clf
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For a thriving New England

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October 31, 2017

Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA 02420

RE: Presumpscot River, Maine: applications for certification by Sappi North America for Eel Weir, Dundee, Gambo, Mallison Falls and Little Falls Projects

Dear LIHI,

On behalf of the Conservation Law Foundation (CLF) and Friends of the Presumpscot River (FOPR), two NGOs with long and extensive involvement with and knowledge of hydropower and its effects on the Presumpscot River in Maine, we write to offer the following comments on Sappi's applications for certification of its five Presumpscot River hydropower projects. For almost two decades, and in partnership with American Rivers, CLF and FOPR have been leading the effort to restore numerous species of anadromous fish species to the Presumpscot (alewife, American shad, Atlantic salmon, blueback herring and more) – species which once spawned and reared in the Presumpscot in prodigious quantities but were decimated, and for some species extirpated, as a result of the multitude of impassable dams inhabiting the 25-mile length of this river.

I. Our background with this river and these dams.

Over the past eighteen years, CLF, FOPR and/or American Rivers have, in close collaboration with state and federal natural resource agencies:

- Succeeded in causing the lowermost dam on the river (Smelt Hill) to be removed;
- Succeeded in having the State of Maine require Sappi to install a state-of-the-art fishway on the now-lowermost, non-hydropower dam (Cumberland Mills);
- For the next five dams going up the river (Saccarappa, Mallison Falls, Little Falls, Gambo and Dundee), succeeded in having the State of Maine and FERC order Sappi to install fishways (2003 licensing decisions), with installation to occur on a progressive implementation schedule;
- Successfully defended those state and federal fishway orders against Sappi's appeals of them before the Maine Supreme Court, the D.C. Court of Appeals, and the U.S. Supreme Court;
- Successfully reached a settlement agreement with Sappi and the natural resource agencies in 2016 regarding dam removal and channel reconstruction at the Saccarappa site, as well

as the schedule for fish passage installation over the next decades at the Mallison Falls, Little Falls, Gambo and Dundee dams.

In sum, CLF and FOPR know this river – its fishery history, its ecology, its regulatory past, its restoration potential and the challenges to restoration that it faces from dams – very, very well.

II. Are the dams for which Sappi seeks certification currently having a low ecological impact?

CLF and FOPR do not dispute that, based on what they know, Sappi is currently in full compliance with the requirements of the USFWS's 2002 fishway prescription and Maine DEP's 2003 water quality certification. But because installation of the fishways required under these licensing orders has not occurred, will not begin to occur for at least a decade, and has not been determined, once installed, to be effective, there is -- bluntly stated -- no credible scientific or ecological argument that the facilities for which Sappi seeks certification are:

(1) *currently* having a "low impact" on the sea-run anadromous fisheries of the Presumpscot;
(2) will have a "low impact" *for at least a decade from now*, when fish passage *might* be triggered and installed at the lowermost dam, Mallison Falls; and
(3) when finally installed at each dam, *actually able to provide safe, timely and effective passage.*

Thus, certifying these five facilities *right now* as having a "low impact" to migrating anadromous fish *while nonetheless lacking any fish passage* would be patently false. Whether these five facilities eventually prove to be of low ecological impact to migrating anadromous fish is years away from even being tested, let alone determined. LIHI certifying them now as "low impact" to anadromous species, relying on your Criterion C-2 to do so, would at best be a made-up story. At worst, it would be a gross misrepresentation to the public.

To talk specifics: in 2021, under the recently negotiated Saccarappa agreement, the removal of the spillways at Saccarappa will be completed and sea-run fish (principally alewife, American shad and blueback herring) should, for the first time in well over 100 years, have free-swim access to the base of the Mallison Falls dam. At this point, these fish will encounter an impassable wall at Mallison Falls that will completely stop their upriver migration; impassable until either 18,020 of their blueback herring brothers/sisters or 2,960 of their American shad brothers/sisters have similarly passed the Saccarappa site (during spring migration), at which point Sappi will be legally required to build a fishway at Mallison Falls. *Until then constructed*, and in the words of LIHI's Criterion C "goal*," there will be no safe, timely and effective upstream fish passage at Mallison Falls, let alone at the dams further upstream*. Achieving these blueback or shad numbers to "trigger" fish passage construction at Mallison Falls is almost certainly at least 10 years in the future, and the fish passage that will then be installed will be untested in its effectiveness for several years thereafter. Until then, Mallison Falls is having, and will continue to have, an absolute, singular and profoundly negative impact on the ability of anadromous fish to migrate upstream, as are the other four facilities for which Sappi seeks certification.

It should be noted that the fact of the very adverse impact that Sappi's dams had on decimating the migratory fishery is not historically disputed (except, possibly, by Sappi) The state and federal natural resource agencies are in complete accord on this history, and have written about it in numerous places (*e.g.*, the 2003 water quality certification issued by the State of Maine and relied upon by Sappi as part of this LIHI application, as well as in discussion contained in the documents submitted as part of these comments).

III. Have LIHI's Eligibility Requirements and Certification Criteria Been Met?

A. The Mallison Falls and Little Falls Projects Are Not Eligible for LIHI Certification

Section 2.2 of LIHI's eligibility requirements state that "[t]he following types of hydropower facilities "are not currently eligible for LIHI certification":

> Facilities associated with dams that have been recommended for removal by a resource agency. If a natural resource agency has concluded that a dam should be removed and has documented their recommendation in an official, publically [sic] available report or proceeding, the hydroelectric facilities associated with that dam are not eligible for LIHI certification and owners of those facilities should not apply (see Section 2.1.1 for possible exceptions)

LIHI should have been informed by Sappi that in the case of the Mallison Falls and Little Falls facilities, the Maine Department of Marine Resources, the Maine Atlantic Salmon Commission, and the US Department of the Interior all filed official, publicly available reports during the FERC licensing process urging removal of these two dams, as well as the downriver Saccarappa dam.[1] As acknowledged by FERC in its June 2002 Final Environmental Impact Statement:

> …the FWS, the state of Maine resource agencies, American Rivers/FOPR, MCASF/Friends of Sebago Lake, and TU all filed comments and recommended license terms and conditions that state that the Commission should order the removal of the three minor project dams, or at a minimum order the installation of fish passage facilities for anadromous species at all five dams. (p. 116)

On January 31, 2001, the Maine Atlantic Salmon Commission (MASC) stated the following to FERC in writing:

> Project decommissioning and dam removal would certainly enhance the prospects and conditions for diadromous fish restoration and the MASC encourages FERC to continue this analysis as part of its environmental assessment as a reasonable alternative benefiting all migratory fish species, especially in light of the fact that some Atlantic salmon periodically are observed in the low Presumpscot River. (p.3)

On November 27, 2001, the same MASC, responding in a highly critical way to FERC's Draft Environmental Impact Statement (which did not recommend removal of the Mallison Falls,

[1] The documents cited in these comments are attached hereto.

Little Falls and Saccarappa dams), stated that it was "genuinely surprised that the FERC staff neglected to take a holistic approach in its analysis of the effects of the Presumpscot River projects" (p.1), and proceeded in the remainder of its comments to set forth the case for Atlantic salmon restoration through dam removal.

On November 28, 2001, the Maine Department of Marine Resources wrote a similarly critical letter to FERC, expressing how "disappointed" it was that FERC's draft EIS did not adequately analyze the benefits of removing Mallison Falls, Little Falls and Saccarappa (p.2), discussing in some depth the cumulative impact of the inefficiency from relying on upstream fishways and the downstream mortality caused by leaving the three dams in place, noting how FERC's own analysis demonstrates that "removal of Mallison Falls and Little Falls dams would increase the amount of run habitat above Saccarappa." (p.3)

On December 3, 2001, also in response to the Draft EIS, the US Department of the Interior wrote to FERC:

> While the Commission has included the alternative of decommissioning and removal of one or more of the five projects in its DEIS…the analysis of environmental benefits falls far short of the equal consideration standard required under the Federal Power Act… Had a full accounting of all environmental benefits and costs associated with mitigation of impacts (fish passage and instream flows) been conducted by the Commission as required under NEPA, the analysis would clearly support the finding that decommissioning and removal of one or more of the dams is the alternative that best meets the public interest. (p.2)

In sum, the record on the agencies' positions on dam removal of Mallison Falls and Little Falls is a very strong preference for dam removal, but having to settle for fishways. These two dams are not eligible for LIHI certification given this record.

B. Certification of the Gambo, Dundee, and Eel Weir Projects should wait until they are actually causing a low impact to migrating fish.

If LIHI is interpreting its section 3.2.3 Criterion C – Upstream Fish Passage to mean that a facility is "low impact" to upstream migrating fish so long as an applicant for certification is subject to and in compliance with a regulatory order which states that at some unknown future date the owner of this complete barrier to upstream migration will be required to install an upstream fishway, even though the present, on-the-ground reality is that,

(1) the facility currently completely blocks upstream fish migration,

(2) it will continue to do for decades from now – many cycles of certification and re-certification -- before even the lowermost dam has installed upstream fish passage to remove this complete blockage, and

(3) even then, there is no proof that, once installed (decades from now) this fish passage will actually prove to be safe, timely and effective,

then indeed Sappi's Gambo, Dundee and Eel Weir facilities are certifiable under LIHI's peculiar and singular view of ecological "low impact."

CLF and FOPR suggest that such a designation would be absurd. A far more defensible approach for LIHI to take would be for LIHI to encourage Sappi to apply for low-impact certification for the Gambo, Dundee and Eel Weir facilities *once it has actually installed fish passage*, and is then able to demonstrate that the installed fish passage is providing safe, timely and effective passage of migrating native anadromous species to occur. At such a time, CLF and FOPR will be the strongest supporters of low-impact certification for the Gambo, Dundee and Eel Weir facilities.

Thank you for your attention to our comments.

