

131 FERC ¶ 62,238  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Penobscot River Restoration Trust	Project Nos. 2403-056
PPL Maine, LLC	2312-019
PPL Great Works, LLC	2721-020

ORDER ACCEPTING SURRENDER OF LICENSES WITH DAM REMOVAL AND  
DISMISSING APPLICATIONS FOR NEW LICENSES

(Issued June 16, 2010)

1. On November 7, 2008, and supplemented on February 23, March 11, and March 18, 2009, the Penobscot River Restoration Trust (Trust), transferee<sup>1</sup> for the Veazie Project No. 2403, Great Works Project No. 2312, and Howland Project No. 2721, filed an application to surrender the licenses for the three previously listed projects, and remove the dams associated with the Veazie and Great Works Projects.<sup>2</sup> The Veazie and Great Works Projects are located on the Penobscot River and the Howland Project is located on the Piscataquis River. All three projects are located in Penobscot County, Maine.

**Background**

**A. Settlement Agreement**

2. In June 2004, the signatories filed the Lower Penobscot River Basin Comprehensive Settlement Accord (Settlement Agreement).<sup>3</sup> The Settlement Agreement

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<sup>1</sup> On January 6, 2009, the Commission issued two orders approving transfer of two licenses from PPL Maine, LLC and one license from PPL Great Works, LLC to the Penobscot River Restoration Trust. Under the Lower Penobscot River Basin Comprehensive Settlement Accord, the property cannot be transferred until all regulatory approvals for surrender and decommissioning become final. Therefore, the license transfer does not become effective until after such requirements are fulfilled.

<sup>2</sup> The settlement agreement calls for the Trust to file these applications to surrender the licenses. Since the license transfers are not yet effective, we will treat the surrender applications as being filed on behalf of PPL Maine and PPL Great Works.

<sup>3</sup> The signatories to the Settlement Agreement are: PPL Maine, the U.S. Department of the Interior (acting through the Fish and Wildlife Service, Bureau of Indian Affairs, and the National Park Service), four State of Maine natural resource

(continued)

is intended to resolve a number of issues arising from the licensing and relicensing of several hydroelectric projects located in the lower Penobscot River basin. When fully realized, the Settlement Agreement opens a large amount of habitat to anadromous fish in the Penobscot Basin by removing the Veazie and Great Works dams and constructing a bypass around the Howland dam while retaining up to 90% of the then existing hydroelectric generating capacity within the Penobscot River area. The Settlement Agreement called for the signatories to take a series of actions, grouped into four phases. The Phase 1 actions, to be taken after execution of the Settlement Agreement and an option for the Trust to purchase the Veazie, Great Works, and Howland projects, included requests to suspend the relicense proceedings for the Howland and Great Works Projects, the filing of applications to amend the licenses for the Milford, Veazie, Stillwater, Medway, and West Enfield Projects and the filing of an application for license for the Orono Project.<sup>4</sup> The Phase 2 actions, to be taken after regulatory approval of the Phase 1 requests, included parties withdrawing rehearing requests that were pending in several proceedings and the Department of the Interior (DOI) withdrawing conditions submitted pursuant to FPA section 4(e) and requests submitted pursuant to FPA section 10(e) for the Milford Project.<sup>5</sup> The Phase 3 actions, to be taken after the Trust exercised the option to purchase the three projects, include the filing of requests to transfer the licenses for the Veazie, Great Works, and Howland projects to the Trust and the Trust filing these applications to surrender the licenses for the three projects and receive authorization to decommission and remove the Veazie and Great Works dams and modify the Howland dam by installing a “nature-like” fish bypass around the dam. The Phase 4 actions, to be taken after the approval of the Phase 3 applications, include PPL Maine filing applications to increase the installed capacity at several of its licensed projects.

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agencies (The Maine State Planning Office, Department of Marine Resources, Department of Inland Fisheries and Wildlife, and Atlantic Salmon Commission), the Penobscot Indian Nation, American Rivers, Atlantic Salmon Federation, Maine Audubon, Natural Resources Council of Maine, Trout Unlimited, and the Penobscot River Restoration Trust.

<sup>4</sup> The amendment applications were approved in orders issued on April 18, 2005. 111 FERC ¶¶ 62,061-62,065. The Orono license was issued on December 18, 2005. 113 FERC ¶ 62,181.

<sup>5</sup> The rehearing requests, conditions and recommendations were withdrawn in January and February 2006. 115 FERC ¶ 61,023.

## B. Project Descriptions

3. The Veazie Project is the lowermost project on the Penobscot River and consists of a 902-foot-long, 25-foot-high, concrete gravity dam with inflatable rubber flashboards, a reservoir with a surface area of about 390 acres and a storage capacity of 4,800 acre-feet at a surface elevation of 34.8 feet mean-sea-level (msl), and two powerhouses on the Veazie (west) side of the river (Plant A with an installed capacity of 5.4 MW and Plant B with an installed capacity of 3 MW). A forebay located on the right side of the river feeds both powerhouses. The tailrace of Plant A is located under the concrete floor of the forebay and Plant B releases water into the river downstream of the dam. The project also includes two fish ladders: an abandoned fishway on the left bank of the river, and an operable ladder between the spillway and forebay.

4. A new license for the Veazie Project was issued on April 20, 1998, and expires on March 31, 2038.<sup>6</sup>

5. The Great Works Project is located about seven miles upstream of the Veazie Project and consists of a 20-foot-high, 1,086-foot-long timber crib and concrete dam. The reservoir has a surface area of 160 acres and a normal pool elevation of 81.7 feet msl. The project has a single powerhouse containing 11 units with an authorized installed capacity of 7.9 MW. The project also has three fish ladders. An abandoned fish ladder is located in the center of the river channel between the timber crib and concrete sections of the dam, and the other two ladders are located on either side of the tailrace dike which extends downstream from the left side of the powerhouse, and divides the tailrace from the main river channel.

6. An original license for the Great Works Project was issued on December 9, 1963, expiring March 31, 2002.<sup>7</sup> PPL Great Works, LLC filed an application for a new license on March 31, 2000. Review of the application was suspended by letter issued December 8, 2003, until April 7, 2004. By letter issued October 20, 2004, the review was suspended until action is taken under the Settlement Agreement to allow the parties to fulfill their respective obligations.

7. The Howland Project, located on the Piscataquis River just upstream of its confluence with the Penobscot River, consists of a 114.5-foot-long concrete cutoff wall at the north embankment, a six-foot-long non overflow abutment, a 570-foot-long concrete overflow spillway, an 85-foot-long gated spillway, a 20-foot-long non overflow section, and a 76-foot-long forebay entrance deck. The reservoir has a surface area of 270 acres

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<sup>6</sup> 83 FERC ¶ 61,040 Order Issuing New License, (issued April 20, 1998).

