APPLICATION REVIEW FOR RECERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE

STILLWATER HYDROELECTRIC PROJECT NO. 2712

December 20, 2016
Revised January 6, 2017

Application Reviewer: Patricia McIlvaine

REVIEW OF APPLICATION FOR RECERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE STILLWATER HYDROELECTRIC PROJECT

Prepared by:
Patricia McIlvaine
December 20, 2016; rev. January 6, 2017

I. INTRODUCTION AND OVERVIEW

This report reviews the application submitted in December 2015 by Black Bear Hydro Partners (BBHP or Applicant), an indirect subsidiary of Brookfield Renewable Energy Group (Brookfield), to the Low Impact Hydropower Institute (LIHI) for re-certification for the Stillwater Hydroelectric Project Stillwater Project). BBHP provided supplemental information on November 4, 2016 for review on in response to the Intake Review completed on July 18, 2016. Some minor additional data was provided on December 8, 2016, in response to a subsequent inquiry from the application Reviewer.

The original Stillwater Project, referred to as Powerhouse A was certified by LIHI as Project #67 from June 1, 2010 to June 1, 2015. A second certification application was submitted for a newly constructed Powerhouse by BBH,P, which also received LIHI certification from August 7, 2013 to August 7, 2018 as LIHI Project # 110. It was agreed that combining both projects into one would make sense for recertification consideration, and are referred to as the Stillwater Project in this report. The original certification reports can be found here:

http://lowimpacthydro.org/wp-content/uploads/2011/01/Stillwater-Report.pdf

http://www.lowimpacthydro.org/assets/files/Stillwater%20B/Final%20Stillwater%20PH2%20Certification%20Report%20_PBM.pdf

The original Stillwater was originally licensed to Bangor Hydro Electric Company on April 20, 1978. 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. Brookfield Renewable Energy Group purchased BBHP in January 2014. The Project (both powerhouses) is licensed by the Federal Energy Regulatory Commission (FERC) as Project Number 2712. The current license expires on March 31, 2048.

As summarized below under ***Regulatory and Compliance Status***, and further described in detail in the two original certification reports, the addition of the Stillwater Powerhouse B is part of a 2004 Settlement Agreement involving five hydropower projects owned and operated by BBHP located within the Penobscot River Basin. The combined estimated annual production of the Project is 32,521 MWh.

II. RECERTIFICATION STANDARDS AND INITIAL ASSESSMENT

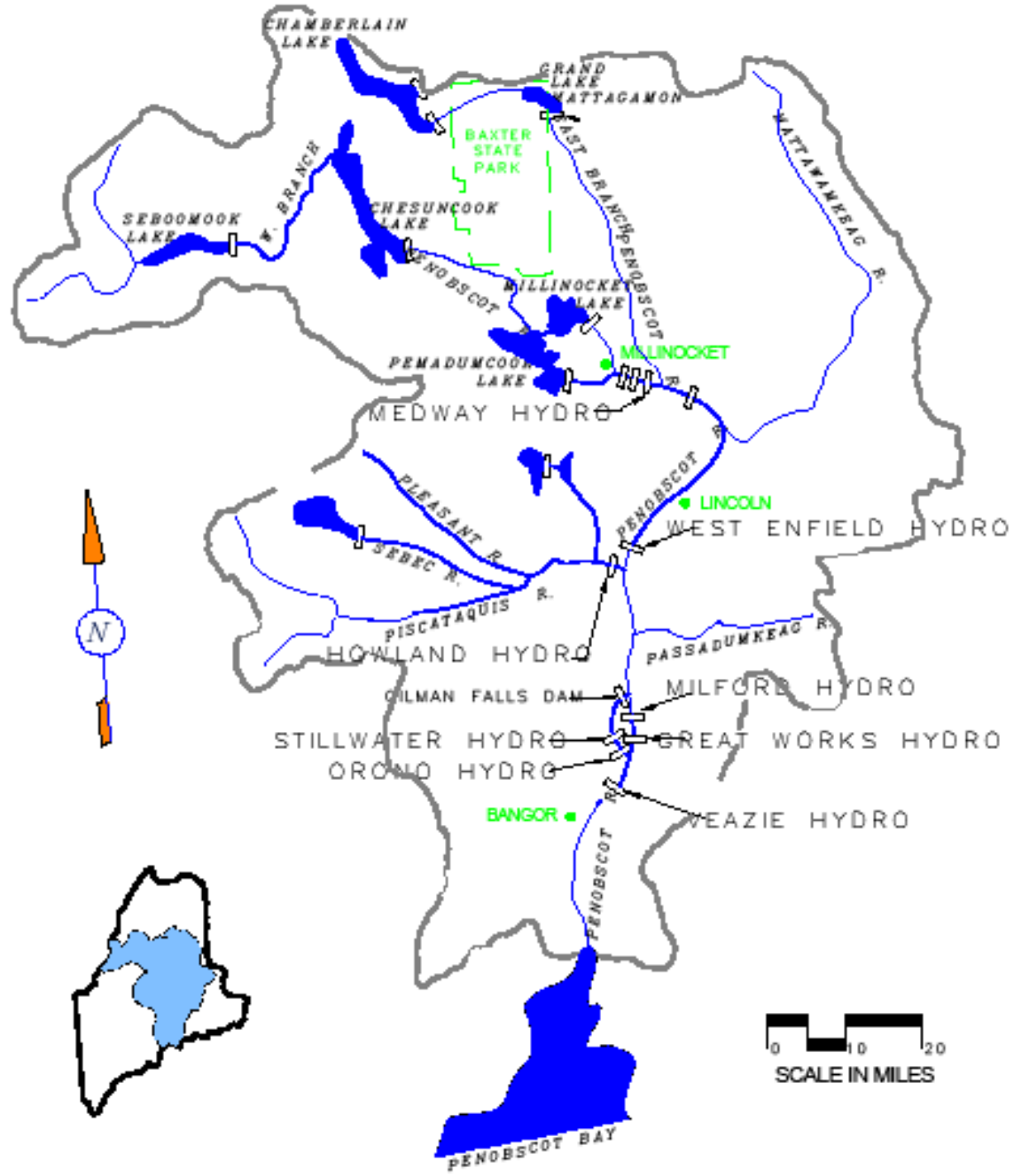
This recertification review was conducted under the April 2014 LIHI Handbook since the application was submitted before the end of December 2015. Chapter 2, Section 2.25 of the April 2014 Handbook provides that a request for renewal of a previously-issued LIHI certification ("re-certification") will 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." Although not specifically defined in the 2014 Handbook, "material changes" were explained to the applicants to mean "changes in circumstances at facilities reviewed by LIHI have involving (1) compliance issues (non-implementation, delayed implementation, incomplete implementation of obligations that are relevant to LIHI's Criteria), and/or (2) new or renewed issues that are relevant to LIHI's Criteria occurring since the previous certification was issued (e.g., newly-monitored exceedance of water quality criteria; construction of a new fishway at the facility or a downstream facility; new effectiveness testing at an already-existing fishway; newly-regulated endangered or threatened species; revised flow regime due to inadequacies found in previous regime."

