

December 4, 2015

Ms. Dana Hall, Deputy Director
Low Impact Hydro Institute (LIHI)
PO Box 194
Harrington Park, NJ 07640

**SUBJECT: Medway Hydroelectric Project (FERC No. 2666)
LIHI Application for Recertification (No. 65)**

Sworn Statement:

I hereby certify that the information provided in this Application is true and correct to the best of my knowledge.

Waiver of Liability:

The primary goal of the Low Impact Hydropower Institute's Certification Program is public benefit. The Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions. The undersigned Applicant agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications or on any other action pursuant to the Low Impact Hydropower Institute's Certification Program.



Kelly Maloney
Manager, Licensing and Compliance

December 4, 2015

Date



Todd Wynn
Vice President, Northeast Operations

December 4, 2015

Date

Medway Hydroelectric Project (FERC No. 2666)

Project Description

Black Bear Hydro Partners, LLC's (BBHP) Medway Hydroelectric Project is a run-of-river hydroelectric generating facility located on the West Branch of the Penobscot River in Medway, Maine. The Project consists of a 343-foot-long concrete gravity dam topped with 5.75-foot-high flashboards, creating an impoundment with a normal full pond elevation of 260.3 feet USGS. The Project has a powerhouse containing five generating units with a total installed capacity of 3.44 MW and a maximum hydraulic capacity of 3,450 cfs. The Project also includes an approximate 144-foot-long underground transmission line and appurtenant facilities and provides access to project lands and waters and recreation opportunities. The Project is operated in run-of-river mode for the enhancement of downstream fisheries, including Atlantic salmon. The Project has upstream and downstream eel passage measures.

The Medway Project commenced initial commercial operations in 1923. The Medway Project generates clean, renewable electricity while providing recreational opportunities (portage trail and boat launch), fish passage measures, consistent water levels that enhance habitats for waterfowl, etc., and substantial support of the local community through stable property tax payments, reliable voltage support of the electrical distribution system, etc.

On June 25, 2004, the Lower Penobscot River Basin Comprehensive Settlement Accord ("Lower Penobscot Agreement") was signed.¹ The Agreement represented an unprecedented collaboration to restore 11 species of sea-run fish while rebalancing hydropower generated on the river.² An integral part of the energy balance associated with the Agreement included amending the license for the Medway Hydroelectric Project. In June 2004 an application was filed with the Federal Energy Regulatory Commission ("FERC") for the amendment and FERC issued the amendment on April 18, 2005 (111 FERC 62,063).

The Medway Project license was transferred to Black Bear Hydro Partners, LLC by FERC order dated September 17, 2009 (128 FERC ¶62,212).

¹ Parties to the Lower Penobscot Agreement include Black Bear Hydro Partners, LLC's predecessor PPL Maine, LLC; the Penobscot Indian Nation (Penobscot); U.S. Department of the Interior (Interior); Maine State Planning Office, Maine Atlantic Salmon Commission, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Marine Resources ("Maine Agencies"); American Rivers, Inc., Atlantic Salmon Federation, Maine Audubon Society, Natural Resources Council of Maine, and Trout Unlimited; and the Penobscot River Restoration Trust ("Trust").

² When complete, the project will help restore native fisheries by markedly improving access to nearly 1000 miles of significant habitat for Atlantic salmon, American shad, and several other species of sea-run fish that once supported diverse economic opportunities as well as the biological health of the Penobscot River.

Black Bear Hydro Partners, LLC
Distribution for Medway

Chief Francis
Penobscot Indian Nation
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Indian Island, ME 04468

Dr. Arthur Spiess
Maine Historic Preservation Commission
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Keith BlueCloud
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Eastern Regional Office
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United States Department of the Interior
Office of the Solicitor
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Mr. Andy Goode
Atlantic Salmon Federation
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Mr. Ben Rizzo
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Engineering Field Office
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Ms. Kathy Howatt
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Maine Department of Environmental Protection
Bureau of Land and Water Quality
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Augusta, ME 04333

Town of Enfield
Enfield Municipal Building
Enfield, Maine 04433

Mr. Don Cameron
Maine Natural Areas Program
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Mr. John Whittaker
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Mr. Kevin Mendik
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Mr. Norman Dube
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Mr. Patrick Keliher
Maine Department of Marine Resources
Atlantic Salmon Commission
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Mr. Randy Dorman
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Mr. Sean McDermott
National Oceanic & Atmospheric Administration
National Marine Fisheries Service
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Black Bear Hydro Partners, LLC
Distribution for Medway

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Nature Conservancy, The
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Ms. Amy Hudnor
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Ms. Bonnie Newsom
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Ms. Elizabeth Maclin
VP Eastern Conservation
Trout Unlimited
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Ms. Gail Wippelhauser
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Ms. Laura Day
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Ms. Sally Stockwell
Director of Conservation
Maine Audubon Society
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Falmouth, ME 04105

Ms. Stephanie Lindloff
American Rivers
1101 14th Street NW, Suite 1400
Washington, DC 20005

Town of Howland
Howland Municipal Building
Main St
Howland, ME 04448

UNITED STATES OF AMERICA 111 FERC ¶62,063
FEDERAL ENERGY REGULATORY COMMISSION

PPL Maine LLC

Project No. 2666-023 and -025

ORDER MODIFYING AND APPROVING AMENDMENT OF LICENSE

(Issued April 18, 2005)

On June 25, 2004, PPL Maine LLC (licensee) filed an application to amend its license for the Medway Project No. 2666, located on the West Branch Penobscot River in Penobscot County, Maine.¹ On August 19, 2004, the licensee also filed a revised Exhibit F drawing showing the upstream fishway for American eels.² The proposed amendment includes increasing the normal reservoir impoundment by one foot, from 259.3 feet National Geodetic Vertical Datum (NGVD), to 260.3 feet NGVD by adding one foot of height to the existing flashboard system, which will result in an increase of approximately 2,303 megawatt hours (MWh) of additional generation annually. The licensee also proposes adding a new article to its license to mitigate for any potential habitat impacts associated with the increase in reservoir elevation. Granting these amendments is in the public interest because the amendments are components of a comprehensive settlement agreement which will contribute to the fishery restoration program in the Penobscot Basin and provide for the generation of significant amounts of electric power at the hydroelectric projects covered by the agreement. For the reasons stated below, I am granting the amendment application.

BACKGROUND

On June 25, 2004, the licensee filed the Lower Penobscot River Basin Comprehensive Settlement Accord (Comprehensive Settlement), which is composed of agreements entered into by the licensee, Bangor-Pacific Hydro, the Penobscot Indian Nation (PIN), the U.S. Department of the Interior (Interior) acting through its bureaus the U.S. Fish and Wildlife Service (FWS), the U.S. Bureau of Indian Affairs (BIA), and the National Park Service (NPS), the Maine agencies,³ the Conservation Interests,⁴ and the

¹ A new license was issued for the Medway Project on March 29, 1999. 86 FERC ¶ 62,242.

