Petition Before the Board of Environmental Protection For Modification of Maine Water Quality Certificates At Four Kennebec River Hydroelectric Dams (Weston, Shawmut, Hydro Kennebec, Lockwood)

Douglas H. Watts, Petitioner

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I. INTRODUCTION

Pursuant to 38 MRSA §341-D, §343-B and Chapter 2, §27 of the Rules of the Maine Department of Environmental Protection (Revocation, Modification or Suspension of Licenses), Petitioner Douglas H. Watts of Augusta, Maine requests the Maine Board of Environmental Protection modify Water Quality Certificates issued for the Weston (FERC No. 2325), Shawmut (FERC No. 2322) , Hydro Kennebec (FERC No. 2611) and Lockwood (FERC No. 2574) Hydroelectric Dams on the Kennebec River to provide immediate safe downstream passage for Atlantic salmon, Alewife, American shad, Blueback herring and American eel. These dams are located in Skowhegan, Fairfield, Waterville and Winslow, Maine.

The Weston and Shawmut Dams are owned by FPL Energy Maine. The Lockwood Dam is owned by Merimil Limited Partnership. The Hydro Kennebec Dam is co-owned by Great Lakes Hydro America LLC and Madison Paper Industries.

Pursuant to Chapter 2, §27 of the Rules of the Maine Department of Environmental Protection (Revocation, Modification or Suspension of Licenses), Petitioner Douglas H. Watts cites the following sub-sections of §27 in support of this Petition:

"C. The licensed activity poses a threat to human health or the environment."

The lack of safe downstream passage at these dams poses an acute threat to five native migratory fish species of the Kennebec River, two of which are now being considered for protection under the United States Endangered Species Act. The lack of safe downstream passage at these dams can and does result in these fish being killed and severely injured from entrainment and physical contact with the metal turbines used by these dams to generate electricity.

"D. The license fails to include any standard or limitation legally required on the date of issuance;"

The failure of Water Quality Certificates issued for the four dams to require safe downstream passage for native, migratory fish causes the Kennebec River to fail to meet its statutory water quality standards as required under State and Federal Law. 38 MRSA §§464-465 *et seq*. and 33 U.S.C. §1251-1387.

"F. There has been a change in any condition or circumstance that requires revocation, suspension or a temporary or permanent modification of the terms of the license;"

On July 6, 2005 the United States Department of the Interior began a 12 month status review to determine if the American eel (*Anguilla rostrata*) should be declared an endangered species pursuant to the United States Endangered Species Act. Federal agencies are now considering protection of Atlantic salmon (*Salmo salar*) of the Kennebec River under the United States Endangered Species Act. These circumstances did not exist during issuance of the Water Quality Certificates now in effect at these four dams. The mandated provision of upstream fish passage at the Lockwood Dam in Waterville, Maine (the lowermost dam on the Kennebec River) in May 2006 allows native migratory fish to be transported above the Lockwood Dam next spring. These fish will be subjected to death and injury during their natural migration to their marine habitat because the four dams described in this Petition lack any safe downstream passage for them.

"G. The licensee has violated any law administered by the Department."

Lack of safe downstream passage for native, migratory fish species at the four dams subject to this Petition is causing the Kennebec River to fail to meet its statutory water quality standards. 38 MRSA §§464-465 *et seq*. Under Maine Law it is illegal to kill an anadromous Atlantic salmon in the waters of the State of Maine.

II. Petitioner's Interest.

Petitioner Douglas H. Watts has lived along the Kennebec River in Augusta, Maine since 1991. Mr. Watts lives at 36 Northern Avenue, Apt. 14, Augusta, Maine 04330. His telephone number is 207-626-8178. Mr. Watts is a writer and photographer who earns a portion of his living writing about and photographing the native migratory fish species of the Kennebec River. The lack of safe and effective downstream passage for Atlantic

salmon, Alewife, American shad, Blueback herring and American eel at the above referenced dams prevents the recovery of these native fish species to their historic range and abundance in the Kennebec River due to their death and injury in turbines of the Weston, Shawmut, Hydro Kennebec and Lockwood Dams. The death of these fish in these dam turbines impairs Mr. Watts' ability to continue making a portion of his living selling stories and photographs describing the recovery of the native, migratory fish species of the Kennebec River.

