STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION

IN THE MATTER OF

LOCKWOOD HYDRO PROJECT	)
#L-20218-33-C-N	)
	)
HYDRO-KENNEBEC PROJECT	)
#l-11244-35-A-N	)
	)
SHAWMUT HYDRO PROJECT	)
#L-19751-33-A-M	)
	)
WESTON HYDRO PROJECT	)
#L-17472-C-M	)

Testimony of Douglas H. Watts, Petitioner.

1. Petitioner requests the Water Quality Certification Orders issued for the above Kennebec River dams by the Maine BEP on July 31, 1998 be modified so as to require immediate, safe and effective upstream and downstream passage at the dams for all native, migratory fish species of the Kennebec River, including but not limited to American Eel, Atlantic Salmon, American Shad, Alewife, Blueback Herring and Sea Lamprey.

2. The Maine BEP is prohibited from issuing a Water Quality Certification for an activity which causes or contributes to a waterbody failing to meet its minimum standards of classification. 38 MRSA §464 (1)(C). (No waterbody shall fail to meet the minimum standards of its assigned water quality classification). 38 MRSA §464 (4)(F)(3). (The Maine BEP may only issue a water quality certification order for a hydropower project if the standards of classification of the waterbody are met. If the standards of classification of the waterbody are not met, the Maine BEP may only issue a water quality certification order if the project does not cause or contribute

to the failure of the waterbody to meet the standards of classification.)

3. Maine law allows the Maine BEP to revoke, suspend or modify any license or certification order which was issued in violation of the law. 38 MRSA §341-D *et seq.*

4. Native fish of the Kennebec River have not been able to safely and easily migrate up and down the Kennebec River past these dams since the dams were first built, nor can they today.[1]

5. Maine's water quality laws require that immediate, safe and effective passage for these fish is provided at these dams at all times.

6. To maintain full compliance with Maine law and the water quality classification, standards and designated uses established by the Maine Legislature for the Kennebec River, the Water Quality Certifications for the four dams should be modified to require immediate, safe and effective upstream and downstream passage for all native, migratory fish species at all times.

7. Thus far, the Maine DEP has offered two arguments to the citizen members of the Maine BEP on this topic. The first argument is that Maine Law does not require immediate, safe and effective passage for migratory fish at these four dams -- ie. that it is perfectly legal for these dams to kill untold numbers of fish each and every year in perpetuity. The second argument is that dam owners are trying very hard to come into compliance with Maine law, but need additional time.

These arguments refute one another. Why would the dam owners be trying very hard to come into compliance with legal requirements the Maine DEP states do not exist?

WHO OWNS THE KENNEBEC RIVER

8. The Kennebec River is a navigable waterway of the United States. Pursuant to the United

[1] The four subject dams were built in the early 20th century on top of previously existing dams built in the 19th century. The four dams have never been equipped with safe and effective upstream and downstream fish passage since they were first built, nor are they today. These dams have never been in compliance with any Maine water quality statute or any fisheries preservation law for the entire period of their physical existence. The Maine DEP today cannot say when or if these dams will ever be in compliance with mandatory Maine water quality statutes, standards and legally protected designated uses. As such, these dams are now in their *third century* of being in violation of mandatory fish preservation and water quality laws enacted by the State of Maine since 1820.

States Constitution, the Kennebec River is owned by the people of the United States of America.

9. The Lockwood, Hydro-Kennebec, Shawmut and Weston Dams are located within the natural bed of the Kennebec River, Maine.

10. These four dams are subject to all Maine and federal statutes which govern their existence and operation.

11. Absent full compliance with all applicable Maine and federal statutes, these dams have no inherent right to exist in the natural bed of the Kennebec River.[2]

WHAT LIVES IN THE KENNEBEC RIVER [3]

12. The following species of migratory fish are indigenous to the Kennebec River and its tributaries above and below these four dams: Atlantic salmon, American shad, alewife, blueback herring, American eel and sea lamprey.

13. These four dams, since they were first constructed, have impeded or completely blocked the natural migrations of these indigenous fish species to and from their normal, natural and historic habitat in the Kennebec River and its tributaries.

14. These four dams, since they were first constructed, have caused or contributed to the

---

[2] *See:* FERC Policy Statement on Project Decommissioning, Dec. 14, 1994, FERC Docket No. RM 93-23-000 at 15: "In those cases where, even with ample use of its conditioning authority, a license still cannot be fashioned that will comport with the statutory standard under Section 10(a), the Commission has the power to deny a license." *Id.* at 16: "There is nothing in the [Federal Power Act] that contemplates the prospect of requiring the Government to routinely bail out projects that can no longer pass muster under Section 10(a) because of serious and irremediable adverse public impacts." *Id.* at 17: "There is no merit to the suggestion by some industry commenters that a condition in a power license is *per se* unreasonable if, as a result of imposing the condition, the project is no longer economically viable."

[3] For brevity's sake, extensive scientific reference citations are not included for this section. All of this scientific information is drawn from the State of Maine's own extensive research and filings before the Federal Energy Regulatory Commission since and after the re-licensing proceeding for the Edwards Dam in Augusta in 1991, which cited extensively from the first and second reports of the Maine Fisheries Commissioners, dated 1867 and 1869, and recent field studies by the Maine Dept. of Marine Resources and other expert fisheries agencies.

complete extirpation or severe dimunition of these indigenous migratory fish species from their normal, natural and historic habitat in the Kennebec River and its tributaries above and in the vicinity of these dams.

15. Today, these four dams continue to have this same deleterious effect on the ability of these indigenous migratory fish species to live and inhabit their normal, natural and historic habitat in the Kennebec River and its tributaries above and in the vicinity of these dams.

16. These four dams, due to their existence in the natural bed of the Kennebec River, completely prevent these indigenous migratory fish species from swimming upstream in the Kennebec River past these dams to occupy their normal, natural and historic habitat in the Kennebec River and its tributaries. This is because these artificial dams are too high and steep for these species to swim over or past them; and because these fish species have no alternate path or mechanism by which to swim around and past these dams. This has been the case since these four dams were first constructed.

17. One indigenous migratory fish species of the Kennebec River, the American eel, has managed to surmount these four dams in small numbers since their construction. This is because the American eel is a catadromous fish species. The term "catadromous" means that the American eel is born in the open Atlantic Ocean and migrates up coastal rivers as a very small, very young fish (usually 2-3 inches in length), spends the rest of its life in freshwater growing to adulthood, and then migrates back to the open Atlantic Ocean to mate, give birth and die.[4]

18. None of the other indigenous, migratory fish species of the Kennebec River possess the unique attributes of very small and very young American eel to surmount the four dams in small numbers. For this reason, the four dams are utterly and completely impassable to these five species during their upstream migration into their normal, natural and historic habitat in the Kennebec River and its tributaries. These five fish species are the Atlantic salmon, American

[4] Mr. Ethan Nadeau, a noted aquatic scientist in Maine, recently informed Petitioner Douglas Watts by e-mail that young (4-6 inch) American eels were observed in 2005 by workers at the Harris Dam on the uppermost reaches of the Kennebec River, several miles below its source at Moosehead Lake. Mr. Nadeau was informed of this by a worker for the Cianbro Corporation who was working at the Harris Dam and personally observed the young eels in the dam penstock when it was dewatered for repairs.

shad, alewife, blueback herring and sea lamprey.

19. Since their construction, these four dams have prevented all Atlantic salmon, American shad, alewife, blueback herring and sea lamprey from living in their normal, native and historic habitat in the Kennebec River above the dams. Today, these four dams are completely impassable to these five indigenous migratory fish species during their upstream migration from the Atlantic Ocean.

20. For the American eel, which can and do surmount these dams in small numbers as tiny juveniles, these four dams cause and contribute to their ultimate death, due to decapitation, as the very large, adult American eels (from 2-4 feet in length) attempt to swim downstream past the dams to the Atlantic Ocean and are decapitated by the mechanical turbines of these four dams as the eels attempt to swim through these mechanical turbines.

MAINE DEP ADMITS THE FOUR DAMS KILL MIGRATING FISH.

21. In the record of the instant proceeding, the Maine DEP has admitted the four hydro-electric dams kill migrating fish:

> "The Board notes that current state-of-the-art downstream fish passage facilities are not 100% effective in safely passing fish. This means that, even in the best of circumstances, there will be some fish that are killed or injured while migrating downstream through these facilities. Even the fact that fish are injured or killed during passage at a particular project would not be a sufficient basis for concluding that a threat to the environment exists." [5]

22. Through this statement, the Maine DEP removes from debate the factual issue of whether the subject dams kill migrating fish. Maine DEP admits they do.