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, then the project is eligible for recertification action by the Executive Director.

An initial review of the application December 2015 application indicated that there was missing information and that "material changes" had occurred, namely the initiation of Powerhouse B operation and construction and operation of new fish passage facilities.

III. PROJECT'S GEOGRAPHIC LOCATION

The Stillwater Project is located on the Stillwater Branch of the Penobscot River ("River) in 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 Stillwater Project is located on Stillwater Branch of the Penobscot River, approximately three miles downstream of the Gilman Falls Dam (which is part of the Milford Hydro Project) and about one mile upstream of the Orono Dam. The Mattawamkeag River remains free-flowing, while there are a total of 20 run-of river dams located on the other Basin waterways.



PENOBSCOT RIVER BASIN

IV. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

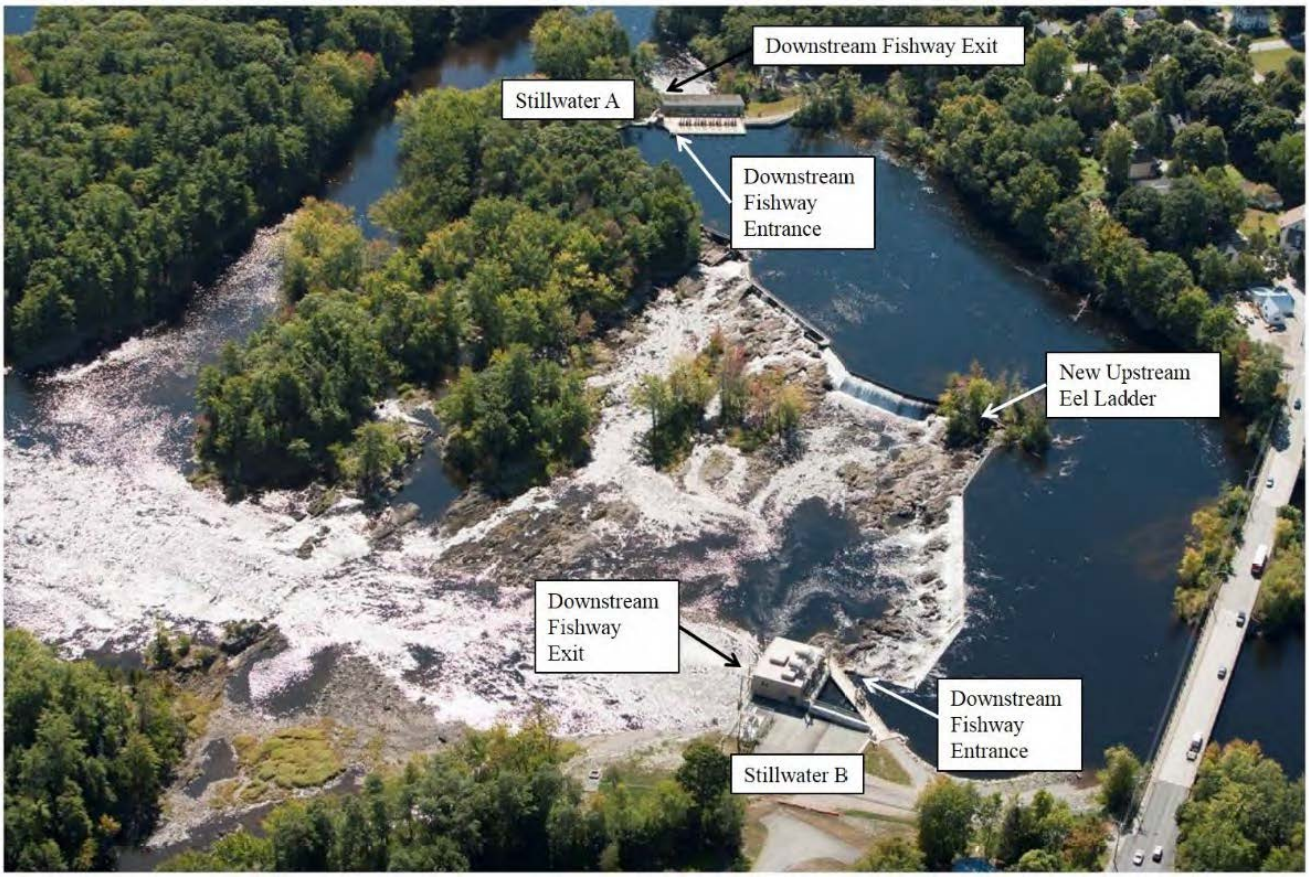
The existing Stillwater Project works consist of a main concrete gravity dam, totaling about 1,720 feet long, with a maximum height of 22 feet at crest elevation 91.65 feet; a concrete and wooden powerhouse; four horizontal hydroelectric generating units, all totaling a rated capacity of 1,950 kilowatts (kW); an impoundment about 3.1 miles long, having a surface area of about 300 acre, a gross storage capacity of 3,040 acre-feet, a negligible useable storage capacity, a normal headwater surface elevation of about 94.65 feet; a downstream fishway bypass; and appurtenant facilities. The re-development of the Project included a second powerhouse containing three turbine-generating units having a nameplate capacity of 803 kW per unit. The powerhouse is located adjacent to the existing left buttress of the dam. A new 60-feet-wide forebay intake will supply the powerhouse. The new powerhouse intake includes a 60-feet-wide by 22-feet-high trashracks with angled 1-in clear spacing. The tailrace will discharge to the existing pool in the bypass reach. The new powerhouse began generation in September 2013.