² The drawing was required in a letter dated July 13, 2004, from the Commission's New York Regional Office.

³ The Maine State Planning Office, the Maine Atlantic Salmon Commission, the Maine Department of Inland Fisheries and Wildlife, and the Maine Department of Natural Resources.

⁴ American Rivers, Inc., the Atlantic Salmon Federation, the Maine Audubon Society, the Natural Resources Council of Maine, and Trout Unlimited.

Penobscot River Restoration Trust (Trust) concerning the Veazie Project No. 2403, Milford Project No. 2534, Medway Project No. 2666, Orono Project No. 2710, Stillwater Project No. 2712, Howland Project No. 2721, Basin Mills Project No. 10981, Great Works Project No. 2312 and West Enfield Project No. 2600.

The Comprehensive Settlement includes the Lower Penobscot River Multiparty Settlement Agreement, dated June 2004 (MPA or Agreement). This filing does not request that the Commission approve the Comprehensive Settlement. Rather, the parties to the Comprehensive Settlement request that the Commission approve individual project amendment applications to implement the initial phase of the Comprehensive Settlement.

Section IV of the MPA requires the concurrent filing with the Commission of a number of requests and applications. These various requests and applications (Phase 1 Requests), if granted by the Commission without alteration or change that materially prejudices any party to the Agreement, will permit the parties to proceed to the subsequent phases of the MPA and thus realize the full public interest benefits contemplated by the MPA, including transfer and surrender of some licenses,⁵ and increased generating capacity at other projects. Once fully implemented, this will ultimately result in restoring access to more than 500 miles of fish habitat in the Penobscot River Basin for Atlantic salmon and other anadromous fish. The State of Maine would retain 90 percent of the hydropower generated on the Penobscot because the licensees would be able to increase generation at other dams.

The PIN Agreement sets out the mitigation measures that are to be implemented by the licensees to address certain impacts to PIN lands, resources, and interests from operation of the Milford Project and the West Enfield Project and, together with the June 2004 Lower Penobscot River Multiparty Settlement Agreement, to resolve the issues currently in dispute before the Commission that were raised in the requests for rehearing of the Commission's April 20, 1998 orders for the various projects in the Penobscot Basin.

PROPOSED MEDWAY AMENDMENT

The licensee requests that the Commission make the following changes to the project's license:

Paragraph (B)(1): Exhibit G – The following revised Exhibit G maps should be approved and made part of this license:

⁵ The Veazie and Great Works Projects would be decommissioned and their dams removed; Howland would be decommissioned and studied for potential dam removal.

Exhibit	FERC No.	Showing	Superseding
G Sheet 1	2666-1010	Detail Map Reservoir	2666-1005
G Sheet 2	2666-1011	Detail Map Reservoir	2666-1006
G Sheet 3	2666-1012	Detail Map Reservoir	2666-1008

Paragraph (B)(2): Change “impoundment elevation of 259.3 feet mean sea level” to “impoundment elevation of 260.3 feet mean sea level”; and change “impoundment at elevation 259.3 feet (normal impoundment level)” to “impoundment at elevation 260.3 feet (normal impoundment level)”.

Paragraph B(2)(a): Exhibit F – The following revised Exhibit F drawings should be approved and made part of this license:

Exhibit	FERC No.	Showing	Superseding
F Sheet 1	2666-1013	General Site Plan and Dam Sections	2666-1009
F sheet 4	2666-1014	Dam and Powerhouse Downstream Elevation	2666-1004

Paragraph C: Exhibit A reference - Change the reference to the existing Exhibit A to a reference to the modified Exhibit A, as submitted herein.

Article 402: Change “an impoundment surface elevation within six inches (in) of 259.3 feet above mean sea level” to “an impoundment surface elevation within six inches (in) of 260.3 feet above mean sea level”.

Add the following Article (for MPA):

Article XXXX: The licensee shall implement the requirements of Attachment B to the Lower Penobscot River Multiparty Settlement Agreement, dated June 2004 (Contingent Mitigation Fund), as it pertains to the Medway Hydroelectric Project.

AGENCY COMMENTS

On June 29, 2004, Commission staff issued a public notice of the applications and requested comments, motions to intervene, or protests. Nine entities filed comments and/or interventions in response to the public notice. The intervenors include: Interior, NOAA Fisheries, Maine State Planning Office, PIN, and the “Conservation Interests” (American Rivers, Atlantic Salmon Federation, Maine Audubon Society, Natural Resources Council of Maine, and Trout Unlimited).

On November 3, 2004, Commission staff issued a draft environmental assessment

(DEA) for comment and requested that comments be filed by November 30, 2004. On November 29, 2004, a joint letter was filed on behalf of American Rivers, Atlantic Salmon Federation, Maine Audubon Society, Natural Resources Council of Maine, PIN, and Trout Unlimited supporting the conclusion of the DEA. The FWS, by letter dated November 30, 2004, also concurred with the conclusion in the DEA.

NOAA Fisheries, by letter dated November 29, 2004, states it would like to reserve authority to prescribe fishways consistent with Attachment A of the MPA under Section 18 of the Federal Power Act for the Medway and West Enfield Projects.

On December 16, 2004, the MDEP provided a final Maine Waterway Development and Conservation Act Permit and Water Quality Certification (WQC) for the Medway Project. The revised WQC is attached to this order and made part of the license.

In a letter dated March 21, 2005, NOAA Fisheries modifies its preliminary prescription submitted on November 29, 2004 in a manner that maintains consistency with fish passage requirements outlined in the MPA. Specifically, NOAA Fisheries reaffirms the preliminary prescription as its final modified prescription with the only change being that the process prescription for the referenced projects be omitted.

In April 2005, a multi-project Final Environmental Assessment (FEA) was issued which analyzed the impacts associated with the amendment requests for the Veazie Project, Milford Project, West Enfield Project, Medway Project, and Stillwater Project.

DISCUSSION

The proposed one-foot increase in headpond elevation at the Medway Project, according to staff's multi-project FEA, will result in a minor 5.5 acre increase in the area of the project impoundment. Since the area is primarily wooded and undeveloped, there are no impacts to the other resources in the area.

The parties to the MPA agreed that the impacts of the proposed modifications to the Medway Project will be fully mitigated by removal of the Veazie Project dam and Great Works Project dam. If these dams are not removed, the MPA provides for the establishment of the Contingent Mitigation Fund and requires the licensee to make monetary payments to the Contingent Mitigation Fund in certain circumstances, as specified in Attachment B to the MPA, to fully mitigate for the habitat impacts. The licensee proposes that an article (article 410) be included in the license requiring it to implement the requirements of Attachment B.