<sup>7</sup> 30 FPC 1465 Order Issuing License (Major), (issued December 9, 1963).

at a normal pool elevation of 148.2 feet msl. The project's powerhouse contains three generating units with an authorized installed capacity of 1.875 MW. The project has two fish ladders located on either side of the gated spillway.

8. An original license was issued for the Howland Project on September 12, 1980, with an effective date of April 1, 1962.<sup>8</sup> This license expired September 30, 2000, and Bangor Hydro-Electric Company, the licensee at the time,<sup>9</sup> filed an application for a new license on September 28, 1998. The review of that application was also suspended in the December 8, 2003 and October 20, 2004 letters.

### **C. Proposed Surrender**

9. The Trust states it intends to initiate the demolition of the Veazie dam by drawing down the impoundment through the project's gates and by deflating the flashboards. After this, access roads would be constructed from the east bank into the river, both upstream and downstream of the dam, which would allow for the demolition of the abandoned fish ladder and the east half of the spillway. After removal of the east bank access roads, a west bank access road would be constructed facilitating the removal of the remaining portion of the spillway, powerhouse B, the operational fish ladder, the forebay, and tailrace. This access road would be removed before a smaller road is constructed along the face of powerhouse A, which is not being demolished, to allow the Trust to seal the face of the powerhouse that adjoined the dam and place fill in the location of former powerhouse B. This road would then be removed.

10. Approximately 1,900 feet upstream of the Veazie Project are the submerged remnants of the historic Veazie Lumber Company Mill dam. This structure is expected to significantly impair natural river flow once the Veazie dam is removed. The Trust proposes to remove the upstream dam remnants by constructing access roads into the river channel to provide access for equipment in order to demolish the structure.<sup>10</sup>

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<sup>8</sup> 12 FERC ¶ 62,207 Order Issuing License (Major), (issued September 12, 1980).

<sup>9</sup> The license was subsequently transferred to Penobscot Hydro, LLC and the licensee's name was later changed to PPL Maine, LLC. *See* 87 FERC ¶ 62,001 Order Approving Transfer of Licenses, (issued April 1, 1999) and 93 FERC ¶ 62,076 Order Amending Licenses, (issued October 31, 2000).

<sup>10</sup> Since these non-project dam remnants may be eligible for inclusion in the National Register, the Trust proposes to document the structures in accordance with the standards of the Historic American Buildings Survey/Historic American Engineering Record. This documentation is incorporated as stipulation I of the Memorandum of Agreement executed among the Commission and Maine State Historic Preservation

11. The Great Works Project impoundment would be drawn down through the opening of gates and removal of the flashboards. Then, an upstream access road would be constructed from the east bank along the entire length of the spillway. Another road would be constructed downstream out to mid-channel to allow removal of the abandoned fish ladder. The spillway would be removed in sections from west to east with concurrent removal of the access road. Following this, another road would be constructed from the west bank across the upstream side of the powerhouse. From this road, the remaining portion of the spillway immediately adjacent to the powerhouse would be removed along with the two operational fish ladders. The forebay area would be filled and graded and the access road removed. The project's powerhouse is proposed to remain because it houses equipment for an adjacent pulp mill.

12. The Trust proposes to initiate activities at the Howland Project by demolishing several buildings adjacent to the project on the south bank of the Piscataquis River to clear the area for the proposed fish bypass channel. This channel would have an average width of 75 feet, a total length of about 800 feet, and a 1.5 percent grade. The channel would bypass the Howland dam on the south bank, beginning approximately 100 feet downstream of the dam and re-entering the river 600 feet upstream of the dam. This channel would include pools, boulders, and J-hook vanes to replicate natural stream conditions. A proposed, elevated access road leading to a small parking lot near the powerhouse would serve as a dike to prevent lateral flood flows from interfering with the bypass channel. A small bridge for this road over the upstream end of the channel would provide some control of flows through the bypass. The Trust proposes to leave all project structures in place except for the flashboards; the removal thereof would decrease the surface level of the impoundment by about four feet.

13. The Trust proposes to remove all turbine/generator units from the powerhouses that would remain after surrender of the three projects. Additionally, the Trust intends to revegetate newly exposed and construction-affected lands with native species to prevent erosion and assist environmental recovery from the action. After performing surveys of the affected project impoundments, the Trust states little evidence of sedimentation was found behind the dams and therefore no actions are expected to be required to prevent or mitigate for movement of impounded sediments once the dams are removed.

14. The Trust proposes to commence demolition activities on the Great Works Project in the summer of 2011. To prevent interruption of fish passage in the Penobscot River, the Veazie Project, and its associated fish ladder and trapping facilities, will not be removed until the fish lift at the Milford Project, FERC No. 2534 is constructed and operational. This is expected to occur in the summer or fall of 2012 at which point the

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Officer, which is incorporated into the projects' licenses by this order.

Veazie Project will likely be demolished the following year. The Howland bypass channel can be constructed at any time and is expected to be completed before or about the same time final demolition activities at the Veazie Project are taking place.

### **Public Notice**

15. Public notice of the filing was issued by the Commission on January 26, 2009.<sup>11</sup> Motions to intervene were filed by PPL Maine, LLC, PPL Great Works, LLC, The National Marine Fisheries Service (NMFS), the DOI, Trout Unlimited, and the Maine State Planning Office (Maine SPO).<sup>12</sup> A late motion to intervene was filed by Red Shield Acquisition, LLC (Red Shield) on August 11, 2009. This late motion to intervene was denied.<sup>13</sup> Fifty-eight comments were filed by the Penobscot Indian Nation (Penobscot Nation), the DOI, a number of organizations, several municipalities, and many individuals. The motions to intervene, comments, and recommendations have been fully considered in determining whether, and under what conditions to accept these surrenders.<sup>14</sup>

16. Many of the protests regarding the Proposed Action concerned fisheries issues such as the potential introduction of the northern pike (*Esox lucius*) into the upper Penobscot Watershed, specifically the Piscataquis River, if the Howland bypass channel were in place. One comment disputed the historic ranges of striped bass and shortnose sturgeon as reported in the Applicant Prepared Environmental Assessment. These comments are addressed in the Fisheries and Aquatic Resources section of the Final Environmental Assessment (FEA). The NMFS filed comments with its motion to intervene discussing procedures regarding threatened and endangered species consultation which are addressed in the Rare, Threatened and Endangered Species and Statutory Requirements sections of the FEA.

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<sup>11</sup> The notice was originally issued on January 21, 2009, but did not include an issuance date and was rescinded and re-issued on January 26, 2009. Comments received before January 26, 2009, were considered in the FEA.

<sup>12</sup> These timely motions to intervene were unopposed and thus automatically granted. 18 C.F.R. § 385.214(c)(1)(2009).