As part of the redevelopment, BBHP installed a new downstream fishway at the new powerhouse, refurbished the existing downstream fishway located near Powerhouse A, constructed an upstream eel passage facility at the top of the forebay, developed downstream passage for eels and added one-inch trashracks for the full depth of the new and existing powerhouse intakes. More detail on these fish passages, including some photographs, can be found in the original certification reports.

The Stillwater Project is operated as a run-of-river development with discharge from the project turbines and spillway equivalent to inflow. Flows are reallocated between the main stem of the Penobscot River and the Stillwater Branch through operation of its Milford Project (No. 2534). The Stillwater Project includes a downstream bypass that discharges to the tailrace. The Stillwater Project also includes two upstream fishways for juvenile American eel that are located at the east and west abutments of the spillway. The Project provides a minimum flow to the bypass reach of 195 cfs through weirs located near the west abutment (70 cfs) and near the center of the spillway (125 cfs).

Land area occupied by the features described above is estimated at 0.8 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.

An aerial photograph on the next page shows the location of the dam, two powerhouse as well as the various fish passage facilities now in operation at the Stillwater Project.



Aerial View of the Stillwater Project

V. REGULATORY AND COMPLIANCE STATUS

FERC License

The original FERC license was issued in 1978, and a new license approved on April 20, 1998 having a 40-year term. The new license was the result of the Lower Penobscot River Basin Comprehensive Settlement Accord, which included a number of agreements, including the Lower Penobscot River Multiparty Settlement Agreement. Numerous federal and state agencies and non-governmental organizations signed the agreements. A detailed description of the settlement agreement processes and signatories can be found in both original certification reports.

A revised FERC license was issued on April 18, 2005 incorporating the conditions of the Settlement Agreement, including authorization to raise the elevation of the reservoir by one foot through the use of flashboards. The license was again amended on September 14, 2012 which authorized the development of Powerhouse B. The development of Powerhouse B, including downstream eel and fish passage and upstream eel passage, were based on the terms of the Settlement Agreement.

Water Quality Certification (WQC)

On January 13, 2005, the Maine Department of Environmental Protection (MEDEP) issued a revised WQC adopting the applicable provisions of the Settlement Agreement. The 2005 WQC was made part of the FERC Order. The MEDEP issued an amended Section 401 WQC for the added generation on August 23, 2011. This amended certification was adopted in its entirety in the September FERC 2012 license.

Overall Compliance

The applicant confirmed that the current Project, including both powerhouses, has been in continuous compliance with its operating requirements since taking ownership in January 2014. Review of FERC's eLibrary indicates that no deviations of flow or other license conditions have occurred since 2010, which is when the certification period for the original powerhouse project (LIHI #67) began. Construction reports filed by BBHP during construction did not report any environmentally related concerns, nor were any reported by the resource agencies consulted as part of the initial certification review of Powerhouse B (LIHI #110).

Certification for Powerhouse B had a condition that required confirmation that the design of the three new fish passage facilities were satisfactory to the resource agencies and that the applicant would notify LIHI if any new fish kill events took place, since there were two (one each in 2012 and 2013) that did not appear to be fully notified. Satisfaction of the first requirement is discussed under **Criterion C – Fish Passage and Protection**. The applicant has also confirmed that no fish kill events have occurred since they took ownership in January 2014. BBHP field staff, who worked for both the previous owner and now Brookfield, who make daily site visits, were queried to confirm that no events occurred in the months between the 2013 event and January 2014.

VI. PUBLIC COMMENT RECEIVED BY LIHI

The deadline for submission of comments on the re-certification application was February 19, 2016. No public comments letters were received. Outreach discussions with several agencies and the Penobscot Indian Nation (PIN) (see list below) are discussed under **Criterion C - Fish Passage** and **Protection** and **Criterion G – Recreation**.

Fish passage:
USFWS - Steven Shepard - steven_shepard@fws.gov
MDMR - Gail Whippelhauser - Gail.Wippelhauser@maine.gov
NMFS – Jeff Murphy - jeff.murphy@noaa.gov – Did not respond
PIN – Dan McCaw - Dan.McCaw@penobscotnation.org – Did not respond

Recreational facilities:
PIN - John Banks – John.Banks@penobscotnation.org

VII. SUMMARY OF COMPLIANCE WITH CRITERIA AND ISSUES IDENTIFIED

Criterion A - Flows – The Stillwater Powerhouse appears to be operated in compliance with the established minimum flow requirements and deviation reporting.

Criterion B - Water Quality - The project appears to be in compliance with the water quality requirements of the Water Quality Certification. Fish passage related issues are discussed under Criterion C. the Maine Department of Environmental Protection (MEDEP) 2012 Integrated Water Quality Monitoring and Assessment Report, the most recent report, indicates the project waters are not listed as impaired.