NOAA Fisheries states it would like to reserve authority to prescribe fishways consistent with Attachment A of the MPA under section 18 of the Federal Power Act for

the Medway Project. NOAA Fisheries did not reserve its section 18 authority to prescribe fishways in the license that was issued in 1999 and therefore cannot now reserve its authority. The provisions of Attachment A of the MPA do not call for the installation of any fishways at the Medford project. If NOAA Fisheries determines that fishways should be constructed at the Medway project, it can ask the Commission to use the reopener provisions of standard Article 15 to require the construction of fishways.

In its filing, the licensee submitted a revised Exhibit A reflecting proposed changes to the project features for the Medway hydroelectric Project. The changes are depicted in the following table 1:

Table 1

Description	License	Revised Exhibit A
Normal Water surface elevation, with flashboards (feet mean sea level)	259.3	260.3
Estimated Average Head (feet)	18.85	19.85
Reservoir Surface at full pond (acres)	98	101.5
Estimated Average Annual Generation (MWh)	28,064	30,367
Flashboards height (feet)	4.75	5.75

The revised Exhibit A conforms to the Commissions rules and regulations and is approved by this order. This order will revise the project description in the license to reflect the changes at the project.

In addition, the licensee submitted revised Exhibit F and G drawings showing the proposed revisions at the project. The revised drawings replace old F-1 and F-4 drawings, labeled FERC No. 2666-1009 and 2666-1004 in the license. The revised Exhibit F drawings conform to the Commission's rules and regulations and are approved by this order.

According to §§ 4.39 (a) and 4.41(h) of the Commission's regulations the licensee is required to provide project boundary data in a geo-referenced format. Each drawing must contain a minimum of three known reference points. The latitude and longitude coordinates, or state plane coordinates of each reference point must be shown. Our review of the exhibit G-1 through G-3 drawings found that they lack thee reference points and surveyor stamp. Therefore, the licensee will be required by this order to file the drawings in compliance with the requirements of § 4.39 of the Commission's regulations.

The licensee's request to amend its license for the Medway Project, with the above modifications, is in the public interest and should, therefore, be approved.

The Director orders:

(A) The revised Exhibit A filed on June 25, 2004, conforms to the Commission's rules and regulations, and is approved and made a part of the license.

(B) Ordering paragraph (B)(2) of the license is revised as follows :

- (2) Project works consisting of: (1) a 343-foot-long gravity dam, topped with 5.75 foot-high flashboards, with an impoundment elevation of 260.3 feet mean sea level (m.s.l.) with flashboards in place; (2) a 64-foot-long concrete gravity forebay wall; (3) a non-functioning upstream fishway; (4) a 101.5-acre impoundment at elevation 260.3 feet (normal impoundment level); (5) a 170-foot-long, 34-foot-wide, 71-foot-high brick powerhouse containing five generating units with a total installed capacity of 3.44 MW; (6) an approximate 144-foot-long, 3-kilovolt (kV) underground transmission line; and (7) appurtenant facilities.

(C) The following revised Exhibit F drawings, filed on June 25, 2004, and August 19, 2004 conform to the Commission's rules and regulations, and are approved and made a part of the license. The superseded exhibits are eliminated from the license.

EXHIBIT No.	FERC. DRAWING No.	DRAWING TITLE	SUPERSEDED FERC. DRAWING No.	FILING DATE
F-1	2666-10110	General Site Plan and Dam Sections	2666-1009	08/19/2004
F-4	2666-10111	Powerhouse Plan	2666-1004	06/25/2004

(D) Within 45 days of the date of issuance of this order, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Drawing Number (e.g., P-2666-10110 and P-2666-10111) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, and F-4), Drawing Title, and date of this order shall be typed on the upper left corner of each aperture card. See Figure 1.

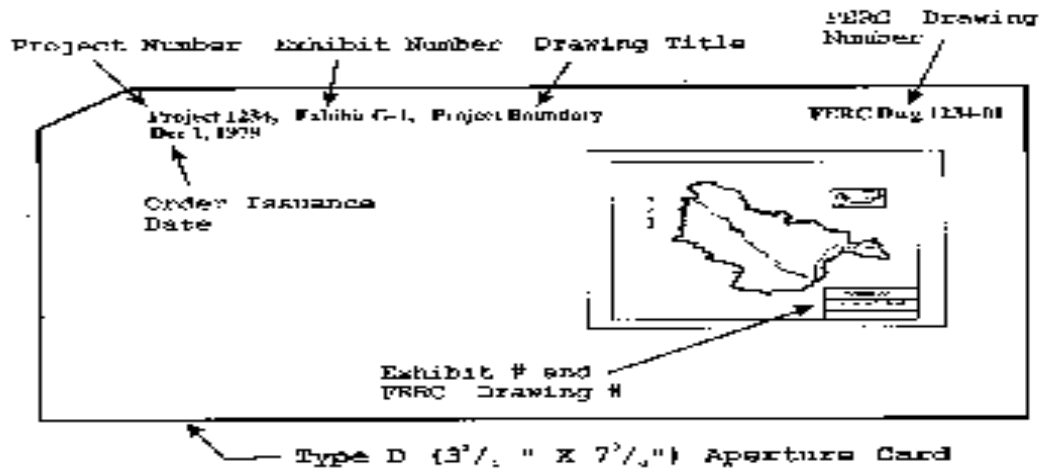


Figure 1 Sample Aperture Card Format

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office.

b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office. Exhibit F drawings must be identified as **(CEII) material under 18 CFR § 388.113(c)**. Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file extension in the following format [P- 2666-10010, F-1, General Site Plan, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file
 FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4
 RESOLUTION – 300 dpi desired, (200 dpi min.)
 DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)
 FILE SIZE – less than 1 MB desired

(E) Within 60 days from issuance of this order, the licensee is required to file for Commission approval, revised exhibit G drawings reflecting the project boundary as approved by this order. Each exhibit G drawing that includes the revised project boundary map must be stamped by a registered land surveyor and contain a minimum of three known reference points, arranged in a triangular format. The latitude and longitude coordinates, or state plane, of each reference point must be shown and identified on the drawing.

(F) Article 402 is amended by changing “an impoundment surface elevation within six inches (in) of 259.3 feet above mean sea level” to “an impoundment surface elevation within six inches (in) of 260.3 feet above mean sea level”.

(G) The following new article is added to the license:

Article 410: The licensee shall implement the requirements of Attachment B to the Lower Penobscot River Multiparty Settlement Agreement, dated June 2004 (Contingent Mitigation Fund), as it pertains to the Medway Hydroelectric Project.

(H) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

J. Mark Robinson
Director
Office of Energy Projects

Project No. 2666-023and -025

9

Water Quality Certification

**STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

COMMENTS

December 16, 2004

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

RE: Application for Amendment of License
Medway Hydro Project
FERC No. 2666

Dear Secretary Salas:

This is in response to the Application for Amendment of License of PPL Maine LLC for the existing Medway Hydro Project, FERC No. 2666, located on the West Branch of the Penobscot River in the Towns of Medway and East Millinocket, and the unorganized township of TA-R7, Penobscot County, Maine.

