:shall@blackbearhydro.com>]  
**Sent:** Tuesday, October 22, 2013 8:41 AM  
**To:** [John.Banks@penobscotnation.org](mailto:John.Banks@penobscotnation.org); Wippelhauser, Gail; Sean McDermott - NOAA Federal; Shepard, Steven  
**Subject:** Milford Project - LIHI Process

Good morning,

As I have discussed with each of you, similar to the Stillwater Project, as part of the process to certify the Milford Project with the Low Impact Hydro Institute (LIHI) it will be helpful to provide your confirmation that the new fish passage facilities are consistent with the Lower Penobscot River Multiparty Settlement Agreement, have been designed in consultation with the agencies and Penobscot Indian Nation (PIN), and are therefore satisfactory with the understanding that the FERC license also requires us to perform effectiveness testing per the recently finalized study plans for Atlantic salmon and other diadromous fish.

While we have provided LIHI with the background outlining our collective engagement in numerous rounds of comments and meetings during an extensive consultation process to arrive at the final designs, we would appreciate it if you could each respond to this email as soon as possible with your confirmation, which I will then forward to LIHI for its records.

Thanks for your recent responses to the same request related to our Stillwater project, and thank you in advance for your response to this as well.

Scott

### Scott D. Hall

Vice President - Environmental & Business Services  
Black Bear Hydro Partners, LLC  
Davenport Street, PO Box 276



## Scott Hall

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**From:** Shepard, Steven [steven\_shepard@fws.gov]  
**Sent:** Wednesday, October 23, 2013 3:03 PM  
**To:** Scott Hall  
**Cc:** John.Banks@penobscotnation.org; Gail Wipplehauser; Sean McDermott - NOAA Federal  
**Subject:** Re: Milford Project - LIHI Process

Same response as Stillwater fish passage construction.

We stipulate that the facilities have been constructed in accordance with agreed upon design criteria, as verified by NOAA during construction inspections. Final approval of the Service will await satisfactory test results.

~~~~~  
Steven Shepard, C.F.P.  
U.S. Fish & Wildlife Service  
17 Godfrey Drive, Suite 2  
Orono, Maine 04473  
Voice: 207-866-3344 x116  
Cell: 207-949-1288  
[steven\\_shepard@fws.gov](mailto:steven_shepard@fws.gov)  
~~~~~

On Tue, Oct 22, 2013 at 8:41 AM, Scott Hall <[shall@blackbearhydro.com](mailto:shall@blackbearhydro.com)> wrote:

Good morning,

As I have discussed with each of you, similar to the Stillwater Project, as part of the process to certify the Milford Project with the Low Impact Hydro Institute (LIHI) it will be helpful to provide your confirmation that the new fish passage facilities are consistent with the Lower Penobscot River Multiparty Settlement Agreement, have been designed in consultation with the agencies and Penobscot Indian Nation (PIN), and are therefore satisfactory with the understanding that the FERC license also requires us to perform effectiveness testing per the recently finalized study plans for Atlantic salmon and other diadromous fish.

While we have provided LIHI with the background outlining our collective engagement in numerous rounds of comments and meetings during an extensive consultation process to arrive at the final designs, we would appreciate it if you could each respond to this email as soon as possible with your confirmation, which I will then forward to LIHI for its records.

Thanks for your recent responses to the same request related to our Stillwater project, and thank you in advance for your response to this as well.

## Scott Hall

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**From:** Sean McDermott - NOAA Federal [sean.mcdermott@noaa.gov]  
**Sent:** Wednesday, October 23, 2013 9:16 AM  
**To:** Scott Hall  
**Cc:** John.Banks@penobscotnation.org; Gail Wipplehauser; Shepard, Steven  
**Subject:** Re: Milford Project - LIHI Process

Scott,  
NMFS agrees with your summary regarding the Milford Project's fish passage facility. The new fish passage facilities at the existing powerhouse were designed in consultation with the state and federal resource agencies and Penobscot Indian Nation. The facilities have been constructed in accordance with agreed upon design, as verified by NOAA during construction inspections. Final concurrence of the design and operation will await satisfactory completion of effectiveness testing per FERC license requirements for Atlantic salmon and other diadromous species. NMFS fishway engineer has conducted on site inspections to ensure construction meets the design specifications. As of October 1, no major construction issues have been noted.  
-Sean