<sup>13</sup> See Commission Secretary's January 8, 2010 Notice Denying Late Intervention and Dismissing Proceeding, *aff'd* at 131 FERC ¶ 61,035 (2010). Red Shield is the owner of a pulp mill which is located adjacent to the west end of the Great Works dam.

<sup>14</sup> Many comments were received after the filing deadline, but were still considered in the FEA and this order.

### **Water Quality Certification**

17. Under section 401 of the Clean Water Act (CWA),<sup>15</sup> the Commission may not issue a license or permit that may result in a discharge from the project unless the water quality certifying agency either has issued water quality certification (WQC) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year.<sup>16</sup> Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.<sup>17</sup>

18. In Maine, the Maine Department of Environmental Protection (Maine DEP) is the certifying agency. The Trust submitted a letter to the Maine DEP on November 7, 2008, requesting a WQC for the surrender of the three projects. On February 13, 2009, Maine DEP issued a letter waiving the issuance of a WQC.

### **Threatened and Endangered Species**

19. Section 7(a)(2) of the Endangered Species Act (ESA) of 1973<sup>18</sup> 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 designated critical habitat.

20. Atlantic salmon Gulf of Maine Distinct Population Segment (Atlantic salmon DPS) is classified as endangered under the ESA, and the Penobscot and Piscataquis Rivers are designated as critical habitat for the Atlantic salmon DPS. Shortnose sturgeon is classified as endangered under the ESA, whereas Atlantic sturgeon is classified as a species of concern (thus, ESA consultation is not needed). By letter dated August 12, 2009, the Commission requested formal consultation with the NMFS and U.S. Fish and Wildlife Service (USFWS) pursuant to section 7 of the ESA regarding the effects of the three license surrenders on these ESA-listed species and their habitat.<sup>19</sup> Attached to that

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<sup>15</sup> 33 U.S.C. § 1341(a) (2006).

<sup>16</sup> A surrender order involving construction that may result in a discharge is such a license or permit.

<sup>17</sup> 33 U.S.C. § 1341(d) (2006).

<sup>18</sup> 16 U.S.C. § 1536(a) (2006).

<sup>19</sup> In a letter filed September 8, 2009, NMFS commented that pursuant to a Statement of Cooperation between NMFS and USFWS, NMFS would be taking the lead on consultation in this proceeding.

letter was a biological assessment of those potential effects. On December 23, 2009, the NMFS issued its biological opinion (BO), which found that the proposed action may adversely affect but is not likely to jeopardize the continued existence of shortnose sturgeon or Atlantic salmon. Furthermore, the BO states that the proposed action is not expected to result in the destruction or adverse modification of Atlantic salmon critical habitat. In its BO, the NMFS issued an incidental take statement, four reasonable and prudent measures, and six terms and conditions to minimize and monitor incidental take. The terms and conditions are attached in Appendix A.<sup>20</sup>

### **National Historic Preservation Act**

21. Under section 106 of the National Historic Preservation Act (NHPA),<sup>21</sup> and its implementing regulations,<sup>22</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

22. By letter issued January 13, 2009, the Commission designated the Trust as the Commission's non-federal representative for informal consultation with the Maine SHPO and the Penobscot Nation's Tribal Historic Preservation Officer. By letter dated December 8, 2009, the Commission requested that the Advisory Council review the draft Memorandum of Agreement (MOA) developed for the undertaking, and indicate if it intends to participate pursuant to Part 800.6 of the NHPA. The Advisory Council did not respond. A MOA between the Commission and SHPO, with the Trust, Penobscot Nation, and NMFS as concurring parties, was executed on January 14, 2010. The MOA sets forth measures to be carried out regarding the treatment of historic structures, treatment of archaeological sites, resolving disputes, and amending or terminating the agreement.

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<sup>20</sup> Although the terms and conditions in the BO purport to place obligations on the Commission and the Corps, they in fact address measures that the Trust must undertake. Appendix A has been revised to clarify the Trust's responsibility to comply with the terms and conditions, and includes only the five terms and conditions of which the Commission is responsible to ensure the Trust's compliance.

<sup>21</sup> 16 U.S.C. § 470 (2006).

<sup>22</sup> 36 CFR Part 800 (2009).

### **Coastal Zone Management Act**

23. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>23</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

24. The coastal zone area along the Penobscot River ends below Bangor, Maine, which is approximately four miles downstream of the Veazie Project, the lowermost on the river. Therefore, the action area is not located within the state designated Coastal Management Zone. By electronic mail dated May 11, 2009, and placed into the public record on June 30, 2009, the Maine SPO stated the Veazie Project does not lie within the coastal area as defined by the CZMA.

### **Magnuson-Stevens Fishery Conservation and Management Act**

25. The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the NMFS on all actions that may adversely affect Essential Fish Habitat (EFH). EFH has been designated for Atlantic salmon in the Penobscot River and its tributaries. By letter dated September 11, 2009, the Commission provided to the NMFS its EFH assessment, which stated that the proposed action would have some minor short-term adverse effects on Atlantic salmon EFH but would generally benefit Atlantic salmon EFH in the long-term. By letter dated October 7, 2009, the NMFS states that further consultation is not required and EFH conservation recommendations are not necessary.

### **Environmental Analysis**

26. On August 4, 2009, the Commission issued a Draft Environmental Assessment (DEA), which evaluated the potential environmental effects of the proposal and identified environmental measures to mitigate or reduce potential impacts. Comments on the DEA were received from the U.S. Army Corps of Engineers, NMFS, DOI, State of Maine, Maine Department of Marine Resources, Atlantic Salmon Commission, Maine SPO, Maine Department of Inland Fisheries and Wildlife, Natural Resources Council of Maine, Trout Unlimited, Maine Audubon, The Nature Conservancy, the Trust, Atlantic Salmon Federation, PPL Maine, PPL Great Works, Fin and Feather Club of Maine, the Town of

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<sup>23</sup> 15 U.S.C. § 1456(3)(A) (2006).

Millinocket, Red Shield, Kenneth Fletcher, Craig Gordon, Diane Walter, and numerous other individuals.<sup>24</sup>

27. On May 18, 2010, the Commission issued a FEA. Comments received on the DEA were considered and addressed in the FEA. The FEA recommends approval of the Trust's proposal with staff identified measures pertaining to fish passage, endangered species, cultural resources, wetlands, recreation, and botanical and wildlife resources. The FEA finds that approval of the Trust's proposal, with staff recommended environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment. The FEA recommends that the following staff identified measures be included in any order approving the Trust's proposal:

- In order to ensure that effects resulting from dam removal activities under the Proposed Action at the Veazie and Great Works Projects and construction of the fish-bypass channel at the Howland Project are minimized, the Trust should develop erosion and sedimentation control plans prior to commencing ground-disturbing activities. Such plans should include a description and design drawings of the best management practices that would be implemented by the Trust, including, but not limited to, silt fences, screens, and floating curtains, cofferdams, geotextile mats for stabilizing sediment deposits, and lay-down areas for material excavated during dam removal or fish-bypass construction. The erosion and sedimentation control plan should be submitted for approval by the Commission's Regional Engineer. This measure is being adopted into ordering paragraph (E).
- The Trust should continue consultation with resource agencies regarding fish passage during dam removal activities to coordinate the timing of dam removal activities to ensure minimal impacts to migrating fish and to develop a relocation plan for any mussels or fish stranded during impoundment drawdowns. This measure is being adopted into ordering paragraphs (L) and (P).
- The Trust should survey the reservoirs after draining for any area of blockage to fish migration and make any modifications needed to clear the blockage if such obstructions are present. This measure is being adopted into ordering paragraph (P).

