

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission (FERC)
888 First Street, NE
Washington, DC 20426

FILED ELECTRONICALLY

RE: Fishway operations at Worumbo Dam (FERC No. 3428) and Pejepscot Dam (FERC No. 4784) Androscoggin River, Maine.

March 25, 2010

Dear Secretary Bose,

We are in receipt of the Feb. 26, 2010 responses from the Worumbo and Pejepscot licensees to our Feb. 1, 2010 request to the Commission regarding fish passage for Atlantic salmon. First, we appreciate the licensees providing us and the Commission with complete data on past operation dates of their upstream and downstream fish passage facilities and the attached letter from Maine DMR of June 18, 2009 on this topic.

The Pejepscot and Worumbo licensees state they intend to operate their upstream and downstream fish passage facilities in 2010 in accordance with a schedule established by Maine DMR as set forth in a Maine DMR letter dated June 18, 2009.

This Maine DMR letter requests downstream fish passage facilities at both dams be operated for Atlantic salmon from April 1 to June 30 and October 15 to Dec. 31 and notes these dates are consistent with recommendations at other hydro projects in Maine. The Maine DMR letter states that Maine DMR has agreed to defer studies of downstream fish passage effectiveness for Atlantic salmon kelts and smolts indefinitely. Maine DMR states it is not requesting any change in the existing schedule for operation of upstream fish passage for Atlantic salmon at Worumbo and Pejepscot. As noted in our Feb. 1, 2010 letter, the upstream fishways at both Pejepscot and Worumbo are often shut down as early as the first week of July for the season, with only occasional operation during the fall.

As the licensees are aware, anadromous Atlantic salmon in the Androscoggin River are now protected as an endangered species under the U.S. Endangered Species Act as part of the Gulf of Maine Distinct Population Segment (GOM-DPS) of Atlantic salmon. The Gulf of Maine DPS includes Atlantic salmon born in the Androscoggin as well as Atlantic salmon from other Gulf of Maine DPS rivers which decide to swim up the Androscoggin.

The Gulf of Maine DPS includes all salmon of hatchery origin which come from

restoration activities in rivers within the Gulf of Maine DPS. The Penobscot River is annually stocked with large numbers of smolt-age salmon which are presumed to be a primary source of the 'hatchery strays' documented in the Androscoggin. These straying salmon are part of the Gulf of Maine DPS. As such, it is safe to presume that all anadromous Atlantic salmon in the Androscoggin River are part of the Gulf of Maine DPS of endangered Atlantic salmon.

As licensees are also aware, in 2009 the U.S. Depts. of Interior and Commerce declared the Androscoggin River from Lewiston downstream to be Critical Habitat for the GOM-DPS of Atlantic salmon. This Critical Habitat encompasses both the Worumbo and Pejepsot projects.

Neither licensee has been issued an Incidental Take Permit under the U.S. ESA from the Depts. of Interior and Commerce for the effects of their projects on Gulf of Maine DPS Atlantic salmon. This means that any anadromous salmon killed or injured at the dams in 2010 constitutes a "take" and a violation of the ESA which subjects the licensees to enforcement action.

Upstream Passage:

Licensees state in their Feb. 26, 2010 letters to the Commission they intend in 2010 to operate their upstream fishways in the same manner and schedule as they have in past years, citing to a June 18, 2009 letter from Maine DMR. Data provided by the licensees in their annual Commission reports since 2000, as amended and corrected in their Feb. 26, 2010 letters, shows their upstream fishways are operated for only a small segment of the April to November upstream Atlantic salmon migration season.

Historic fishway data for the Brunswick Dam reviewed in Baum (1997) shows that about 60 percent of the Androscoggin Atlantic salmon run passes upstream at Brunswick prior to July 1st with the remaining 40 percent of the run passing upstream in July, August, September and October. This run timing is similar to historic fishway/fish trap data for the Saco, Union, Sheepscot, Machias and St. Croix Rivers.