On November 10, 2004, the Maine Department of Environmental Protection (MDEP) issued a draft Maine Waterway Development and Conservation Act (MWDCA) Permit and Water Quality Certification, with conditions, for the proposed modification of the Medway Project. The draft order reflected an impoundment level increase of one foot and incorporated all appropriate terms and conditions of the June 25, 2004 Lower Penobscot River Basin Comprehensive Settlement Accord.

The MDEP has now issued a final MWDCA Permit and Water Quality Certification for the proposed modification of the Medway Project. The final permit and certification reflects the comments received by the MDEP on the draft Order. A copy of the Department Order approving the modification is attached.

In summary, the proposed modification of the Medway Project has been certified as meeting applicable water quality standards, subject to the following conditions:

1. The Standard Condition of Approval for projects under the Maine Waterway development and conservation Act.
2. All existing permit conditions for the Medway Project as contained in Department Order #L-18893-35-B-N dated December 23, 1998, subject to any subsequent amendments, modifications and condition compliances, shall remain in effect except as specifically modified by this approval.
3. Except as temporarily modified by specified conditions, water levels in the project impoundments shall be maintained within 6 inches of full pond elevation (260.3 feet msl) when flashboards are in place, and within 6 inches of spillway crest elevation when flashboards are not in place.
4. A Contingent Mitigation Fund shall be established in accordance with the terms of the Lower Penobscot River Multiparty Settlement Agreement.

We recommend that the forgoing conditions be included in the Articles of the Amendment of License issued for the Medway Hydro Project, in compliance with the provisions of Sections 401 (a) and (d) of the Clean Water Act.

By Executive order of the Governor of the State of Maine, the terms and conditions in the attached Water Quality Certification represent the State's official recommendations regarding the subject Application for New License, superceding all preliminary recommendations by individual State agencies.

Please direct any questions regarding these comments to Dana Murch of the MDEP staff at 207-287-7784.

Sincerely,

/s/ Andrew C. Fisk
Andrew C. Fisk, Director
Bureau of Land & Water Quality

Attachment

**STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

DEPARTMENT ORDER

IN THE MATTER OF

PPL MAINE LLC)	MAINE WATERWAY DEVELOPMENT AND
Medway, East Millinocket and TA-R7)	CONSERVATION ACT and
Penobscot County, Maine)	WATER QUALITY CERTIFICATION
MEDWAY HYDRO PROJECT)	
FLASHBOARD REPLACEMENT)	FINDINGS OF FACT AND ORDER
#L-18893-33-H-M (APPROVAL))	PERMIT MODIFICATION

Pursuant to the provisions of 38 MRSA Sections 464 *et seq.* and Sections 630 *et seq.*, 06-096 CMR 450 (Administrative Rules for Hydropower Projects, effective date September 1, 1987), and Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the application of PPL MAINE, LLC with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

- A. Application. The applicant proposes to replace the existing flashboard system and modify the operation of the existing Medway Hydro Project, located on the West Branch Penobscot River in the Towns of Medway and East Millinocket and the unorganized township TA-R7, Penobscot County, Maine. The applicant also proposes to comply with the requirements of Lower Penobscot River Basin Comprehensive Settlement Accord (Accord), dated June 25, 2004, as they apply to the Medway Project.
- B. Existing Project. The existing Medway Project consists of a dam and powerhouse, both originally constructed in 1922, an impoundment, and appurtenant facilities.

The Medway Dam is an L-shaped concrete gravity structure consisting of a 343 foot-long spillway section with an average height of 20 feet, a fishway and log sluice section, a 64 foot-long forebay wall section, and a 170 foot-long intake section. The intake section leads directly to the powerhouse that is an integral part of the dam. The spillway section is topped by 58 inch-high wooden flashboards.

The dam is located immediately upstream of the confluence of the East Branch and West Branch of the Penobscot River in the Town of Medway, at the site known as Rockabema Rips. The dam creates a 1.9 mile-long impoundment with a surface area of 120 acres at a normal full pond elevation of 259.3 feet msl. The impoundment extends upstream to Great Northern Paper's East Millinocket Dam.

The project powerhouse contains five turbine-generator units with a total rated generating capacity of 3,440 KW at a gross head of 18.85 feet. The maximum hydraulic capacity of the generating units is 3,450 cubic feet per second (cfs).

The operation of the Medway Project was approved by the DEP in Department Order #L-18893-33-B-N, dated December 23, 1998. The project is operated as a hydroelectric generating facility under the terms of FERC License No. 2666.

- C. Summary of Flashboard Replacement Proposal. The applicant proposes to install new flashboards which will be 5.75 feet in height in place of the existing flashboards which are 4.75 feet in height. The new flashboard system has been designed to allow failure when overtopped by one foot of water, at elevation 261.3 feet NGVD, which is the same elevation at which the existing flashboards are designed to fail (when overtopped by two feet of water). Additionally, the flashboards will fail at a lower flow. The new flashboard system will be installed in the same manner as the existing flashboards. The replacement will not require any instream construction activity.
- D. Summary of Proposed Project Operation. The applicant proposes to continue to operate the project in a run-of-river mode, with outflows approximately equal to inflows. The normal impoundment elevation at the dam will be raised from 259.3 feet to 260.3 feet. This elevation will continue to be maintained when river flows are at or below the hydraulic capacity of the turbines. The impoundment surface area of approximately 98 acres will be increased by 3.5 acres to approximately 101.5 acres. Due to prominent hydraulic controls at the upstream end of the impoundment the length of the 1.7-mile project impoundment will not increase appreciably.

2. JURISDICTION

- A. Hydropower Project Permit. The proposed flashboard replacement qualifies as the "construction, reconstruction or structural alteration of a hydropower project" under the Maine Waterway Development and Conservation Act (MWDCA), 38 MRSA Section 630 et seq. The proposed modification of project operation qualifies as a change in the terms and conditions of the MWDCA permit currently in effect for the project that must be approved by the Department.
- B. Water Quality Certification. The proposed flashboard replacement and modification of project operation qualify as an "activity...which may result in (a) discharge into the navigable water (of the United States)" under the Clean Water Act (CWA), 33 USC 1251 et seq. Section 401 of the CWA requires that any applicant for a federal license or permit to conduct such an activity will comply with applicable State water quality standards.

The applicant has filed an Application for Amendment of License for the Medway Hydroelectric Project with the Federal Energy Regulatory Commission to authorize the proposed new flashboard system and modification of project operation.

C. Terms and Conditions. Section 401 (d) of the CWA provides that a water quality certification shall set forth any limitations necessary to assure that an applicant for a federal license or permit will comply with any appropriate requirement of state law, and that such limitations shall become a condition on the federal license or permit issued for the activity. As discussed above, a permit is required under the MWDCDA for the proposed new flashboard system and modification of project operation. The MWDCDA is a state water quality-related law. Consequently, the terms and conditions of any permit issued for this project constitute appropriate and necessary limitations to be set forth in any certification issued for the project.