Sincerely,

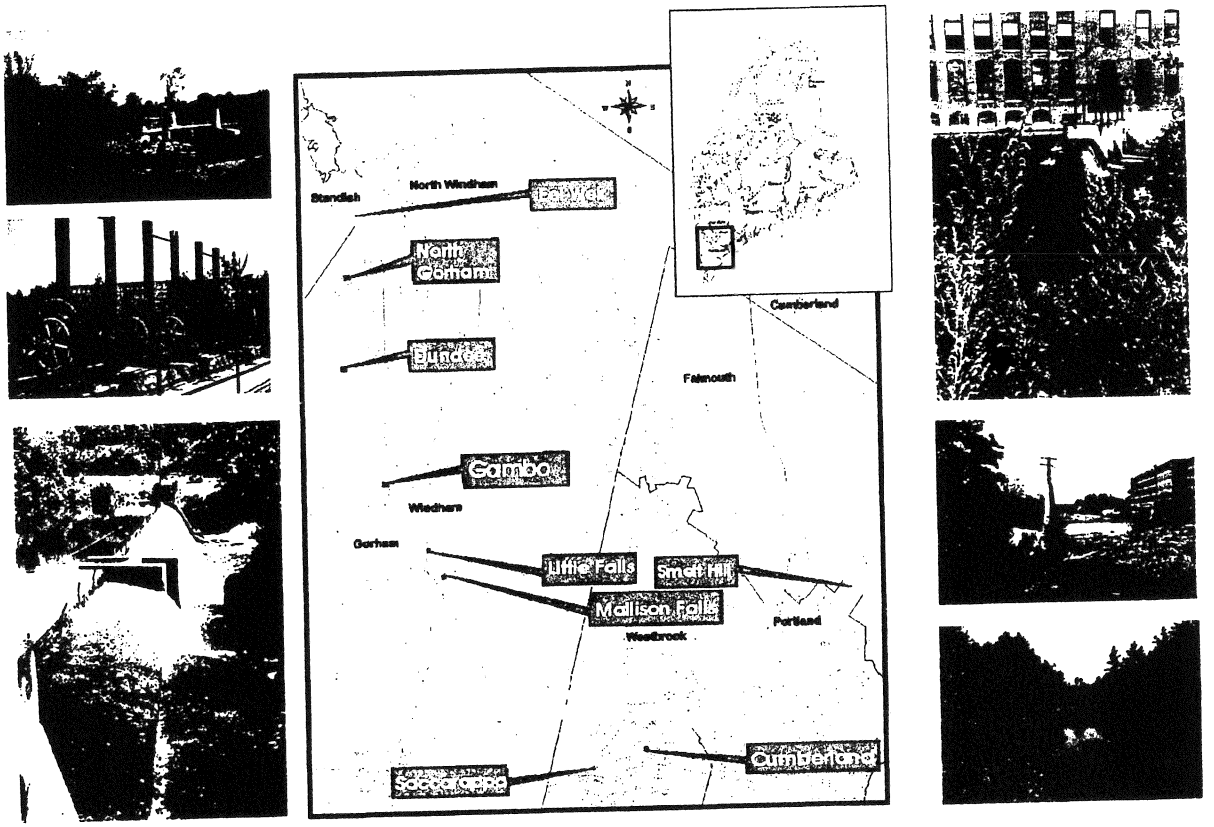
Sean Mahoney, Esq.
Executive Vice President
Conservation Law Foundation

Ronald A. Kreisman, Esq.
Counsel
Friends of the Presumpscot River

Federal Energy Regulatory Commission
Office of Energy Projects
June 2002

PART 1072

Final Environmental Impact Statement (FERC/FEIS-0139F)



Presumpscot River Projects
Maine

Dundee Project (FERC Project No. 2942)
Gambo Project (FERC Project No. 2931)
Little Falls Project (FERC Project No. 2941)
Mallison Falls Project (FERC Project No. 2932)
Saccarappa Project (FERC Project No. 2897)

888 First Street, N.E., Washington, DC 20426

COVER SHEET

a. Title: Relicensing the Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa projects in the Presumpscot River Basin, Federal Energy Regulatory Commission (FERC or Commission) Project Nos. 2942-005, 2931-002, 2941-002, 2932-003, and 2897-003

b. Subject: Final Environmental Impact Statement

c. Lead Agency: Federal Energy Regulatory Commission

d. Abstract: S.D. Warren Company (S.D. Warren) filed applications for new licenses for the existing Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa hydroelectric projects located on the Presumpscot River in southeastern Maine.

The primary issue in these relicensing proceedings is the effects of project operations on fisheries resources including resident trout, American shad, river herring, Atlantic salmon, and American eel. A secondary issue is public access for recreation at the projects. S.D. Warren proposes to provide minimum flows to the bypassed reaches at the Dundee, Gambo, and Mallison Falls projects to enhance resident fisheries and to provide upstream eel passage at the Dundee Project. S.D. Warren would also improve canoe portage, car-top boat access, and walk-in angler access at the projects.

During the scoping process for these proceedings, numerous entities called for the removal of the Little Falls, Mallison Falls, and Saccarappa dams, based on changing circumstances in the Presumpscot River Basin, including the potential removal of Smelt Hill dam near the mouth of the river at Casco Bay. Dam removal advocates recognize that Cumberland Mills dam (a non-jurisdictional dam also owned by S.D. Warren), located between the Saccarappa dam and the Smelt Hill dam, blocks upstream anadromous fish migration and condition their dam removal recommendation on installation of fish passage facilities at the Cumberland Mills dam. We analyzed the effects of dam removal on fisheries resources, assuming that these two lower dams would be removed or laddered, and conclude that only marginal benefits to fisheries would be realized.

3.2 Scoping Process

The Commission issued a Scoping Document 1 (SD1) on July 23, 1999, pursuant to 18 CFR Section 385.602(b) for the Presumpscot River projects to invite appropriate resource agencies, Native American tribes, and other interested parties to participate in the scoping process. The Commission also conducted two scoping meetings associated with the Presumpscot River projects on August 25 and 26, 1999, in Windham, Maine, and held a site visit to the Presumpscot River projects on August 25, 1999.

After careful consideration of all scoping input, the Commission revised SD1 and issued Scoping Document 2 (SD2) in March 2000. SD2 identifies issues to be addressed in the EIS, including potential effects on: (1) water use and quality; (2) aquatic resources; (3) terrestrial resources; (4) land use and aesthetic resources; (5) recreational resources; and (6) cultural resources. The scoping process did not reveal substantive issues related to geology and soils, except for potential sedimentation associated with the dam removal alternatives. We address potential sedimentation issues under water quality. We also determined that there are no significant socioeconomic issues associated with the proposed actions and do not include socioeconomics in our detailed analysis.

3.3 Agency Consultation

On December 4, 2000, the Commission issued a REA notice for the Presumpscot River projects soliciting comments, recommendations, terms and conditions, and prescriptions. In response to this notice, the following entities filed comments:

Commenting Entity	Date of Letter
State of Maine, State Planning Office[7]	January 31, 2001
U.S. Department of the Interior[8]	February 2, 2001
American Rivers and Friends of the Presumpscot River	February 2, 2001
City of Westbrook	February 2, 2001
Trout Unlimited	February 5, 2001
Friends of Sebago Lake	February 6, 2001

[7] The State of Maine included comments from the MDMR, the MASC, and the MDIFW.

[8] Interior included comments from the FWS and the NPS.

S.D. Warren filed reply comments on April 18, 2001.[9]

3.4 Comments on the Draft Environmental Impact Statement

The Commission sent its DEIS for the relicensing of the Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa projects to the U.S. Environmental Protection Agency (EPA) on September 25, 2001, and EPA issued the DEIS on October 5, 2001. The Commission requested that comments be filed within 60 days from the issuance date (by December 4, 2001). Fifteen letters, representing 12 entities and 3 individuals, commenting on the DEIS were filed with the Commission. We modified the text of the DEIS in response to these comments. Appendix A summarizes the comments that were filed and our responses to the comments.

3.5 Water Quality Certification

Under Section 401(a)(1) of the CWA, license applicants must obtain either state certification that any discharge from a project would comply with applicable provisions of the CWA or a waiver of certification by the appropriate state agency. On January 14, 1999, S.D. Warren applied to the MDEP for water quality certification (WQC) for the Presumpscot River projects. S.D. Warren withdrew and refiled its applications for WQC on January 12, 2000, January 11, 2001, and again on January 9, 2002. Action on the applications is pending.

3.6 Fishway Prescription

Section 18 of the FPA states that the Commission must require a licensee to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. By letter dated February 2, 2001, Interior filed, for comment, preliminary Section 18 prescriptions for fishways at the Presumpscot River projects. On February 5, 2002, Interior filed its final fishway prescriptions for the projects, and we describe these prescriptions in the following section. We provide the major provisions of the final fishway prescription below and the specific details in section V.C.4.3.2, *Aquatic Resources*.

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[9] Reply comments are due within 105 days of the date of the REA notice. S.D. Warren requested a 60 day extension of time, from March 14, 2001, to May 18, 2001, to file reply comments. The Commission granted a 30-day extension of time to April 18, 2001.

The FWS prescription requires specific triggering events for fishway construction, and provides some design specifications for the required facilities. Although this prescription would be mandatory, the Commission would ultimately be responsible for ensuring licensee compliance with the prescription, as a condition of any license issued. When fish passage facilities are required at a Commission licensed project, whether via a mandatory condition or a licensee proposal, the detailed design and construction must be approved (ordered) by the Commission, because it would be a modification of project structures. Typically, the Commission requires the licensee to develop the detailed designs in consultation with the state and federal resource agencies, and to file these designs with the Commission for approval.

For the Presumpscot River, since the construction of fish passage facilities would depend on future events (fish passage being achieved at the downstream Cumberland Mills and Smelt Hill dams, and the development of future runs of anadromous fish), the Commission must have a mechanism for monitoring future events, to determine when fish passage must be ordered. Thus, we are recommending that S.D. Warren prepare a fish passage implementation plan for all five projects, which would require the licensee to file annual reports to the Commission on the progress of fish restoration activities in the basin, including fish counts at any fish passage facilities already constructed, and detailed design plans and construction schedule for each project, for approval, once fish passage is triggered, pursuant to the FWS prescription.

Because installation of fish passage would affect project economics we address the cost in section 5, *Developmental Analysis*, and we make our recommendations in section 6.1, *Comprehensive Development and Recommended Alternative*.

Dam Removal Alternatives

As described above, the FWS, the state of Maine resource agencies, American Rivers/FOPR, MCASF/Friends of Sebago Lake, and TU all filed comments and recommended license terms and conditions that state that the Commission should order the removal of the three minor project dams, or at a minimum order the installation of fish passage facilities for anadromous species at all five dams. These parties believe that dam removal would allow for the re-establishment of Atlantic salmon and other anadromous and catadromous (American eel) fish runs in the Presumpscot River, as well as benefit the resident trout population. S.D. Warren strongly opposes removal of any of its dams. Herein, we analyze the potential effects of dam removal on fishery resources in the Presumpscot River.