The existing and proposed upstream fishway operation schedule for Atlantic salmon at the Pejepsot and Worumbo dams is not consistent with the documented run timing of Atlantic salmon in the Androscoggin River. Nor is the existing operation schedule consistent with those established for fishways on the Kennebec River and Sebasticook and Penobscot Rivers. On those rivers, upstream fishways are operated for Atlantic salmon throughout the entire spring, summer and fall upstream Atlantic salmon migration season.

Neither Maine DMR or the licensees have provided any information or explanation for why the upstream fishways at Pejepsot and Worumbo are shut down for most of the summer while fishways on the Kennebec (at Lockwood Dam) and the Penobscot (at Veazie, Great Works, Milford, West Enfield, Howland and Weldon) are operated throughout the summer and are used by Atlantic salmon during the summer.

Based upon our conversations with Maine DMR scientists and licensee annual reports, the existing schedule for upstream fishway operation at Pejepscot and Worumbo is based upon the run timing of alewives (*Alosa pseudoharengus*), which cease their upstream migration in late June. In contrast, Atlantic salmon migrate upstream throughout the year from April to November. As best as we can discern, the existing upstream fish passage operation schedule at Worumbo and Pejepscot was never designed with the needs of Atlantic salmon in mind, nor has Maine DMR adjusted the existing schedule to accommodate Atlantic salmon and make it consistent with the April to November schedule used on the Kennebec and Sebasticook and Penobscot Rivers as well as the Brunswick Dam at the head of tide on the Androscoggin. We believe this oversight should be corrected at Pejepscot and Worumbo in 2010.

Dropdowns:

On this topic, Baum (1997) states: "Maine Atlantic salmon do not always migrate in an upstream direction. Returning to tidewater after migrating several miles upriver earlier in the year is common for an Atlantic salmon. They may migrate back into the same (or even a different) river later in the year."

The Worumbo and Pejepscot licensees reject as groundless our concern about the effect of the annual summer and fall upstream fishway shutdowns at Pejepscot and Worumbo on drop-down adult Atlantic salmon. Here we define a "drop-down" Atlantic salmon as an adult salmon, which for any number of reasons, migrates above a dam and then swims downstream at some time between when it first enters the river and when it spawns in the late fall. Atlantic salmon are highly migratory animals and have evolved to have free movement in their home river. Because they often first enter their natal river in the spring and summer and do not spawn until late fall, they often travel back and forth from one river segment to another prior to spawning.

It is axiomatic that the summer fishway shutdowns at Pejepscot and Worumbo prevent any drop-down salmon from migrating back upstream. It is also axiomatic that if the upstream fishways at Worumbo and Pejepscot were operated on a schedule consistent with fishways on the Kennebec, Sebasticook and Penobscot Rivers, which is what we request, any negative effect on any drop-down salmon would be eliminated. Licensees offer no explanation for why they should be allowed to operate their fishways in a manner which is completely inconsistent with dam owners and fishways on the Kennebec, Sebasticook and Penobscot, except that Maine DMR has allowed them to. This does not constitute an adequate explanation.

Once an Atlantic salmon passes a fishway it is by no means guaranteed the salmon will stay above it. The existing seasonal closure regime penalizes salmon which pass either the Pejepscot or Worumbo fishways or both and then, for various reasons, migrate back downriver (during summer and fall freshets, for example). Once these fishways are closed, usually in early summer, salmon which drop down cannot migrate upriver again. In a river like the lower Androscoggin, which often attains very high water temps. in mid-

summer, these summer fishway shutdowns could injure or kill salmon if they are unable to find thermal refugia in the river reach they are "stuck in." These shutdowns also have the effect of fragmenting and isolating an already exceedingly small number of spawners by preventing salmon finding each other during their October-November spawning period. Since the Androscoggin River is not stocked with Atlantic salmon, the maintenance and restoration of its Atlantic salmon population is wholly dependent on adult spawners finding each other in the fall and successfully spawning. For this to occur, Atlantic salmon need to have maximum freedom of movement in the river, which they do not have in the Androscoggin because of the fishway shutdowns at Pejepscot and Worumbo.