On Tue, Oct 22, 2013 at 8:41 AM, Scott Hall <[shall@blackbearhydro.com](mailto:shall@blackbearhydro.com)> wrote:

Good morning,

As I have discussed with each of you, similar to the Stillwater Project, as part of the process to certify the Milford Project with the Low Impact Hydro Institute (LIHI) it will be helpful to provide your confirmation that the new fish passage facilities are consistent with the Lower Penobscot River Multiparty Settlement Agreement, have been designed in consultation with the agencies and Penobscot Indian Nation (PIN), and are therefore satisfactory with the understanding that the FERC license also requires us to perform effectiveness testing per the recently finalized study plans for Atlantic salmon and other diadromous fish.

While we have provided LIHI with the background outlining our collective engagement in numerous rounds of comments and meetings during an extensive consultation process to arrive at the final designs, we would appreciate it if you could each respond to this email as soon as possible with your confirmation, which I will then forward to LIHI for its records.

Thanks for your recent responses to the same request related to our Stillwater project, and thank you in advance for your response to this as well.

Scott

**Scott D. Hall**

## Patricia McIlvaine

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**From:** Patricia McIlvaine  
**Sent:** Tuesday, December 17, 2013 3:32 PM  
**To:** 'steven\_shepard@fws.gov'; 'Sean.mcdermott@noaa.gov'; 'richard.dill@maine.gov'; gail.whippelhauser@maine.gov; john.banks@penobscotnation.org  
**Subject:** Milford Project Compliance

Good afternoon

I am in the process of reviewing Black Bear Hydro's application for Low Impact Hydropower Certification for their Milford project. I did receive a copy of the emails you provided to Scott addressing fish passage issues at the project. I now have a couple of other questions for you. Please feel free to respond by email or by calling me at the number listed below:

- 1) Are you satisfied with how BBH has been handling issues associated with run-of-river operation, minimum flows and headpond management at this site? Do you have any concerns?
- 2) Given the past emails you provided regarding the construction of the fish passages, can I assume from the fact that you are willing to rely on the passage effective testing to confirm their proper installation, that you are also satisfied with how your comments to the draft Diadromous Fish Passage Study Plan, draft Species Protection Plan and draft Atlantic Salmon Passage Study Plan were addressed? I see that you each provided a series of comments to those draft Plans.
- 3) Are there any general comments or issues you would like to share with me regarding BBH's responsiveness to their overall commitments and the working relationship between them and your organization.

Thank you for your time. I look forward to hearing from you.

Pat

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**Patricia McIlvaine | Project Manager**

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



## Patricia McIlvaine

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**From:** Patricia McIlvaine  
**Sent:** Tuesday, December 17, 2013 1:52 PM  
**To:** kathy.howatt@maine.gov  
**Subject:** Milford Hydropower Project

Hi Kathy

Pursuant to my voice message, I would like to chat with you for a few minutes about the following items associated with the Black Bear Hydro (soon to be Brookfield Renewables) Milford Project. Please feel free to respond by email or by calling me at the number listed below.

- 1) Are you satisfied with how BBH has been handling issues associated with water quality protection at this site from both the construction activities that are still ongoing and operation of the existing units? Do you have any concerns?
- 2) Are you satisfied with the activities that BBH has been conducting regarding flow management?
- 3) Are there any general comments or issues you would like to share with me regarding BBH's responsiveness to their overall commitments and the working relationship between them and your organization.

Thank you for your time. I look forward to hearing from you.

Pat

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**Patricia McIlvaine | Project Manager**

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



**Patricia McIlvaine**

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**From:** Shepard, Steven <steven\_shepard@fws.gov>  
**Sent:** Wednesday, December 18, 2013 3:42 PM  
**To:** Patricia McIlvaine  
**Subject:** Re: FW: Milford Project Compliance

NOAA-Fisheries is taking the lead on fish passage testing, with assistance from Maine DMR (who will provide the fish). Thus, we will not be filing any comments  
Steve

~~~~~  
Steven Shepard, C.F.P.  
U.S. Fish & Wildlife Service  
17 Godfrey Drive, Suite 2  
Orono, Maine 04473  
Voice: 207-866-3344 x116  
Cell: 207-949-1288  
[steven\\_shepard@fws.gov](mailto:steven_shepard@fws.gov)  
~~~~~

On Wed, Dec 18, 2013 at 11:57 AM, Patricia McIlvaine <[Pat.McIlvaine@wright-pierce.com](mailto:Pat.McIlvaine@wright-pierce.com)> wrote:

Steve

I thought I'd attach a copy of the actual fish effectiveness testing plan which includes your comments in the appendix. This might make things easier for you.