Criterion C - Fish Passage and Protection The downstream anadromous fish passage at Powerhouse B and improvements to the passage at Powerhouse A, and upstream and downstream passage structures for American eel have been constructed under the required timeline. Fish passage effectiveness studies, including the need to meet specific numerical performance standards for Atlantic salmon, a federally endangered species, are underway. Adequacy of the new fish passages installed must be demonstrated for three years. USFWS certification of the fishways is still outstanding. Four conditions are recommended to ensure compliance with these requirements.

Criterion D - Watershed Protection - There are no requirements for a buffer zone, shoreline protection fund or shoreline management plan for the Facility. 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, a federally endangered species. A 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. This opinion is based on the assumption that the downstream passage facilities at the Stillwater Project will provide safe passage for the species, which are defined by numerical standards. As noted above, proof of safe passage will not be confirmed until effectiveness testing is completed and the results assessed. The Project appears to be in compliance with all requirements of its Species Protection Plan which was developed in compliance with the Biological Opinion. Incidental takes of the GOM-DPS Atlantic salmon have been appropriately reported. These "takes" include those used for fish passage effectiveness testing.

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

Criterion G - Recreation - The Project was found to be in compliance with all recreational requirements.

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

VIII. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATIONS

Based on my review of information submitted by the applicant, the additional documentation noted herein, and comments obtained through my consultation with several resource agencies and the PIN, I believe that the Stillwater Project continues to be compliance with the LIHI criteria and should be re-certificated for term of five years, providing the following conditions are satisfied. These conditions incorporate requirements under **Criterion C – Fish Passage and Protection** and **E – Threatened and Endangered Species Protection.**

1. The Owner shall notify LIHI within 30 days of receipt of USFWS certification of the downstream anadromous fishway and the up and downstream eel passage facilities as required by the Lower Penobscot River Multiparty Settlement Agreement. This certification requires affirmation that a) the facilities were designed and installed as prescribed, b) the facilities are ready for routine operation as evidenced by approved Operating Manuals and electronic data collection systems and c) one year of testing and any required "fine tuning" has been completed. If such USFWS certification is not received by the end of 2017, the Owner shall provide LIHI documentation as to why the certification has not been received and the plan and schedule to remedy deficiencies identified by USFWS preventing such certification.

2. If the requirement for re-initiation of studies of downstream passage of juvenile alosine species occurs within this LIHI certification period, the Owner shall notify LIHI within 60 days of receipt of such study re-initiation. This notification shall include the study schedule including the expected report issuance date. A copy of the final report, along with agency comment as to whether or not the testing results prove that safe downstream passage has been demonstrated, shall be provided to LIHI within 60 days of issuance of the final report.

3. The Owner shall notify LIHI within 60 days of receipt of USFWS, NMFS and MDMR acknowledgement that the standards specified in the Biological Opinion for safe downstream passage of Atlantic salmon have been met. Currently, effectiveness testing should be completed by 2018 based on the three-year testing requirement, unless advancement to the third level flow enhancement sequence is found to be necessary. Should this occur, the Owner shall notify LIHI in the annual compliance report as to the new date by which such continuing testing to meet passage standards is expected to be completed.

4. The Owner shall provide LIHI a summary of the results of the 2016 quantitative downstream effectiveness study for American eel, along with comments received from USFWS, NMFS and MDMR as to whether or not the testing results prove that safe downstream passage for American eel has been demonstrated. Also, the Owner shall provide a summary of the annual American eel upstream passage results, along with confirmation that any changes to the passage facilities recommended by the resource agencies have been, or are scheduled for implementation. The noted upstream and downstream passage results shall be provided within 60 days of report finalization.

LIHI reserves the right to revoke the certification if the fishways do not receive USFWS certification or if the agencies do not agree that safe passage has been confirmed.

THE STILLWATER PROJECT
CONDITIONALLY MEETS
THE LIHI CRITERIA FOR RECERTIFICATION

IX. 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.

The Project operates as run-of-river facilities with specified headpond variation limits and minimum flows of 20 cubic feet per second (cfs) to the western channel of the bypass reach and 50 cfs to the eastern channel of the bypass reach are required. This is achieved by complying with the requirements of the Project's Operations and Flow Monitoring Plan which was approved on August 27, 2013. Detailed on how these flows and headpond levels are monitored can be found in the original certification reports. As FERC no longer submission of annual reports confirming compliance with such requirements, instead, the applicant submitted a signed confirmation statement to LIHI certifying these requirements have been met.

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. There have been no concerns raised that suggest that water quality impacts are occurring as a result of project operations. Required dissolved oxygen (DO) monitoring conducted in 2014 and reported April 2015 demonstrated that DO standards for Class B waters are met under the operating scheme used at the Stillwater Project. No agencies had comments regarding the results of these studies. The project also appears to have met all non-water quality requirements of the WQC.

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 MEDEP 2012 Integrated Water Quality Monitoring and Assessment Report, the project waters are not listed as impaired.

The existing water quality 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. The license has both mandatory fish passage requirements (under Articles 406 through 408) and reservation of authority for both USFWS and NMFS (under Article 409). As a signatory to the Settlement Agreement, the USFWS 1997 Mandatory Fish Passage requirements were incorporated into the Agreement, and as such, were incorporated into the amended FERC license issued on April 18, 2005. On May 23 and 29, 2012 respectively both NMFS and USFWS issued letters to FERC requesting reservation of their authority to order fish passage prescriptions for the modifications to the Stillwater Project (i.e. Powerhouse B), which was incorporated into the 2012 FERC license. The 2012 license however maintained the requirements from the 2005 license for downstream passage for American Shad, alewife, blueback herring, and the federally endangered Atlantic salmon, and both downstream and upstream passage for American eel.