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<sup>24</sup> A complete list of all entities commenting on the DEA is included as appendix A to the FEA.

- In order to minimize the adverse effects to botanical resources from dam removal activities in the Project areas, the Trust should submit an Invasive Species Monitoring and Control Plan to the Commission for approval prior to dam removal activities. This plan should at a minimum include the following information: 1) native herbaceous and shrub species that will be planted in the newly exposed riverbank areas immediately following dam removal activities; 2) locations where plantings of native species, soil testing, repeated seed broadcasting, and fertilizer application will likely occur; 3) a description of the monitoring method that will be used to identify invasive species in the project areas; and 4) the control measures that will be used on invasive species if found to be competing with native plants in the Project areas. This measure is being adopted as ordering paragraph (K).
- The Great Works Canoe Portage, a project recreational facility, may need to be moved or extended because of the dewatering that would occur if the dam were removed. The dam was built on a ledge that could obstruct through-access and could pose a safety hazard to some paddlers. If the portage is not functional post-removal, then minor, long-term, negative effects on non-motorized boaters using the river both upstream and downstream of the project could occur. Because of this, the Trust should be required to examine the efficacy of the Great Works Canoe Portage post-removal, and file a report with the Commission on the results of its review, and if necessary, provide recommendations for a functional portage route around the obstruction. This measure is being adopted as ordering paragraph (O).
- The Trust should consult with the USFWS and the Maine Department of Inland Fisheries and Wildlife (Maine DIFW) to develop a plan for surveying the three projects for bald eagle nests, prior to decommissioning activities or construction of the fish bypass. The Trust should also submit the results of the above surveys to the USFWS and the Maine DIFW at least 30 days prior to the start of decommissioning and other ground-disturbing activities. If additional nests are found near construction areas this plan should also include a protocol for minimizing impacts and notifying the USFWS and the Maine DIFW. This Measure is being adopted as ordering paragraph (N).
- The Trust should continue consultation with resource agencies regarding state and federally listed species and develop mitigation plans to reduce impacts to these species. This measure is being adopted into ordering paragraph (P).
- The MOA between the Commission and SHPO, with the Penobscot Nation, Trust, and NMFS as concurring parties, executed on January 14, 2010, should be incorporated as a condition of the license surrenders for the Veazie, Great

Works, and Howland projects. This measure is being adopted as ordering paragraph (J).

- In order to ensure that the Howland fish bypass is built as proposed, the Trust should file functional design drawings, for Commission approval, prior to initiating construction of the fish bypass channel. This measure is being adopted as ordering paragraph (U).

## **Discussion**

### **Invasive Species**

28. In response to the public notice and the notice of availability of the DEA, several commenters<sup>25</sup> indicated their opposition to the proposal to construct a fish-bypass channel around the Howland dam. The basis for their concern is the potential introduction of the northern pike, and other invasive aquatic species, into the Piscataquis River and upper Penobscot River watersheds. The commenters are concerned that northern pike would out-compete native fishes, such as the brook trout, which provide an important sport fishery and source of revenue for many towns along the rivers.

29. One of the comments regarding northern pike recommends that the Trust construct a trap-and-sort facility in lieu of the fish-bypass channel. As discussed in the FEA, the feasibility and cost of a trap-and-sort facility was evaluated during preliminary design discussions.<sup>26</sup> During this evaluation, it was determined that a trap-and-sort facility would not be 100 percent effective in preventing undesirable species, including northern pike, from passing the Howland dam due to uncertainty about the swimming capacity of northern pike and concerns that manual sorting would be subject to error due to the large number of fish that would be handled. The FEA concludes that a trap-and-sort facility would have negative impacts on target species to be passed, including migratory delays, required handling of all fish passed, potential injuries due to attempts to leap the barrier, crowding, and the need for a separate eel passage facility.<sup>27</sup> Thus, the FEA concludes

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<sup>25</sup> These commenters include the Fin and Feather Club of Maine, Craig Gordon, Paul Johnson, Scott Roy, and the Towns of Enfield, Dover-Foxcroft, Millinocket, Lake View Plantation, Sangerville, Sherman, and Staceyville.

<sup>26</sup> FEA at p. 126.

<sup>27</sup> *Ibid.*

that the benefits of unrestricted fish passage for migratory fishes through the project area outweigh the potential risks associated with northern pike passage.<sup>28</sup>

30. The commenters also expressed concern that the Commission did not consider Executive Order 13112 (E.O. 13112) regarding invasive species. E.O. 13112 requires, among other things, that any federal agency whose actions may affect the status of invasive species: (1) identify such actions; (2) prevent the introduction of invasive species; and (3) not carry out actions that are likely to cause the spread of invasive species unless the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm. Because the Commission is an independent regulatory agency as defined by 5 U.S.C. § 104, it is exempt from the requirements of E.O. 13112. Regardless, as discussed in the FEA, and above, Commission staff has concluded that the benefits of the proposed bypass channel outweigh the risks associated with the passage of invasive aquatic species (i.e., northern pike). The DOI's September 2, 2009 comment concurs with this conclusion, and states that the Trust's proposal is not likely to cause or promote the spread of any invasive species, and even if there were a risk of spread, the benefits clearly outweigh the potential harm. The DOI also notes that E.O. 13112 calls for the restoration of native species and habitat conditions to reduce the effects of invasive species and prevent further invasions, of which the Trust's proposal would be a significant contribution.

### **Period of Jurisdiction**

31. In its comments on the DEA, the DOI recommends that the Commission clarify the intended duration of its jurisdiction over surrender activities at the Howland Project with regard to construction and monitoring of the fish bypass channel. Specifically, the DOI comments that if the Commission intends to extend its jurisdiction beyond the point of construction of the bypass, it should require an effectiveness monitoring plan for the upstream passage of Atlantic salmon, alewife, and American shad.

32. In the FEA, Commission staff recommends that the Commission retain jurisdiction of the Howland project until construction of the bypass channel is complete to ensure that it is built to specification.<sup>29</sup> Accordingly, the staff recommends that the Trust be required to file functional design drawings prior to commencing construction of the Howland fish bypass channel.<sup>30</sup> The functional designs set forth the final design of

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<sup>28</sup> Ibid.