From 2003 to 2005, Mr. Watts has filmed and produced a 75 minute video presentation titled The Kennebec: A River Reborn which documents the restoration of the Kennebec River's native migratory fisheries since the removal of the Edwards Dam in Augusta in 1999. Partial funding for this documentary was provided by the National Fish & Wildlife Foundation. This video has now been requested and viewed by citizens, scientists and policy makers in 11 nations including China, India, Bangladesh, Turkey, Australia, Canada and England as well has citizens and scientists from 12 states in the United States. The ability of Mr. Watts to continue making video documentaries depicting the restoration of the Kennebec River's native migratory fisheries is directly harmed by the continued lack of safe and effective downstream fish passage at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams.

In November 2004, Mr. Watts and his brother, Timothy A. Watts, successfully petitioned the United States Dept. of Interior to initiate a 12-month status review to determine if the American eel throughout its natural range in the United States qualifies for protection under the United States Endangered Species Act. Mr. Watts' demonstrated interest in preventing the extinction of the American eel in the Kennebec River and throughout its natural range in the United States is directly harmed by the continued lack of safe downstream passage for adult American eel at the four dams referenced in this Petition.

In April 2005, Mr. Watts, Timothy A. Watts and Friends of Merrymeeting Bay petitioned the United States Department of Interior to declare the native Atlantic salmon of the Kennebec River an endangered species pursuant to the United States Endangered Species Act. Mr. Watts' demonstrated interest in preventing the extinction of the native Atlantic salmon of the Kennebec River is directly harmed by the continued lack of safe downstream passage for Atlantic salmon at the four Kennebec River dams referenced in this Petition.

Since 1997, Mr. Watts has documented and alerted State of Maine officials to numerous severe kills of native American eel and alewives at several hydroelectric dams in the Kennebec River drainage and has attempted via the regulatory process to ensure that further fish kills of this type do not re-occur. One severe fish kill of juvenile alewives discovered by Mr. Watts, at the Benton Falls Dam on the Sebasticook River in October 1999, resulted in an enforcement action by the State of Maine under 38 M.R.S.A. §§364-365 and the payment of a $17,000 fine by the dam owner. Mr. Watts' demonstrated interest in stopping the killing of native, migratory fish species of the Kennebec River at hydroelectric dams is directly harmed by the lack of safe and effective downstream passage for these species at the four dams referenced in this Petition.

Since 1991, Mr. Watts has been an active citizen participant in numerous regulatory proceedings conducted by the State of Maine and the Federal Energy Regulatory Commission regarding restoration of the native, migratory fisheries of the Kennebec River, including providing oral testimony in 1992 in support of the State of Maine's comprehensive planning document for the Kennebec River: Kennebec River Resource Management Plan: Balancing Hydropower Generation and other Uses. Mr. Watts' documented interest and long-term participation in public proceedings aimed at restoring the native, migratory fisheries of the Kennebec River is harmed by the continued lack of

safe and effective downstream passage for these species at the four dams referenced in this Petition.

Mr. Watts and the volunteer organization which he helped found in 1996, Friends of the Kennebec Salmon, has been a formal intervenor in federal re-licensing proceedings for the Lockwood Dam, the Abenaki and Anson Dams, and federal license surrender of the Fort Halifax Dam. In all of these federal proceedings, Mr. Watts has expressed a consistent interest in restoration of the native, migratory fishes of the Kennebec River to their historic range and abundance. This interest is harmed by the continued lack of safe and effective downstream passage for these native, migratory fish species of the Kennebec River at the four dams referenced in this Petition.