Angus. S. King, Governor

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Frederick W. Kircheis
Executive Director

January 31, 2001

David P. Boergers, Secretary
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: COMMENTS; RECOMMENDATIONS; TERMS AND CONDITIONS
Saccarappa Project (FERC No. 2897-003), **Mallison Falls Project** (FERC No. 2932-003), **Little Falls Project** (FERC No. 2941-002), **Gambo Project** (FERC No. 2931-002), and the **Dundee Project** (FERC No. 2942-005)

Dear Secretary Boergers:

The Maine Atlantic Salmon Commission (MASC) is charged with the restoration of anadromous Atlantic salmon (*Salmo salar*) throughout its historic range in the State of Maine. Atlantic salmon were historically present in the Presumpscot River.

At the time of initial contact with the Maine Atlantic Sea Run Salmon Commission (now Maine Atlantic Salmon Commission) in 1995 when S.D. Warren's consultant was preparing the Initial Stage Consultation Document, the MASRSC stated that efforts to restore anadromous Atlantic salmon to the Presumpscot River would be passive. In 1995, the MASRSC considered restoration of anadromous Atlantic salmon to the Presumpscot River a low priority, principally because of poor water quality, lack of upstream and downstream passage facilities, and lack of financial resources to undertake a restoration program.

By letter to Secretary Boergers dated September 22, 1999, MASC's Interim Executive Director Frederick W. Kircheis stated "although previously considered to be a very low priority, the Presumpscot River may, if current conditions were altered, become part of that (restoration) effort."

At least three relatively recent events have prompted the MASC to reevaluate its 1995 position on passive restoration of anadromous Atlantic salmon to the Presumpscot River: (1) S.D. Warren has closed its pulping operation significantly increasing water quality in the Presumpscot River below Westbrook; (2) the State of Maine, through the Department of Marine Resources and Department of Environmental Protection, is currently in the process of acquiring the Smelt Hill Dam (FERC No. 7118) at head of tide for removal

which will provide unimpeded access to the lower seven miles of the Presumpscot River and lower river tributaries as well as provide a migratory corridor to the upper Presumpscot River and tributaries; and (3) on July 3, 2000, the MASC opened a regional office in Sidney, Maine, thereby committing financial and personnel resources to southern Maine. The Sidney regional office will have management oversight of the existing and historical anadromous Atlantic salmon rivers in southern Maine.

The MASC, through its Sidney regional office, is currently developing work plans that include preliminary assessment work on the Presumpscot River from head of tide to Sebago Lake. Initially, the work will concentrate on an inventory of anadromous Atlantic salmon habitat in the mainstem Presumpscot and its tributaries. Anadromous Atlantic salmon habitat in the mainstem of the Presumpscot River has been virtually eliminated by the construction of dams from the head of tide to Sebago Lake. However, we know that the four largest tributaries (Piscataqua River, Mill Brook, Little River, and Pleasant River) contain extensive coldwater fish spawning and nursery habitat as evidenced by production of wild brook trout and brown trout. In addition, smaller, spring-fed tributaries to the Presumpscot River support brook trout populations. The MASC will quantify the existing habitat and estimate its anadromous Atlantic salmon smolt production capabilities of the habitat.

S.D. Warren has not proposed any anadromous Atlantic salmon resource enhancement features for any of the five projects as part this relicensing process. S.D. Warren is aware of the MASC's position in developing a Presumpscot River anadromous Atlantic salmon restoration program. Frederick W. Kircheis, MASC Executive Director, communicated to S.D. Warren on June 22, 2000, that "the MASC does not have an active program now but that the MASC wishes to keep its options open for future efforts." With that reservation in mind and the recent establishment of the Sidney regional office, an approach is in place to evaluate anadromous Atlantic salmon habitat in the near term that serves to accelerate MASC's efforts in the Presumpscot River watershed. Additionally, the MASC recently participated with the Maine Department of Inland Fisheries and Wildlife and the Maine Department of Marine Resources in establishing interim goals for fisheries management in the Presumpscot River[1].

As the Presumpscot River exists today, the principal obstacle to anadromous Atlantic salmon restoration is the complete lack of upstream and downstream passage facilities. Such facilities would allow maiden and repeat spawning anadromous Atlantic salmon access to historical spawning and nursery grounds and egress of anadromous Atlantic salmon kelts and smolts back to the ocean. The continued operation of the five projects as they currently exist today precludes restoration of anadromous Atlantic salmon to the Little River, Pleasant River, and Eel Weir Dam bypass reach of the mainstem Presumpscot River below Sebago Lake as well as to smaller spring-fed tributaries between the Saccarappa Project and Sebago Lake. Habitat information for anadromous Atlantic salmon life stages in the bypass reaches of the five projects is lacking and needs to be determined to delineate appropriate bypass reach flows to support inriver spawning and/or production of anadromous Atlantic salmon.

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[1] Presumpscot River: Interim Goals for Fisheries Management (Maine Department of Marine Resources, Maine Department of Inland Fisheries and Wildlife, and Maine Atlantic Salmon Commission, 2001).

Cumulatively and singly, the five projects, as currently operated, directly impact anadromous Atlantic salmon restoration by (1) preventing upstream migration of spawners, (2) preventing downstream migration of kelts and smolts, (3) inundating historical adult salmon habitat, (4) inundating juvenile salmon habitat, and (5) fostering a non-native fish community structure that could potentially be detrimental to successful restoration of self-sustaining anadromous Atlantic salmon populations.

Project decommissioning and dam removal would certainly enhance the prospects and conditions for diadromous fish restoration and the MASC encourages FERC to continue this analysis as part of its environmental assessment as a reasonable alternative benefiting all migratory fish species, especially in light of the fact that some Atlantic salmon periodically are observed in the lower Presumpscot River. The MASC recommends that FERC impose the necessary safeguards to ensure the return of anadromous Atlantic salmon and all diadromous species, formerly present in the Presumpscot River watershed, after an absence of many years so that they may once again become part of the Presumpscot's aquatic community.

The MASC recommends to FERC that S.D. Warren provide upstream and downstream fish passage facilities at the Saccarappa, Mallison Falls, Little Falls, Gambo, and Dundee projects to grant access to historical spawning and nursery areas and to provide a means for egress to the ocean for the restoration of diadromous fish species, including Atlantic salmon, to the Presumpscot River watershed. Inherent with the provision of fish passage facilities is the need for appropriate attraction flows to maximize passage efficiency of the particular facilities. Additionally, the MASC recommends to FERC that appropriate bypass flows be provided for the protection and enhancement of the diadromous fish species utilizing the historical riverine corridor at the five projects. Therefore, the MASC requests that FERC establish the following terms and conditions for the licenses issued to S. D. Warren: (1) that license reopener clauses be included to address the need for upstream and downstream passage facilities for diadromous fish at the above referenced projects once the downstream Cumberland Mills Dam (FERC No. 8385) is provided with passage facilities; (2) that S. D. Warren periodically consult with the MASC (a minimum of every three years) over the term of the licenses to develop a schedule for construction of upstream and downstream passage facilities designed to safely and efficiently pass anadromous Atlantic salmon; and (3) that S. D. Warren develop, in consultation with the MASC, a study to determine appropriate bypass reach flows suitable for adult salmon spawning, egg incubation, and production of juvenile Atlantic salmon. The second and third term and condition are contingent upon the completion of a habitat assessment by the MASC and a decision by the MASC to initiate anadromous Atlantic salmon restoration in the Presumpscot River.

Sincerely,

Norman R. Dubé

Norman R. Dubé
Fisheries Scientist and
Environmental Coordinator

I concur with the comments prepared by my staff. Please direct any further questions to Norm Dubé at (207) 941-4453.

Joan G. Trial
Senior Biologist
Atlantic Salmon Commission

cc: Steve Timpano, IF&W
Francis Brautigam, IF&W
Gordon Russell, USFWS
Larry Miller, USFWS
Dana Murch, DEP
Tom Squiers, DMR
Gail Wippelhauser, DMR
Steve Spencer, DOC
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ORIGINAL

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Angus S. King, Governor

Frederick W. Hopkins
Executive Director

November 27, 2001

David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, N. E.
Washington, D.C. 20246

RE: FERC DEIS – 0139D, Presumpscot River Projects
Dundee Project No. 2942-005, Gambo Project No. 2931-002, Little Falls Project No. 2941-002, Mallison Falls Project No. 2932-003, Saccarappa Project No. 2897-003

Dear Secretary Boergers:

The Maine Atlantic Salmon Commission (MASC) was created by legislative statute in 1947 and charged with the responsibility to restore and manage Atlantic salmon to all historical salmon rivers of the State, including the Presumpscot. The overarching goal of the MASC is restoration and management of self-sustaining Atlantic salmon runs within historical habitat. Therefore, the MASC is the lead State agency for the management of Atlantic salmon within the State of Maine. Additionally, the MASC cooperates closely with its sister State fishery agencies, the Maine Department of Marine Resources (MDMR) and the Maine Department of Inland Fisheries and Wildlife (MDIFW) in the restoration and management of Atlantic salmon in estuarial and inland waters.

Comments

First and foremost, the MASC is genuinely surprised that the FERC staff neglected to take a holistic approach in its analysis of the effects of the Presumpscot River projects, especially on an anadromous fish species such as the Atlantic salmon. This is particularly astonishing with respect to diadromous fish species that are not only affected by development activities in the project reach analyzed by FERC staff but below and especially above the five S.D. Warren projects as well. Not only have the projects impacted habitat by inundation, the projects preclude access to remaining habitat by creating migratory bottlenecks; the projects fragment the longitudinal river corridor that diadromous fish species depend upon to complete their life history. Healthy stocks of diadromous fish are dependent upon the ability to freely swim to upriver spawning and nursery areas and to migrate safely downriver to the ocean to feed and mature (and for eels, spawn). A global approach is needed to fully realize the continuing impacts of the Presumpscot River projects.

Information on the presence of Atlantic salmon within the Presumpscot River watershed has already been presented in these proceedings, therefore, there is no need to reiterate the historical accounts here. Suffice it to say that Atlantic salmon historically accessed areas of the Presumpscot River above these five projects. Therefore, FERC should acknowledge that continued operation of the projects seriously impacts restoration of Atlantic salmon in the Presumpscot River watershed, not only in the project reaches, but upstream of the projects by preventing or severely limiting the Atlantic salmon access to critical life history requirements.