<sup>29</sup> FEA at p. 125.

<sup>30</sup> FEA at p. 189.

the proposed channel, and would require approval by the Commission. Upon completion of the bypass channel, the Trust should be required to file as-built drawings of the facility depicting the final layout and configuration of the bypass channel in relation to the project boundary and other project features. The as-built drawings would allow the Commission to review the as-built condition of the bypass in comparison with the proposed design contained in the functional design drawings. We will require the Trust to file these drawings in ordering paragraph (V) of this order.

33. Condition 6 of the BO issued by NMFS states that the Trust must monitor the effectiveness of the Howland fish bypass in passing Atlantic salmon upstream and downstream for 3 years, and file with the resource agencies annual reports summarizing the results of the studies. In addition, under BO condition 6, the Trust must monitor the physical integrity of the Howland fish bypass for 15 years, and file annual reports of the monitoring results with the resource agencies. These requirements would ensure that adequate oversight of the Howland fish bypass is retained by resource agencies to ensure that the bypass channel provides safe, effective, and timely passage for Atlantic salmon and other migratory fish species.

34. The functional design drawings and subsequent as-built drawings of the Howland fish bypass would help ensure that the fish bypass channel is built as proposed by the Trust. Since the design of the channel was developed in consultation with various federal and state resource agencies, the proposed bypass design would effectively pass fish around the Howland dam. Further, mechanisms for continued federal and state oversight, after the surrender becomes effective, of the evaluation of the effectiveness of the bypass, to which the parties to the Settlement Agreement agreed, would ensure that the bypass functions properly and meets its intended purpose.

35. Since BO condition 6 would provide for resource agency oversight after surrender of the license and during the monitoring of the effectiveness of the Howland fish bypass, and the Commission would review and approve the final functional design and as-built condition of the bypass, it is not necessary for the Commission to retain its jurisdiction over the Howland Project after the fish bypass channel is constructed and capable of passing fish. Once the bypass channel is constructed, and the Commission has approved the as-built drawings of the bypass, and all other conditions of the surrender order pertaining to the Howland Project are completed to the satisfaction of the Commission's Regional Engineer, the surrender of the Howland Project would be made effective.

### **Dam Safety**

36. The Commission's staff reviewed the Trust's proposal to surrender the licenses for the Veazie, Great Works, and Howland Projects, determined that the Trust's application was generally in agreement with the Commission's dam safety guidelines, and recommended several measures to be included in the order approving the surrenders. The

measures include submission of various construction plans to protect public safety and environmental resources, cofferdam construction plans, a Temporary Emergency Action Plan, monthly progress reports, and a final report on surrender activities. The surrender of each license would not be effective until the Regional Engineer of the Commission's New York Regional Office has determined that all terms and conditions applicable to the surrender of that license are satisfied.

### **Other Issues**

37. The DOI's comments on the DEA indicate that two areas near French Island, located at the upstream end of the Great Works impoundment, would likely not meet its minimum water velocity criteria for fish passage during the month of May. The DOI recommends that an evaluation of the French Island area be conducted after the Great Works dam is removed. As indicated in the FEA, Commission staff agrees with the DOI and recommends that the Trust be required to survey the impoundments for blockages to fish passage, including the area around French Island and areas where tributary streams enter the impoundments. These surveys should be conducted at Veazie and Great Works upon removal of each dam and at Howland upon removal of the flashboards.<sup>31</sup> If any obstructions are identified, the Trust should make any modifications necessary to clear the blockage. We are adding ordering paragraph (R) to ensure the Trust monitors and corrects any potential flow impediments at the mouths of tributaries caused by impoundment dewatering.

38. The Trust's proposal includes the construction of several access roads and related general use areas among the various projects as well as the addition of the fish bypass channel and the demolition of existing non-project structures at the Howland Project. In order to ensure proper Commission jurisdiction over these lands and facilities during construction activities and prior to surrender of the licenses, the Trust must include them within amended project boundaries. In ordering paragraph (M) we are requiring the Trust to file revised Exhibit G drawings showing these roads, lands, and structures within the project boundaries.

39. We also agree with several of the Trust's proposed actions intended to benefit fish passage while construction or demolition at the projects is ongoing. To ensure that these actions are performed satisfactorily, we are incorporating them into ordering paragraphs (S), (T), and (W) of this order. Ordering paragraph (S) and (T), respectively, require the Trust to provide for trapping and trucking of migrating fish during demolition activities at Great Works and remove the Great Works Project before the Veazie Project. Trapping and trucking during dam removal at the Great Works dam would ensure adequate fish

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<sup>31</sup> FEA at p. 96.

passage. Additionally, to maintain effective operation of the existing fish passage facilities at the Howland Project, we are requiring, in ordering paragraph (W), that the Trust maintain the flashboards until after the proposed fish bypass is operating.

40. In its applications to surrender the licenses for the Veazie, Great Works, and Howland projects and the accompanying preliminary design reports, the Trust proposed to mitigate the adverse effects of removing or lowering the project reservoirs on infrastructure. The Trust proposed to provide a new water intake for the Red Shield Mill, extend a sewage treatment plant outfall pipe in the Great Works impoundment, relocate a water intake hose in the Veazie impoundment, extend a boat ramp in the upper part of the Veazie impoundment, place riprap and extend drainage swales at culverts and drainage outfalls and monitor other drainage culverts and outfalls and take any necessary remedial measures. In a response to a request for additional information, the Trust stated that it was not obligated pay for replacement of Red Shield's water intake system.<sup>32</sup>

41. In its August 11, 2009 motion to intervene, Red Shield argues that the Trust is required to pay for the modifications to the water intake for the pulp mill by agreements and easements that were created when the Great Works project was sold to PPL Great Works. In its August 26, 2009 answer to Red Shield's motion to intervene, the Trust argues that the agreements and easements require Red Shield to pay for the modifications. The Trust further argues that it is not legally obligated to either maintain a reservoir level that allows the existing intake to function or pay for a new intake if the reservoir is drained. The Trust has not argued that it should not be required to mitigate the other adverse effects on infrastructure that would result from draining the Veazie and Great Works reservoirs and lowering the Howland reservoir and has not explained why effects on different pieces of infrastructure should be treated differently. Absent such explanation, we will require the Trust to mitigate the adverse effects on infrastructure, as proposed in the applications, including replacement of the water intake for the Red Shield Mill.

42. Red Shield argues that language in footnote nine in a 1999 order amending the license for the Great Works Project<sup>33</sup> created an obligation on the part of the licensee to provide water to the pulp mill and pay for any necessary modifications to the water intake

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<sup>32</sup> Response to Request for Additional Information, filed February 23, 2009, p. 14. In the Environmental Report filed with the applications to surrender the licenses, the Trust stated that a final determination of the Trust's obligations regarding the new water intake system had not been made.