The goals for restoration of anadromous species in the Penobscot River have been designed on a regional basis, with the main focus on the mainstem of the River. This approach was key to the Settlement Agreement. Thus, while downstream passage for anadromous species is required at the Stillwater Project, there is no requirement for upstream anadromous species passage. Instead upstream passage is required at the Orono Project, located where the Stillwater Branch and Penobscot River merge, and at the Milford Project. Both Projects have trap and truck lifts. Fish caught at Orono are transported upstream of the Milford Project, with release into the Penobscot River mainstem rather than in the Stillwater Branch. Basin-wide focus is also supported by the fact that all fish studies are coordinated and reported in combined reports for the Stillwater, Orono and Milford Projects, facilitating basin-wide review by the resource agencies.

In accordance with Article 416, the fish passage designs, schedule, and operations and maintenance procedures of the new downstream fishway for Powerhouse B were developed in consultation and cooperation with NMFS, USFWS, the Maine Department of Marine Resources (MDMR), the Maine Department of Inland Fisheries and Wildlife (MDIFW), and the Penobscot

Indian Nation (PIN) with agency coordination on fish passage design plans at the 30, 60, and 90 percent design phases. Based on a series of consultation meeting discussions and agency comments and recommendations, BBHP updated the 90 percent design drawings and issued them and the Operations and Maintenance Plan to agencies for review and comment on October I7, 2012. BBHP held a meeting with the agencies to discuss this submittal on November 1, 2012. Based on comments received, BBHP then provided final design drawings and the final Operations and Maintenance Plan for final review on December 3, 2012 and agency comments were addressed in the final design drawings submitted for FERC approval on January 11, 2013. Construction of this facility, as well as improvements to the existing downstream passage at Powerhouse A, were completed in the fourth quarter of 2013. Their first use was the 2014 passage season.

In accordance with Article 407 and 408, the eel passage designs, schedule, and operations and maintenance procedures of the new upstream eel passage at the Project were developed in consultation and cooperation with the NMFS, USFWS, MDMR, MDIFW, and the PIN with agency coordination on eel passage design plans during a November 2014 meeting and as part of a 30-day review period for final design. Comments were received from MDMR and USFWS and were addressed in the final design. The downstream eel passage measures and one-inch trashracks for the full depth of the new and existing powerhouse intakes were also installed in 2014. The upstream eel passage was completed in December 2015.

Certification for Powerhouse B had a condition that required confirmation that the resource agencies were satisfied with the design of the new fish and eel passages, since during that LIHI review there was some controversy over their design. While such documentation was never provided by the applicant in any LIHI annual compliance statement, this "acceptance" of the designs is apparent since approval by the resource agencies of the final design features was a requirement of FERC before FERC would permit their construction.

Formal certification that the fish and eel passage facilities rests with the USFWS. This certification is based on the following three items:

- Did the licensee design and install the facilities as prescribed?
- Did the facilities complete a year of testing and fine tuning?
- Are the facilities ready for routine operations?

To be "ready for operation", the fishways must have agency approved Operating Manuals and electronic data collection. BBHP reports that the Operations Manual have been submitted for approval in April 2015 but are still under review. The electronic data collection protocols are scheduled for approval in 2017. Thus, to date, no fishway has been certified. Based on email consultation with Stephen Shepard of USFWS, this certification is still under review as the monitoring and evaluation of the effectiveness of the passage facilities is still underway. He did note that he is generally satisfied to date with activities being done. A condition that LIHI be notified of this certification has been recommended.

Study plans to test the effectiveness of these passage facilities with approval by the resource agencies is required. Studies of American Shad, alewife, blueback herring and American eel follow "traditional" approaches, as defined in the Settlement Agreement and incorporated in the FERC license. The testing for the Atlantic salmon is governed by the Biological Opinion issued on August

31, 2012. As a result, one study plan was developed for Atlantic salmon while the remaining species studies were addressed jointly in a second study plan.

Anadromous Species Studies

The first round of testing was conducted in 2014, following a study plan reported by the applicant to have been approved by the fisheries agencies (USFWS, NMFS, MDMR, MDIFW and PIN) and implemented as planned. This testing for American Shad, alewife, and blueback herring involved visual observations through use of cameras to identify species and counts. This approach was taken due to the expected low numbers of target species of appropriate lifestage

In 2015, a downstream effectiveness study of juvenile American Shad, alewife, and blueback herring utilized standard tagging and monitoring approaches. The results of the pilot tagging study demonstrated that netting and tagging juvenile alosines is not an effective means to evaluate downstream fishway use or effectiveness in the lower Penobscot River, especially given the size of the alosines observed in 2015. The alosines were small and fragile (i.e., average length of 83 mm, range 30 to 95 mm) and did not withstand active collection and tagging techniques. As a result, Brookfield proposed and it was apparently found acceptable to the agencies that additional studies of juvenile alosine passage would be delayed until the state of the art for studying alosine species is better developed. A condition has been recommended to address this future obligation.

The testing for the Atlantic salmon is governed by the Biological Opinion issued on August 31, 2012. Numerical performance standards have been established for Atlantic salmon as noted below to be measured during a **three-year testing period**. Specific action plans have also been established if these standards are not met each consecutive year, which are also noted below.

Performance standards for Atlantic salmon:

> *"The performance standard for downstream migrating smolts and kelts at the Stillwater Project is a minimum of 96% survival, based on a 75% confidence interval. That is, no fewer than 96% of downstream migrating smolts and kelts approaching the dam structure will survive passing the dam structure, which would include from 200 meters upstream of the trashracks and continuing downstream to a point where delayed effects of passage can be quantified. Fish that stop moving prior to reaching the most downstream telemetry array or take longer than 24 hours to pass the project will be considered to have failed in their passage attempt."*

In the event that the performance standard is not met, the following sequence of enhancements will be implemented sequentially each year:

1. Increase bypass flow up to the limit of the facility;
2. Increase spill to between 20% and 50% of river flow at station at night during the two week smolt out migration period; and
3. Two weeks of 100% spill of river flow at night (except for one unit, which will be operated at its lowest possible setting as required for powerhouse startup), followed by two weeks of spill of 25% of river flow during day and night.