23. Today, according to Maine DEP, none of the four dams are equipped with "state of art"

[5] Draft Order Denying Petition of Douglas Watts and Friends of Merrrymeeting Bay for Public Hearing to Modify Water Quality Certifications for Kennebec River Dams, Maine DEP, Jan. 19, 2006.

downstream passage systems for all migratory species, including American eel. As such, Maine DEP admits it is likely the subject dams now kill many more fish than if they were equipped with "state of art" downstream passage systems.

24. Maine DEP has already admitted the central material facts in this proceeding: the four dams kill migrating fish. By doing so, the dams directly cause the Kennebec River to fail to provide suitable habitat for these fish as required by law. 38 MRSA §464 (1)(C) (No waterbody shall fail to meet the minimum standards of its assigned water quality classification.)[6]

ADDITIONAL EVIDENCE THE FOUR DAMS KILL MIGRATING FISH.

25. It is generally accepted that hydro-electric dams kill fish. In their *amicus curiae* brief to the United States Supreme Court in S.D. Warren, the Attorneys General of 35 of the United States declared:[7]

> *"The mechanical grind of hydroelectric turbines often kills large numbers of fish that pass downstream."*

26. The first statutory requirement for safe and effective downstream fish passage at dams and obstructions in Maine is found in Section 6 and 7 of the 1823 Maine law titled, "An Act to Regulate the Salmon, Shad and Alewive Fishery in St. Croix and its Branches," which declares:[8]

> "Sect. 6. Be it further enacted, That hereafter no eel wears [weirs] shall be erected

[6] See S.D. Warren v. Maine BEP, 2005 ME 27, ¶21: "The legally designated uses of a waterbody must actually be present and if the designated uses are not presently being achieved, the Legislature intended the quality of the water be enhanced so that the uses are achieved." See also PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, 511 U.S. at 714-715 (1994). "A project that does not comply with a designated use of the water does not comply with the applicable water quality standards." And: "A State may impose conditions on certifications insofar as necessary to enforce a designated use contained in the State's water quality standard." Id.

[7] Amicus Curiae Brief of 35 of the United States, the Commonwealth of Puerto Rico and the Pennsylvania Department of Environmental Protection on *writ of certiorari* by S. D. Warren Company. United States Supreme Court. 2006.

[8] Laws of the State of Maine, Chapter CLXXXVI. Source: Legislative Documents, Maine State Archives.

on any part of said river or lakes, or its branches, either by the citizens of this State or Indians, so as to stop or impede the passage of the young fish or fry in returning down said river; and if the fish committee shall neglect their duty in causing the provisions of this section and of every part of this act to be carried into effect, they shall forfeit and pay a sum not less than five nor more than twenty dollars, at the discretion of the Court before whom conviction may be had.

"Sect. 7. Be it further enacted, That it shall be lawful, for the Agent or Agents for the State's Land, to cut down so much of any eel wears as to give a passage to the young fish or fry in returning down said river or its branches, wherever they may find said wears so erected on any of the State's Land, as to stop or impede their passage down said river, or its branches."

27. The killing of American eels in the turbines of dams has been noted in Maine for at least the past 150 years. A corporate history of the S.D. Warren Paper Company describes severe kills of female American eels at the company's dam at Ammoncongin Falls on the Presumpscot River, Maine during the mid 19th century. The published corporate history of the S.D. Warren Company available at the Warren Library in Westbrook, Maine states at page 46:

"Water power had its peculiar troubles: every cold winter morning anchor ice would clog in the intakes, and the mill would be down. Then when warm weather came, the water would be full of eels and eels are fish with tough hides. The blades of the water wheels would not chew them up and there are frequent entries in the record stating the water supply had failed and the mill was down, because the eels had stopped the wheels."

A similar report was made by the operator of the Damariscotta Mills hydro-electric dam on the Damariscotta River in Newcastle, Maine to Lewis Flagg of the Maine Department of Marine Resources. A telephone record by Alex Hoar of the U.S. Fish and Wildlife Service, dated March 30, 1996 states:

"Subject: Eels
Telephone Record.
Lew Flagg told me in a telephone conversation on Saturday night that eels had stopped the project at Damariscotta Mills from operating and set off the alarm. He was told this by the plant operator. The event happened in October. He said the eels clogged the project as they were migrating downstream. -- Alex Hoar."[9]

A memo summarizing two meetings held with Maine commercial eel fishermen in December, 1994 written by Maine Inland Fisheries & Wildlife fisheries scientist Frederick W. Kircheis states:

"Many eel harvesters commented on the loss of large numbers of migrating eels at power generating turbines on rivers. Apparently eels are attracted to the current drawn by the turbines while migrating at night. One eel weir operator has, as result of legal action, an agreement with a dam operator to cease generating after dark from mid-August to mid-October, the prime time for migrating eels."[10]

28. The most direct refutation of the Maine DEP's position in this proceeding is the enormous fish kill of juvenile alewives (*Alosa pseudoharengus*) on the Sebasticook River at the Benton Falls Dam in Benton, Maine on Columbus Day, 1999. This fish kill occurred when the Maine DEP-approved "state of art" downstream fish passage system at the dam failed to operate for several days because it was clogged with floating logs. This fish kill was discovered and reported to State of Maine officials by the Petitioner, Douglas H. Watts, on the afternoon of Columbus Day, October 12, 1999. After confirmation of the ongoing fish kill by Maine DEP and Maine DMR officials, the State of Maine fined the owners of the Benton Falls Dam $17,000 for failing to maintain the "state of art" downstream fish passage facility at the dam. Maine DEP's

[9] This telephone conversation record was submitted by the Kennebec Coalition in 1996 as part of its 1,600 page filing before the Federal Energy Regulatory Commission pursuant to re-licensing of the Edwards Dam in Augusta, Maine. The author, Alex Hoar, is a fisheries scientist with the U.S. Fish & Wildlife Service. Mr. Lewis Flagg is a fisheries scientists long employed by the Maine Dept. of Marine Resources. The incident described by Mr. Flagg did not occur in 1996, but was based upon Mr. Flagg's recollection of instances in the past of documented eel kills at Maine dams.

[10] This memorandum by Mr. Kircheis was included in public document filings by the Kennebec Coalition before the Federal Energy Regulatory Commission in the Edwards Dam re-licensing proceeding, 1996.

investigation determined the fish kill was caused when the "state of art" downstream fish passage system at the dam became clogged with logs and migrating alewives were forced to swim through the dam turbines. Hundreds of thousands of alewives were killed over a 48 hour period and their bodies littered the banks and bottom of the Sebasticook River for one mile downstream from the dam.[11]

29. The ability of hydro-electric turbines to kill large numbers of migrating fish was further demonstrated, again, at the Benton Falls Dam in October 2004, when Maine DMR fisheries scientist Nate Gray and Petitioner Douglas H. Watts discovered hundreds of large, adult American eels killed by the dam turbines directly below the dam site. This discovery confirmed and corroborated observations made by Maine DMR in fall 2001 via underwater video camera which showed large numbers of chopped up American carcasses directly below the Benton Falls Dam turbine outfall.

30. The ability of hydro-electric turbines to kill large numbers of migrating fish has been repeatedly documented by Maine DMR scientists at the American Tissue hydro-electric dam on Cobbosseecontee Stream in Gardiner, Maine between 2000 and 2002. The killings of American eels at this dam became so severe in fall 2002 that Mr. John M. Glowa, Sr. of the Maine DEP enforcement division issued a Cease and Desist Order to the dam owner in October 2002 requiring the dam owner to shut down their turbines from dusk to dawn each day during the fall eel migration season, which was promptly complied with.

The Maine DEP's Cease and Desist Order of Oct. 10, 2002 states as follows:

> Skip Medford
> CHI Operations, Inc.
> 200 Bulfinch Drive
> Andover, MA 01810

[11] In the Matter of Benton Falls Associates ..., 2000 Me. ENV. LEXIS 40 (Aug. 17, 2000). This Consent Order is included as a joint Evidentiary Exhibit by Petitioner Friends of Merrymeeting Bay and Douglas Watts and is labelled Exhibit W/FOMB-2. Photographs showing the condition of migratory fish after passing through the Benton Falls and other dam turbines in the Kennebec River drainage are included as Exhibits W/FOMB-10, 11, 15 and 27.