<sup>33</sup> *Fort James Operating Company and PP&L Great Works, LLC*, 89 FERC ¶ 62,248.

structures. The Trust argues that the order did not make the provision of water or a new water intake system a condition of the license and that the language in the footnote merely described the Commission's understanding of the facilities and equipment that were being deleted from the license. The 1999 amendment order removed certain lands and equipment from the license as a result of the sale of the Great Works project from Ft. James to PPL Great Works. These lands and equipment were necessary for the operation of the mill, but were not necessary for the operation and maintenance of the project. The order approved new Exhibit J and K drawings and made them part of the license and deleted the old Exhibit J and K drawings from the license. Footnote nine states "As part of the sales agreement, Great Works, as a new licensee, agrees to continue to provide process water and fire and cooling water for the Old Town Paper Mill."<sup>34</sup> This language does not create a license condition requiring the licensee to maintain the existing water intake or construct a new one, but states the Commission's understanding of one of the provisions of the sales agreement between Ft. James and PPL Great Works.

43. The additional measures recommended by Commission staff in the FEA would help to protect environmental resources and public safety at the projects during project decommissioning activities and in the future. This order authorizes the surrender of the Veazie and Great Works Project licenses with dam removal, and the surrender of the Howland Project license with removal of the flashboards and construction of a fish bypass channel, subject to the conditions for each project discussed above. Each surrender will not be effective until issuance of Commission notices that all of the conditions for each project have been independently satisfied. Until then, the projects remain under license. Because the surrender of licenses are being accepted, the applications for new license for the Great Works and Howland Projects are dismissed.

The Director orders:

(A) The application for new license for the Great Works Project No. 2312, filed March 31, 2000, is dismissed.

(B) The application for new license for the Howland Project No. 2721, filed September 28, 1998, is dismissed.

(C) The Penobscot River Restoration Trust's (Trust) application for surrender of the licenses for the Veazie Project No. 2403, the Great Works Project No. 2312, and the Howland Project No. 2721 filed November 7, 2008, is approved. The surrender of each license shall not be effective until the New York Regional Engineer has issued a letter stating that all terms and conditions of the surrender order as to that license have

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<sup>34</sup> *Id.* at ¶64,405.

been satisfied. In order to satisfy the terms and conditions for the Veazie Project, the Trust must fulfill the requirements of ordering paragraphs (D) through (N), (P) through (T) and (X). In order to satisfy the terms and conditions for the Great Works Project, the Trust must fulfill the requirements of ordering paragraphs (D) through (T) and (X). In order to satisfy the terms and conditions for the Howland Project, the Trust must fulfill the requirements of ordering paragraphs (D) through (K), (M), (N), (Q), (R), and (U) through (X).

(D) The Penobscot River Restoration Trust shall commence removal or construction of the project features as authorized in this order within two years from the issuance date of this order and shall complete removal and construction of the appropriate features within six years of the issuance date of this order.

(E) At least 60 days before starting removal activities for the Veazie and Great Works Projects, and decommissioning activities for the Howland Project, the Penobscot River Restoration Trust (Trust) shall submit one copy to the Division of Dam Safety and Inspections (D2SI) – New York Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI) of: (1) a detailed description of the sequence of activities and schedule for decommissioning the project's generating equipment, removing the project features, and restoring the site; (2) final contract plans and specifications; (3) a Quality Control and Inspection Program; (4) a public safety plan for the period during removal activities; (5) a blasting plan; (6) a disposal plan; and (7) a detailed erosion and sediment control plan, including descriptions of deconstruction staging areas, access locations, and debris disposal areas. The Trust shall prepare these plans after consultation with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Maine Department of Marine Resources, and Maine Department of Inland Fisheries and Wildlife. The Trust shall include with the plans documentation of consultation, and copies of comments and recommendations on the completed plans. The Trust shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plans with the Commission. If the Trust does not adopt a recommendation, the filing shall include the Trust's reasons, based on project-specific information. The Trust may not begin removal activities until the D2SI - New York Regional Office has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction removal activities.

(F) Before starting removal activities for the Veazie and Great Works Projects, and decommissioning activities for the Howland Project, the Penobscot River Restoration Trust (Trust) shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdams, the Trust shall submit one copy to the Division of Dam Safety and Inspections (D2SI) - New York Regional Engineer and two copies to the Commission

(one of these copies shall be a courtesy copy to the Director, D2SI), of the approved cofferdam construction drawings and specifications and the letters of approval.

(G) At least 60 days before starting removal activities for the Veazie and Great Works Projects, and decommissioning activities for the Howland Project, the Penobscot River Restoration Trust shall submit one copy to the Division of Dam Safety and Inspections (D2SI) – New York Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI), of the Temporary Emergency Action Plan (TEAP) for the Commission's review and approval. The TEAP shall describe emergency procedures in case failure of a cofferdam, large sediment control structure, or any other water retaining structure that could endanger construction workers or the public. The TEAP shall include a notification list of emergency response agencies, a plan drawing of the proposed cofferdam arrangement, the location of safety devices and escape routes, and a brief description of testing procedures.

(H) During removal, decommissioning, or construction activities, the Penobscot River Restoration Trust shall submit one copy to the Division of Dam Safety and Inspections (D2SI) - New York Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI), of a monthly progress report.

(I) Within 30 days of completing project removal and site restoration, the Penobscot River Restoration Trust shall submit one copy to the Division of Dam Safety and Inspections (D2SI) - New York Regional Office and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI), of a final report which demonstrates that the project facilities have been removed and the project site restored in accordance with the approved plans.

(J) The Penobscot River Restoration Trust (Trust) shall implement the Memorandum of Agreement (MOA) between the Commission and Maine State Historic Preservation Officer (SHPO), with the Penobscot Indian Nation (Penobscot Nation), Penobscot River Restoration Trust (Trust), and National Marine Fisheries Service as concurring parties, executed on January 14, 2010, for the surrender of the Veazie, Great Works, and Howland Hydroelectric Projects.

Upon the SHPO's acceptance of the Historic American Building Survey/ Historic American Engineering Record documentation of the remains of the Veazie Lumber Company Mill, the Trust shall file with the Commission documentation of the Maine State Historic Preservation Officer's acceptance.

By December 31<sup>st</sup> annually, until all stipulations of the MOA have been satisfied, the Trust shall file a report to keep the Commission apprised of its progress in implementing the MOA. The report shall include a description of all activities conducted

during the previous year in implementing the stipulations of the MOA, and provide a summary of work anticipated for the next year. The report shall be prepared in consultation with the SHPO and Penobscot Nation, and shall include documentation of this consultation. The final report shall be filed once the technical report required by stipulation F(2) of the MOA is submitted to the SHPO and Penobscot Nation, and shall include any comments received from the SHPO or Penobscot Nation on the technical report. Upon Commission acknowledgement of the final report, all of the resulting documentation and any artifacts shall be forwarded to the SHPO and Penobscot Nation, or any other repository designated by the SHPO and Penobscot Nation.

