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**RE: 60 Day Notice of Intent, U.S. Endangered Species Act,  
Androscoggin River Dams, Androscoggin River, Maine.**

August 27, 2010

Dear Sirs,

This letter is being sent to provide you with 60 days notice of our intent to file suit against you for violations of the U.S. Endangered Species Act at the Worumbo, Pejepscot and Brunswick dams on the Androscoggin River in Lisbon, Topsham and Brunswick, Maine.

Atlantic salmon in the Androscoggin River are protected under the U.S. Endangered Species Act. Section 9 of the ESA prohibits the “taking” of any endangered species. 16 U.S.C. § 1538(a). The Act defines the term “take” to include “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Id. § 1532(19). The term “harass” is defined as “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. The term “harm” is defined as “an act which actually kills or injures wildlife, [which] . . . may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” Id.

We believe credible evidence already exists which shows your dams are now causing a 'take' of Atlantic salmon under the ESA by failing to provide them with safe and effective downstream passage around the turbines of your dams.

## **I. Brunswick Dam.**

Records show downstream fish passage facilities at the Brunswick Dam have never been tested for effectiveness or efficiency. According to Maine DMR, the downstream fish passage facilities at Brunswick consist of an approx. 18 inch diameter pipe situated between the two turbine intakes of the dam. Maine DMR stated in a 2007 status report: "The downstream passage facility at the Brunswick Dam is between two turbine units, a poor location. Downstream attraction flows guide migrating adults and juveniles to the turbine units and the upstream passage [entrance]."

In 2010, Maine DMR further stated: "The downstream passage is an 18" (est.) pipe between turbines 1 & 2. Juvenile alosine and adult fish species that fit between the [upstream fish] trap grating may pass downstream when the fishway is operating - though my observation is that few fish pass downstream in that manner. Due to the lack of FERC requirements at the time there were and still are no required studies for up or downstream passage for any species." (Michael Brown, Maine DMR Androscoggin River restoration coordinator, email to Douglas Watts, January 27, 2010.) Given the size and intended function of the grate at the upstream exit of the upstream fishway at Brunswick, it is unlikely that adult Atlantic salmon kelts would be able to pass downstream through the grate and use the upstream fishway as a downstream passage method.

## **II. Pejepscot Dam**

The Pejepscot Dam uses surface bypass weirs as an alternative to turbine passage. However, studies conducted in 1996 by the Pejepscot owner show these bypass weirs are ineffective at guiding downstream migrants away from the turbines.

Downstream passage studies using juvenile alewives were conducted at the Pejepscot dam in 1996 and produced useable 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 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 never conducted. FERC 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. Downstream fish passage effective studies for Atlantic salmon have never been conducted at the dam. By letter dated June 18, 2009, Maine DMR 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."

### **III. Worumbo Dam**

Like Pejepscot, the Worumbo dam uses surface bypass weirs as an alternative to turbine passage. According to annual licensee reports filed with FERC and state and federal fisheries agencies, no downstream passage efficiency or effectiveness studies have

ever been conducted for Atlantic salmon at the Worumbo Dam. Downstream passage studies for juvenile alewives were attempted several times at the Worumbo Dam during the 1990s but failed to provide meaningful data. [Order Approving Recommendations on Fish Passage Studies, Worumbo Dam, Nov. 12, 1998, 85 FERC ¶ 62,089.] Records show that since 1998 the Worumbo Dam licensee has given up attempting to conduct any efficiency or effectiveness studies of the downstream bypass for any species at the Worumbo Dam.

#### **IV. Ongoing ESA Violations**

It is well accepted in the general scientific literature that Atlantic salmon and other diadromous fish species are frequently killed or injured when forced to migrate through dam turbines. Turbine mortality tends to increase as the body length of the fish increases. For this reason, large-bodied fish such as adult Atlantic salmon are particularly vulnerable to mortality and injury in dam turbines. This is why downstream passage systems at hydroelectric dams are designed to guide migrating fish away from the project turbines.

Official submissions by the owners/agents for the three dams and official submissions by state and federal agencies during the past 20 years show that the downstream bypass systems which exist at the Brunswick, Pejepscot and Worumbo dams were never intended or designed to achieve 100 percent survival of migrating fish, including Atlantic salmon, nor is there any evidence that these installed systems actually achieve anything approaching 100 percent survival of Atlantic salmon or any other fish species at the dams.