As a citizen of the United States of America and the State of Maine, Mr. Watts has a reasonable expectation the State of Maine will enforce Maine's water quality laws as they respect the Kennebec River and its native, migratory fish species at the four dams referenced in this Petition.

III. PROCEDURAL HISTORY

On July 31, 1998 the State of Maine amended previously issued Water Quality Certificates for the Weston, Shawmut, Hydro Kennebec and Lockwood Dams according to terms and conditions of the 1998 Kennebec River Settlement Accords ("Accords"). These Water Quality Certificates were issued and amended by the State of Maine pursuant to the Federal Water Pollution Control Act, 33 U.S.C. §1251-1387 ("Clean Water Act") and the State of Maine's Water Classification Law, 38 M.R.S.A. §§464-470 (2001 & 2003 Supp.) ("Water Classification Law").

The 1998 Kennebec River Settlement Accords was a privately negotiated agreement between the State of Maine, owners of seven hydroelectric dams in the Kennebec River drainage, federal fisheries agencies and five non-profit conservation organizations. The agreement attempted to resolve outstanding regulatory issues affecting the restoration of the native, migratory fish populations of the Kennebec River, the third largest river system in New England. The Accords represented the latest of many attempts to restore the Kennebec River's native migratory fish species to their historic range and abundance after more than a century of dam construction and severe water pollution.

A key component of the Accords was a financial contribution by Kennebec River hydroelectric dam owners (the "Kennebec Hydro Developers Group") toward the cost of removing the Edwards Dam in Augusta, Maine from the Kennebec River. The Edwards Dam, illegally constructed at the river's head of tide in 1837 without effective fish passage, was identified by the State of Maine as the most critical obstacle to restoring the Kennebec River's native, migratory fish populations. (*See*: State of Maine. Kennebec River Resource Management Plan: Balancing Hydropower Generation and other Uses. Maine State Planning Office, 1993; Comments of State of Maine on Kennebec River DEIS, FERC/DEIS-0097, Evan D. Richert, Maine State Planning Office, April 4, 1996.)

In exchange for a multi-year financial contribution by Kennebec River hydroelectric dam owners, the State of Maine, federal agencies and private conservation groups granted these dam owners multi-year delays of pending legal requirements to provide upstream and downstream passage for native, migratory fish at their dams. This private agreement was announced to the public in May, 1998 as the Kennebec River Settlement Accords. Legal obligations of KHDG dam owners negotiated within the Accords were submitted to the Federal Energy Regulatory Commission for inclusion in the federal licenses for each of the dams. Simultaneously, the State of Maine amended its previously issued Water Quality Certificates for each dam to incorporate the terms and conditions of the Accords.

Petitioner Douglas H. Watts was not involved in crafting the Accords, was not aware of the Accords until they were publicly announced, and was not a signatory to them. In 1998, as a staff reporter for the Maine Sportsman magazine, Mr. Watts published a long and unflattering article about the Accords soon after they were made public. In this article, Mr. Watts included excerpts of an interview conducted with Mr. Gordon Russell of the U.S. Fish & Wildlife Service in which Mr. Russell described the Accords as "a deal with the Devil."

In 1999, the Edwards Dam was removed from the bed of the Kennebec River in Augusta, Maine. Since 1999, the seven hydroelectric dams subject to the Accords have been operated under State of Maine Water Quality Certificates amended in July, 1998.

Pursuant to the Accords, State of Maine Water Quality Certificates for the Weston, Shawmut, Hydro Kennebec and Lockwood Dams were amended to remove previous requirements for date-certain installation of safe and effective downstream passage for indigenous fish species. The amended Water Quality Certificates contain *no deadline* for when safe downstream passage must be provided at the four dams. Prior to 1998, State of Maine Water Quality Certificates for these four dams required safe and effective downstream passage to be installed between 1999 and 2001. (*See*: State of Maine. Motion to Intervene, Protest and Comments of the State of Maine before the Federal Energy Regulatory Commission. June 13, 1997 at 20-21.)