(K) Within 6 months of the date of this order, the Penobscot River Restoration Trust (Trust) shall file, for Commission approval, an Invasive Species Monitoring and Control Plan that includes at a minimum: (1) native herbaceous and shrub species that will be planted in newly exposed riverbank areas; (2) locations where plantings of native species, soil testing, repeated seed broadcasting, and fertilizer application will occur; (3) a description of the monitoring methods to be used to identify invasive species in the project areas during the three year post removal monitoring period; and (4) control measures to be used on any invasive species identified. The plan shall be developed in consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and Maine Department of Environmental Protection. The plan shall include documentation of this consultation, including copies of any correspondence, and specific descriptions of how any comments or recommendations received have been incorporated into the plan. If the Trust does not incorporate comments or recommendations into the plan, the Trust shall provide its reasons, based on project-specific information. The Commission reserves the right to make changes to the plan. Implementation of the plan shall not begin until it is approved by the Commission. Upon Commission approval, the Trust shall implement the plan including any changes required by the Commission.

(L) Within 6 months of the date of this order, the Penobscot River Restoration Trust (Trust) shall develop a salvage and relocation plan for any mussels or fish stranding during drawdown of the impoundments. The plan shall be developed in consultation with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Maine Department of Marine Resources, and Maine Department of Inland Fisheries and Wildlife, and filed with the Commission, for approval, prior to drawdown of the Veazie and Great Works impoundments. The plan shall include documentation of consultation, including copies of any correspondence, and specific descriptions of how any comments or recommendations received have been incorporated into the plan. If the Trust does not incorporate comments or recommendations into the plan, the Trust shall provide its reasons, based on project-specific information. The Commission reserves the right to make changes to the plan. Implementation of the plan shall not begin until it is approved by the Commission. Upon Commission approval, the Trust shall implement the plan including any changes required by the Commission.

(M) Within 90 days of the date of this order, the Penobscot River Restoration Trust shall file, for Commission approval, revised Exhibit G drawings incorporating all existing and proposed structures, access roads, and lands necessary for activities authorized in this order within the particular project boundary. The drawings shall comply with sections 4.39 and 4.41(h) of the Commission's regulations.

(N) At least 30 days prior to commencing project decommissioning or ground-disturbing activities, the Penobscot River Restoration Trust (Trust) shall file, for Commission approval, a plan to survey for Bald Eagle nests at the Veazie, Great Works, and Howland Projects. The plan shall be developed in consultation with the U.S. Fish and Wildlife Service and Maine Department of Inland Fisheries and Wildlife. The plan shall include documentation of consultation, including copies of any correspondence, and specific descriptions of how any comments or recommendations received have been incorporated into the plan. If the Trust does not incorporate comments or recommendations into the plan, the Trust shall provide its reasons, based on project-specific information. The Commission reserves the right to make changes to the plan. Implementation of the plan shall not begin until it is approved by the Commission. Upon Commission approval, the Trust shall implement the plan including any changes required by the Commission.

(O) Following removal of the Great Works dam, the Penobscot River Restoration Trust (Trust) shall examine the safety of the Great Works Canoe Portage to determine if changes are necessary to provide for safe use of the portage. Within 6 months of removing the dam, the Trust shall file a report with the Commission to include: (1) a summary of its safety review of the Great Works Canoe Portage; (2) a description of any steps that were taken to provide for a functional portage route around the obstruction, if necessary; and (3) photographs or other evidence to support the Trust's conclusions regarding safety of the portage.

(P) The Penobscot River Restoration Trust (Trust) shall continue consultation with the appropriate resource agencies regarding fish passage during dam removal activities at the Veazie and Great Works Projects to coordinate the timing of dam removal to ensure minimal impacts to migrating fish. Prior to commencing dam removal activities at the Veazie and Great Works Projects, the Trust shall consult with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Maine Department of Marine Resources, and Maine Department of Inland Fisheries and Wildlife to review the dam removal activities and to review any new information for potential impacts that were not considered during consultation, as required in the Biological Opinion. If new methods of avoiding and/or minimizing incidental take are identified, the Trust shall seek review and approval from the NMFS before commencing decommissioning activities of any changes in dam removal methods and actions, take minimization activities, and monitoring and contingency activities.

Following removal of the Veazie and Great Works dams, the Trust shall evaluate upstream and downstream passage for migratory fish species (including Atlantic salmon and shortnose sturgeon) and monitor the mouths of tributary streams along the projects' former impoundments to ensure effective passage for migratory fish species. The Trust shall make any modifications needed to clear the blockages if such obstructions are present. Any evaluation, monitoring, or modifications shall be done in consultation with state and federal fisheries agencies. Within six months of removing the Veazie and Great Works dams, the Trust shall file with the Commission a report summarizing its monitoring results, including evidence of agency consultation.

(Q) Within 90 days of the date of this order, the Penobscot River Restoration Trust (Trust) shall file, for Commission approval, a schedule for mitigating the adverse impacts on infrastructure caused by the dewatering of the Veazie and Great Works impoundments and the lowering of the Howland impoundment. The schedule shall identify each piece of affected infrastructure and describe how and when the impacts will be mitigated. In the event that the impact on a piece of infrastructure and/or the appropriate mitigation measure cannot be determined until after the reservoir is dewatered or lowered, the schedule shall describe how that the impacts on that piece of infrastructure will be monitored and how and when any impacts will be mitigated.

(R) The Penobscot River Restoration Trust shall monitor the mouths of tributary streams entering the impoundments following dam or flashboard removal and remove, within 6 months, any sediment deposits that impede the flow of the tributaries into the lowered river elevation.

(S) To provide for fish passage during removal of the Great Works Dam, the Penobscot River Restoration Trust shall utilize trapping and trucking of salmon from Veazie Dam until the Great Works Dam is breached.

(T) The Great Works Dam shall be decommissioned and removed before the Veazie Dam so that the trap at the Veazie Dam can be used to capture salmon for hatchery broodstock and to trap and truck, and to avoid effects to diadromous aquatic species.

(U) At least 6 months before commencing construction of the Howland fish bypass channel, the Penobscot River Restoration Trust (Trust) shall file, for Commission approval, functional design drawings of the facility, prepared in consultation with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Maine Department of Marine Resources, and Maine Department of Inland Fisheries and Wildlife. The filing shall include a description of the methods and schedule for completing the installation of the Howland fish bypass channel, documentation of consultation, including copies of any correspondence, and specific descriptions of how any comments or recommendations received have been incorporated into the drawings.