A. Tributary Smolt Production

The FERC DEIS neglects to take into account salmon production in the tributaries below and above the Presumpscot River projects and the contribution of each of the tributaries for the prediction of overall Presumpscot River returns. When modeling Atlantic salmon returns to a river, one does not just model a sub-reach to the exclusion of the entire basin; the whole watershed needs to be analyzed.

Within the Presumpscot River projects' affected reach, Saccarappa Dam to the Gambo tailrace (Little Falls headpond), the FERC DEIS listed the Little River as a potential contributor to a salmon run and neglected to include Colley Wright Brook. Colley Wright Brook is a small tributary that has potential to produce Atlantic salmon.

The staffs of the MASC and MDIFW who are most knowledgeable of the Presumpscot River watershed analyzed all tributaries below Sebago Lake for their potential to produce Atlantic salmon. The tributaries that the MASC and MDIFW identified as having good potential to produce Atlantic salmon include the Piscataqua River, Mill Brook, Little River, Colley Wright Brook, and the Pleasant River. A total of 4,557 habitat units (one habitat unit = 100 square meters) are estimated in the tributaries (Table 1). At an estimated production rate of three smolts per unit (Baum 1997[1], FERC DEIS), Presumpscot River tributaries would yield a total of 13,671 smolts.

Table 1. Estimated Atlantic salmon smolt production, Presumpscot River tributaries.

Tributary	Habitat Units (sq. m)	Smolt Production
Piscataqua River	579	1,737
Mill Brook	191	573
Little River	2,455	7,365
Colley Wright Brook	306	918
Pleasant River	1,026	3,078
Totals	4,557	13,671

[1] Baum, E. 1997. Maine Atlantic Salmon: A National Treasure. Atlantic Salmon Unlimited, Hermon, Maine. 224 pp.

B. Mainstem Smolt Production

Presently, the only mainstem reach of the Presumpscot River that could produce Atlantic salmon smolts is the Eel Weir Bypass. Although the bypass reaches located at the Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa dams, a total of 3,215 linear feet, consist primarily of cobble, boulder, rubble, and to some extent, bedrock (Berger 2001[2]), for purposes of this analysis only, the MASC assumes the bypass reaches will not produce salmon smolts even with the projected minimum flows. Therefore, the Presumpscot River mainstem, as presently configured, is estimated to being capable of producing 2,178 smolts (3 smolts/unit, 726 units).

C. Mainstem Habitat

In the DEIS, FERC argued that little Atlantic salmon habitat would become available through selective dam removal. The MASC believes that FERC, in relying on the Berger report, has underestimated Atlantic salmon habitat currently impounded by the Saccarappa, Little Falls, and Mallison Falls dams. It is our belief that Berger, when estimating river length with hard substrate after dam removal (Table 10, Berger report), utilized the width of the transects at full pond (Table 9, Berger report). Such a determination would underestimate the percentage of coarser substrates that would have been found in the former river channel prior to inundation. We would expect that finer substrates found in the former flood plain and presently inundated would bias the estimated percentage of coarser substrates downward. Elimination of sampled sites from the Berger analysis that would no longer be wetted after dam removal would increase the percentages of coarser substrates found. We are unable to determine the precise amount of coarser substrates that would remain if dams were removed. Therefore, we cannot make a complete evaluation of the Berger estimate that approximately 1.76 miles of coarse substrate would be suitable Atlantic salmon habitat with the removal of the Saccarappa, Mallison Falls, and Little Falls dams.

Berger's field investigation in September 2000 indicated that most of the surface sediments in the Little Falls, Mallison Falls, and the upper portion of the Saccarappa impoundment consisted of coarser-grained sediments, boulders, or bedrock with limited amounts of finer-grained sediments (page 27, Berger report). Surface sediments in the lower part of the Saccarappa impoundment consisted predominantly of sand, silt, and clay. Furthermore, when describing existing impoundment habitats (page 28, Berger report), Berger states that hard substrates predominate throughout much of the Little Falls and Mallison Falls impoundments. Berger also states that sand and silt are common in the deeper mid-section of the Little Falls impoundment and sand is common in many areas of the Mallison Falls impoundment. For the Saccarappa impoundment, substrate in the lower half is comprised of sand, silt, and clay whereas sand, and some gravel and cobble are present in the upper half of the impoundment.

[2] The Louis Berger Group, Inc. 2001. Impact Assessment of the Removal of the Little Falls, Mallison Falls, and Saccarappa Dams along the Presumpscot River. Final Report. Prepared for the Federal Energy Regulatory Commission. 185 pp.

Additionally, when Berger estimated potential habitat with dam removal, sand was excluded as Atlantic salmon habitat. Categorical exclusion of sand as a habitat variable oversimplifies the analysis and underestimates potential Atlantic salmon habitat. Coupled with other environmental and abiotic factors, Atlantic salmon will utilize sand as a rearing substrate. Habitat use by juvenile salmon is plastic, with salmon routinely found utilizing "non-classic" habitats. For example, Gibson (1973[3]) and Gibson *et al* (1993[4]) found that juvenile salmon could inhabit slow-moving and lentic habitats and Cunjak (1992[5]) observed parr occupying estuaries. Although young salmon are generally associated with coarse substrates, the importance of this habitat is dependent on interactions with water velocity, depth, light, and cover (Gibson 1993[6]).

Berger further assumed for the habitat analysis that the substrate after dam removal would be the same as observed in their September 2000 field survey. Berger did acknowledge that substrate composition might change after dam removal as the higher predicted velocities erode existing softer sediments leaving underlying harder substrate of bedrock, boulder, cobble, or gravel. We believe the latter to be the case. The failure of Berger to determine the potential Atlantic salmon habitat after dam removal precludes a thorough impact assessment of dam removal. In our analysis for predicting Atlantic salmon returns, we will utilize the Berger estimate as the minimal amount of Atlantic salmon habitat that would become available with dam removal. We do not have a good method to extract the appropriate habitat data from the Berger report to estimate the quantity of salmon habitat that would become available with dam removal. However, by looking at other reported habitat variables such as velocity and gradient, we conservatively estimate that at least three miles of the Saccarappa through the Little Falls reaches would become suitable Atlantic salmon habitat.

D. Adult Salmon Returns – Existing Situation (Alternative 4)

FERC seriously underestimated potential returns of mature Atlantic salmon to the Presumpscot River by utilizing only the Saccarappa to Little Falls reach and ignoring smolt production from tributaries and the Eel Weir Bypass and resultant contribution of these smolts to overall Presumpscot River returns. A thorough assessment of project impacts needs to take into account the effects of the Presumpscot River projects on all Atlantic salmon adults or smolts bypassing the projects, not just Atlantic salmon produced in the project reach.

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[3] Gibson, R.J. 1973. Interactions of juvenile Atlantic salmon (*Salmon salar* L.) and brook trout (*Salvelinus fontinalis* Mitchill). Int. Atl. Salmon Found. Spec. Publ. Ser. 4(1): 181-202.

[4] Gibson, R.J., Stansbury, D.E., Whalen, R.R., and Hillier, K.G. 1993. Relative habitat use, and inter-specific and intra-specific competition of brook trout (*Salvelinus fontinalis*) and juvenile Atlantic salmon (*Salmo salar*) in some Newfoundland rivers. In Gibson, R.J. and Cutting, R.E., eds. Production of juvenile Atlantic salmon, *Salmon salar*, in natural waters. Can. Spec. Publ. Fish Aquat. Sci. 118: 53-69.

[5] Cunjak, R.A. 1992. Comparative feeding, growth and movements of Atlantic salmon (*Salmo salar*) parr from riverine and estuarine environments. Ecol. Freshwat. Fish. 1: 26-34.

[6] Gibson, R.J. 1993. The Atlantic salmon in fresh water: spawning, rearing and production. Rev. Fish Biol. and Fisheries. 3: 39-73.

We used the following underlying assumptions for run prediction: 10% downstream mortality of smolts at North Gorham, Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa and 5% downstream mortality at Cumberland Mills, and 1%-5% sea survival rates.

The MASC realizes that downstream turbine mortality is difficult to predict and downstream mortality is highly site specific depending upon a power plant's operating parameters. S.D. Warren has identified turbine passage mortality in the range of 5%-15% based upon the specific turbines at the Presumpscot River projects (S.D. Warren letter to the FERC dated August 2, 2001). Absent site-specific information, we used a mid-point mortality rate of 10%. Therefore, the downstream mortality assumptions used in this modeling exercise are in line with what S.D. Warren suggests downstream mortality could be at Presumpscot River projects. Even though generation does not occur at Cumberland Mills, we used a downstream mortality rate at the low end of the spectrum because there is an existing dam that would have an impact on downstream smolt migration.

As FERC is aware, natural annual variation in the sea survival rate can vary by an order of magnitude. The MASC routinely utilizes sea survival rates of 3%-5% for projecting salmon returns, although rates below 1% to as high as 15% have been observed in Maine (Baum 1997[1], Baum 1995[7]). However, recent collaborative modeling undertaken by the MASC, National Marine Fisheries Service (NMFS), and the U.S. Fish & Wildlife Service (USFWS), sea survival rates of 1%-5% have been used in population viability analysis models. One key point is that Maine rivers produce smolts and not adult salmon. Once smolts migrate into the estuary, they are entirely dependent upon the ocean for survival and subsequent return to their natal river. Therefore, it is imperative to ensure the highest numbers of smolts reach the estuary due to the highly variable sea survival rates. Utilizing the above modeling parameters, MASC predicts that 124-620 adult Atlantic salmon would return to the Presumpscot.

E. Adult Salmon Returns – Little Falls, Mallison Falls, and Saccarappa Dams Removed (Alternative 1)

Under Alternative 1, the number of Atlantic salmon smolts reaching the estuary, from tributary production alone, would increase by 15% due to increased survival of smolts during their downstream migration and the fact that smolts would have to negotiate three fewer impoundments and hydro stations. This alone would mean an additional 19-95 adult salmon returns to the Presumpscot River.

Approximately one mile of the lower Little River would become riverine habitat with the removal of the Saccarappa Dam. Berger reported that the substrate of this reach consists of primarily sand and silt. We will not estimate the quantity of Atlantic salmon habitat this stretch of the Little River would eventually make available because Berger simply

[7] Baum, E.T. 1995. Maine Atlantic Salmon Restoration and Management Plan, 1995 – 2000. Atlantic Sea Run Salmon Commission, Bangor, ME 55 pp.

does not provide any transect information for us to make a reasonable judgment. We do, however, realize that increased velocities will erode fines and some habitat will be recovered. For this reason and for purposes of modeling, we exclude potential habitat gains from the lower Little River.