Thomas R. Brown
Ridgewood Maine Hydro Partners, L.P.
947 Linwood Ave.
Ridgewood, N.J. 07450

Also sent via fax to CHI on October 10, 2002 (978-681-7727)

Re: American Tissue Dam-FERC No. 2809-ME

Dear Messrs. Medford and Brown:

I want to begin by thanking you for your prompt response to our requests for corrective action at this facility. As of the time this letter is written, CHI has installed a plunge pool box for alewives and opened one of the deep gates some six inches. It is my understanding that CHI has verbally agreed to shut down the turbine, effective today, from dusk till dawn every day until November 15, 2002. It is also my understanding that today CHI installed two metal plates, each several feet high, at the base of the trash screens that will physically block eels from swimming along the bottom and into the influent to the turbines. Because eels typically travel along the bottom, hopefully this will prove to be an effective deterrent.

Although these corrective actions are very positive steps in the right direction, we need to assure that the facility is brought into compliance with Maine law and continues in compliance. Therefore, the Department continues to request that CHI Operations, Inc. and/or Ridgewood take any and all necessary measures, subject to DEP and/or DMR approval, to prevent fish mortality due to downstream migration at the American Tissue Dam (FERC No. 2809) in Gardiner, Maine. Such measures may include, but may not be limited to, temporarily shutting down the turbine and if necessary, draining the head pond until the downstream migration of eels and alewives is done for this year.

It is the Department's position that you are in violation of Title 38 M.R.S.A. § 464 for rendering the receiving waters unsuitable "as habitat for fish and other aquatic life." Our position is supported by an ongoing fish kill and evidence of other significant fish kills that occurred at the facility over the past several years.

This Department's request for corrective action was initially conveyed to you via a voicemail message shortly after 5:00 P.M. on October 7. On October 8, 2002, CHI responded by increasing the opening of the deep gate nearest to the generating station intake to approximately 5 inches. Increasing the gate opening revealed that the previous opening of some three inches (opened on September 15, 2002) was partially blocked by debris. As soon as the gate was opened to 5 inches, there was a moderate increase in water through the gate. Several minutes after the gate opening was increased to 5 inches, a plume of muddy water exited through the gate and the flow increased considerably. I later learned from John Bogert that CHI staff place sandbags in front of the gates each fall to minimize leakage. Apparently, during the period September 15-October 8, 2002, although the gate was opened some three inches, the effective width of the opening was less than that.

During my site visit on October 8, I requested of Mr. Bogert that CHI place a screen below the powerhouse discharge to determine if eels continue to be killed in the turbines in spite of the increased flow through the deep gate. He refused because, as he stated, the screen would become clogged.

On October 9, CHI closed the deep gate and opened the gate furthest from the powerhouse intake to approximately six inches. It is my understanding the possibility of shutting down the turbines during the night time hours was discussed between CHI and John Perry of the Dept. of Marine Resources at this time. On this date, CHI built a structure on the dam apron to act as a plunge pool for downstream migrating alewives. After the structure was built, a small school of alewives was seen going over the dam, entering and exiting the structure, and entering the stream. During my visit to the site this afternoon, I observed that the

flow to the plunge pool box had been cut off and workmen were busy repairing the box because one side wall had bowed out from the water pressure. I observed two dead alewives inside the box. Once the box was braced and the flashboard was removed, I observed that the box has considerable leakage. The integrity of the box should be closely monitored and if leakage becomes excessive, it should be repaired or replaced.

On October 8, 9, and 10, dead eels were observed and collected below the outfall of the power generation station. On October 9 alone, evidence of more than one hundred dead eels was collected and removed from the stream. Today, in excess of forty dead and dying eels were found in the stream below the power generation facility. These were still found in spite of increased stream flows that may have washed additional eels and eel parts downstream. It is this Department's position that the corrective measures taken by CHI prior to today have not been effective with regard to the killing of eels. Conversely, there is evidence, in the form of dead and dying eels, that the corrective measures have been ineffective. Therefore, effective immediately, the Department of Environmental Protection requests that, at a minimum, you take the following corrective actions:

Cease all power production by shutting down the turbine every day from dusk to dawn beginning today, October 10, 2002 until November 15, 2002 (as noted above, it is my understanding that CHI has verbally committed to do this);

Maintain continuous downstream eel passage by keeping one or more deep gates open a minimum of six inches until November 15, 2002;

3) Due to concerns that flows into the headpond through the CHI operated New Mills dam may be cut back at night, please ensure that sufficient flow is maintained to maximize the downstream passage of eels through the deep gate during non-generating hours until November 15, 2002;

Maintain an effective downstream alewife fish passage device until November 15,

2002; visit the facility a minimum of once daily to monitor the effectiveness of downstream fish passage; and,

To determine the efficacy of these corrective measures, install a screen or other device below the outfall of the power plant, subject to approval by the Dept. of Marine Resources, and report any numbers of dead and dying eels collected to the DEP daily. This screening device is to remain in place until November 15, 2002 unless approval to remove it sooner is granted by the DEP.

It is likely that this Department will issue a formal Notice of Violation in this matter.Due to the repeated nature of these violations, the Department may propose an Administrative Consent Agreement and Enforcement Order. The Department's actions in this regard will be guided in part by your willingness to permanently correct the problems at the facility.

Thank you again for your very prompt response and for your anticipated continued cooperation in this matter. Please contact me within five (5) days of receipt of this letter with your response to these requests. If you have any comments or questions, please call me at (207) 287-7783.

Sincerely,
John M. Glowa, Sr.
Enforcement Section
Maine Dept. of Environmental Protection[12]

[12] After this incident, the Maine Dept. of Attorney General and Maine DEP declined to support Mr. Glowa's enforcement action of Oct. 2002 against the American Tissue Dam and instead ruled that the severe kill of American eels at Cobbossee Stream that Mr. Glowa halted was in fact legal because the Water Quality Certification Order for the dam did not *specifically* require safe and effective downstream passage for American eels. This was the same reasoning used by the Dept. of Attorney General in October 2004 for refusing to stop the massive, ongoing kill of American eels at the Benton Falls Dam. In both instances, Maine DEP staff informed the Petitioner that if the Water Quality Certifications for these dams had specifically required safe passage for eels, the Maine DEP would have been able to take enforcement action and levy civil penalties, as was done in the 1999 Benton Falls alewife kill.

31. Quantitative studies were conducted in Maine for American eel passage at hydroelectric dams by the Maine Department of Marine Resources in the Kennebec River drainage from 2000 to 2002 using small numbers of radio-tagged female eels released directly above a dam and allowed to swim freely past it. Radio-tracking of adult female American eels by the Maine Department of Marine Resources (Maine DMR) at the Benton Falls Project in 2000 and 2001 indicate more than 50 percent of the migrating eels attempting to pass the Benton Falls project are entrained and killed in the project turbines. In fall 2001, Maine DMR staff used an underwater videocamera at the Benton Falls Project turbine outfall to attempt to locate two radio-tagged eels which had passed through the Benton Falls Project turbines. The videocamera revealed large numbers of dead eels and eel carcasses resting on the river bottom at the turbine outfall. Maine DMR's 2001 study reported stated:

> "DMR personnel attempted to recover these eels on five occasions (10/22, 10/26, 10/31, 11/2, 12/7). An underwater camera revealed a deep hole below the tailrace that contained many portions of eel carcasses in various states of decay. It was apparent these eels had been killed by turbine blades .... Based on two years data, the surface bypass at Benton Falls is not efficient at passing eels."

In fall 2004 Maine DMR biologists and citizens documented hundreds of dead American eels below the Benton Falls Dam. Based upon these observations, female American eels were being killed at this dam from mid-September to at least early November, ie. throughout the entire fall eel migration season. During this entire period, the installed surface downstream fish passage system was operating yet unable to guide migrating American eels away from the turbine intakes of the Benton Falls Dam. Due to these severe mortalities, the dam's owner in Sept. 2005 placed metal screening across the entire turbine intakes to prevent eels from gaining entrance to the turbines. After installation of this protective screening, turbine mortalities of American eels ceased at the dam during the fall 2005 eel migration season. Radio-tracking of adult American eels by the Maine Department of Marine Resources just above the Lockwood Dam on the Kennebec River during fall 2002 suggests that 40 percent or more of the adult American eel attempting to migrate past the Lockwood Project are entrained and killed in the turbines each year, despite the availability of the project spillway for passage. This study -- and data gathered from American eel kills at other hydro-electric dams in Maine -- indicates the availability of spillway passage

alone will not provide safe passage for adult American eels at Maine hydroelectric dams.