If the Trust does not incorporate comments or recommendations into the drawings the Trust shall provide its reasons, based on project-specific information. The Commission reserves the right to make changes to the drawings.

(V) Within 90 days of completing the construction of the Howland fish bypass channel, the Penobscot River Restoration Trust shall file, for Commission approval, as-built drawings of the fish bypass channel.

(W) To provide for fish passage at the Howland Dam, the flashboards shall not be removed until the bypass channel is constructed and operational so that the existing fish ladder remains functional for upstream passage. Downstream passage shall be provided by the existing vertical sluice.

(X) The Penobscot River Restoration Trust shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(Y) For the purpose of minimizing and monitoring incidental take of Atlantic salmon and shortnose sturgeon for the Veazie, Great Works, and Howland Projects, the Penobscot River Restoration Trust (Trust) shall implement Terms and Conditions Nos. 1, 2, 3, 4, and 5, stipulated in the National Marine Fisheries Service's December 23, 2009 Biological Opinion (BO). The terms and conditions are set forth in Appendix A of this order. To keep the Commission apprised of its activities to minimize and monitor incidental take, the Trust shall file with the Commission any reports required by the BO (including, but not limited to, annual reports summarizing ambient water temperature monitoring and annual reports summarizing any takes of Endangered Species Act-listed species). These reports shall be filed, as required by the BO, until the project license surrenders are effective.

(Z) 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 FPA, 16 U.S.C. §8251 (2006), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2009). 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.

Edward A. Abrams  
Director  
Division of Hydropower Administration  
and Compliance

## APPENDIX A

[National Marine Fisheries Service's Reasonable and Prudent Measures and Terms and Conditions as Found in its Biological Opinion, Issued December 23, 2009]

### **9.2. Reasonable and Prudent Measures**

The National Marine Fisheries Service (NMFS) believes the following reasonable and prudent measures are necessary and appropriate to minimize and monitor incidental take of Atlantic salmon and shortnose sturgeon in the action area. Therefore, the Trust should complete the following measures:

1. Prior to dam removal, review and use best available science to adaptively manage the dam removal protocol to incorporate any new practices which will minimize impacts to listed Atlantic salmon and shortnose sturgeon.
2. Conduct all operational, dam removal, and any other in-water and near-water construction activities in a manner that minimizes incidental take of Endangered Species Act (ESA) -listed or proposed species and conserves the aquatic resources on which ESA-listed species depend.
3. Minimize incidental take from all dam removal and other decommissioning in-water and near-water construction activities by applying best management practices to the proposed action that avoid or minimize adverse effects to water quality and aquatic resources.
4. Ensure completion of an annual monitoring and reporting program to confirm the Trust is minimizing incidental take and reporting all project-related observations of dead or injured salmon or sturgeon to NMFS.

### **9.3. Terms and Conditions**

In order to be exempt from prohibitions of section 9 of the ESA, the Trust must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and which outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. To carry out reasonable and prudent measure #1, the Trust shall ensure that, prior to dam removal (currently scheduled to begin in spring 2010), it prepares a Final Dam Removal Construction Plan (Construction Plan) in collaboration with NMFS, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers (ACOE), and other state agencies.

2. To implement reasonable and prudent measure #1, the Trust must do the following:
  - a. Prior to initiating dam removal activities, convene state and federal resources agencies to review the dam removal activities and review any new information for potential impacts that were not considered during consultation. If new methods of avoiding and/or minimizing incidental take are identified, the Trust must seek review and approval from NMFS before decommissioning activities commence of any changes in a) dam removal methods and actions; b) take minimization activities; and c) monitoring and contingency activities. Changes to the proposed action or this incidental take statement may be authorized via simple amendment of this Opinion.
  
3. To implement reasonable and prudent measure #2, the Trust must do the following:
  - a. Timing of in-water work: Work below the bankfull elevation<sup>35</sup> will be completed during an in-water work period from July 1 to April 9. The Trust must notify NMFS one week before in-water work begins.
  
  - b. Use Best Management Practices (BMPs) that will minimize concrete products (dust, chips, larger chunks) mobilized by dam removal 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.
  
  - c. Employ erosion control and sediment containment devices at the Veazie, Great Works, and Howland dams construction sites. During dam removal, 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.
  
  - d. 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.
  
  - e. 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

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<sup>35</sup> 'Bankfull elevation' means the bank height inundated by a 1.5 to 2-year average recurrence interval and may be estimated by morphological features such as average bank height, scour lines and vegetation limits.

required during periods operated within or above the waterway.

f. 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.

g. 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.

h. 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.

i. At the end of each work shift, vehicles will not be stored within, or over, the waterway.

j. 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.

k. Use temporary erosion and sediment controls on all exposed slopes during any hiatus in work exceeding 7 days.

l. Place material removed during excavation only in locations where it cannot enter sensitive aquatic resources.

m. Minimize alteration or disturbance of the stream banks and existing riparian vegetation to the greatest extent possible.

n. Remove undesired vegetation and root nodes by mechanical means only. No herbicide application shall occur.

o. Mark and identify clearing limits. Construction activity or movement of equipment into existing vegetated areas shall not begin until clearing limits are marked.

p. Retain all existing vegetation within 150 feet (46 m) of the edge of the bank to the greatest extent practicable.

4. To implement reasonable and prudent measure #3, the Commission and ACOE must require the Trust to do the following:

- a. Contact NMFS within 24 hours of any interactions with shortnose sturgeon, including non-lethal and lethal takes (Jeff Murphy: by email (Jeff.Murphy@noaa.gov) or phone (207) 866- 7379 or the Section 7 Coordinator by phone (978) 281-9208 or fax (978) 281-9394).
  - 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. Submit annual reports at the end of each calendar year summarizing the results of proposed action and any takes of listed species to NMFS by mail (to the attention of the Section 7 Coordinator, NMFS Protected Resources Division, Gloucester, MA 01930).
5. To implement reasonable and prudent measure #4, the Trust must do the following:
- a. Monitor ambient water temperatures in the lower Penobscot River from April 1<sup>st</sup> to June 30th annually to analyze the success of turbine shutdowns. Annual reports summarizing water temperature monitoring should be submitted to resource agencies by August 1st annually during the period of interim operations.
  - b. Require the Trust to develop a dam and fish bypass maintenance and operation plan for the Howland Project in consultation with state and federal resource agencies.
  - c. Develop an invasive plant species monitoring and removal plan for the projects.
  - d. Evaluate upstream and downstream passage for Atlantic salmon and shortnose sturgeon following dam removal in consultation with state and federal fisheries agencies.
  - e. Monitor the mouths of tributaries in the former impoundments to ensure effective passage for migratory fish species.

Document Content(s)

P-2403-056.DOC.....1-28