None of the downstream passage systems at the three dams have ever been tested for their effectiveness for adult or juvenile

Atlantic salmon. The Brunswick downstream passage facility has never been tested for any species. The Worumbo Dam downstream fish passage facility has never been effectively tested for any species. The Pejepscot Dam downstream fish passage facility has been tested only once, using juvenile alewives as test subjects, and its effectiveness for this species and life stage was found to fall far below USFWS and Maine DMR passage effectiveness goals for anadromous fish. Even the USFWS' stated goal for passage effectiveness (90 percent survival per dam) falls far short of that required under the take provision of the ESA. Simple arithmetic shows that even with 90 percent passage survival at each dam, the cumulative survival for migrants passing all three dams would be only 72.9 percent, creating a cumulative mortality rate of 27.1 percent.

A new document issued jointly by NOAA, USFWS, Maine DMR and the Penobscot Indian Nation, titled "Atlantic Salmon Recovery Framework: August 2010 Draft," states at 42: "In order for habitat to be considered accessible, it must be in an area where .... Anthropogenic barriers have the following characteristics: Cumulative downstream fish passage efficiencies of all barriers are 95 percent or greater unless site-specific demographic studies demonstrate other targets are sufficient to allow for recovery ..." There is no credible evidence showing the existing downstream facilities at the three Androscoggin River dams meet this performance standard.

We believe the above evidence shows the Brunswick, Pejepscot and Worumbo Dams are now in violation of the 'take' provision of the ESA for Atlantic salmon, specifically the prohibition against harassment of Atlantic salmon, which is defined in the ESA as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife ..."; and the 'harm' prohibition, which is defined in the ESA as "an act which

actually kills or injures wildlife ..."

Without a properly issued Incidental Take Permit under Section 10 of the ESA, the legal bar under the ESA for Atlantic salmon mortality and injury at these dams is zero. We believe there is credible evidence showing the mortality and injury caused to Atlantic salmon at these dams is greater than zero.

## **V. Section 10 of the ESA**

We are aware the Androscoggin dam owners have expressed an interest in beginning a consultation process with NOAA and USFWS under Section 10 of the ESA for the purpose of eventually applying for an Incidental Take Permit for the dams. By letter dated March 8, 2010 to Mary Colligan of NOAA, Topsham Hydro Partners and Miller Hydro Group state that they will need to spend at least the next three to five years conducting studies at the dams before filing any formal application to NOAA and USFWS for a Section 10 Incidental Take Permit.

Section 10(a)(2) of the ESA allows the Secretary to issue a permit for Incidental Take only after the formal submission of an application which includes a conservation plan that specifies:

"(i) the impact which will likely result from such taking;  
(ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;  
(iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and  
(iv) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan."

Upon receipt of a formal application under 10(a)(2), Section 10(b) states:

"(B) If the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that—

- (i) the taking will be incidental;
- (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;
- (iii) the applicant will ensure that adequate funding for the plan will be provided;
- (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and
- (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented, the Secretary shall issue the permit."

To our knowledge, the owners of the Brunswick, Pejepscot and Worumbo projects have yet to file formal applications with NOAA and USFWS for Incidental Take Permits. Instead, as best as we can discern, the owners have proposed to NOAA and USFWS an ill-defined, yet very lengthy 'study period' of 3-5 years in order to gather data they believe would be useful for the submission of a formal application for a 10(a)(2) Incidental Take Permit at some unspecified date in the future, a date which will come only after their own proposed 'study period' is concluded to their own satisfaction.

We believe that NOAA and USFWS have no authority under the ESA to grant the Androscoggin River dam owners such a lengthy 'study period' in lieu of formal submission of a Section 10 application. Section 9 of the ESA places a total bar against any ongoing 'take' of a listed species -- unless and until the

Secretary has issued an Incidental Take Permit for such a 'take' in conformance with the procedures set forth in Section 10(a) and 10(b) of the ESA. The dam owners have not submitted to the Secretary a formal application for a Section 10 permit. The dam owners' March 2010 proposal appears to request that NOAA and USFWS completely exempt the dam owners from compliance with Section 9 of the ESA for a 3-5 year period (or longer) simply because the dam owners have recently expressed a generalized 'interest' in submitting a formal application for a Section 10 permit at some unspecified date in the future; and that they believe they need to spend the next 3-5 years gathering additional data before submitting a formal Section 10 application to the Secretary.