32. Thus far in this instant proceeding, the Maine DEP has adopted the paradoxical position that the four subject hydro-electric dams *do not* kill migrating fish and yet, even with installation of "state of art" downstream fish passage systems at some point in the future, the dams *will still kill* migrating fish.[13]

MAINE ADMITS THE FOUR DAMS ARE A "POLLUTANT"
AND THUS A "THREAT TO THE ENVIRONMENT"
PURSUANT TO MAINE AND FEDERAL LAW.

33. The State of Maine itself has argued to the United States Supreme Court that hydro-electric dams are a form of pollution pursuant to Maine Law and the United States Clean Water Act:

"There is also no dispute that each of these facilities, like almost all other hydropower projects, contribute to 'pollution' as that term is defined under §502(19) because each alters the chemical, physical and biological integrity of the water, causing the River to fail to meet water quality standards. Specifically, the Facilities do this by ... (3) blocking fish to their spawning and nursery waters."[14]

"The operation of dams affects water quality by obstructing the river and thereby creating or contributing to pollution." Id. at 24.

---

[13] This paradox is illustrated by 2006 correspondence between Maine DEP and the owners of the Hydro Kennebec Dam, who in Feb. 2006 submitted design plans to construct a downstream fish passage facility for migrating fish. In an April 10, 2006 letter to Brian Stetson of Hydro Kennebec, Dana P. Murch of Maine DEP stated: "It is hoped that these facilities *will provide* effective downstream fish passage for anadromous fish as well as for eels." (emphasis added) Presumably, if the Hydro Kennebec Dam was already providing effective downstream passage for migratory fish species *in situ*, there would be no need for this new downstream fish passage facility to be built in the first place. See also, Federal Energy Regulatory Commission, Order Approving Functional Design Drawings and Plans for Interim Downstream Passage at Hydro Kennebec Dam, April 21, 2006 at 3: "The installation of interim downstream fish passage at the Hydro Kennebec Project will allow out-migration of post-spawn adult American shad and Atlantic salmon this year and in coming years, significantly contributing to fisheries restoration efforts on the Kennebec River." 115 FERC ¶62,096.

[14] State of Maine. 2006. Respondent State of Maine's Brief to the United States Supreme Court in re: *writ of certiorari* of S.D. Warren Company, at 9.

"Petitioner's Facilities -- and hundreds of dams like them -- indisputably create pollution and contribute to the non-attainment of water quality standards." Id. at 26.

As shown in the State of Maine's own Response Brief to the United States Supreme Court in in 2006, hydro-electric dams which prevent the passage of native fish to and from their spawning grounds constitute a form of pollution under Federal Law and Maine Law. Pollution is an inherent threat to the environment. If it were not, it would not be called pollution.

MAINE WATER QUALITY STATUTES
PROHIBIT THE KILLING OF MIGRATORY FISH AT DAMS.

34. The Maine Legislature's goal and purpose for its Water Classification Laws are stated as follows:

> "The Legislature declares that it is the State's objective to restore and maintain the chemical, physical and biological integrity of the State's waters and to preserve certain pristine state waters. The Legislature further declares that in order to achieve this objective the State's goals are ... That water quality be sufficient to provide for the protection and propagation of fish, shellfish and wildlife and provide for recreation in and on the water. The Legislature intends by passage of this article to establish a water quality classification system which will allow the State to manage its surface waters so as to protect the quality of those waters and, where water quality standards are not being achieved, to enhance water quality. This classification system shall be based on water quality standards which designate the uses and related characteristics of those uses for each class of water and which also establish water quality criteria necessary to protect those uses and related characteristics. The Legislature further intends by passage of this article to assign to each of the State's surface water bodies the water quality classification which shall designate the minimum level of quality which the Legislature intends for the body of water. This designation is intended to direct the State's management of that water body in order to achieve at least that minimum level of water quality." 38 MRSA 464 (1).

35. The four subject Kennebec River dams are located on waters classified as "B" and "C" by the Maine Legislature. Class B waters "shall be of such quality that they are suitable for the designated uses of . . . recreation in and on the water . . . and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired." 38 M.R.S.A. § 465(3)(A). "Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community." 38 M.R.S.A. § 465(3)(C). Class C waters "shall be of such quality that they are suitable for the designated uses of . . . recreation in and on the water . . . and as a habitat for fish and other aquatic life." 38 M.R.S.A. § 465(4)(A). Discharges to Class C waters may cause some changes to aquatic life, except that the receiving waters must be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community." 38 M.R.S.A. § 465(4)(C).

36. Under Maine law, aquatic habitat in Class A waterbodies shall be "natural"; Class B waterbodies shall be "unimpaired." Aquatic habitat in Class C waterbodies shall maintain "the integrity of the resident biological community." Maine BEP has no authority to establish aquatic habitat standards. 38 MRSA §464(2)(D) (The Legislature shall have sole authority to make any changes in the classification of the waters of the State). In S.D. Warren, 2005 ME 27, the Maine Supreme Court affirmed the Maine BEP's ruling that provision of safe and effective passage for indigenous, migratory fish at hydro-electric dams is a fundamental component of the legally designated use of Maine rivers as habitat for these animals. In its April 2003 Water Quality Certification Orders for S.D. Warren's Presumpscot River dams, the Maine BEP held that the legally designated use of the Presumpscot River as fish habitat could not be attained if the subject dams physically prevented the fish from having safe access to and from that habitat during their lifecycle. In its Sept. 30, 2003 Findings of Fact and Order denying S.D. Warren's Appeal of its Presumpscot River Water Quality Certification Orders, the Maine BEP stated:

> "Nowhere, as appellant suggests, does the statute state that 'some' of the waters be suitable for the designated uses; that 'some' of the aquatic species indigenous to the waters be supported; or that 'some' of the habitat must be unimpaired or natural. On the contrary the terms 'receiving waters' and 'habitat' are unqualified

> and the statute specifically states that the water quality must be such to support 'all' indigenous aquatic species .... Appellant's contention that water quality standards are being attained as long as the designated uses of fish, fishing and aquatic habitat are present to any degree in any portion of the river is thus contrary to the language of the statute and to the Legislature's stated objective 'to restore and maintain the chemical, physical and biological integrity of the State's waters.' 38 MRSA Section 464(1)."[15]

37. The severe negative impacts of the subject dams on native American eels in the Kennebec River watershed cause Class A, Class B and Class C waterbodies in the Kennebec River watershed to fail to meet their aquatic habitat quality standards. The inability of native, migratory fish to safely migrate from Class A, B and C habitat due to hydroelectric dams violates the narrative water quality standards for Class A, Class B and Class C waters in the Kennebec River watershed. Maine's water quality standards expressly protect all indigenous fish species, including highly migratory species such as the American eel. S.D. Warren ("Maine law is settled in this area.") Maine water quality standards do not protect indigenous fish in only one portion of a waterbody. *Id.* Maine's water quality standards do not only apply to fish species that stay in one place for their entire lives. *Id.* Maine's water quality standards recognize that many of Maine's signature native fish species, such as the Atlantic salmon, American shad, alewife and American eel, must safely migrate back and forth from freshwater to saltwater in order to survive. *Id*. This is why the State of Maine informed the United States Supreme Court in 2006 that hydroelectric dams can cause pollution by preventing migratory fish from safely moving back and forth from freshwater to saltwater: "There is also no dispute that each of these facilities, like almost all other hydropower projects, contribute to 'pollution' as that term is defined under §502(19) because each alters the chemical, physical and biological integrity of the water, causing the River to fail to meet water quality standards. Specifically, the Facilities do this by ... blocking fish to their spawning and nursery waters." (Maine Respondent's Brief to United States Supreme Court at 9.)

38. Existing water quality certificates for the subject dams allow them to kill native fish migrating from their natural and historic growing habitat in the Kennebec River watershed. Maine water

[15] Maine BEP. Findings of Fact and Order Denying Appeal of S.D. Warren Company. Sept. 30, 2003.

quality statutes require the Kennebec River and its tributaries to be suitable habitat for all aquatic species indigenous to them. The large number of dams on the Kennebec River means that even if a migrating fish negotiates one dam safely it may well be killed at the next dam it encounters. If a fish safely negotiates two dams it may be killed at the third dam it encounters. If a fish safely negotiates three dams it may be killed at the fourth dam it enounters Simple arithmetic shows a small likelihood that native fish migrating past the numerous dams on the Kennebec River can ever reach the Atlantic Ocean alive.

39. Indigenous means "supported in a reach of water or known to have been supported according to historical records compiled by State and Federal agencies or published scientific literature." 38 MRSA §466(8).

40. The legally designated uses of a waterbody must actually be present and if the designated uses are not presently being achieved, the Legislature intended the quality of the water be enhanced so that the uses are achieved. S.D. Warren, 2005 ME 27, ¶21.