3. APPLICABLE WATER QUALITY STANDARDS

- A. Classification: The waters of the Penobscot River affected by the Medway Project are currently classified as follows: Penobscot River, West Branch Drainage - From the outlet of Furguson and Quakish Lakes to its confluence with the East Branch of the Penobscot River, including all impoundments - Class C. 38 MRSA § 467(7)(C)(1)(f).
- B. Designated Uses. Class C waters shall be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; and navigation; and as a habitat for fish and other aquatic life. 38 MRSA § 465(4)(A).
- C. Numeric Standards. The dissolved oxygen content of Class C waters may be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. 38 MRSA § 465(4)(B).
- D. Narrative Standards. Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. 38 MRSA § 465(4)(C).

The habitat characteristics and aquatic life criteria of Class C are deemed to be met in an existing impoundment which is classified C provided that any reasonable changes are implemented that do not significantly affect existing energy generation capability and that would result in an improvement in the habitat and aquatic life of the impounded waters. Where the actual quality of the impounded waters attains any more stringent habitat characteristic or aquatic life criteria than that required under Class C, that existing water quality must be maintained and protected. 38 MRSA § 464(10).

- E. Antidegradation: The Department may only approve water quality certification if the standards of classification of the waterbody and the requirements of the State's antidegradation policy will be met. The Department may approve water quality certification for a project affecting a waterbody in which the standards of classification

are not met if the project does not cause or contribute to the failure of the waterbody to meet the standards of classification. 38 M.R.S.A. § 464(4)(F).

4. DISSOLVED OXYGEN

The Department has developed a water quality model for the Penobscot River. This model has been calibrated and verified with data collected in 1997 and 2001. The Department has reviewed the proposed increase in impoundment level using this model to predict expected changes in dissolved oxygen. The model predicts that no lowering of dissolved oxygen levels should occur in the Medway impoundment as a result of the change in water level. Based on this review, the Department finds that the proposed impoundment level change will not have any adverse impact on dissolved oxygen conditions in the project waters.

5. AQUATIC LIFE

The proposed increase in impoundment full pond level is not expected to have any adverse impact on aquatic life in the project waters.

6. FISHERY RESOURCES

A. Comprehensive Settlement Accord. The Lower Penobscot River Basin Comprehensive Settlement Accord (Accord), dated June 25, 2004, established a comprehensive settlement governing fisheries restoration for numerous anadromous and catadromous species to assist in the restoration of these species in the lower Penobscot River Basin. The Accord was designed to accomplish the following:

- The sale by PPL of the Veazie, Great Works, and Howland dams to the Penobscot River Restoration Trust (Trust), the decommissioning and removal of Veazie and Great Works, and the decommissioning and bypassing of Howland;
- The upgrading of fish passage at the remaining PPL dams in the lower Penobscot River Basin;
- The provision for increased power production at remaining PPL dams to replace power lost by removals/bypass;
- The provision for continued public outreach and other appropriate steps to address local concerns;
- The settlement of outstanding litigation regarding Basin Mills, Milford and other projects and resolution of the pending Great Works and Howland licensing proceedings; and,
- The provision of a Contingent Mitigation Fund (Mitigation Fund) in the event that the Veazie and Great Works dams are not purchased and removed by the Trust.

The Accord includes the Lower Penobscot River Multiparty Settlement Agreement, dated June 2004 (MPA). The MPA is intended to: significantly enhance fishery restoration efforts in the Penobscot River Basin and resolve to the Parties' satisfaction all pending

fish passage issues associated with the Veazie, Great Works, and Howland Projects (“Designated Projects”) and other hydroelectric projects in the Penobscot River Basin currently owned or operated by PPL Maine. The MPA is also intended to resolve to the Parties' satisfaction all issues raised in the requests for rehearing filed by PPL Maine's predecessor in interest, Department of the Interior, Penobscot Indian Nation, Atlantic Salmon Federation, Maine Audubon Society, Maine Council of the Atlantic Salmon Foundation and Trout Unlimited of the Federal Energy Regulatory Commission's April 30, 1998, orders for Basin Mills, Veazie, Milford, Orono, and Stillwater projects.

B. Applicant’s proposals. The applicant proposes to comply with the Lower Penobscot River Multiparty Settlement Agreement as it applies to the Medway Project. Under the MPA, PPL is obligated to make the following provisions relating to the Medway Project:

- Continue to operate the existing fish passage for eels;
- In the event the option to purchase the Veazie, Great Works, and Howland projects is not exercised or Veazie and Great Works are not decommissioned and removed by the Trust, provide monetary compensation in accordance with the MPA to mitigate for the impacts to habitat that may be caused by the implementation of the headpond increase at the Medway project;

C. Discussion. The Department finds that the applicant’s proposals to continue to provide eel passage at the Medway Project and provide contingent mitigation support for fisheries resources in accordance with the Lower Penobscot River Multiparty Settlement Agreement will be adequate to ensure that project waters are suitable for the designated use of habitat for fish.

7. PUBLIC ACCESS AND RECREATION

The proposed increase in impoundment full pond level is not expected to have any adverse impact on public access to or recreational uses of the project waters.

8. HISTORIC AND ARCHAEOLOGICAL RESOURCES

The Maine Historic Preservation Commission has commented, in a letter dated March 15, 2004, that the proposed increase in normal impoundment level will have no effect upon historic properties, architectural or archaeological resources.

9. SOIL STABILITY, WETLANDS AND WILDLIFE

The proposed increase in impoundment full pond level is not expected to have any adverse impact on soil stability, wetlands and wildlife in the project area.

10. FLOOD CONTROL

The new flashboard system has been designed to allow failure when overtopped by one foot of water, at elevation 261.3 feet NGVD, which is the same elevation at which the existing

flashboards are designed to fail (when overtopped by two feet of water). Thus, by maintaining the same flashboard failure point, the dam's flood flow discharge capacity will be maintained, and there will be no change in upstream water levels during high-flow periods. With the new flashboards installed the frequency of flashboard outages is not expected to appreciably increase. The existing flashboards currently fail approximately once per year, typically in the spring. The new flashboards are expected to fail only slightly more often, or for a short additional period each spring, failing a few hours or days earlier than the existing flashboards would otherwise have failed.

11. HYDROELECTRIC POWER GENERATION

The proposed increase in impoundment level will increase average annual generation at the Medway Project by 2.3 million kilowatt hours. This is equivalent to the electricity that would be produced by burning 51,480 barrels of oil or 25,490 tons of coal each year.

12. OTHER ISSUES; REVIEW COMMENTS

No other significant issues involving any statutory criteria of the Maine Waterway Development and Conservation Act have been identified. No objections to the proposed activity have been raised by State review agencies or the affected municipalities.