Downstream Passage:

We concur with Maine DMR's recommendation in its letter of June 18, 2009 that downstream fishways at the Worumbo and Pejepscot dams be operated beginning on April 1 of each year. However, Maine DMR's letter states that downstream passage should be operated for Atlantic salmon from April 1 to June 30 and October 15 to Dec. 31. Again, this is inconsistent with downstream passage on the Kennebec, Sebasticook and Penobscot Rivers, which are operated all summer and fall. As such our recommendation stands as April 1 to Dec. 31 since it is consistent with downstream fish passage operation on other Gulf of Maine DPS rivers.

Maine DMR's letter states: "Although we request these timing windows for operation, we are aware that river conditions may prevent the safe operation of downstream fish passage facilities during these dates. We fully understand if ice or high water, for example, were to delay or shorten the operational window."

We disagree with Maine DMR's statement due to the 2009 inclusion of Androscoggin River anadromous Atlantic salmon in the Gulf of Maine DPS of Atlantic salmon protected under the U.S. Endangered Species Act. The take prohibition of the ESA places a far greater burden on the licensees for providing safe downstream passage than other regulatory mechanisms. Absent issuance of an Incidental Take Permit for the dams, Atlantic salmon must be provided safe downstream passage at the dams at all times, regardless of whether river conditions make it difficult to operate the existing downstream fish passage facilities.

For this reason, Maine DMR's exception, as quoted from their June 18, 2009 letter above, is inconsistent with the ESA and could result in a take of Atlantic salmon under the ESA at the dams. We are not questioning the sincerity of licensees' desire to ensure downstream passage facilities are on-line and operating during the full window of the downstream Atlantic salmon migration season. We are questioning the wisdom and legality of Maine DMR's built-in exemption as quoted above, which could leave salmon with no downstream passage for days, weeks or months depending on river flow and mechanical difficulties.

Downstream Passage Studies for Atlantic salmon:

Maine DMR's June 18, 2009 letter states: "Even though we are requesting downstream fish passage facilities be operational for Atlantic salmon, we defer requesting downstream kelt and smolt studies to a later date."

According to annual licensee reports filed with the Commission, no downstream passage efficiency or effectiveness studies have ever been conducted at the dams for Atlantic salmon kelts and smolts. Downstream passage studies for juvenile alewives were attempted several times at the Worumbo Dam many years ago and failed to provide meaningful data. [Order Approving Recommendations on Fish Passage Studies, Worumbo Dam, Nov. 12, 1998, 85 FERC ¶ 62,089.]

Downstream passage studies for juvenile alewives conducted at the Pejepscot Project in 1996 produced some usable data for the species. These studies showed a significant amount of turbine entrainment, with the licensee estimating that 34 percent of the total test population of juvenile alewives passed through the turbines and did not use the downstream fish passage facility. [Order Approving Modifications to the Downstream Fish Passage Facility and Operation Plan, Pejepscot Dam, August 19, 1997, 80 FERC ¶ 62,160]

Based upon this 1996 study, the U.S. Fish & Wildlife Service informed the Commission and licensee by letter on April 11, 1997 that the study results "fall far short of the passage efficiency goal of 90 percent." The Maine DMR made the same finding by letter dated March 14, 1997. The USFWS letter further stated that additional studies were necessary to calculate survival of juvenile alewives which pass through the turbines. These studies were not conducted. Commission records show the licensee has conducted no further downstream passage studies at the Pejepscot dam for any species since 1996 and no studies are contemplated or scheduled in the future.

At this late date, with Androscoggin River Atlantic salmon listed as an endangered species under the U.S. Endangered Species Act, there is no reason why the licensees should not be required to immediately conduct downstream fish passage effectiveness studies for Atlantic salmon at their dams. Part B of the Commission's August 19, 1997 Order for the Pejepscot Dam at 5 states the Commission reserves the right to "require additional study based upon annual reports filed" by the licensee.

Through this letter we are requesting the Commission immediately exercise this reserved right and require downstream passage studies in 2010 for Atlantic salmon kelts and smolts at the Pejepscot Dam; and the Commission exercise its identical reserved right at the Worumbo Dam and make the same requirement at Worumbo.