41. If water quality standards are not presently being met, the BEP may impose any conditions necessary to ensure compliance with those standards. Id at ¶19.

42. The Legislature shall have sole authority to make any changes in the classification of the waters of the State. 38 MRSA §464 (2)(D). There is no water quality classification lower than Class C. 38 MRSA §464. No waterbody shall fail to meet the minimum standards of its assigned water quality classification. 38 MRSA §464 (1)(C).[16]

[16] This portion of Maine statute expressly forbids issuance of a Water Quality Certification for an activity which causes or contributes to a waterbody failing to meet its minimum standards of classification. This point was reiterated by Maine BEP on Sept. 21, 2005 in its Water Quality Certification Order for the Gulf Island and Deer Rips hydroelectric dams on the Androscoggin River, which states in part: "FPL Energy's argument that Gulf Island Pond is somehow 'grandfathered' from meeting state water quality standards, including the state's antidegradation policy, has no basis in law. The state's antidegradation policy clearly provides that the DEP may only issue a wastewater discharge license pursuant to state law or approve water quality certification pursuant to federal law if the standards of classification of the water body are met. 38 MRSA §464(4)(F)(3). No water bodies are 'grandfathered' from meeting water quality standards, and no projects -- whether paper mills or dams -- are 'grandfathered' from appropriate regulation if determined to be causing or contributing to the failure of any water body to meet water quality standards." The pertinent portion of this 2005 Water Quality Certification Order is provided as Joint Evidentiary Exhibit W/FOMB- 3.

43. Maine's Anti-Degradation Statute declares: "The existing in-stream water uses and the level of water quality necessary to protect those existing uses must be maintained and protected. Existing in-stream uses are those uses which have actually occurred on or after November 28, 1975, in or on a waterbody whether or not the uses are included in the classification of the waterbody." Maine's anti-degradation statute prohibits the Maine BEP from issuing water quality certification orders for projects that cause a waterbody to fail to meet its standards of classification. §464 (4)(F)(5), §464 (F)(1-A), §464 (4)(F)(3)

STATUTORY PURPOSE OF WATER QUALITY CERTIFICATIONS

44. The sole statutory purpose of "Water Quality Certifications" issued by the State of Maine to the above four dams is to ensure the existence and operation of these dams do not cause the Kennebec River to be in violation of its Legislatively established water quality standards. 38 MRSA §636(8) (The department shall approve a project when it finds that the applicant has demonstrated that there is reasonable assurance that the project will not violate applicable state water quality standards, including the provisions of 38 MRSA §464 (4)(F), as required for water quality certification under the United States Water Pollution Control Act, Section 401.) *See also*: S.D. Warren, 2005 ME 27, ¶21. (The legally designated uses of a waterbody must actually be present and if the designated uses are not presently being achieved, the Legislature intended the quality of the water be enhanced so that the uses are achieved.) *And* ¶19. (If water quality standards are not presently being met, the BEP may impose any conditions necessary to ensure compliance with those standards.)

45. If full compliance with the conditions contained in these Water Quality Certifications still causes the Kennebec River to fail to meet its Legislative water quality standards, the Certifications are legal nullities because they fail to accomplish the sole and specific purpose for which they were issued. John Hancock Mut. Life Ins. Co. v. Harris Trust Savings Bank, 510 U.S. 86, 94 (1993); 3 Singer, §58.6 at 107. (A statute should be interpreted so that its manifest purpose, policy or object can be accomplished.) Handyman Equipment Rental Co., Inc. v. City of Portland, 724 A.2d 605, 607-608 (Me. 1999) (words in statute must be given meaning and cannot be treated as meaningless and superfluous).

THE MAINE DEPT. OF MARINE RESOURCES AND U.S. FISH & WILDLIFE SERVICE STATE THE FOUR DAMS DO NOT PROVIDE SAFE PASSAGE FOR ADULT AMERICAN EEL.

46. Expert testimony by the Maine Dept. of Marine Resources and the U.S. Fish & Wildlife Service from May 2006 state that the four dams fail to provide immediate, safe and effective passage for downstream migrating adult American eels.

47. In a letter dated May 8, 2006, Maine Dept. of Marine Resources Commissioner George Lapointe stated:[17]

> "FPL Energy and Merimil propose to provide gate spillage at the Lockwood, Shawmut, and Weston projects annually for a period of eight hours per night for up to eight weeks during the period from early September to mid-November as a means of downstream passage for American eel. They also propose to conduct periodic weekday inspections in the projects' tailrace areas to determine whether American eels are passing the projects without significant numbers of injury or mortality.
>
> "MDMR is concerned that controlled spill via bypass gates will not be an effective measure for downstream eel passage, and that significant injury or mortality to eels will occur unless additional measures are taken. In September and October, river flow exceeds hydraulic capacity only 5-15% of the time at the Weston and Shawmut projects and 40-50% of the time at the Lockwood Project and. If migrating eels are randomly distributed in the river, then eels will pass through the turbines at Weston and Shawmut 85-95% of the time and through the turbines at Lockwood 50-60% of the time. We note that both FPL Energy and MDMR have observed eel mortalities below the Shawmut Project."

48. In a letter dated May 12, 2006 Gordon Russell of the U.S. Fish & Wildlife Service stated regarding downstream American eel passage at the Weston, Shawmut and

[17] Letter of George Lapointe, MDMR Commissioner, to Christopher Shaw, FPL Energy, May 8, 2006 at 2.

Lockwood Dams owned by FPL Energy:

> "The use of controlled spills at night via bypass gates at Lockwood and at Shawmut and proposed in 2006 at the Weston Project is not an effective stand alone measure to provide safe downstream passage of adult eels. This practice can result in most adult eels being entrained into operating project turbines which will require additional measures to facilitate safe eel passage -- such as night time shutdowns, or other generation restrictions to reduce approach velocity to 2 feet per second maximum, along with full depth intake trash rack reduced spacing (1 inch clear) and concurrent use of controlled spill into an adequate plunge pool."[18]

49. In an e-mail dated Feb. 15, 2006, U.S. Fish & Wildlife Service fish passage engineer Ben Rizzo stated that the proposed downstream fish passage facility proposed for the Hydro Kennebec Dam will not provide safe passage for adult American eels: "We note that additional operational and structural measures (as noted in our Jan. 20, 2006 e-mail) will be required to minimize turbine entrainment of downstream migrating silver [adult female] eels."[19]

50. In a letter dated Feb 17, 2006 from Maine Dept. of Marine Resources scientist Gail Wippelhauser, Ms. Wippelhauser stated that MDMR concurred with Mr. Rizzo's conclusions: "In addition we concur with Mr. Rizzo's comment that additional operational and structural measures will be required to minimize entrainment of downsteam migrating silver eels."[20]

51. In December 2006, Maine DMR fisheries scientist Nate Gray provided the following overview of Maine DMR eel observation efforts for fall 2006 and described practical difficulties faced by scientists attempting to quantify the number of eels killed at the subject dams:

> **From:** Gray, Nate <Nate.Gray@maine.gov>
> **To:** info@dougwatts.com

[18] Letter of Gordon Russell, U.S. Fish & Wildlife Service, to Christopher Shaw, FPL Energy, May 12, 2006.

[19] Included as attachment to letter of Brian Stetson, Brookfield Power Hydro Kennebec LLP to Dana P. Murch, Maine DEP, March 27, 2006.

[20] Letter of Gail Wippelhauser, Maine DMR, to Kevin Bernier, Brookfield Power Hydro Kennebec LLP, Feb. 17, 2006.