State of Maine Water Quality Certificates, as amended in 1998, do not assert the Weston, Shawmut, Hydro Kennebec and Lockwood Dams provide safe and effective downstream passage for native, migratory fish. Instead, the 1998 Water Quality Certificates arbitrarily defer installation of safe and effective downstream passage at these four dams to an unspecified moment in the future which has still not arrived.

On June 13, 1997 the State of Maine filed with the Federal Energy Regulatory Commission a 200+ page document titled Motion to Intervene, Protest and Comments of the State of Maine. This voluminous document was instigated by an April 1997 filing before the Federal Energy Regulatory Commission by Kennebec and Sebasticook River hydroelectric dam owners titled Request for Amendment of License Conditions for the Kennebec Hydro Developers Group. April 23, 1997.

In this 200+ page filing, Kennebec and Sebasticook River hydroelectric dam owners asked the Federal Energy Regulatory Commission to remove date-certain deadlines for installation of upstream and downstream fish passage at seven hydroelectric dams on the Kennebec and Sebasticook Rivers. These legal deadlines required installation of permanent upstream and downstream fish passage at all seven dams between 1999 and 2001.

In its June 13, 1997 response, the State of Maine argued strenuously against the dam owners' request for indefinite delays in provision of upstream and downstream fish passage at the Lockwood, Hydro Kennebec, Shawmut and Weston Dams. At this time, Maine Water Quality Certificates for these dams required permanent upstream and downstream fish passage to be installed between 1999 and 2001. Maine declared none of these deadlines could be deferred without the dam owners filing for amendments of their existing State of Maine Water Quality Certificates. (*See*: State of Maine. Motion to Intervene, Protest and Comments of the State of Maine before the Federal Energy Regulatory Commission. June 13, 1997 at 20-21.)

Nowhere in this 200+ page filing did the State of Maine did Maine suggest construction of safe, effective downstream passage at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams was *not* necessary to protect native, migratory fish species. Nowhere in

this 1997 filing did the State of Maine declare these four dams were *already* providing safe and effective downstream passage for migratory fish. In this 1997 filing, the State of Maine demanded that safe and effective downstream passage at all four dams be constructed two years after removal of the Edwards Dam *at the latest*. Maine asserted this "modest" alteration itself would require amendment of existing State of Maine Water Quality Certificates for the four dams, which called for installation of downstream fish passage facilities by 2001 at the latest. Id.

Just eleven months after this 200+ page filing, the State of Maine announced via the 1998 Accords that installation of safe and effective downstream passage at Kennebec River dams would be delayed indefinitely.

The State of Maine then asked the Federal Energy Regulatory Commission to remove all of its previous, date-certain license requirements for downstream fish passage at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams. And then the State of Maine amended its Water Quality Certificates for these four dams to remove all deadlines for construction of safe downstream passage which the State of Maine had *demanded* just eleven months earlier. Maine provided no scientific or factual justification for these changes.

The regulatory record as summarized above shows that in 1998 the State of Maine completely abandoned its requirements for date-certain installation of downstream fish passage facilities at the Weston, Shawmut, Hydro Kennebec and Lockwood. The record shows this abandonent had no scientific or factual basis. The State of Maine's 1998 amendments to Water Quality Certificates for these dams -- which removed *all* deadlines for downstream fish passage -- are arbitrary, capricious and illegal. These amendments were illegal in 1998 and they are illegal today. Tens of thousands of fish have had their heads removed from their bodies by these dams since 1998 as a result. At this writing (10

p.m., 22 September 2005) , a female American eel is probably having her head ripped from her body in the turbines of the Shawmut Dam.

Adult Atlantic salmon, Alewife, American shad and Blueback herring must return to their marine environment after giving birth in their freshwater spawning environment. Their offspring, born in freshwater, must migrate 60 to 100 miles down the Kennebec River to the Atlantic Ocean for two to five years of growth before they reach sexual maturity and migrate back up the Kennebec River to spawn. To accomplish these arduous tasks, native migratory fish residing in the Kennebec River above the Lockwood Dam in Waterville, Maine must now safely pass one, two, three or four hydroelectric dams in order to complete their lifecycle and give birth to their children. The American eel, which spends its adult life in freshwater and gives birth in saltwater, must safely migrate past one, two, three or four of these dams as sexually mature adults in order to reach their spawning grounds in the Atlantic Ocean east of Bermuda.