Effectiveness studies were first performed in 2014. It appears there is controversy expressed by NMFS over whether or not the 2014 study standards were met. Record review indicated that not all agency comments on the study plan were adopted in the 2015 studies. However as reported by Brookfield, all of these changes were incorporated into the 2016 effectiveness studies. Satisfaction of the 2016 study plan is apparent in the letter issued by NMFS on August 12, 2016 which is included in Appendix A.

In the 2016 studies, to address performance standard deficiencies measured in 2015, Brookfield decided to increase flows to between 20% and 50%, and bypassed the first "enhancement" step. Thus, the disagreement over whether or not the 2014 studies met the study standard is moot, since the three-year study requirement was re-started with the 2016 studies. These results are not yet available. A certification condition has been recommended regarding these 2016 and subsequent years' studies. MDMR and USFWS reported that they could not comment on the Stillwater Project until the effectiveness testing was completed. No response was received from NMFS nor the fishery expert at PIN.

American Eel Studies

Upstream eel passage reports must be filed annually. The first report for Stillwater for the 2016 season is due for submission by March 31, 2017. The Downstream passage effectiveness testing for eel was contingent upon collection of sufficient numbers of in basin eels, which was assessed in 2014 and qualitative video monitoring conducted in 2015. The study plan for downstream eel effectiveness testing was filed in 2016 and approved by the agencies. A quantitative effectiveness study using out of basin eels was conducted in 2016, the report for which is not yet available. A condition is recommended regarding these studies.

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. One-inch clear spacing angled trashracks for the full length of the new intake at Powerhouse B have been installed.

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.

NOT APPLICABLE. No Shoreland Management Plan, buffer zone or enhancement fund was required for the Stillwater Project.

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 Stillwater Project area. Two other federally listed species, Shortnose Sturgeon and Atlantic Sturgeon are located in the lower reaches of the Penobscot River, historically were blocked from reaching the Stillwater Project by the Veazie dam, which was removed in October 2014, and the Orono Project, located approximately one mile downstream on the Stillwater River. Neither sturgeon has been captured in the fish lift installed in 2014 at Orono. If any are captured, they

would be released downstream in the mainstem of the Penobscot River per the approved Sturgeon Handling Plan, and thus would not be in the area of the Stillwater Project.

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. The Biological Opinion issued August 31, 2012 incorporated the requirements of the recovery plan. The fish passage effectiveness testing requirements for downstream passage of Atlantic salmon incorporates specific numerical standards that must be achieved to ensure the safety of the species. This is discussed further below.

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 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.

Specific to Stillwater, the Biological Opinion includes an Incidental Take Statement (ITS). The ITS exempts the incidental taking of Atlantic salmon adults, smolts, and ke1ts from activities associated with the construction of the new powerhouse, ongoing operations of the Stillwater facilities, and downstream passage and survival studies. BBHP has been issued the required reporting for incidental takes of GOM-DPS Atlantic salmon. These "takes" include those used for fish passage effectiveness testing. The Project appears to be in compliance with all requirements of its Species Protection Plan which was developed in compliance with the Biological Opinion.

This opinion is based on the assumption that the downstream passage facilities at the Stillwater Project will provide safe passage for the species, which are defined as:

> *"The performance standard for downstream migrating smolts and kelts at the Stillwater Project is a minimum of 96% survival, based on a 75% confidence interval.*

As previously described under ***Section VIII Criteria C, Fish Passage and Protection***, this testing 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. 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 is incorporated into the single condition recommended.

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?

Not applicable

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. A Cultural Resources Management Plan (CRMP) exists for the Project, as required by the 1998 license. Requirements include filing of an annual report of activities conducted under the Stillwater CRMP with FERC, the SHPO, PIN and the US Department of Interior. The annual report filed denotes if any new items are found that the provisions of the CRMP will be followed. NO such items have been found.

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. A Recreational Use and Facility Report is prepared according to license obligations. The most recent report issued in October 2016, did not identify a need for additional facilities, in part based on filed Form 80 Reports. Because this report requires specific review of the adequacy of the recreational facilities for cultural use by PIN members, I contact John Banks of PIN. He reported that he has no issue with the facilities that are provided.

BBHP provided a copy of the latest FERC environmental inspection report which was conducted in July 2014. With regard to recreational facilities, the report stated that "All facilities were functional and in good condition." ***Go to G3***

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

YES. The application denotes that such access is provided free of charge to the reservoir and downstream reaches of the river.

The Project 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

NMFS COMMENT LETTER TO FERC ON FISH PASSAGE

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

AUG 12 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Division
888 First Street, N.E.
Washington, D.C. 20426

Re: Atlantic Salmon Species Protection Plan - 2015 Annual Report for Project Nos. 2710, 2712, 2534, 2600, and 2666 (Orono, Stillwater, Milford, West Enfield, and Medway Hydroelectric Projects)

Dear Secretary Bose,

On May 31, 2016, Brookfield Renewable Energy Group filed their Atlantic Salmon Species Protection Plan Annual Report for 2015 with you. The report presents the study results from Atlantic salmon smolt survival studies conducted at the West Enfield, Milford, Stillwater, and Orono projects in 2015, as well as the results of an Atlantic salmon upstream passage study at the Milford project. The purpose of this letter is to clarify certain points made in that submittal.