We interpret the plain language of Section 9 and 10 to mean that unless and until a Section 10 incidental take permit has been formally issued by NOAA and USFWS, and after the opportunity for public notice and comment, the 'take' prohibition under Section 9 remains in full effect.

Nothing in the ESA gives NOAA and USFWS the authority to informally grant the dam owners a blanket exemption from the Section 9 'take' prohibition because the dam owners have expressed to NOAA and USFWS a generalized interest in submitting a formal application for a Section 10 permit at some distant, unspecified point in the future. This interpretation would turn the plain language and intent of Section 9 and 10 on its head because a dam owner could just as credibly argue that it needs 10, 20 or 30 years to conduct studies before submitting a Sect. 10 application; or after conducting studies for 3-5 years, the dam owner could say that its studies, for any number of reasons, were inconclusive and the dam owners needs another 3-5 years to conduct additional or follow-up studies, and to repeat this pleading ad nauseam.

By this time, the listed species could become extinct because of the ongoing take at the dams, thus relieving the dam owner of any requirement to submit a formal Section 10 application since there would no longer be any listed species in the river left to take. We believe Congress provided the plain language of Section 9 and 10 in order to prohibit, rather than encourage, this type of deliberate 'gaming the system.'

We also believe the proposal for 3-5 (or more) years of 'additional study' prior to formal submission of a Section 10 application is unwarranted because records show the owners of all three dams have already had one or more decades to study the effectiveness of their downstream bypass systems for Atlantic salmon but have repeatedly neglected to do so. Records show the Pejepscot Dam owner has been aware since 1996 that its own studies show a turbine entrainment rate of approx. 33 percent for juvenile alewives at the dam and that this data necessarily suggests a similar or greater entrainment rate for Atlantic salmon kelts and smolts (based upon the much larger body size of kelts and the larger body size of smolts as compared to juvenile alewives). There is no similar study data for Worumbo because its owner essentially gave up attempting to test the effectiveness of its downstream bypass after 1998. The Brunswick dam owner has never even tried to test the effectiveness of its downstream bypass, presumably because, according to Maine DMR, its federal license contains no requirement for effectiveness testing of its downstream bypass.

The basis of the request by dam owners to conduct 'studies' for 3-5 years prior to submission of formal Section 10 applications is that the dam owners lack information they believe would be useful in filing their eventual Section 10 application. Had the dam owners done these same studies during the past 10-20

years, which they were fully authorized and encouraged to do (nobody told them they couldn't), this instant request would be unnecessary. The only reason the dam owners allegedly lack this data is because they have knowingly and willfully refused during the past 10-20 years to go out and collect it. So, they are using their own willful negligence during the past 10-20 years as justification to ask NOAA and USFWS for an additional 3-5 years to collect this data, and to be granted a blanket exemption from Section 9 of the ESA while they do so. Even if NOAA and USFWS could grant the dam owners an informal, blanket exemption from the requirements of Section 9 for the next 3-5 years, such an exemption would be inappropriate since it is the dam owners themselves who are culpable for the lack of basic data they now claim they need to collect. This is the orphan's alibi.

Given the available data at these dams and the general scientific literature regarding the effect of turbine passage on Atlantic salmon and other fish, we believe a reasonable person would infer that the measured turbine entrainment rates at Pejepscot indicate the dam is now causing a 'take' of outmigrating Atlantic salmon; that the turbine entrainment rates for Worumbo are of a similar range and magnitude as found at Pejepscot because both dams rely upon similar bypass mechanisms; and that the turbine entrainment rate at Brunswick is likely much greater than at Pejepscot or Worumbo because of the primitive and limited nature of the downstream bypass at Brunswick, which according to Maine DMR consists of an 18 inch diameter pipe situated between the dam's two turbine intakes. Available data provides no credible evidence upon which to conclude these three dams are not now causing a take of Atlantic salmon in their turbines; and credible evidence shows these dams will continue to cause a take of Atlantic salmon until Atlantic salmon are physically prevented from gaining access to the turbines of these dams, or

have become extinct from the Androscoggin River.

## **VI. Resolution.**

We believe the proper resolution of this issue is for you to immediately file with NOAA and USFWS formal applications for Section 10 incidental take permits and, in the interim, to take prudent steps to ensure that Atlantic salmon no longer have access to the turbines of your dams so as to abate the ongoing take of Atlantic salmon occurring at these dams. We welcome the opportunity to discuss this matter with your respective staff.

Sincerely,

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