If the hydroelectric dams of the Kennebec River did not require large, rapidly spinning metal turbines to generate electricity, the safe migration of native fish species past these dams would not be a problem. If these spinning, metal turbines did not severely harm and injure native migratory fish, they would not be a problem. If native, migratory fish were provided a safe and easily accessible migration route which allowed them to avoid these spinning, metal turbines, there would not be a problem.

Unfortunately, the large, spinning metal turbines of these dams are lethal to migratory fish, creating an effect similar to sticking your arm in a wood chipper, food processor, kitchen blender or window fan. None of the four Kennebec River dams referenced in this Petition are equipped with safe, accessible migration routes for migratory fish which allow these fish to avoid coming into contact with the spinning, metal blades of the turbines at these dams. This is a problem.

Affected indigenous migratory fish species include the Atlantic salmon (*Salmo salar*); the American eel (*Anguilla rostrata*); the Alewife (*Alosa pseudoharengus*); the Blueback herring (*Alosa aestivalis*) and the American shad (*Alosa sapidissima*).

The lack of safe egress for these indigenous fish species at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams is a violation of State of Maine water quality standards 38 MRSA §§464-465 *et seq*.

Through this Petition, Douglas H. Watts requests the State of Maine modify its Water Quality Certificates for these dams to require *immediate* safe passage for these indigenous fish species so they can reach the Atlantic Ocean, continue their natural lifecycle and give birth to their children.

IV. INDIGENOUS AQUATIC SPECIES AFFECTED

A. Atlantic salmon *(Salmo salar)*

Anadromous Atlantic salmon are now present above the Weston, Shawmut, Hydro-Kennebec and Lockwood Dams due to annual stockings of juvenile Atlantic salmon in the Sandy River drainage above Farmington, Maine by the Maine Atlantic Salmon Commission. Beginning in May 2006, adult anadromous Atlantic salmon entering the fish lift at the Lockwood Dam in Waterville, Maine are scheduled to be transported by aerated tank truck to portions of the Kennebec River drainage above the four aforementioned dams. Post-spawned adults and juvenile salmon require safe downstream passage at these dams. Under Maine Law it is illegal to kill an anadromous Atlantic salmon in the waters of the State of Maine.

B. Alewife ***(Alosa pseudoharengus)***

Adult alewife are released each spring into their native spawning habitat in Wesserunsett Lake in Cornville, Maine by the Maine Department of Marine Resources. Wesserunsett Lake is located above the Shawmut, Hydro-Kennebec and Lockwood Dams. Beginning in 2006, adult anadromous alewives entering the fish lift at the Lockwood Dam in Waterville, Maine are to be transported by aerated truck to portions of the Kennebec River drainage above some or all of the four aforementioned dams. Post-spawned adults and juvenile alewives from these releases require safe downstream passage at these dams in order to complete their lifecycle and give birth. Photographic evidence in this Petition shows post-spawned adult alewives from these releases are being entrained and killed in the turbines of the Shawmut Dam.

C. American shad ***(Alosa sapidissima)***

Juvenile American shad are released each spring into the Kennebec River above the Hydro-Kennebec and Lockwood Dams. Beginning in 2006, adult American shad entering the fish lift at the Lockwood Dam in Waterville, Maine are to be transported by aerated truck to portions of the Kennebec River drainage above some or all of the four aforementioned dams. Adult and juvenile American shad from these releases require safe downstream passage at these dams in order to complete their lifecycle and give birth.