Utilizing the Berger estimate of habitat uncovered by the removal of three dams (Table 11, Berger report), additional gains in mainstem smolt production of 3,885 smolts translate into an extra 36-180 salmon at 1%-5% sea survival. Using the habitat numbers reported by Berger, Alternative 1 increases adult returns by 45% to 180-900 salmon. The returns are far more than the 34-102 salmon the Berger report predicted would return using pessimistic return rates and the narrow view of smolt production from only the Saccarappa Dam – Little Falls Dam reach and ignoring the river system as a whole productive unit.

While it is difficult to delineate precise amounts of habitat that would become available under Alternative 1, we conservatively estimate from the information presented in the Berger report that at least three miles of mainstem habitat, or an additional 2,202 units, would be suitable Atlantic salmon habitat. The gain in habitat quantity is as much as 42% over the current situation. Utilizing this information, our estimates for salmon returns are 206-1,030 spawners. Contrary to the Berger report conclusion that Alternative 1 would provide little enhancement of the salmon population, we conclude that Alternative 1 would provide a 65% increase in salmon returns to the Presumpscot River. Increasing the number of returns by nearly two-thirds is significant and constitutes a major enhancement to the salmon runs of the Presumpscot River.

F. Adult Salmon Returns – Removal of Saccarappa Dam Only (Alternative 2)

Utilizing a similar analysis as in Alternative 1, we conclude that removal of the Saccarappa Dam would provide a 23% increase in salmon returns (156-778 salmon) to the Presumpscot River over the present day situation. Berger predicted returns of 20-60 salmon based on production capabilities of the Saccarappa Dam – Little Falls Dam reach only and pessimistic return rates. Habitat gains would be less than 28% of the gains realized from Alternative 1.

G. Adult Salmon Returns – Removal of Little Falls and Mallison Falls Dams Only (Alternative 3)

Analysis of this alternative yields predicted returns of 169-847 salmon, or an increase of 28% over the present day scenario. Habitat gains would amount to 63% of the gains under Alternative 1. Berger predicted returns at 27-81 salmon, again using just the production capabilities of the Saccarappa Dam – Little Falls Dam reach and pessimistic return rates.

H. Adult Salmon Returns – Summary

Berger and FERC failed to take into account the salmon production potential of tributaries outside of the Saccarappa Dam – Little Falls Dam reach when analyzing the various alternatives. Our analyses of the three alternatives plus the present-day situation indicate that substantial gains in Atlantic salmon habitat and returns can occur under the various alternatives over the current situation (Table 2). The boost in returns is attributed to increased survival of downstream migrants (decreased cumulative impact due to dam removal) and increased instream production of juvenile salmon (increased quantity of salmon habitat recovered due to dam removal).

Table 2. Predicted Atlantic salmon returns, Presumpscot River.

	Habitat Units (100 sq. m)		Estimated Returns	
	Berger	MASC	Berger[1]	MASC[2]
Alternative 1	2,276	7,485	34-102	206-1,030
Alternative 2	1,339	5,891	20-60	156-778
Alternative 3	1,797	6,670	27-81	169-847
Alternative 4	No Habitat	5,283	No Estimate	124-620

[1]Assumed survival rates of 0.5%-1.5%
[2]Population viability analysis sea survival rates of 1%-5%

We totally reject the Berger conclusion that each of the three dam removal alternatives would marginally increase potential Atlantic salmon habitat. We estimate habitat gains as high as 42% under Alternative 1, 12% under Alternative 2, and for Alternative 3, a 26% increase in habitat compared to the status quo.

We also reject the Berger claim that constructing fish passage facilities would provide very little Atlantic salmon habitat. While FERC is correct in its analysis that limited amounts of Atlantic salmon habitat would be made available in the mainstem Presumpscot River by the installation of fishways (Alternative 4), FERC ignores the substantial quantities of Atlantic salmon habitat (4,557 units) that would become accessible in tributaries (Table 1).

A critical component to restoration of Atlantic salmon to the Presumpscot River is efficient upstream and downstream passage. We have already touched upon downstream migration of smolts and the prospective for dams to reduce year class strength by increasing the opportunity of dams to amplify mortality of smolts prior to reaching the estuary. Even state-of-the-art downstream passage facilities have yet to achieve 100% downstream passage efficiency.

Similar to downstream passage inefficiency, we are unaware of any upstream passage facility that passes 100% of upstream migrants. With all the Presumpscot River projects in place (Alternative 4), an additional 90 Atlantic salmon are needed at the Saccarappa Dam in order to meet the conservation requirement (egg deposition at 240 eggs/unit, 7,200 eggs/female salmon, 50:50 sex ratio) for upstream habitat. If Atlantic salmon were

allowed to freely swim, upstream habitat requires 208 Atlantic salmon. With the Presumpscot River projects in place, the need increases by 30% to 298 fish, assuming a conservative 90% upstream passage efficiency. Under Alternative 1, the conservation requirement becomes 234 Atlantic salmon or a 9% increase. For Alternatives 2 and 3, the conservation requirements are 268 and 260 Atlantic salmon, or increased escapement of 22% and 20%, respectively. Selective dam removal accelerates the prospects of restoration.

Currently, there are two obstructions in the lower river below the Saccarappa Dam that present obstacles to upstream migration of adult Atlantic salmon – Smelt Hill and Cumberland Mills dams. The MDMR will obtain ownership of the Smelt Hill Dam within the next few months and we are confident that the dam will be removed in 2002 as currently planned. As for upstream passage at the Cumberland Mills Dam, we will rely upon the statutory authority of the Commissioner of MDIFW to require a fishway to restore anadromous fish runs, including the Atlantic salmon, should the various resource agencies not reach an agreement with the owner of the Cumberland Mills Dam for providing upstream passage at that site.

I. Minimum Flows

The MASC did not have the opportunity to participate in any minimum flow studies nor were we consulted during the scoping of studies. (We did not find any correspondence in our files that would indicate the MASC was involved in minimum flow studies. The MASC does not have in its library any consultant prepared reports such as the Phase I habitat mapping report or the Phase II flow demonstration report by Kleinschmidt Associates).

We support the year-round minimum flows as recommended by the U.S. Fish & Wildlife Service (USFWS) of 57 cfs at the Dundee Project bypass, 40 cfs at the Gambo Project bypass, and 63 cfs at the Mallison Falls Project bypass. We find these flows to be consistent with flows necessary for salmonid habitat enhancement and protection and would likely protect the life stages of Atlantic salmon that would utilize the bypass reaches.

J. Full Habitat Utilization

We are not certain what FERC means by the "full utilization" trigger before fish passage is constructed at a project since the concept is not defined in the DEIS. We understand full utilization to mean that fish passage should not be constructed at an upstream dam and diadromous fish allowed to continue their upstream migration until the number of returning fish fully saturate/utilize all available spawning and rearing habitat below a dam before the dam can be slated for fishway construction.

We reject the concept put forth by FERC of full habitat utilization downstream of a project before fishway construction is triggered at that particular project. Atlantic salmon enter Maine rivers anytime during the months of May through October. A life history

strategy of Atlantic salmon is to freely swim to upstream areas where adults remain in holding and resting pools awaiting the spawning period in late October to early November. To prevent upstream migration of maturing salmon unnecessarily and artificially increases the risk to the fish of some environmental catastrophe (e.g. failure of pollution control) that may occur in one portion of the drainage but not in another portion. As a biological approach, full utilization also prevents Atlantic salmon from freely choosing the habitat preferred for spawning. Also, spreading themselves out within the drainage insures a biological advantage in that year class strength would not be compromised should an unmitigated disaster occur in another part of the river basin.

For prime examples that full utilization is not a workable biological concept for Atlantic salmon, one only needs to look at the many historical Atlantic salmon rivers within the State of Maine where dams constructed in lower river sections precluded the Atlantic salmon's access to prime upriver spawning and nursery habitat. We don't know of any of these rivers that are replete with Atlantic salmon. Passage to upriver habitat is a necessary and vital component of the Atlantic salmon's life history strategy. In the initial stages of restoration, it is imperative that the best habitat be available for use by the spawning stock.

Even with the extremely pessimistic outlook that FERC portrays for Atlantic salmon restoration, the MASC would not defer a decision to any other agency to determine whether restoration is feasible or not for a candidate river. Rather, the MASC prefers an optimistic and proactive approach where restoration of anadromous fish is seen as a positive for basin wide ecological health.

Sincerely,

Norman R. Dubé
Fisheries Scientist

I concur with the comments prepared by my staff. Please direct any further questions to Norm Dubé at (207) 941-4453.

Joan G. Trial
Senior Biologist

cc: F. Kircheis, MASC
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ORIGINAL

ANGUS S. KING, JR.
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

GEORGE LAPOINTE
COMMISSIONER

November 28, 2001

David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20246

RE: COMMENTS ON DEIS
S.D. Warren Company
Dundee (FERC No. 2942-005), Gambo (FERC No. 2931-002), Little Falls (FERC No. 2941-002), Mallison Falls (FERC No. 2932-003), and Saccarappa (FERC No. 2897-003)

Dear Mr. Boergers:

The Maine Department of Marine Resources (MDMR) has reviewed the Draft Environmental Impact Statement (DEIS) prepared by Federal Energy Regulatory Commission (FERC) staff for the five S.D. Warren Projects on the Presumpscot River in Maine. MDMR has commented extensively during the relicensing proceedings and staff attended the October 25, 2001 public hearing at Westbrook. In order to respond to the DEIS more effectively, major recommendations made by FERC staff on issues pertaining to diadromous species are summarized below, followed by MDMR comments.

Fish Passage for Anadromous Species
FERC staff rejected S.D. Warren's position that fish passage for anadromous species was not needed and recommended that upstream and downstream fish passage for American shad and river herring were beneficial and appropriate.

FERC staff is to be commended for rejecting S.D. Warren's position that anadromous fish should not be restored to the Presumpscot River. MDMR also agrees with FERC's recognition of the need for efficient upstream and downstream passage, although we consider the analysis of alternatives to be incomplete.