BASED on the above Findings of Fact, and the evidence contained in the application and supporting documents, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The applicant has the financial capacity and technical ability to undertake the project.
2. The applicant has made adequate provision for protection of public safety.
3. The project will result in significant economic benefits to the public.
4. The applicant has made adequate provision for traffic movement.
5. The proposed activity is not located within the jurisdiction of the Land Use Regulation Commission.
6. The applicant has made reasonable provisions to realize the environmental benefits and to mitigate the adverse environmental impacts of the project provided that:
 - a. All existing permit conditions remain in effect except as specifically modified by this approval;
 - b. Following the installation of the new flashboard system, impoundment levels are maintained within six inches of the new flashboard elevation of 260.3 feet msl;

- c. The applicant complies with the contingent mitigation fund requirement of the Lower Penobscot River Multiparty Settlement Agreement, as applicable to the Medway Project.
- 7. The advantages of the project are greater than the direct and cumulative adverse impacts over the life of the project provided that the project is undertaken in accordance with the provisions of Conclusion #6 above.
- 8. There is reasonable assurance that the project will not violate applicable state water quality standards.

THEREFORE, the Department APPROVES the above noted application of PPL Maine, LLC to install new flashboards and modify project operation at the Medway Hydro Project, as described above, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. STANDARD CONDITIONS

The Standard Conditions of Approval for projects under the Maine Waterway Development and Conservation Act, a copy attached.

2. EXISTING PERMIT CONDITIONS

All existing permit conditions for the Medway Project as contained in Department Order #L-18893-35-B-N dated December 23, 1998, subject to any subsequent amendments, modifications and condition compliances, shall remain in effect except as specifically modified by this approval.

3. WATER LEVELS

Condition 1.A. of Department Order #L-18893-35-B-N dated December 23, 1998, is modified to read:

- 1.A. Except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicants' control, as defined below, and (4) agreement between the applicant, appropriate state and/or federal agencies, and the Penobscot Indian Nation, water levels in the project impoundment shall be maintained within 6 inches of full pond elevation (260.3 feet msl) when flashboards are in place, and within 6 inches of spillway crest elevation when flashboards are not in place.

4. CONTINGENT MITIGATION FUND

In the event that the option to purchase the Veazie and Great Works projects is not exercised or is terminated, or if, subsequent to the exercise of the option, the Veazie and Great Works projects are not acquired and removed, the applicant shall participate in the establishment of and shall provide funds to a Contingent Mitigation Fund, in accordance with the terms of the

Project No. 2666-023and -025

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Lower Penobscot River Multiparty Settlement Agreement, dated June 2004.

DONE AND DATED AT AUGUSTA, MAINE, THIS 17th DAY OF December, 2004.

By: /s/ Dawn R. Gallagher
Dawn R. Gallagher, Commissioner

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

PPL Maine LLC

Project No. 2666-023 and -025

ERRATA NOTICE

(Issued April 19, 2005)

ORDER MODIFYING AND APPROVING AMENDMENT OF LICENSE

(Issued April 18, 2005)

On April 18, 2005, the Commission issued an Order Modifying and Approving Amendment of License. Ordering paragraph (C) should be changed to read as follows to reflect the correct FERC Drawing numbers:

(C) The following revised Exhibit F drawings, filed on June 25, 2004, and August 19, 2004 conform to the Commission's rules and regulations, and are approved and made a part of the license. The superseded exhibits are eliminated from the license.

EXHIBIT No.	FERC. DRAWING No.	DRAWING TITLE	SUPERSEDED FERC. DRAWING No.	FILING DATE
F-1	2666-1010	General Site Plan and Dam Sections	2666-1009	08/19/2004
F-4	2666-1011	Powerhouse Plan	2666-1004	06/25/2004

George H. Taylor
Chief, Biological Resources Branch
Division of Hydropower Administration
and Compliance

142 FERC ¶ 62,119
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Black Bear Hydro Partners, LLC

Project No. 2666-033

ORDER AMENDING LICENSE
TO INCORPORATE TERMS AND CONDITIONS
UNDER THE ENDANGERED SPECIES ACT
AND REQUIRING PERIODIC CONSULTATION

(Issued February 21, 2013)

1. On May 15, 2012, Black Bear Hydro Partners, LLC (licensee), filed a request to amend its license¹ for the Medway Project (FERC No. 2666) to incorporate provisions to protect Atlantic salmon. The project is located on the West Branch of the Penobscot River in Penobscot County, Maine.

Amendment Request

2. In its May 15, 2012 filing, the licensee requests to modify the Medway Project license to add a requirement for the licensee to consult with the National Marine Fisheries Service (NMFS) once every five years regarding the status of Atlantic salmon and other Endangered Species Act (ESA) listed fishery species 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. The licensee states that the purpose of the requirement is to provide for the protection of Atlantic salmon and other fishery species listed under the ESA. The licensee states that it consulted with NMFS, the U.S. Fish and Wildlife Service, the Penobscot Indian Nation, and state fisheries agencies regarding the amendment request.

Consultation under the Endangered Species Act

3. Section 7(a)(2) of the ESA of 1973,² requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their

¹ See Order Issuing New License, 86 FERC ¶ 62,242 (issued April 29, 1999).

² 16 U.S.C. § 1536(a) (2006).

designated critical habitat. Listed species in the area of the Medway Project include the Gulf of Maine Distinct Population Segment of Atlantic salmon. There is no designated critical habitat for Atlantic salmon in the West Branch of the Penobscot River upstream of the Medway Project. However, the Penobscot River downstream of the project is designated critical habitat for the species.

4. In a letter filed May 18, 2011, the licensee requested that the Commission designate it as the Commission's non-federal representative for the purpose of conducting informal consultation with the NMFS and U.S. Fish and Wildlife Service pursuant to section 7 of the ESA for the proposed action at the Medway Project³ as well as proposed actions at the licensee's (or its affiliate) other projects in the basin including the Orono (FERC No. 2710), Stillwater (FERC No. 2712), West Enfield (FERC No. 2600), and Milford (FERC No. 2534) Projects. On September 14, 2011, the Commission designated the licensee as its non-federal representative for informal consultation. At the time, no amendment application for the Medway Project had been filed with the Commission.

5. On March 7, 2012, the licensee provided the Commission with its Biological Evaluation (BE) regarding the effects of operation of the Medway Project on Atlantic salmon. The BE included a Species Protection Plan for Atlantic salmon. By letter issued April 27, 2012, Commission staff adopted the licensee's BE as its biological assessment and requested that NMFS initiate formal consultation on the actions contained in the licensee's amendment application. NMFS initiated formal consultation on May 3, 2012.

6. On June 8, 2012, the licensee filed a revised Species Protection Plan which included, as an appendix, an Atlantic Salmon Passage Study Plan. Accordingly, on June 27, 2012, Commission staff forwarded the plans to NMFS for inclusion in the formal consultation process. The Species Protection Plan does not include any protection measures to be implemented at the Medway Project. The Atlantic Salmon Passage Study Plan includes a proposal to deploy a telemetry array at the Medway Project to monitor for the presence of Atlantic salmon approaching the tailrace of the project.