Thanks

Pat

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**From:** Patricia McIlvaine  
**Sent:** Tuesday, December 17, 2013 3:32 PM  
**To:** 'steven\_shepard@fws.gov'; 'Sean.mcdermott@noaa.gov'; 'richard.dill@maine.gov'; [gail.whippelhauser@maine.gov](mailto:gail.whippelhauser@maine.gov); [john.banks@penobscotnation.org](mailto:john.banks@penobscotnation.org)  
**Subject:** Milford Project Compliance

Good afternoon

I am in the process of reviewing Black Bear Hydro's application for Low Impact Hydropower Certification for their Milford project. I did receive a copy of the emails you provided to Scott addressing fish passage issues at the project. I now have a couple of other questions for you. Please feel free to respond by email or by calling me at the number listed below:

- 1) Are you satisfied with how BBH has been handling issues associated with run-of-river operation, minimum flows and headpond management at this site? Do you have any concerns?
- 2) Given the past emails you provided regarding the construction of the fish passages, can I assume from the fact that you are willing to rely on the passage effective testing to confirm their proper installation, that you are also satisfied with how your comments to the draft Diadromous Fish Passage Study Plan, draft Species Protection Plan and draft Atlantic Salmon Passage Study Plan were addressed? I see that you each provided a series of comments to those draft Plans.
- 3) Are there any general comments or issues you would like to share with me regarding BBH's responsiveness to their overall commitments and the working relationship between them and your organization.

Thank you for your time. I look forward to hearing from you.

Pat

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**Patricia McIlvaine | Project Manager**

99 Main Street | Topsham, ME 04086

**Office** 207.725.8721 | **Direct** 207.798.3785 |



## Patricia McIlvaine

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**From:** Spiess, Arthur <Arthur.Spiess@maine.gov>  
**Sent:** Wednesday, December 18, 2013 1:02 PM  
**To:** Patricia McIlvaine  
**Subject:** RE: Milford Hydropower Project

Hello Pat:

Yes, we are satisfied with how BBH has handled the Milford project, and BBH in general when it comes to archaeology.

Sincerely, Art Spiess

*Dr. Arthur Spiess*  
Senior Archaeologist, Maine Historic Preservation  
State House Station 65  
Augusta, ME 04333  
desk phone: 207-287-2789

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**From:** Patricia McIlvaine [<mailto:Pat.McIlvaine@wright-pierce.com>]  
**Sent:** Tuesday, December 17, 2013 1:59 PM  
**To:** Spiess, Arthur  
**Subject:** Milford Hydropower Project

Hi Dr. Spiess

Pursuant to my voice message, I am doing a review for this project for the Low Impact Hydropower Institute. I would like to chat with you for a few minutes about the following items associated with the Black Bear Hydro (soon to be Brookfield Renewables) Milford Project. Please feel free to respond by email or by calling me at the number listed below.

- 1) Are you satisfied with how BBH has been handling issues associated with cultural resource protection at this site from both the construction activities that are still ongoing and operation of the existing units? Do you have any concerns?
- 2) Are there any general comments or issues you would like to share with me regarding BBH's responsiveness to their overall commitments and the working relationship between them and your organization.

Thank you for your time. I look forward to hearing from you.

Pat

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**Patricia McIlvaine**

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**From:** Chris Sockalexis <Chris.Sockalexis@penobscotnation.org>  
**Sent:** Wednesday, December 18, 2013 10:40 AM  
**To:** Patricia McIlvaine  
**Subject:** Questions on Milford Project

Good Morning,

John Banks forwarded an email to me from you regarding some questions about the Milford Project. Is there a link to FERC's eLibrary that can take me to the Milford Project's listing that I can scan through?