Interim Contingency Downstream Passage Measures:

The period prior to the initiation and completion of any voluntary or Commission-ordered downstream passage studies for Atlantic salmon, and completion of any changes and improvements made in response to those studies, is likely to be several years at minimum.

During this lengthy and unknown period, Atlantic salmon in the Androscoggin River will remain subject to status quo passage conditions at the Pejepscot and Worumbo Dams.

1996 studies of juvenile alewife passage at the Pejepscot Dam by the licensee show a turbine entrainment rate of approx. 34 percent when the downstream passage facility is operating. At this entrainment rate, mortality and injury to Atlantic salmon kelts and smolts at the dam is a certainty. In spring 1997, USFWS and MDMR both stated the 1996 Pejepscot study results showed the Pejepscot facility falls "far short" of their 90 percent downstream passage efficiency goals for juvenile alewives. For large-bodied fish like adult Atlantic salmon, the mortality due to 34 percent turbine entrainment would be severe.

At Worumbo, downstream passage efficiency studies using juvenile alewives were abandoned a decade ago after several attempts produced no usable results. It is reasonable to assume that downstream passage efficiency at Worumbo is similar to that documented at Pejepscot, and mortality and injury to Atlantic salmon kelts and smolts at Worumbo is a certainty.

Both licensees have had nearly two decades to conduct downstream passage efficiency studies and turbine mortality studies for Atlantic salmon at their dams but have repeatedly and voluntarily elected not to do so. This elective decision does not now excuse or obviate the licensees from their legal responsibility to not cause a take of endangered Atlantic salmon at their dams in 2010 and thereafter; nor does it excuse the licensees from their general FERC license obligations to operate their dams in a manner which is protective of the public interest and in accordance with relevant state and federal laws.

Article 15 in the Commission's Form L-3 states:

"Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing."

The immediate protection of a federally listed endangered species, the Atlantic salmon, from being killed at these dams falls within the category of "the conservation and development of fish and wildlife resources" in Article 15 and obligates the licensee and the Commission to take necessary steps to achieve this goal.

With the completion of studies and implementation of changes based upon their findings not possible until several years from now at the earliest, a set of interim, contingency actions must now be devised and implemented. We believe the most effective interim protective measures at the two dams to prevent mortality to Atlantic salmon is for the licensees to install full-depth angle iron or punch plate screens to their turbine intakes this

spring and to cease project generation after April 1, 2010 until such time as these screens are in place.

Recommendations:

1. In accordance with Article 15, we request the Commission exercise its independent, reserved authority to order downstream passage studies for Atlantic salmon at the dams be conducted in 2010.
2. In accordance with Article 15, we request the Commission exercise its independent, reserved authority to instruct the licensees for the Pejepscot and Worumbo projects to operate their upstream fishways at these dams every day during the 2010 Atlantic salmon migration season and thereafter beginning when the first migratory fish is passed at the Brunswick Dam and until Nov. 30 of each year.
3. In accordance with Article 15, we request the Commission exercise its independent, reserved authority to instruct the licensees for the Pejepscot and Worumbo projects to operate their FERC-licensed downstream fish passage facilities from April 1 - Dec. 31 of each year to protect downstream migrating Atlantic salmon. We request this schedule begin with the 2010 Androscoggin River Atlantic salmon migration season, which starts on April 1, 2010.
4. In accordance with Article 15, we request the Commission exercise its independent, reserved authority to instruct the licensees for the Pejepscot and Worumbo projects to install full-depth angle iron or punch plate screens to their turbine intakes this spring and to cease project generation after April 1, 2010 until such time as these screens are in place.

Sincerely,

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cc:

Topsham Hydro Partners

Miller Hydro Group

Maine DEP, Dept. of Land & Water Quality

NOAA-Fisheries

USFWS, Maine Field Office

Maine DMR, Bureau of Sea Run Fisheries

References:

Baum, E.T. 1997. Maine Atlantic Salmon: A National Treasure. Atlantic Salmon Unlimited. Hermon, Maine.