Date: Wednesday, December 20, 2006 01:12 pm

Subject: RE: Eel survey

Doug, there was no "report" on observation activities submitted by FPL up to this point. Only a phone call from Richter saying they had found some [dead eels] in the tailrace of Shawmut. I think the # was 15 or so. We had found some there in the past. I think it was the fall of 2004. Yep, 2004. Water conditions [in 2004] allowed us to deploy the small jet boat at the tailrace launch and poke around for a while. We had an underwater camera set up and we investigated the east turbine outfalls and tailrace/pool below and saw no eels. Returning to the boat ramp we investigated the south (new) turbine tailrace and found some adults that had most likely been entrained at Shawmut. There were not a lot. Perhaps 10 or so and all located within a fairly small area. One was huge. This year high water conditions made observations at the Shawmut site untenable. We had a few opportunities to look at Lockwood but again the water conditions were high. There is no wading in the immediate tailrace so basically we'd pull way up to just below the outfalls, shut down the motor, stand on the gunnels with polaroids on and stare into the depths. We performed four passes (eight one ways) on different lines of drift to see what there was to see. We saw none. There were enough velocity rufugia that if there were a significant event I believe we would have seen evidence of entrainment. I also believe (with no substantial evidence, just a gut feeling) that the high water may have dealt the outmigrant adults a good hand. Multiple passage opportunities specifically at Lockwood with the spillway running constantly. Observations at Hydro-Kennebec are very difficult. The depth of the tailrace, accesibilty and viewing sites are all factors here. From the west plateau you are afforded and excellent view of the river downstream of the tailrace....Binoculars should be used as well as the noon sun to have the best light. I've seen no eels there either. None of us have looked at Weston, Anson-Abenaki, Williams, Wyman, Harris or Flagstaff. We don't have a clue as to what’s going on there or what the population looks like as far as numbers in the upper watershed. I'm thinking diminished to a great extent but then that is just a guess. The big dams with deep tailraces could hide an army of dead and you'd never know. I base that

observation on experience. Once injured or killed the eels do not float. Only the injured will make it an appreciable distance downstream as we've seen at Benton. The less the injury the greater the distance.

Nate Gray
Maine Department of Marine Resources
Scientist
Kennebec River Restoration

52. As the above citations show, not a single expert fisheries agency has stated the four dams now provide safe downstream passage for American eel. Instead, all fisheries experts say the dams do not provide safe downstream passage for American eel.

ACCORDING TO THE MAINE ATTORNEY GENERAL
THE EXISTING WATER QUALITY CERTIFICATIONS MAKE LEGAL
THE KILLING OF EVERY SINGLE AMERICAN EEL
IN THE KENNEBEC RIVER IN PERPETUITY.

53. The existing Water Quality Certifications are unlawful because, according to the Maine Attorney General, these Orders make legal and thus, prevent the State of Maine from stopping fish kills of American eel, no matter how severe or prolonged these fish kills are.

54. This is shown by the severe kill of American eels documented at the Benton Falls Dam on the Sebasticook River in fall 2004. According to Maine DEP correspondence, the Attorney General ruled that Maine had no legal authority to stop the ongoing fish kill or to prosecute the dam owner for violating Maine Law and the water quality standards of the Sebasticook River. The Maine Attorney General opined that because the Water Quality Certification Order for the Benton Falls Dam did not specifically require immediate, safe and effective passage for American eels, the fish kill was legal. The Attorney General then opined that Maine's only option to stop the ongoing fish kill was to ask the dam owner to voluntarily shut down the turbines at night for the remainder of the eel migration season. The dam owner refused to do so and the killing continued unabated for weeks -- until there were no more eels coming down the river to be killed.

The language in the Water Quality Certification Order for the Benton Falls Dam regarding downstream American eel passage is identical to that in the four subject dams here. The pertinent communication from 2004 is quoted here in its entirety. The first email communication, which describes the initial discovery of the eel kill, was written by fisheries scientist Nate Gray of the Maine Dept. of Marine Resources:

-----Original Message-----
From: Gray, Nate
Sent: Friday, October 15, 2004 4:09 PM
To: Squiers, Tom; Wippelhauser, Gail; Glowa, John M
Subject: Benton Eel kill

Returned to the tailrace of Benton Fall Hydroelectric facility this PM with Doug Watts after he reported a significant eel kill having happened sometime prior to 10/14/04. Using chest waders we inspected the tailrace outfall and found there were at least a few hundred eels killed over the past few weeks. Eels ranged from highly decomposed to cripples unable to swim. A bald eagle was noted taking off with eel remains. Nearly all sections of the tailrace that were wadeable contained the remains of adult eels that appeared to have been killed by turbine blade strike. Calvin Neal, the station operator had reduced flows to the turbine in order to more efficiently utilize water resources in generating electricity. This may account for the eels that were found that appeared whole but were nevertheless dead. On 10/14/04 I performed a routine downstream inspection of the site and was informed by Mr. Neal that a certain person in the form of Douglas Watts had come to the site and was very upset that there were dead eels below the project. I asked Mr. Neal to accompany me on an inspection walk down in the tail waters to see if there were any eels or alewives that had been entrained and killed by the turbine. Viewing conditions were less than ideal but I did note that there appeared to be a few dead eels in the tailrace. One in particular was quite visible. Having no chest waders with me I told Mr. Neal that I would return on 10/15/04 to confirm the presence of the eel(s) in the project tailwaters. Mr. Watts visited the office on the morning of 10/15/04 and told what he had seen below the Benton facility so I asked him to accompany me to show me what he had seen. He did so. There were more than he had seen the previous day. Below the rapids there is a large fall-out pool and the bottom here showed eels in various states of decay from very fresh to weeks old."

The second communication is from Dana P. Murch of the Maine DEP explaining why, according to the Maine Attorney General, the State of Maine had no legal authority to stop the ongoing fish kill due to the lack of explicit language in the Benton Falls Water Quality Certification Order requiring immediate, safe and effective passage for American eels at the dam:

-----Original Message-----
From: Murch, Dana P
Sent: Monday, October 18, 2004 2:42 PM
To: Fisk, Andrew C; Kavanah, Brian W
Cc: Merrill, Dennis L
Subject: Benton Falls eel kill

I met today at DMR to discuss the Benton Falls eel kill situation with Commissioner George Lapointe, Deputy Commissioner David Etnier, DMR staff (Tom Squiers & Gail Wippelhauser), and Mark Randlett of the AG's Office. It was acknowledged that the dam owner (Benton Falls Associates) is not currently in violation of either its FERC license or its DEP water quality certification for the project, both of which have eel passage provisions based on the 1998 KHDG Agreement. Under the terms of the Agreement, DMR is still studying "the appropriate permanent downstream eel passage measures to apply" to the project.

Commissioner Lapointe will take the lead in requesting that the dam owner voluntarily cease project generation at night during the eel migration season. It will be acknowledged to the dam owner that this request goes beyond the current requirements of the KHDG Agreement. If consensus is not reached with the dam owner, DMR retains the option, under the KHDG Agreement, of petitioning FERC to amend the project license to insert appropriate conditions for eel passage.

Commissioner Lapointe will also take the lead in setting up a meeting with the entire Maine

hydro industry to discuss eel passage issues. I plan to participate in this discussion.
Dana

This 2004 fish kill, perhaps more than any other item of evidence, proves the legal inadequacy of the existing Water Quality Certification Orders for the four subject dams, all of which contain the exact same language regarding downstream American eel passage as the Benton Falls Dam. In his email, Mr. Murch states that because the Maine BEP Certification Orders for the Benton Falls and Kennebec River dams fail to specifically require immediate, safe and effective downstream passage for American eels, the State of Maine is completely helpless to stop documented, severe fish kills of American eels at these dams -- and must allow these fish kills to continue unabated in perpetuity. In other words, Mr. Murch admits that the specific language (or lack thereof) in the existing Water Quality Certification Orders nullifies and supercedes Maine law and in fact makes severe fish kills of American eels 100 percent legal. Maine BEP has no right or authority to "make legal" a violation of Maine law or to issue a regulatory instrument which has the direct effect of nullifying and superceding laws enacted by the Maine Legislature and prevents the Maine DEP and Maine Attorney General from enforcing these laws when they are being openly violated.

55. The above correspondence shows why the Sept. 14, 2006 "Compliance Order" issued by Maine DEP regarding downstream American eel passage at the four dams has no relevance to this proceeding. This is because, according to the Maine DEP and Maine Attorney General, there is no enforceable language in the existing Water Certification Orders requiring immediate, safe and effect downstream passage for American eels for the dam owners to comply with. A "Compliance Order" must order the recipient to comply with something. The existing Water Quality Certification Orders contain no requirements for immediate, safe and effective passage for American eels. According to the Maine Attorney General, these Water Quality Certification Orders confer a legal right to the dam owners to kill as many American eels as they wish, in perpetuity, in direct violation of Maine statute; and prohibit the State of Maine from stopping this killing and to enforce Maine statutes which prohibit this killing. The Sept. 14, 2006 "Compliance Orders" do nothing except to "order" the dam owners to continue killing American eels. This is why, among other reasons, Petitioners did not appeal these Compliance Orders

when they were issued. There was nothing to appeal in these Orders because the Water Quality Certifications which they intend to "enforce" allow unlimited numbers of American eels to be killed at these dams in perpetuity.

THE EXISTING WATER QUALITY CERTIFICATIONS ARE UNLAWFUL BECAUSE THEY CONTAIN NO DEADLINES FOR COMPLIANCE AND ARE UNENFORCEABLE.