D. Blueback herring (*Alosa aestivalis*)

Native Blueback herring are now found in large numbers directly below the Lockwood Dam on the Kennebec River in Waterville, Maine. Beginning in 2006, adult blueback herring entering the fish lift at the Lockwood Dam in Waterville, Maine are to be transported by aerated truck to portions of the Kennebec River drainage above some or all

of the four aforementioned dams. Adult and juvenile Blueback herring from these releases require safe downstream passage at these dams in order to complete their lifecycle and give birth.

E. American eel *(Anguilla rostrata)*

American eel occur naturally in the Kennebec River watershed above the Weston, Shawmut, Hydro-Kennebec and Lockwood Dams. Juvenile American eels are now being passed over most of these dams via recently installed fish passage facilities specifically designed for juvenile American eel. Once they reach sexual maturity, American eel require safe downstream passage at all of these dams in order to complete their lifecycle and give birth.

State of Maine officials have been aware *for at least eleven years* that adult American eels are killed in substantial numbers in the turbines of hydroelectric dams across the State of Maine each fall. In December 1994, State of Maine fisheries agency staff met with commercial American eel harvesters in Bangor and Machias, Maine. A December 14, 1994 account of these meetings written by Frederick W. Kircheis, a fisheries scientist with the Maine Dept. of Inland Fisheries & Wildlife, states:

"Many eel harvesters commented on the 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 the result of legal action, an agreement with the dam operator to cease generating after dark from mid-August to mid-October, the prime time for migrating eels. This agreement has resulted in a noticeable increase in the pounds of eels captured at his weir, downstream from the dam. It was suggested that screens with a 1 inch bar mesh be placed above turbines. Perhaps

research can produce an eel-exclusion device to be placed above turbines or generation agreements can be reached with other dam owners similar to the above example."

V. NEED FOR SAFE DOWNSTREAM PASSAGE

The five indigenous fish species of the Kennebec River described above are highly migratory animals which require access to freshwater and marine aquatic environments as part of their natural lifecyle. In order to successfully complete their lifecycle and give birth, each of these species must have safe egress from their freshwater home to their marine home. Artificial dams erected within the migratory paths of these species hinder or prevent these animals from reaching their marine homes and completing their lifecycle.

Except during periods of very high flows, all river water at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams is guided into the power turbines of these dams to generate electricity. Owners of the dams provide no alternative routes for migrating indigenous fish species so they can avoid entering the project turbines. The power turbines of these dams consist of large metal blades which spin rapidly due to the movement of river water in response to gravity. Fish forced through these turbines are killed or injured due to direct impact with the metal blades or by sudden changes in water pressure which ruptures their internal organs.

Passage through hydroelectric turbines is not considered a safe or effective method of downstream passage for migratory fish species native to the Kennebec River. All efforts by Maine and federal fisheries scientists to devise safe downstream passage methods at dams consist of installing mechanical devices which guide fish *away* from hydroelectric turbines and *toward* safe, alternative passage routes. The effectiveness of such devices ("downstream fishways") is judged by the extent to which they successfully guide migrating fish *away* from hydroelectric turbines and *toward* migration routes which do

not kill or injure the fish. This strategy is premised on the fact that a fish killed or injured in a hydroelectric dam turbine cannot continue its migration, complete its natural lifecycle or give birth to its children.

Today, safe alternatives to turbine passage are limited to non-existent at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams. State of Maine Water Quality Certificates for these dams do not require any safe, alternative route for fish instead to passage through the dam turbines. During the migration periods for adult Atlantic salmon, Alewife, American shad, Blueback herring and American eel, operators of the Weston, Shawmut, Hydro Kennebec and Lockwood Dams endeavor to guide 100 percent of river flow into the dam turbines. Hydrologic data for the Kennebec River shows that during the migration period for these animals, nearly all of the Kennebec River flow at each dam is guided by dam operators into the dam turbines. This operational practice prevents fish from gaining access to any migration route past the dam except via the dam turbines.