The studies at the West Enfield, Milford, Stillwater, and Orono projects were conducted pursuant to the 2012 Species Protection Plan (SPP) proposed by Black Bear Hydro Partners, LLC (these facilities have since been purchased by Brookfield). In August 2012, we issued a Biological Opinion to FERC which concluded that the continued operation of the subject projects consistent with the provisions of the SPPs would not jeopardize the continued existence of species listed by us under the Endangered Species Act (ESA) or adversely modify or destroy any designated critical habitat for listed species. Our Opinion contained an Incidental Take Statement (ITS) exempting certain levels of take for these actions. The provisions of the SPP and the reasonable and prudent measures and terms and conditions from the Opinion's ITS have been incorporated into the projects' FERC licenses.

The following are our comments on the 2015 Annual Report:

Following the completion of studies at the projects in 2015, the Licensee modified certain aspects of the study plan for 2016 based upon recommendations from us. We acknowledge the Licensee's efforts working with us and other stakeholders on the Penobscot River to conduct the best possible assessments of Atlantic salmon. In addition, the Licensee has implemented a very thorough and transparent operational plan for theses projects and fishways in the Penobscot River.

Page five of cover letter, number 5, bullet 1: In their annual report, Brookfield does not indicate how the projects were operated during the 2016 smolt survival study in regards to the adaptive

management plan (AMP, Figure 2 in our Opinion) that was incorporated in their SPP. It is our understanding that Brookfield skipped a step (i.e., maximizing flow through the downstream bypass) in the AMP and proceeded to the next step (i.e., increase spill to between 20% and 50% of river flow at station at night during the two-week smolt out migration period). It is also our understanding that Brookfield went beyond what was required of them in this step by spilling between 20% and 50% of flow throughout the study period, not just at the night during the two-week peak of the smolt migration period. We are very supportive of this decision as it should significantly improve smolt survival and decrease migratory delay associated with the projects. As detailed in our 2012 Opinion, the 96% downstream performance standard must be achieved for three years in order for the standard to be considered met. We consider 2016 as the first of three years of study under this mode of operation.

Page 5 of cover letter, number 5, bullet 2: Although we understand that this bullet is specifically discussing activities proposed for 2016, it is worth noting our understanding that Brookfield will continue monitoring upstream passage of adult Atlantic salmon at the project in 2017, as the upstream performance standard has yet to be achieved.

Page 6 of cover letter, number 5, bullet 3: Brookfield is proposing to cease monitoring of adult salmon activity at the Orono project, since significant delay was not detected in either 2014 or 2015. The intent of the Opinion and the SPP was that monitoring will occur at the Orono project when studies are occurring at the Milford project to make sure that the exempted amount of take (i.e., significant levels of delay) is not exceeded. As tagged salmon have been trapped at the Orono project, and are known to access habitat downriver, it is appropriate for Brookfield to continue collecting information on their movements in the project area during studies at Milford. The monitoring involves a relatively small amount of effort (i.e., the placement of radio receivers in the bypass reach and tailrace, and periodic data downloads) and provides important information on the effects of the action, as well as on how salmon behave at the confluence of the Stillwater Branch and the mainstem Penobscot River.

Page 6, number 6, last sentence of paragraph 2: We concur with Brookfield's description of the schedule for kelt studies (i.e., ten years after smolt survival standards have been achieved at the Milford, Stillwater, Orono, and West Enfield projects). However, the last sentence indicates that "…kelt studies are not anticipated until at least 2026." As it is required that each project meets the performance standard for three years under a single step of the AMP, the smolt standards cannot be met until 2018 at the earliest, since the first year of testing under the current step (i.e. 20%-50% spill) is occurring in 2016. Therefore, pursuant to the agreement that kelt studies occur 10 years later, we anticipate that kelt studies will not occur at these projects until 2028 at the earliest.

Page 6, number 7: This item addresses requirements for consultation that were incorporated into the Medway license as a result of the section 7 consultation. FERC amended the Medway license on February 21, 2013 to require that the licensee "…consult, once every five years, with NMFS, U.S. Fish and Wildlife Service, Penobscot Indian Nation, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Marine Resources once every five years regarding the status of Atlantic salmon and other Endangered Species Act-listed fishes in the Penobscot River to ensure that operation of the Medway Project is consistent with the listing determinations for such species and with the then-current recovery objectives for such species." Given that the

amendment was issued in February 2013, we anticipate that this consultation will occur no later than February 2018.

Page 7, number 8, response to our first comment: We stand by our comment and our February 20, 2015 comment letter submitted to Brookfield. As described in that letter, we do not believe that the 2014 results support a determination regarding the achievement of the performance standard. We disagree with Brookfield in suggesting that there were "…no further comments or objections from NMFS." Although we did not file additional comments with FERC, we certainly made it clear to Brookfield that we were still dissatisfied with the study. In fact, the day after Brookfield filed their 2014 annual report with FERC (March 24, 2015), we had an e-mail exchange (attached) with Brookfield where we indicated that we had not yet received information from them that was necessary for us to adequately assess the results of the study; indicating that this information was "…extremely important for us to understand cumulative effects of hydropower in the river". On May 6, 2015, we reiterated in a separate e-mail to Brookfield that "…there remains some disagreement whether downstream performance standards were achieved at dams in the Penobscot River in 2014" (attached). We are reiterating this point as our position has not changed.

If you have any questions concerning these comments, please contact Jeff Murphy (207-866-7379 or Jeff.Murphy@noaa.gov) .