56. Water Quality Certification Orders are enforcement instruments. Enforcement instruments which lack compliance deadlines are, by definition, unenforceable. Enforcement instruments which are unenforceable are unlawful on their face. This fact is shown by recent documentary records excerpted below.

57. In its Jan. 19th, 2006, "Draft Findings of Fact and Order ..." in this instant proceeding, Maine DEP states:

> "Based on the above findings of fact, the Board concludes that the Lockwood, Hydro-Kennebec, Shawmut, and Weston projects are either currently in compliance or, as discussed above in Section 5(a), are *coming into compliance* with the provisions of the 1998 KHDG Agreement and the terms of their permits and/or water quality certifications with respect to providing passage for eels and anadromous fish." (emphasis added).

What does "*coming into compliance*" mean? Obviously, it means the projects are not now in compliance. If the projects were now in compliance, the Maine DEP would say they are in compliance. The above statement was made in January, 2006 -- nearly *eight years* after the subject Water Quality Certification Orders were issued. If a dam owner in 2006 is still not in compliance with a 1998 Certification Order then the dam owner is not in compliance.

58. In March 2006, the Maine DEP contradicted its above statement in a letter to the owners of the Hydro Kennebec Project which states:

> "Given these facts, it is the DEP's position that progress on determining and providing appropriate downstream eel passage measures at the Hydro Kennebec Project is overdue." [21]

59. How can the Maine DEP inform the Maine BEP on Jan. 19, 2006 that the dam owners are "coming into compliance" with their Water Quality Certifications, yet tell the same dam owners in March 2006 that compliance is "overdue" ? Which is it?

60. In the same March 3, 2006 letter, Mr. Dana P. Murch of Maine DEP informed the owners of the Hydro Kennebec Dam:

> "As discussed during the annual Kennebec River Diadromous Fisheries Meeting held on February 15, 2006, there are currently no downstream eel passage measures in place at, or proposed for, the Hydro Kennebec Project."[22]

Despite the above statement, the Maine DEP informed the Maine BEP on Jan. 19, 2006 that the four projects, including Hydro Kennebec, were in compliance or "coming into compliance" with the existing Water Quality Certification Orders. Yet in this March 3, 2006 letter, Mr. Murch informs Hydro Kennebec that they have done nothing, nor proposed doing anything, to bring them into compliance. How can a dam owner be in compliance, coming into compliance, not yet in compliance and not at all in compliance? After *eight years*?

61. In a letter to the Petitioners dated June 20, 2006, Dana P. Murch of Maine DEP described the actions FPL Energy proposed to take regarding American eels. None of the proposed actions do anything to actually provide safe passage for American eels at the dams:

> "With respect to downstream eel passage, FPL Energy and Merimil propose to conduct radio-telemetry and passive integrated responder (PIT) studies and visual tailrace observations to determine what routes eels are using to migrate

[21] Letter of Dana P. Murch, Maine DEP, to Brian Stetson, Brookfield Power Hydro Kennebec LLP, March 3, 2006.

[22] *Id.* at 3. Correspondence records show that since this March 2006 letter from Maine DEP, Hydro Kennebec has not provided safe downstream passage for American eels at the dam.

> downstream throught the projects and whether the existing sluices, deep gates and other gates are passing eels successfully. Based on the results of these studies, FPL and Merimil will either propose permanent downstream passage measures or continue consultation with state and federal fisheries agencies with respect to appropriate next steps."[23]

The FPL studies Mr. Murch describes above do absolutely nothing to provide safe passage for American eels. The described actions are proposals to conduct studies which, at some undefined point in the future, *may or may not* result in the provision of safe downstream passage for American eels at the dams. This is admitted by Mr. Murch by stating that, based upon these *future* studies, FPL and Merimil "will either propose permanent downstream passage measures or continue consultation with state and federal fisheries agencies ..."

62. In a letter to Hydro Kennebec LLP dated March 3, 2006, the Maine DEP states:

> "Under the terms of the 1998 KHDG Agreement, which have been incorporated into the water quality certification for the Hydro Kennebec Project, Hydro Kennebec LLP and other KHDG members were to join DMR and federal fisheries agencies in undertaking a three-year study to determine appropriate downstream eel passage measures at each of the KHDG member-owned dams. Based on the results of this study, all KHDG members were then to consult with DMR and federal fisheries agencies to attempt to reach agreement on the appropriate downstream eel passage measures to apply to each dam. The study and subsequent consultation were to end by June 30, 2002."[24]

This statement clearly shows that the deadline for completion of all downstream American eel passage studies and consultation on providing safe American eel passage was June 30, 2002. Record evidence, as discussed in detail by the Maine BEP on January 19, 2006, shows the

---

[23] Letter of Dana P. Murch, Maine DEP, to Douglas Watts and Ed Friedman, June 20, 2006. In this letter, Mr. Murch describes the above offer by FPL Energy as a "proposal for downstream eel passage" even though one month earlier, the Maine Dept. of Marine Resources and U.S. Fish & Wildlife Service had informed FPL Energy and Maine DEP that FPL's "plan" would not prevent "significant" mortality to Americen eels at FPL's dams.

[24] Letter of Dana P. Murch to Brian Stetson, Hydro Kennebec LLP, March 3, 2006 at 3.

required studies and consultation for downstream eel passage required by June 30, 2002 have still not been completed as of 2007.

Nearly *five years* have elapsed since June 30, 2002 -- and neither the required studies nor the consultation have been completed. At this date, in January 2007, the State of Maine and dam owners *still cannot agree* on whether the studies required to have been completed by June 30, 2002 have or have not been been completed.

63. The above documentary record shows that mandatory conditions in the 1998 Water Quality Certification Orders regarding safe passage for American eels are unenforceable and therefore unlawful. Based upon the letters by the Maine DEP cited above, the owners of the subject dams could forestall providing any safe downstream passage for American eels at their dams in perpetuity by claiming that more studies are needed before any concrete actions are taken. The documentary record already shows that the subject dam owners have employed this tactic for the past eight years and continue to employ it. The Maine DEP correspondence record shows the Department is willing to allow the dam owners to propose future studies *ad infinitum* in lieu of providing of safe downstream passage at their dams for American eels, even though final deadline for completion of all requisite studies and consultation about those studies was June 30, 2002 -- nearly five years ago. This is the textbook definition of an unenforceable compliance standard.[25]

FACTUAL OVERVIEW

64. Petitioner requests the Maine BEP modify the existing Water Quality Certifications for the

[25] The Maine DEP's position thus far is harmed, not helped, by the condition within the 1998 Water Quality Certification Orders which allows the State of Maine to petition the Federal Energy Regulatory Commission for license amendments requiring safe downstream eel passage in the event that consultation between dam owners and the State does not result in agreement for measures to protect American eel at the dams. Records herein show the consultation process required by law to have been completed by June 30, 2002 was never done; and the consultation process conducted in 2006 -- as a direct result of the instant Petition proceeding -- produced no results. Today and since 2002, the State of Maine has refused to exercise its right to petition FERC for resolution of this issue. By refusing to exercise its right to petition FERC for the past 5 years, the State of Maine has nullified this key portion of the 1998 Water Quality Certification Orders by doing nothing.

four dams to require immediate, safe and effective upstream and downstream passage for all native, migratory fish species.

65. The Water Quality Certification Orders do not require immediate, safe and effective upstream passage for any native, migratory fish species. Petitioner admits and agrees that some measure of upstream passage for one species, juvenile American eel, is now being provided at the dams.

66. The Water Quality Certification Orders do not require immediate, safe and effective downstream passage for any native, migratory fish species, nor is any safe and effective downstream passage provided for these species at the dams. Petitioner admits and agrees that some measure of downstream passage for certain fish species, but not the American eel, is to be provided at *one* of the four dams, the Hydro Kennebec Dam, in 2007.

67. Without equivalent and concurrent measures in place at the dams immediately above and below the Hydro Kennebec Dam (Weston, Shawmut and Lockwood), this laudable effort by Hydro Kennebec LLP will prove useless. The fish will already be dead before they reach the Hydro Kennebec Dam (killed in the turbines of Weston and Shawmut); or will be killed in the turbines of Lockwood (immediately after safely passing the Hydro Kennebec Dam).