To answer question 1 & 4 - I am satisfied with the notifications and protection of cultural issues during construction activities. I would like to be informed of all future projects that arise so that a proper survey of the area can be done. I would like to be notified of any and all drawdowns of the Milford impoundment so that shoreline surveys of cultural/historical materials can be completed by my office. I have been satisfied by the relationship the Penobscot Nation has with Black Bear Hydro and I look forward to working with Brookfield Renewables in the future.

Is there more information that you can provide for the new canoe portage trail project that can be emailed to me?

As far as the remainder of the questions you have posed - I cannot answer those.

Thank you for consulting with the Penobscot Nation on this project.

Sincerely,

Chris Sockalexis, THPO  
Penobscot Nation

## Patricia McIlvaine

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**From:** Sean McDermott - NOAA Federal <sean.mcdermott@noaa.gov>  
**Sent:** Wednesday, December 18, 2013 8:39 AM  
**To:** Patricia McIlvaine  
**Subject:** Re: Milford Project Compliance

Pat,  
I would prefer to not comment until after monitoring data are available and properly analyzed.  
-Sean

On Tue, Dec 17, 2013 at 3:31 PM, Patricia McIlvaine <[Pat.McIlvaine@wright-pierce.com](mailto:Pat.McIlvaine@wright-pierce.com)> wrote:

Good afternoon

I am in the process of reviewing Black Bear Hydro's application for Low Impact Hydropower Certification for their Milford project. I did receive a copy of the emails you provided to Scott addressing fish passage issues at the project. I now have a couple of other questions for you. Please feel free to respond by email or by calling me at the number listed below:

- 1) Are you satisfied with how BBH has been handling issues associated with run-of-river operation, minimum flows and headpond management at this site? Do you have any concerns?
- 2) Given the past emails you provided regarding the construction of the fish passages, can I assume from the fact that you are willing to rely on the passage effective testing to confirm their proper installation, that you are also satisfied with how your comments to the draft Diadromous Fish Passage Study Plan, draft Species Protection Plan and draft Atlantic Salmon Passage Study Plan were addressed? I see that you each provided a series of comments to those draft Plans.
- 3) Are there any general comments or issues you would like to share with me regarding BBH's responsiveness to their overall commitments and the working relationship between them and your organization.

Thank you for your time. I look forward to hearing from you.

Pat

## Patricia McIlvaine

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**From:** John Banks <John.Banks@penobscotnation.org>  
**Sent:** Tuesday, December 17, 2013 3:49 PM  
**To:** Patricia McIlvaine  
**Cc:** Chris Sockalexis  
**Subject:** RE: Questions on the Milford Project

Pat,

- 1) that should be addressed by our THPO, Chris Sockalexis, whom I have CCed above.
- 2) yes
- 3) yes
- 4) We have a good working relationship with BBH.

Thanks,

John

John S. Banks  
Director of Natural Resources  
Penobscot Nation  
12 Wabanaki Way  
Indian Island, ME 04468  
207-817-7330  
207-356-5022 (cell)  
[john.banks@penobscotnation.org](mailto:john.banks@penobscotnation.org)

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**From:** Patricia McIlvaine [<mailto:Pat.McIlvaine@wright-pierce.com>]  
**Sent:** Tuesday, December 17, 2013 1:47 PM  
**To:** John Banks  
**Subject:** Questions on the Milford Project

Hi John

Pursuant to my voice message, I would like to chat with you for a few minutes about the following items associated with the Black Bear Hydro (soon to be Brookfield Renewables) Milford Project. I do have an email from you to Scott Hall regarding fish passage issues. Please feel free to respond by email or by calling me at the number listed below.

- 1) Are you satisfied with how BBH has been handling issues associated with protection of cultural issues at this site from both the construction activities that are still ongoing and operation of the existing units? Do you have any concerns?
- 2) Are you satisfied how they are handling the commitment to provide monetary compensation as identified in the PIN Agreement that was signed?
- 3) Are you satisfied with the activities that BBH has been conducting regarding management of logs in the river that may affect navigation and tier proper removal as identified in the PIN Agreement?

- 4) Are there any general comments or issues you would like to share with me regarding BBH's responsiveness to their overall commitments and the working relationship between them and your organization...

As the potential new canoe portage trail is not yet due, I am not currently focused on this. But if there has been activity or discussions on this that is not available in documents on FERC's eLibrary, please let me know.

Thanks for your time. I looked forward to hearing from you.

Pat

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