Sincerely,

Julia E Crocker

Julia E. Crocker
Endangered Species Coordinator

Cc: Oliver Cox (MDMR)
Steven Shepard (USFWS)
Antonio Bentivoglio (USFWS)
Dan McCaw (PIN)
Julie Crocker (NMFS)

Dan Tierney - NOAA Federal <dan.tierney@noaa.gov>

FERC Filing: Atlantic Salmon Species Protection Plan - 2014 Annual Report for Orono, Stillwater, Milford, West Enfield and Medway Projects

Jeff Murphy - NOAA Federal <jeff.murphy@noaa.gov> Wed, Mar 25, 2015 at 8:15 AM
To: "Bernier, Kevin" <Kevin.Bernier@brookfieldrenewable.com>
Cc: "Donald Dow (Donald.Dow@noaa.gov)" <Donald.Dow@noaa.gov>, "Dan Tierney (dan.tierney@noaa.gov)" <dan.tierney@noaa.gov>, "Steve Shepard, F&WS" <steven_shepard@fws.gov>, "Day, Julie" <Julie.Day@brookfieldrenewable.com>, "antonio_bentivoglio@fws.gov" <antonio_bentivoglio@fws.gov>, "Anitra_Firmenich@fws.gov" <Anitra_Firmenich@fws.gov>, "peter_lamothe@fws.gov" <peter_lamothe@fws.gov>, "Cox, Oliver" <Oliver.N.Cox@maine.gov>, "Richard.Dill@maine.gov" <Richard.Dill@maine.gov>, "Randy Spencer (randy.spencer@maine.gov)" <randy.spencer@maine.gov>, "John Perry (john.perry@maine.gov)" <john.perry@maine.gov>, "'gordon.kramer@maine.gov' (gordon.kramer@maine.gov)" <gordon.kramer@maine.gov>, "dan.mccaw@penobscotnation.org" <dan.mccaw@penobscotnation.org>, "Clere,Jason" <Jason.Clere@brookfieldrenewable.com>, "Murphy,Kyle" <Kyle.Murphy@brookfieldrenewable.com>, "Richter, Robert" <robert.richter@brookfieldrenewable.com>, "Zarrella, Antonio" <Antonio.Zarrella@brookfieldrenewable.com>, "Craig, Michael" <Michael.Craig@brookfieldrenewable.com>, "Wynn, Todd" <Todd.Wynn@brookfieldrenewable.com>, "Dewechter, Robert" <Robert.DeWechter@brookfieldrenewable.com>, "Cole, James" <James.Cole@brookfieldrenewable.com>, "Seyfried,Jason" <Jason.Seyfried@brookfieldrenewable.com>, "Brochu, Robert" <Robert.Brochu@brookfieldrenewable.com>, "mary.mccann@hdrinc.com" <mary.mccann@hdrinc.com>, "Sears, Michael (Michael.Sears@hdrinc.com)" <Michael.Sears@hdrinc.com>, "jim.gibson@hdrinc.com" <jim.gibson@hdrinc.com>

Hi Kevin - Despite our previous requests for all tagged smolt detection data through each project in the Penobscot River, your response filed with FERC suggests that you are unwilling to provide it. You state:

"Therefore, the Orion data that did include all frequencies is an incomplete data set for all smolts that traveled through the system and is of limited value, especially when considering the additional effort required to filter and analyze this information from the existing data set."

Its obvious that smolts from upstream projects were detected at receivers at downstream projects. This data is extremely important for us to understand cumulative effects of hydropower in the river. We reiterate our request for the data.

We will likely comment to FERC on this filing in the next several weeks. Thank you, Jeff.

[Quoted text hidden]

--
Jeff Murphy
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Maine Field Station
17 Godfrey Drive
Orono, Maine 04473
PH: 207-866-7379
FAX: 207-866-7342

Dan Tierney - NOAA Federal <dan.tierney@noaa.gov>

RE: Smolt Studies Meeting

Jeff Murphy - NOAA Federal <jeff.murphy@noaa.gov> Wed, May 6, 2015 at 8:09 AM
To: "Bernier, Kevin" <Kevin.Bernier@brookfieldrenewable.com>
Cc: "Yost, Fred" <fred_yost@fws.gov>, Anitra Firmenich <anitra_firmenich@fws.gov>, "Richter, Robert" <robert.richter@brookfieldrenewable.com>, Dan Tierney - NOAA Federal <dan.tierney@noaa.gov>, "Job, Kevin" <Kevin.Job@brookfieldrenewable.com>, "Cole, James" <James.Cole@brookfieldrenewable.com>, "Brochu, Robert" <Robert.Brochu@brookfieldrenewable.com>, "Craig, Michael" <Michael.Craig@brookfieldrenewable.com>, "Clere,Jason" <Jason.Clere@brookfieldrenewable.com>, "Cox, Oliver" <Oliver.N.Cox@maine.gov>, Antonio Bentivoglio <Antonio_Bentivoglio@fws.gov>, Peter Lamothe <Peter_Lamothe@fws.gov>, Donald Dow - NOAA Affiliate <Donald.Dow@noaa.gov>

Hello Kevin - Thanks for your efforts to address some of the concerns voiced regarding the smolt study design. We really appreciate your commitment towards adaptive management. We support your proposed release strategy and assume all fish released upstream will be monitored at downstream projects.

As you know, there remains some disagreement whether downstream performance standards were achieved at dams in the Penobscot River in 2014. My recommendation going forward for 2015 would be to implement step 2 of the adaptive management plan of the Species Protection Plan (increase bypass flow up to the limit of the facility).

Thanks again and best of luck this year. Jeff.

On Tue, May 5, 2015 at 11:46 PM, Bernier, Kevin <Kevin.Bernier@brookfieldrenewable.com> wrote:

> Below is the smolt release scenario that we settled on for the Penobscot based on the April 16 meeting at GLNFH. We believe this addresses the concerns that were voiced (such as evaluating impoundment mortality), while still meeting Brookfield's need to evaluate passage survival at each dam for meeting performance standards. The first releases are expected to be made this Thursday evening, May 7th.
>
> Please let me know if you have any comments or concerns.
>
> Thanks, Kevin

Table 1. Proposed release scenario, 2015 Atlantic salmon smolt studies, Penobscot River.

River Reach	Release Location (depends on river access)	Number Released	Purpose of Release
Weldon	Head of impoundment	50	Evaluate potential impoundment mortality – Weldon