CONCLUSION

68. Thus far, in this instant proceeding, the Maine DEP has disputed the veracity of its own factual and legal assertions in the following seminal regulatory cases:

a. The Maine BEP's Water Quality Certification Orders issued in April 2003 for five of S.D. Warren Company's Presumpscot River hydro-electric dams.

b. The unanimous ruling of the Maine Supreme Judicial Court in 2005 which upheld and affirmed the Maine BEP's Water Quality Certification Orders for S.D. Warren's Presumpscot River hydro-electric dams.

c. The Maine BEP's Water Quality Certification Orders issued in September 2005 for the Gulf Island and Deer Rips Dams on the Androscoggin River.

d. The unanimous ruling of the United States Supreme Court in 2006 affirming and upholding the State of Maine's legal and factual arguments regarding its right under the federal Clean Water Act to ensure full compliance with Maine water quality statutes at hydro-electric dams in Maine through the issuance of Water Quality Certification Orders pursuant to §401 of the Clean Water Act and Maine law.

69. In the instant proceeding, we have seen the Maine DEP declare that the killing of migrating fish at hydro-electric dams is not a form of pollution and is not a threat to the environment, but then inform the United States Supreme Court that it is.

70. We have seen the Maine DEP argue that Water Quality Certification Orders must contain specific "re-opener clauses" in order to be modified, yet have seen the Maine DEP declare in WQCs for the Gulf Island and Deer Rips Dams that water quality certification orders can be modified without re-opener clauses.

71. We have seen the Maine DEP declare that eight hour per evening turbine shutdowns at S.D. Warren's Presumpscot River hydro-electric dams are necessary to ensure compliance with Maine water quality standards protecting American eels, but have seen Maine DEP argue in this instant proceeding that the ongoing killing of American eels at the four Kennebec River dams is not even a "threat to the environment" -- let alone a violation of Maine water quality standards.

72. We have reviewed an October 10, 2002 Cease and Desist Order from the Maine DEP which ordered the owners of the American Tissue Dam on Cobbosseecontee Stream to immediately cease evening operations to stop the killing of adult American eels, yet have heard the Maine DEP argue in this proceeding that the killing of an infinite number of American eels each and every year at the subject Kennebec River dams is completely legal.

73. We have reviewed an August 2000 Notice of Violation and Consent Order by the Maine BEP which fined the owners of the Benton Falls Dam $17,000 for causing a severe fish kill of

migrating alewives in October 1999, yet have heard the Maine DEP argue in this proceeding that the unlimited killing of migrating fish in the turbines of the four Kennebec River Dams is completely legal.

74. In the instant proceeding, we have seen expert fisheries scientists from the Maine Dept. of Marine Resources and the U.S. Fish & Wildlife Service inform the Maine DEP in May 2006 that the *status quo* passage conditions at the four Kennebec River dams are causing, and will continue to cause, the death of most adult American eels trying to migrate past the dams, and the Maine DEP issue "Compliance Orders" to the dam owners in September 2006 declaring these *status quo* conditions are in full compliance with Maine law.

75. These facts lead the Petitioner to conclude that the existing Water Quality Certification Orders for the four subject dams are wholly inadequate to enforce and uphold Maine law. These Orders contain no enforceable and transparent performance standards nor do they contain clear, explicit date-certain deadlines for compliance with their specific conditions.

76. Past practice dating from issuance of these Orders on July 31, 1998 to the present moment shows that the Maine DEP has been either unable or unwilling to ensure that these enforcement instruments achieve their sole statutory purpose of achieving full compliance with Maine law and the specific water quality standards and designated uses established for the Kennebec River by the Maine Legislature. As such, these Orders are fundamentally defective and must be modified so they can achieve their sole purpose for existing: to enforce the Laws of the State of Maine.

77. The sole purpose of these Water Quality Certification Orders was succinctly stated by U.S. Senator Edmund Sixtus Muskie of Rumford, Maine, the author of the United States Clean Water Act, as quoted by the State of Maine itself to the United States Supreme Court just 12 months ago:

> "This provision may be the most important action of this legislation. I call the Senate's attention to section 21. This section requires that any applicant for a federal license or permit obtain certification of reasonable assurance of compliance

with water quality standards before that applicant can receive any license or permit." (Sen. Edmund S. Muskie. 116 Cong. Rec. 8,984 (1970) on H.R. 4148 after amendment by the Conference Committee).

THE PETITIONER HAS STANDING AS AN EXPERT.

78. Petitioner Douglas Harold Watts has been a resident of Augusta, Maine since July 1991. Since 1991 Mr. Watts has intensively studied the natural history of the Kennebec River and its native fauna through field studies and historical research. Mr. Watts has been discovering, photographing and documenting the killing of native, migratory fish in the turbines of various hydro-electric dams in the Kennebec River drainage since 1997.

79. As an interested citizen, a professional journalist and a scientific/historic consultant for various non-profit river conservation organizations since 1991, Mr. Watts has been intimately involved with the re-licensing and post-licensing proceedings of virtually every hydro-electric dam in the middle and lower Kennebec River drainage, including the Edwards, Lockwood, American Tissue, Fort Halifax, Benton Falls, Burnham, Hydro Kennebec, Shawmut, Weston, Anson, Abenaki and all four of the Messalonskee Stream hydro-electric dams.

80. As a professional scientific and historic consultant for Friends of the Presumpscot River, American Rivers and Friends of Sebago Lake, Mr. Watts researched and wrote the seminal natural history of the native fisheries of the Presumpscot River and Sebago Lake and the impacts to these fish populations caused by the European settlement of the region in 1730. Mr. Watts' research has been utilized by the Maine Supreme Judicial Court and the United States Supreme Court in their recent decisions on the re-licensing of S.D. Warren Company's hydro-electric dams on the Presumpscot River.

81. In 1998, Mr. Watts was a plaintiff and scientific research consultant in the federal court case which forced the United States Dept. of Interior to declare Atlantic salmon in a portion of Maine to be a federally endangered species (Defenders of Wildlife et al. v. Babbitt).

82. Mr. Watts and his brother, Timothy Watts, are now plaintiffs in a federal court action to force the United States Dept. of Interior to issue a formal ruling on the Watts' Nov. 2004 petition to declare the American eel an endangered species pursuant to the U.S. Endangered Species Act. (Watts v. Kempthorne, 06-CV-01282.).

83. In May 2005, Mr. Watts, his brother Timothy, Mr. Ed Friedman and Ms. Kathleen McGee filed a formal petition with the U.S. Dept. of Interior to list the native Atlantic salmon of the Kennebec River as a federally endangered species. On Nov. 14, 2006, the U.S. Dept. of Interior filed a positive 90-Day finding on this petition (FR 66298, Vol. 71, No. 219). Final listing action by the U.S. Dept. of Interior is expected in 2007.

84. Mr. Watts is a founder of the $50 million Penobscot River Restoration Initiative to restore the native, sea-run fisheries of the Penobscot River and restore the treaty fisheries rights of the Penobscot Indian Nation via the purchase and removal of the Veazie and Great Works Dams and decommissioning of the Howland Dam on the Piscataquis River. (www.penobscotriver.org)

85. Mr. Watts has researched and published the only extant documentary histories of the native migratory fisheries of the Saco, Presumpscot, Androscoggin, Kennebec and Penobscot Rivers. Portions of this historical research were utilized by the Committee on Maine Atlantic Salmon of the National Academy of Sciences in their research volume, Atlantic Salmon in Maine. (National Academy Press, 2004.)

86. As a professional outdoors journalist, Mr. Watts has written on the topic of fisheries biology and river conservation for Maine Environment, Wild Salmon & Steelhead, Tide: The Journal of the Coastal Conservation Association, the Maine Sportsman, the Atlantic Salmon Journal, the Capital Weekly, the Lewiston Sun-Journal and Northern Sky News.

87. Mr. Watts and his brother Timothy's work to protect the American eel and other native, migratory fish of New England's rivers and coastline has been described in the New York Times, the Washington Post, the Los Angeles Times, the Boston Globe, National Public Radio and other regional, national and international news outlets.

88. Mr. Watts is the author of A Documentary History of the Alewife (*Alosa pseudoharengus*) in Maine and New England.

INCORPORATION OF PREVIOUSLY SUBMITTED EVIDENCE BY REFERENCE.

89. This pre-filed testimony incorporates by reference all material provided by Petitioner Douglas H. Watts in his Sept. 28, 2005 Petition and appendices submitted to the Maine BEP pursuant to 38 MRSA §341-D and Ch. 2 §27 of Maine DEP rules. It has been agreed by all parties at various pre-hearing conferences during 2006 that Mr. Watts' Sept. 28, 2005 Petition and appendices are already part of the official record for this proceeding and need not be resubmitted here.

I declare under the penalty of perjury that the above is to the best of my knowledge true and correct.

Dated January 17, 2007.

_____

Douglas H. Watts, Petitioner
Post Office Box 2473
Augusta, Maine 04338