Estimates of Production Potential
FERC staff endorsed the methodology employed by MDMR to develop an "order-of-magnitude" estimate of production potential for American shad and rejected S.D. Warren's position that it was inappropriate to estimate shad production for the Presumpscot River based on estimated production from river systems outside of Maine. In the DEIS, however, FERC staff used a range of production values (25-142 shad per acre) in their calculations, whereas MDMR used a single production value (111 shad per acre).

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Maine currently has no rivers with extensive runs of American shad. Historical information on run sizes is lacking because runs were greatly reduced or extirpated by dam construction beginning in the 1700s; therefore, they must be estimated from information based upon runs restored in other rivers. In the past, DMR has used 111 shad per acre (= 2.3 shad per 100 yd^2), based on shad restoration in the Connecticut River in the 1980s. To validate this production estimate, DMR recently obtained the numbers of shad passed at Holyoke (first dam) and Turners Falls (second dam) on the Connecticut River for the years 1983-2000, along with a GIS estimate of surface area for this river reach[1]. Average shad production for the 20 year-period was 98.8 shad per acre (range 46.1-182.1). If this long-term average is used, DMR's total estimate of shad production for the Presumpscot River is reduced by about 4,000 fish.

Analysis of Alternatives

In its analysis, FERC considered the impact on anadromous species of three dam removal alternatives: (1) removal of the Little Falls, Mallison Falls, and Saccarappa Project dams; (2) removal of the Saccarappa Project dam only; and (3) removal of the Little Falls and Mallison Falls Project dams with passage at Saccarappa. FERC staff also considered the impact of a fourth alternative, retaining Mallison Falls, Little Falls, and Saccarappa dams, but with the installation of efficient fish passage facilities at all three dams. FEFC staff compared the three dam removal alternatives and concluded that the third (removal of the Little Falls and Mallison Falls Project dams with passage at Saccarappa) provided the highest production potential for American shad and river herring. However, FERC staff ultimately recommended the fourth alternative (retaining Mallison Falls, Little Falls, and Saccarappa dams, but installing efficient fish passage facilities at all three dams), arguing that it resulted in a higher production potential for American shad and river herring and that passage at the two downstream dams (Smelt Hill and Cumberland Mills) was uncertain.

MDMR was disappointed with the analysis of Alternative 4 and considers it to be incomplete because passage efficiency and habitat suitability were ignored. FERC staff made the untenable assumption in their analysis of Alternative 4 that fish passage facilities are 100% efficient. A free flowing river is highly variable and provides migrating species that differ in swimming ability, physiology, and behavior, with a choice of routes for moving upstream and downstream. A fishway, by comparison, presents migrating species with a single choice. In addition, FERC considered habitat quantity, but not habitat quality, in its analysis.

FERC staff should consider in analysis of Alternative 4 that inefficient upstream passage will tend to concentrate American shad and river herring in the lower reaches of the river. As a result, adults may have to compete for spawning space, juveniles may have to compete for food, and all age groups would be subjected to poorer water quality. If upstream passage is very inefficient[2], modeling indicates that restoration of American shad above Gambo Dam (Phase II) is questionable.

FERC staff should consider in analysis of Alternative 4 the cumulative lethal impacts of inefficient downstream passage on all migratory species. Flow duration curves for July through November, the downstream migration period for diadromous species managed by MDMR, indicate that fish not utilizing downstream passage will pass through turbines rather than over the spillway. Assuming a reasonable 10% mortality due to passage through turbines[3], 53 of 100 adult American eels leaving Sebago Lake would reach the mouth of the Presumpscot River after passing through the North Gorham, Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa Projects. Similarly, 73 of 100 shad or alewives leaving the Little Falls impoundment would reach the mouth of the Presumpscot with the three lower dams in place. For all migratory species, downstream mortality would be significantly reduced under Alternative 3, compared to that of Alternative 4.

In its analysis of Alternatives 3 and 4, FERC considered the quantity, but not quality, of production habitat available. Because wetted width and therefore habitat area decreases with dam removal, there is a 3% reduction in production potential for American shad and alewife under Alternative 3 compared to Alternative 4 (Table 19). However, the hydraulic analysis of existing conditions compared to those after dam removal (Table 19) additionally shows that depth decreases and average velocity increases with dam removal. In a study of habitat use by

[1] Data obtained from Caleb Slater, Massachusetts Division of Fisheries and Wildlife

[2] If 25% of migrants do not pass upstream at each dam

[3] Studies of turbine mortality on European eel and American eel (DEIS, pages 85-86) range from 6-100%

American shad on the Delaware River, Ross et al. (1993)[4] found that spawning activity was significantly higher in run habitat (defined as a mid-river stretch of relatively shallow [0.5-1.5m] water and moderate to high [current velocity 0.3-0.7m/sec]). As shown in Table 19 of the DEIS, removal of Mallison Falls and Little Falls dams would increase the amount of run habitat above Saccarappa.

In their discussion of alternatives, FERC staff stated that the probability of restoring a shad run appears low, based on recent history of other shad restoration programs in Maine (DEIS, P. 110). MDMR strongly objects to this statement and offers the following updates of Maine restoration projects for FERC consideration:

The passive restoration program on the ***Saco River*** began just nine years ago, when fish passage was installed at the Cataract East and West Channel dams, located at head-of-tide. Between 1993 and 1997, an average 760 shad were passed annually; this "remnant" first-generation was larger than anyone anticipated. Between 1998 and 2001, an average 2278 shad were passed annually. Thus, providing adult shad with access to upriver spawning habitat has caused the population to triple in a single generation. The nearly passive restoration program on the ***Androscoggin River*** began in 1983, when the Brunswick Fishway was constructed. Since 1995, MDMR staff have released modest numbers of adult shad (average of 375) and alewives upriver each year. The alewife population responded well, but shad returns were poor until 1999 and 2000 when 87 and 88, respectively, were passed. Underwater video shows that numerous shad are present in the tailrace, but do not enter the fishway. Modifications are currently being made to the fishway at Brunswick to improve shad utilization. Active restoration on the ***Kennebec River*** watershed began in 1987, with the annual stocking of American shad and river herring. When Edwards Dam was removed in 1999, 17 miles of free flowing river became accessible to anadromous fish. In 2000, the average catch per unit effort (termed juvenile abundance index or JAI) of American shad among all sites in the newly accessible stretch was 4.6. This year, the average JAI for the same area was 17.24. In 2000, most of the shad were captured at a single site (for a site JAI of 29.43). In 2001, high numbers of shad were captured at three sites, resulting in site JAI's of 50.6, 87.75, and 18.67. As evidence by the above documentation, all three Maine shad restoration programs are progressing well.

Passage Requirements at Smelt Hill and Cumberland Mills
FERC staff recommended that installation of fish passage for American shad and river herring be contingent upon passage being achieved by either dam removal or installation of fish passage at the Smelt Hill and Cumberland Mills dams.

MDMR concurs with this FERC recommendation. MDMR is scheduled to assume ownership of Smelt Hill in the next few months; its removal is scheduled for the summer of 2002. Regarding dams like Cumberland Mills that are outside FERC jurisdiction, Maine statute (12 M.R.S.A. §7701-A) authorizes the Commissioner of DIFW to require that a fishway be erected by the owners of any dam within inland waters to conserve, develop or restore anadromous fish resources.

Triggers for Anadromous Fish Passage at Saccarappa, Mallison Falls, Little Falls, and Gambo
FERC staff recommended that S.D. Warren design and install upstream and downstream fish passage facilities at the Saccarappa, Mallison Falls, Little Falls, and Gambo Projects for American shad and river herring in a phased approach. In various areas of the DEIS, FERC recommended that such facilities be constructed at each dam only after migratory fish populations "have become established immediately downstream of each dam" or "have reached" a dam or "are utilizing the habitat below a dam." In addition, on page 225, FERC recommended that preparation of design plans be triggered by "full utilization of river habitat downstream and the presence of anadromous fish at the base of the dam."

MDMR strongly objects to the ambiguous language and undefined terms that FERC staff used in its recommendations regarding the timing of fish passage. The term "full utilization" is particularly troubling. In the absence of a definition, we assume that FERC is recommending that a fishway not be built on the next highest dam in the river until the numbers of returning adults fully utilize all available spawning and rearing habitat. To our knowledge, "full utilization" has not been used to trigger fish passage on any river system in the northeast, and the concept was

[4] Ross, R.M., R.M. Bennett, and T.W.H. Backman. 1993. Habitat use by spawning adult, egg, and larval American shad in the Delaware River. Rivers 4: 227-238.

Thank you for the opportunity to comment on this document. If you have any questions, please contact Gail Wippelhauser at 207-624-6349.

Sincerely,

GEORGE D. LAPOINTE, COMMISSIONER
GDL/jcw

Attachments

United States Department of the Interior

ORIGINAL

OFFICE OF THE SECRETARY
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408 Atlantic Avenue - Room 142
Boston, Massachusetts 02210-3334

December 3, 2001

ER 01/897

REF: Presumpscot River Projects
S.D. Warren Company - Maine
FERC Nos. 2942-005, 2931-002, 2941-002, 2932-003, 2897-003
Comments on the Draft Environmental Impact Statement

Mr. David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Dear Mr. Boergers:

This document contains the U.S. Department of the Interior's (Department)[1] comments on the Federal Energy Regulatory Commission's (Commission) Draft Environmental Impact Statement (DEIS) for the Presumpscot River Projects, Cumberland County, Maine, covering the following licensed hydroelectric projects: Dundee Project (FERC No. 2942-005); Gambo Project (FERC No. 2931-002); Little Falls Project (FERC No. 2941-002); Mallison Falls Project (FERC No. 2932-003); and Saccarappa Project (FERC No. 2897-003). The DEIS was prepared by the Commission pursuant to the National Environmental Policy Act (NEPA), based on the finding that the proposed licensing actions would have a significant impact on the quality of the human environment. As described herein, it is the Department's position that the DEIS is fundamentally inadequate. Therefore, in order to achieve consistency with NEPA (40 C.F.R §1502.9), the Commission should issue a supplemental DEIS to correct the inadequacies in the existing document and to incorporate new information.