7. On August 31, 2012, NMFS filed its Biological Opinion (Opinion) which concludes that operation of the Medway Project may adversely affect, but is not likely to jeopardize the continued existence of, the Gulf of Maine Distinct Population Segment of Atlantic salmon.

³ We note that the proposed amendment to add a license requirement to consult with NMFS on a periodic basis would have no effect on endangered species. Therefore, the proposed amendment, in and of itself, does not require the Commission to initiate consultation under the ESA. However, if a licensee wishes to voluntarily consult under the ESA, such as in this case, the Commission may cooperate in that effort.

8. The East Millinocket Dam is 2.9 kilometers upriver of the Medway Project and is the next upstream barrier to migrating fish. In the Opinion, NMFS states that the approximately 0.46 square kilometers of habitat between the two dams has been made inaccessible to Atlantic salmon by the lack of passage at the Medway Dam. NMFS concludes that the habitat is impounded and, therefore, it is not currently suitable as rearing or spawning habitat. NMFS states that, while there are no fish honing on the West Branch of the Penobscot River (because there are no fish stocked in this branch), the Medway Dam likely delays some fish that are returning to the East Branch of the river and have strayed into the tailrace of the Medway Project.

9. Since the Medway Project currently lacks upstream fish passage facilities, NMFS assumes that 100 percent of Atlantic salmon that approach the project are adversely affected due to delay or alteration in spawning behavior. Because no upstream passage facilities are proposed at the project, NMFS states that these adverse effects would continue during the entirety of the period that the Medway Project will operate. NMFS concludes that the licensee's monitoring of salmon that approach the Medway Project will be used to assess the level of delay that is due to the Medway Project dam. NMFS states that if the telemetry monitoring, conducted under the Atlantic Salmon Passage Study Plan, demonstrates that significant delay is occurring, possible solutions would be discussed at the consultation meetings held once every five years, as proposed by the licensee.

10. Along with the Opinion, NMFS issued an incidental take statement and included reasonable and prudent measures and terms and conditions to minimize and monitor incidental take of Atlantic salmon at the Medway, Orono, Stillwater, Milford, and West Enfield Projects. The terms and conditions of the Opinion, as they pertain to the Medway Project, are incorporated into the license by ordering paragraph (B) and attached to this order as Appendix A.

Discussion and Conclusions

11. The licensee's proposed amendment includes consultation, once every five years, with NMFS. It does not include consultation with any other entities. However, the licensee consulted with the U.S. Fish and Wildlife Service, Penobscot Indian Nation, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Marine Resources regarding the proposed amendment and on the proposed plans. Any consultation on these matters should include all of the parties with interest in fisheries resources at the project. Therefore, ordering paragraph (A) requires the licensee to 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.

12. The Atlantic Salmon Passage Study Plan includes provisions to monitor salmon approaching the Medway Project dam to determine the extent that those fish are delayed. The plan briefly mentions the licensee's proposal to monitor Atlantic salmon approaching the Medway Project dam, but lacks detail regarding this monitoring. In particular, section 6.0, Data Analysis and Reporting, does not include a provision for analyzing the data collected at the Medway Project or for filing the results of the consultation, conducted once every five years, with the Commission. Also, while the plan states that telemetry arrays will be deployed, the plan does not include any detail regarding the locations where the arrays will be deployed and section 7.0, Schedule, does not include the timing of deployment at the Medway Project. In addition, the proposed Species Protection Plan and corresponding Atlantic Salmon Passage Study Plan are inconsistent with several terms and conditions of the Opinion.

13. Therefore, ordering paragraph (C) requires the licensee to revise the Species Protection Plan and the corresponding Atlantic Salmon Study Passage Plan, in order to incorporate the terms and conditions of the Opinion and provide additional detail regarding the proposed monitoring.

14. The modification of the Medway Project license to include a provision for the licensee to consult with NMFS once every five years regarding the status of Atlantic salmon and other Endangered Species Act-listed fishes in the Penobscot River would help 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. The licensee's proposed amendment, with staff modifications, should therefore be approved.

The Director orders:

(A) Black Bear Hydro Partner's, LLC (licensee) proposed amendment for the Medway Project, filed May 15, 2012, as modified herein is approved. The licensee shall consult with the National Marine Fisheries Service, 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.

(B) The terms and conditions of the incidental take permit included with the National Marine Fisheries Service's Biological Opinion, filed on August 31, 2012, as they pertain to the Medway Project, are hereby incorporated into the license for the Medway Project. The terms and conditions are attached to this order as Appendix A.

(C) By September 14, 2013, the licensee shall file, for Commission approval, a revised Species Protection Plan and corresponding Atlantic Salmon Passage Study Plan.

The revised plans shall incorporate the terms and conditions of the National Marine Fisheries Service's Biological Opinion, filed on August 31, 2012. In addition, the revised plans shall include: (1) a provision for analyzing the data collected at the Medway Project; (2) a description of the location and timing of the proposed monitoring in the tailrace; (3) a schedule for providing data and reports to the consulted entities; and (4) a provision for filing the results of the consultation, conducted once every five years, with the Commission. The plans shall also clarify in what year the first consultation would take place. The plans shall be revised in consultation with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Penobscot Indian Nation, the Maine Department of Inland Fisheries and Wildlife, and the Maine Department of Marine Resources.

Following the revision of the plans in consultation with the resource agencies and Penobscot Indian Nation, the licensee shall provide a copy of the proposed plans to these entities and allow them a minimum of 30 days to review and comment on the plans. The final plans filed with the Commission shall include documentation of consultation including copies of any comments received. The licensee shall address all comments and recommendations in its filing. If the licensee does not adopt a recommendation from the resource agencies or Penobscot Indian Nation, the licensee shall include its reasons based on project-specific information. The Commission reserves its authority to require the licensee to modify the plans, project structures, or operations in order to protect and enhance aquatic resources.

(D) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2006), and the Commission's regulations at 18 C.F.R. § 385.713 (2012). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Steve Hocking
Chief, Environmental Review Branch
Division of Hydropower Administration
and Compliance

APPENDIX A

DEPARTMENT OF COMMERCE NATIONAL MARINE FISHERIES SERVICE

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS OF THE INCIDENTAL TAKE STATEMENT AS PART OF THE BIOLOGICAL OPINION FOR THE MEDWAY PROJECT (FERC NO. 2666)

Filed August 31, 2012

Reasonable and Prudent Measures

1. FERC must ensure, through enforceable conditions of the project licenses, that Black Bear minimize incidental take from all in-water and near-water activities by applying best management practices to the proposed action that avoid or minimize adverse effects to water quality and aquatic resources.
2. To minimize incidental take from project operations, FERC must require that Black Bear measure and monitor the performance standards contained in the June 7, 2012 Species Protection Plan (SPP) in a way that is adequately protective of listed Atlantic salmon.
3. FERC must ensure, through enforceable conditions of the project licenses, that Black Bear complete an annual monitoring and reporting program to confirm that Black Bear is minimizing incidental take and reporting all project-related observations of dead or injured salmon or sturgeon to NMFS.
4. If the new Milford upstream fish lift is not operational prior to the Veazie Dam removal, or if it is proven ineffective during upstream monitoring studies, FERC must require Black Bear to install a broodstock collection device at the existing Denil fishway.