The following comments are provided in two parts: first, we give an overall assessment of the adequacy of the DEIS in addressing issues of concern to the Department; second, Attachment A is a section-by-section analysis of the DEIS. The Department also will be modifying its preliminary Section 18 prescription for fishways at the Presumpscot River Projects, contained in its February 2, 2001, comments to the Commission. In accordance with the final Interagency Policy for Review of Mandatory Conditions Developed by the Departments of the Interior and Commerce in the Context of Hydropower Licensing, dated January 18, 2001, the Department will be providing the Commission with its modified fishway prescription for these projects within 60 days of the close of the DEIS comment period. The Commission should expect to receive the modified fishway prescription by February 1, 2002.

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[1]Representing the U.S. Fish and Wildlife Service (FWS), the National Park Service (NPS), and the Bureau of Indian Affairs (BIA).

GENERAL COMMENTS

The Commission's DEIS generally responds to a number of issues raised in the U.S. Fish and Wildlife Service's September 27, 1999, comments on Scoping Document 1 regarding the relicensing of the Presumpscot River Projects and the Department's comments of February 2, 2001. This includes an acknowledgment of ongoing river basin restoration efforts involving the removal of Smelt Hill dam, located at the mouth of the Presumpscot River. As discussed in the FWS's scoping comments, ecological conditions are rapidly changing or are poised to improve as a result of dam removal, reduction in paper mill discharges, and implementation of fish restoration plans. Those changes also will result in increased recreational use and land development pressures.

There is widespread public support for continued restoration of the Presumpscot River ecosystem, as evidenced by the tenor of testimony presented at the Commission's October 25, 2001 public hearing on the DEIS. The area is experiencing improvements to air and water quality associated with the cessation of pulping operations at Cumberland Mills. Given the current and upcoming (Eel Weir Project) licensing activity in this basin, along with the expected removal of the Smelt Hill Dam, the scope of this DEIS is severely limited and fails to adequately address the cumulative impacts the Commission's various licensing decisions will have in this basin. The DEIS should take into account all of the licensing activity in the basin, and not simply focus on the subject projects.

The Commission's ultimate licensing decisions for the five projects that are covered in the DEIS must be consistent with, and should not impede, ongoing efforts by public agencies and non-governmental organizations to fully restore suitable environmental conditions in the Presumpscot River. As discussed below in greater detail, the Commission's recommended actions regarding fish passage implementation at the Presumpscot River Projects are likely to result in significant delays in fish restoration efforts. The Commission's failure to adopt the Department's timely filed Section 18 Prescriptions for Fishways for these projects is a clear violation of the law. The Commission also fails to take into account the potential for extraordinary levels of public use of the river's fishery and recreational resources. Moreover, the Commission's recommendations in the DEIS for instream flow releases, shoreline protection and other environmental measures fall far short of what is needed to achieve widely supported agency goals.

While the Commission has included the alternative of decommissioning and removal of one or more of the five projects in its DEIS, as committed by the Interagency Task Force for Hydropower Licensing, the analysis of environmental benefits falls far short of the equal consideration standard required under the Federal Power Act (FPA), either in terms of accurately estimating numbers of restored migratory fish or in terms of the economic benefits likely to result from renewed opportunities for fishing and other recreation. Had a full accounting of all environmental benefits and costs associated with mitigation of impacts (fish passage and instream flows) been conducted by the Commission as required under NEPA, the analysis would clearly support the finding that decommissioning and removal of one or more of the dams is the alternative that best meets the public interest.

Treatment of Section 18 Fishway Prescriptions

The Commission's attempts to constrain and limit the authority of the Secretary under Section 18 of the FPA are inconsistent with the law and congressional intent. Through its improper action, the Commission ignores the mandatory nature of the Department's Prescriptions for Fishways and improperly and without legal authority, recommends alternative measures in the DEIS.

Section 18 of the Federal Power Act states that "(t)he Commission shall require the construction... (of) ...such fishways as may be prescribed by the Secretary of the Interior." Using several different, and equally improper devices, the Commission attempts in the DEIS to limit and constrain the authority explicitly given to the Secretary of the Department of Interior by Congress in Section 18 of the FPA without legal justification, and in direct violation of the express intent of Congress as embodied in Section 1701(b) of the Energy Policy Act of 1992.

Implicit in the Commission's DEIS is its determination that it can substitute its judgment regarding the needs and health of the fish and wildlife resources for that of the Department. The Commission made a determination that the Department's timely filed Prescriptions for Fishways either were not fishways, or were subject to their review. Clearly, in order to make such a determination, the Commission evaluated the Department's prescriptions against some benchmark definition, and decided that the Department's prescriptions were unacceptable. This review, definition and interpretation by the Commission of the Secretary's mandatory Section 18 fishway prescriptions is a fundamental violation of the FPA, the intent of Congress, and case law. The Commission used these contrivances to unilaterally, and in clear violation of the law, replace the Department's mandatory prescriptions with its own recommendations, subject to its own review and balancing.

Through Section 18 of the FPA, Congress relegates to the Secretary of the Department of the Interior and the Secretary of the Department of Commerce (jointly referred to as the Secretaries) the sole authority to prescribe such fishways as are deemed necessary. The courts have held that the Commission is obliged to include, without review, the Department's prescription as a condition of the license. Escondido Mut. Water Co. v. La Jolla Band of Mission Indians, 466 U.S. 765, (1984) and Bangor Hydro-Electric Co. v. FERC, 78 F.3d 659 (D.C.Cir.1996); State of Vermont v. FERC, 129 F.3d 99 (2nd Cir.1997); and the Commission's licensing order in Lynchburg Hydro Assoc., 39 FERC & 61,079 (1987).

Moreover, the Commission, in other proceedings, has clearly recognized that "it is not the Commission's role to judge the validity of the Secretary's prescriptions", and that it is not the Commission's responsibility to investigate the Department's decision-making process or review the Department's internal delegation. The Bangor decision also requires the Department to base its Section 18 prescription for fishways on substantial evidence in the record before the Commission, and to reasonably relate the prescription to the Department's goals. Bangor, at 664. The Department has done both in the instant case, as described in its February 2, 2001 filing.

In May 1991, through rulemaking, the Commission defined the term fishways to mean devices providing only for upstream passage. Commission Chair Moler dissented, saying "Such a

narrow reading -- and with it the attempt to circumscribe the authority of the Secretaries of the Interior and Commerce -- cannot be squared with the statute or any common sense use of the term 'fishway'." Order 533: Regulations Governing Submittal of Proposed Hydropower License Conditions and Other Matters, Docket No. RM89-7-000, May 1991. After considerable opposition, in its November 1991 Order on Rehearing, the Commission reversed the "fishway" definition to include upstream and downstream fish passage but excluded resident species.

Congress responded by enacting Section 1701(b), of the Energy Policy Act of 1992. Congress vacated the Commission's definition, and required that "any further definition promulgated by regulatory rulemaking shall have no force or effect unless concurred in by the Secretary of the Interior and the Secretary of Commerce". Through the legislative history for Public Law 102-486, Section 1701(b) Congress opines:

> Clearly the definition as revised is an improvement, but it is hardly adequate. **Moreover, it raises concerns that the FERC is unilaterally seeking to change the longstanding statutory provisions of Section 18 relative to the roles of the Secretaries of Interior and Commerce...**

at page 224. (Emphasis added).

Congress provided fishway direction, stating:

> ...That items which may constitute a "fishway" under section 18 for safe and timely upstream and downstream passage of fish shall be limited to physical structures, facilities, or devices necessary to maintain all life states of such fish, and project operations and measures related to such structures, facilities, or devices which are necessary to ensure the effectiveness of such structures, facilities, or devices for such fish.

Pub.L. 102-486, Section 1701(b)(1992).

The Commission has no discretion, but must include in any issued license those conditions and prescriptions deemed necessary by the Secretary. Escondido, Id. at 777. It is up to the U.S. Court of Appeals to determine whether the conditions are valid, not the Commission. 16 U.S.C. § 825l(b); Escondido, 466 U.S. at 777; See Bangor Hydro-Electric Company v. FERC, 78 F.3d 659, 663 (D.C. Cir. 1996) ("[I]t is not the Commission's role to judge the validity of Interior's position -- substantially or procedurally.").

Most importantly, the Commission did not consult the Secretary of the Interior regarding the definition of fishways. Rather, the Commission proceeded to interpret, on its own, the fishway direction provided by Congress, relying on its prior order in Lynchburg. In its Lynchburg order, the Commission concluded that while the Secretary's Section 18 authority was mandatory upon the Commission, it did not include broad power to impose mandatory conditions of a license, stating:

> Inasmuch as fishways obviously serve to protect, mitigate damages to, and enhance fish resources, it will be a matter for determination in each individual case where the scope of Section 18 is appropriately drawn. **The guiding principles, in our view, are, first that the Commission has the ultimate responsibility and authority to balance the various public interest uses of a waterway,** and second, that the FPA...has a separate mechanism for fish and wildlife agencies to submit recommended license conditions for protection...

Id., at 61,079. (Emphasis added.) Using Lynchburg as justification, the Commission has formulated Section 18 Fishway Prescriptions --- Guidelines. The Guidelines were formulated by Commission staff for use in evaluating conditions submitted as fishway prescriptions pursuant to Section 18 of the FPA. The document includes several caveats, and was intended only to be distributed to Commission staff and contractors for use in the preparation of environmental assessments, environmental impact statements, and orders, affecting all work in progress.

The Guidelines reflect the **Commission's** unilateral interpretation of Congress' fishway direction in Section 1701(b) of the Energy Policy Act of 1992. Of greatest importance is the fact that the Guidelines were not the subject of any consultation between the Commission and the Secretaries as required by Section 1701(b). The fact that the Guidelines were not promulgated as rulemaking is of little legal import, and in fact, makes the Commission's violation of express Congressional intent more egregious. Had the Commission attempted to promulgate regulations consistent with the Guidelines, the Department would have responded immediately. Without such publication, the Commission has attempted to improperly usurp the role of the Secretaries, without the Secretaries' knowledge. The Guidelines violate the intent of Congress, which had clearly expressed its concern with unilateral Commission actions interfering with the Secretaries' authority in Section 1701(b).

Congressional concern with the Commission's unilateral interference with the Secretaries' authority was validated by the Commission's use of the Guidelines, and confirmed by the Commission's position in the instant projects' DEIS. However, no justification for the Commission's interpretation exists, particularly in light of the decision of the Court of Appeals in the State of Vermont v. FERC, 129 F.3d 99 (2nd Cir. 1997).