Terms and Conditions

1. To implement reasonable and prudent measure #1, FERC and ACOE must require Black Bear to do the following:
 - a. Hold a pre-construction meeting with the contractor(s) to review all procedures and requirements for avoiding and minimizing impacts to Atlantic salmon and to emphasize the importance of these measures for protecting salmon.

- b. Black Bear must notify NMFS one week before in-water work begins.
- c. Use Best Management Practices that will minimize concrete products (dust, chips, larger chunks) mobilized by construction activities from entering flowing or standing waters. Best practicable efforts shall be made to collect and remove all concrete products prior to rewatering of construction areas.
- d. Employ erosion control and sediment containment devices at the Stillwater, Orono and Milford Dams construction sites. During construction, all erosion control and sediment containment devices shall be inspected weekly, at a minimum, to ensure that they are working adequately. Any erosion control or sediment containment inadequacies will be immediately addressed until the disturbance is minimized.
- e. Provide erosion control and sediment containment materials (e.g., silt fence, straw bales, aggregate) in excess of those installed, so they are readily available on site for immediate use during emergency erosion control needs.
- f. Ensure that vehicles operated within 150 feet (46 m) of the construction site waterways will be free of fluid leaks. Daily examination of vehicles for fluid leaks is required during periods operated within or above the waterway.
- g. During construction activities, ensure that BMPs are implemented to prevent pollutants of any kind (sewage, waste spoils, petroleum products, etc.) from contacting water bodies or their substrate.
- h. In any areas used for staging, access roads, or storage, be prepared to evacuate all materials, equipment, and fuel if flooding of the area is expected to occur within 24 hours.
- i. Perform vehicle maintenance, refueling of vehicles, and storage of fuel at least 150 feet (46 m) from the waterway, provided, however, that cranes and other semi-mobile equipment may be refueled in place.
- j. At the end of each work shift, vehicles will not be stored within, or over, the waterway.
- k. Prior to operating within the waterway, all equipment will be cleaned of external oil, grease, dirt, or caked mud. Any washing of equipment shall be conducted in a location that shall not contribute untreated wastewater to any flowing stream or drainage area.

- l. Use temporary erosion and sediment controls on all exposed slopes during any hiatus in work exceeding seven days.
 - m. Place material removed during excavation only in locations where it cannot enter sensitive aquatic resources.
 - n. Minimize alteration or disturbance of the streambanks and existing riparian vegetation to the greatest extent possible.
 - o. Remove undesired vegetation and root nodes by mechanical means only. No herbicide application shall occur.
 - p. Mark and identify clearing limits. Construction activity or movement of equipment into existing vegetated areas shall not begin until clearing limits are marked.
 - q. Retain all existing vegetation within 150 feet (46 m) of the edge of the bank to the greatest extent practicable.
2. To implement reasonable and prudent measure #2, FERC and ACOE must require Black Bear to do the following:
- a. Contact NMFS within 24 hours of any interactions with Atlantic salmon, Atlantic sturgeon or shortnose sturgeon, including non-lethal and lethal takes (Jeff Murphy: by email (Jeff.Murphy@noaa.gov) or phone (207) 866-7379 and the Section 7 Coordinator (incidental.take@noaa.gov))
 - b. In the event of any lethal takes, any dead specimens or body parts must be photographed, measured, and preserved (refrigerate or freeze) until disposal procedures are discussed with NMFS.
 - c. Notify NMFS of any changes in project and fishway operations (including maintenance activities such as flashboard replacement and draft tube dewatering) at the Orono, Stillwater, Milford, West Enfield, and Medway Projects.
 - d. Submit a fish evacuation protocol to NMFS at least two weeks prior to the commencement of in-water work. Daily visual surveys will be conducted by qualified personnel to verify that there are no Atlantic salmon within the project area during the installation and removal of any in-water cofferdam or bypass structure. If cofferdams overtop due a high flow event, the cofferdam will be resurveyed for adult Atlantic salmon prior to dewatering.

If any Atlantic salmon are observed within the enclosed cofferdam they should be removed, either by herding or by capture. Handling should be minimized to the extent possible.

3. To implement reasonable and prudent measure #3, the FERC must require that Black Bear do the following:
 - a. Require Black Bear to measure the survival performance standard for downstream migrating Atlantic salmon smolts and kelts at the Orono, Stillwater, Milford, and West Enfield Projects of 96% (within the lower and upper 75% confidence limit) using a scientifically acceptable methodology.
 - i. That is, 96% of downstream migrating smolts and kelts approaching the dam structure survive passing the project, which would include from 200 meters upstream of the trashracks and continuing downstream to the point where delayed effects of passage can be quantified. Black Bear must coordinate with NMFS in selecting an adequate location for the downstream receivers.
 - ii. Passage must occur within 24 hours of a smolt or kelt approaching within 200 meters of the trashracks for it to be considered a successful passage attempt that can be applied towards the performance standard.
 - iii. The survival standard is considered achieved if each year of a three year study period achieves at least 96%, based on a 75% confidence interval, at each project. A Cormack-Jolly-Seber (CJS) model must be used to determine if the survival standard has been achieved and present 75% error bounds around survival estimates.
 - iv. Black Bear must consult with NMFS concerning the application of appropriate statistical methodology and must provide an electronic copy of the CJS model(s) and data to NMFS.
 - b. All tags released in the system should have codes that are not duplicative of tags used by other researchers in the river, including university, state, federal and international tagging programs.
 - c. Submit a study plan for a one year adult upstream study at the West Enfield Project to be conducted ten years post implementation of the SPP.
 - d. Submit a study plan for a three year downstream kelt study at the Orono, Stillwater, Milford, and West Enfield Projects.
4. To implement reasonable and prudent measure #4, the FERC must require that Black Bear do the following:

- a. Require that Black Bear seek comments from NMFS on any fish passage design plans at the 30%, 60%, and 90% design phase. Also, allow NMFS to inspect fishways at the projects at least annually.
- b. Submit annual reports at the end of each calendar year summarizing the results of proposed action and any takes of listed sturgeon or Atlantic salmon to NMFS by mail (to the attention of the Section 7 Coordinator, NMFS Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 and to incidental.take@noaa.gov).

Jon.elmer@brookfieldrenewable.com
Black Bear/08:08:2013 12:26
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