In Vermont, the Commission failed to include, as conditions to a group of licenses, the State of Vermont's 401 water quality certification conditions, stating that the measures not included were outside the 401 certification authority of the State. Similar to Section 18, the State's 401 certification authority is mandatory upon the Commission. Also, the articles excluded from the licenses in Vermont are remarkably similar to the fishway prescriptions rejected or altered by the Commission in its DEIS. In defense of its position, before the Court of Appeals, the Commission argued that Congress had determined that the Commission should have a paramount role in the hydropower licensing process. The Commission argued that "whether certain state conditions are outside the scope of Section 401 is a federal question to be answered by the Commission". 68 FERC & 61,078 at 61,387.

In resoundingly rejecting the Commission's argument as an improper intrusion into mandatory State authority, the Court stated that "the Commission assumes the very question to be decided: whether the Commission -- and not a court of appropriate jurisdiction on appeal by an applicant -- has the authority to review the legality of state-imposed §401 conditions in the first instance". Vermont, at 108. Furthermore, the Court, in relying on the Supreme Court in Escondido, found the state and the Secretaries' positions presented a strikingly analogous factual and legal scenario. In discussing the similarities between the state and the Commission, and the Secretaries and the Commission, the Court stated further that:

> In both contexts, FERC is required in clear statutory language to incorporate conditions imposed by an independent governmental agency with special expertise, in Escondido, the Department of the Interior...., and in this instance, the states.....In both cases, the Commission attempted to ignore this command and substitute its own judgment for that of the certifying agency. In both cases, the real issue in dispute is not whether there are limits on the certifying agency's authority to impose conditions on federal licenses, but "whether the Commission is empowered to decide when the ... conditions exceed the permissible limits." In neither case do the underlying statutes or their schemes for administrative and judicial review suggest that Congress wanted the Commission to second-guess the imposition of conditions.

Vermont at 110; citing Escondido, 466 U.S. at 777.

The Commission's explanation for its failure to fully accept the Department's February 2, 2001 timely filed preliminary Prescriptions for Fishways is in error, and in violation of Congressional intent and applicable case law.

The Commission improperly and without legal justification altered the Department's Prescriptions for Fishways. Congress' requirement in Section 1701(b) to consult with the Secretaries in defining fishways is readily apparent in the Commission's application of its interpretation of the Department's prescriptions in the present DEIS. Exclusion of a particular item or condition undermines the effectiveness of the prescription.

The Commission specifically has failed to adopt the prescription for fishways at Dundee; has not acknowledged or accepted the conceptual fishway designs the Department provided; has rejected the schedule for installing fishways at Saccarappa when passage is attained at the downstream Smelt Hill and Cumberland Mills; and has failed to acknowledge the need for the Department to review and approve all proposed design plans and operational procedures. The Commission unilaterally and without legal authority, substituted its own version of phasing of passage requirements at the projects, which is destined to delay, if not completely thwart, the restoration efforts of the Department and the state resource agencies.

It is the Department (specifically the FWS) and the state resource agencies that possess the

expertise needed to determine what conditions are necessary to accomplish fish passage at the projects. As such, the Commission must include the prescriptions in any license(s) issued, without changes.

Further, as acknowledged in the DEIS, S. D. Warren (applicant) objects to the Department's Section 18 fishway prescriptions. In the face of such objection, it is illogical to assume that post-licensing consultation between the Licensee and the Department will resolve individual fishway issues, given the Licensee's fundamental opposition to the provision of comprehensive fish passage at these projects. Moreover, converting a prescription into a requirement for consultation diminishes the mandatory nature of the Secretary's authority and subjects it to the Commission's review. Lengthy delays in implementation also are likely if the Commission postpones making decisions on the dates and designs of fishways, ultimately resulting in harm to existing migratory fish populations and impairment of restoration goals for the Presumpscot River.

It is the expectation of the Department, consistent with law that the Commission will include the Department's Modified Prescriptions for Fishways, due to be filed by February 1, 2002, in the FEIS and any license(s) issued.

Economic Assessment of Environmental Resources and Uses

The Commission, by its action in the DEIS, fails to place any economic value on environmental resources and other non-use values and services. The result of these failures is exponential and predetermines an outcome in which the Commission greatly undervalues the environmental consequences of the proposed action, and fails to comply with either the letter or the spirit of NEPA, the FPA, or applicable case law. In every instance in the DEIS where a determination is made, or conclusion drawn based upon economic feasibility, the Commission implies that it has conducted an economic balancing of all costs and benefits of the project. The Commission did use specific methodologies to ascertain the costs of lost power in the DEIS. However, the Commission, admittedly, made no attempt to assess, quantify and assign a value to the expected losses or gains in environmental resources, habitats and other non-use values or services.

For instance, in evaluating dam removal, fish passage requirements and Section 10(j) recommendations for instream flows and other environmental improvements, the Commission identifies the cost of the measure, and then attempts to show that it has balanced those costs with the intended benefits. However, the Commission's process is flawed in that it repeatedly fails to identify and incorporate the economic benefits of improved or restored environmental resources.

The Commission's failure to place an economic value upon environmental resources and other non-use values is contrary to law. By claiming to conduct economic balancing but failing to evaluate the costs of lost resources and habitat, the Commission is in contradiction to its obligations under NEPA. (40 C.F.R. §§1500.1, 1502.1, 1507.2(b) and 1508.8). Section 1500.1 requires high quality and accurate scientific analysis. Section 1502.1 requires that the environmental impact statement "shall provide full and fair discussion of significant environmental impacts..." Section 1507.2(b) requires all agencies of the federal government to identify methods and procedures required by Section 102(2)(B) to insure that presently

unquantified environmental amenities and values may be given appropriate consideration. Whether the Commission conducts a cost-benefit analysis under Section 1502.23 or a systematic balancing process (as conducted in Calvert Cliffs' Coordinating Committee, Inc., v. Atomic Energy Commission, 449 F.2d 1109 (D.C.Cir. 1971), the Commission is required to conduct such fully and fairly (Id. at 1115), ensuring professional and scientific integrity of the discussions and analyses in the environmental impact statements. (40 C.F.R. § 1502.24).

The courts have provided considerable direction in identifying the kind of process required to conform to NEPA standards, but have found that misleading economic assumptions can defeat the first function of an EIS,[2] by impairing the agency's consideration of the adverse environmental effects of a proposed project. South La. Envtl. Council, v. Sand, 629 F.2d 1005, 1011-12 (5th Cir. 1980), as cited by Hughes River Watershed Conservancy v. Glickman, 81 F.2d 437, 446 (4th Cir. 1996). Nothing can be more misleading than to conduct a "cost-benefit analysis" while admittedly failing to include any valuation of environmental resources and non-use values. NEPA requires the agencies to balance a project's economic benefits against its adverse environmental effects. Calvert Cliffs, at 1113. However, if the agency never undertakes a complete analysis of environmental values, or, as in the case at bar, where the Commission has undertaken no analysis of the value of environmental resources, there is no balancing. The use of inflated economic benefits in a balancing process may result in approval of a project that otherwise would not have been approved because of its adverse environmental impact. Sand, at 1101. Where the economic assumptions are so distorted as to impair fair consideration of the project's adverse environmental effects, the Commission's EIS is subject to review. Sand, at 1011, Hughes River, at 446. Nothing can be more distorted than to exclude environmental values from the balancing equation, and then to state that agency conclusions are the result of balancing. The exclusion of environmental values from the balancing equation in the instant case may result in issuance of licenses that would not otherwise be issued, since assumptions so distorted impair fair consideration, and thus subject the EIS to court review.

The Commission presumably has avoided placing a value on environmental resources and habitat, or other non-use values, due to its perception that methods for doing so are non-existent or not widely accepted.[3] This position is completely without support. While valuations on intangibles, such as environmental resources and habitat, may be more difficult than ascertaining profit margins and other power costs as reported by the applicant, standard methods exist for doing so. In fact, tort litigation, natural resource damage litigation and many other kinds of cases could not proceed without valuation of intangibles. Not only does the Commission disregard the

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[2] Preparation of an EIS serves the national policy of protecting and promoting environmental quality in two ways. First, it ensures that an agency, when deciding whether to approve a project, will carefully consider or take a "hard look" at the project's environmental effects. Secondly, it ensures that the relevant information about a proposed project will be made available to members of the public so that they may play a role in the decisionmaking process. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349, 109 S. Ct. 1835, 1845 104 L.Ed.2d 351 (1989).

[3] At the October 25, 2001, public meeting, Mr. Jim Haimes of the Commission staff stated that the reason they do not include economics in their cost benefits analysis is that state and federal resource agencies disagree over the dollar value of these resources.

FPA,[4] it ignores the large body of scientific study regarding the valuation of intangibles, while at the same time, states that it has conducted an economic balancing. Such balancing cannot occur when the valuation of environmental resources and uses is ignored or considered too difficult or inconvenient to undertake. Given the Commission's position, its references to economic balancing are misleading and deceptive.

The Commission's concern with the alleged controversial nature of an economic analysis that gives due consideration to environmental resources and non-use values is an insufficient justification for a clear abrogation of its legal obligation. In fact, the Commission's refusal to even attempt a valuation of environmental resources is a clear violation of the fundamental requirements of NEPA and the FPA, which do not require a substantive result, but rather, mandate a process in which impacts to the environmental resources are given due consideration. Robertson, 490 U.S. at 350, 109 S. Ct. at 1845-1846; Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 558, 98 S.Ct. 1197, 1219, 55 L.Ed. 2d 460 (1978).

The Commission's failure to make any attempt to estimate economic value of lost environmental resources, habitat and other non-use values predetermines the outcome, and is, therefore, arbitrary and capricious. Therefore, its conclusion (which is inferred to be the result of a scientific balancing) is grossly inaccurate, and completely inconsistent with economic practices and basic principles of fairness. Clearly, the record lacks substantial evidence to support the Commission's conclusions in the DEIS.

The shortcomings in the DEIS must be remedied prior to the Commission's reaching final licensing decisions on these projects. The Department is prepared to assist the Commission and its staff in producing a supplemental DEIS (40 C.F.R. § 1502.9), and looks forward to additional consultation on issues discussed herein.

Thank you for the opportunity to comment on this DEIS.

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

[4] Section 797(e) of the FPA requires the Commission, prior to the issuance of any license, to render a finding that the proposed project (and hence the application for the granting of the privilege to appropriate public resources) is desirable, justified, and in the public interest. In making this finding, the Commission must give equal consideration to a broad range of environmental impacts and public uses. (16 U.S.C. § 797(e), as amended).