A. Physical Effects of Turbine Passage on Migrating Fish

Since 1999 Petitioner Douglas Watts and other citizens of the Kennebec River Valley have taken photographs of fish forced to migrate through the metal turbine blades of hydroelectric dams on the Kennebec and Sebasticook Rivers and Cobbosseecontee Stream. These photographs provide objective, documentary evidence of the effect of turbine passage on migratory fish attempting to pass through them. These photographs are included in this Petition. Accounts and descriptions of the death and injury of migrating fish in the Kennebec River drainage are contained in the annual Kennebec River Restoration Reports of the Maine Department of Marine Resources (1987-2004). Detailed discussions of turbine-induced mortality of American eel are contained in the administrative record for the re-licensing of the Dundee, Gambo, Mallison, Little Falls and Sacarappa Falls Dams on the Presumpscot River and the Eel Weir Dam at the outlet

of Sebago Lake. Detailed discussions of turbine-induced mortality of American eel are contained in the Federal Register Notice of the U.S. Dept. of the Interior dated July 6, 2005 initiating a status review of the American eel pursant to the United States Endangered Species Act.

A June 17, 2005 letter of Dana Murch, Maine Department of Environmental Protection, states the Department believes American eels are now being killed in the turbines of the four hydroelectric dams referenced in this Petition and announces that Maine Department of Marine Resources staff plan to look for dead eels below these dams during the fall of 2005. This June 17, 2005 letter states the Maine Department of Marine Resources will: "check the Lockwood, Hydro-Kennebec, Shawmut and Weston Projects [on the Kennebec River] for eel mortalities during 2005."

In the November 2004 edition of the Belfast, Maine based Northern Sky News, Maine Dept. of Marine Resources senior fisheries scientist Gail Wippelhauser (Ph.D., 1986, University of Maine), stated the severe American eel kill documented at Benton Falls Dam on the Sebasticook River in fall 2004 was not an isolated incident. Wippelhauser further stated: “I think the same thing is probably happening at every hydro facility on the East Coast that has a run of eels.”

B. Safe Downstream Passage Methods

During the past decade State of Maine and federal fisheries scientists and cooperating dam owners have devised methods which allow Atlantic salmon, American shad, Alewife and American eel to migrate downstream past hydroelectric dams without being injured or killed in dam turbines. These downstream passage devices allow migrating fish to safely reach their marine environment, complete their lifecycle and give birth. Downstream fish passage systems designed for juvenile Alewives and American shad are

now in operation at the Fort Halifax, Benton Falls and Burnham Dams on the Sebasticook River and the American Tissue Dam on Cobbosseecontee Stream. Downstream fish passage systems designed for adult American eel are now in place on the American Tissue Dam on Cobbosseecontee Stream and under construction on the Benton Falls and Burnham Dams on the Sebasticook River. These downstream passage systems are designed to accommodate the natural migratory behavior of the target species so as to prevent the fish from coming into contact with the metal turbine blades and being killed or injured by them.

No similar downstream fish passage systems exist on the Weston, Shawmut, Hydro Kennebec or Lockwood Dams. The State of Maine Water Quality Certificates for these dams do not require *any* downstream passage systems at these dams to prevent migrating fish from being injured and killed in their metal turbines as they attempt to migrate to the Atlantic Ocean.

VI. STATEMENT OF ISSUES AND ARGUMENT

A. Legal Requirement for Safe Downstream Passage for Migratory Fish.

Water Quality Certificates for the continued operation of hydroelectric dams are issued by the State of Maine pursuant to the Federal Water Pollution Control Act, 33 U.S.C. §1251-1387 ("Clean Water Act") and the State of Maine's Water Classification Law, 38 M.R.S.A. §§464-470 (2001 & 2003 Supp.) ("Water Classification Law"). Maine law authorizes the Maine Department of Environmental Protection to issue Water Quality Certificates for hydroelectric dams "pursuant to the [Clean Water Act] if the standards of classification of the water body ... are met." 38 M.R.S.A. §464(4)(F)(3).

The first paragraph of the federal Clean Water Act states that is "the objective of this Act to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. §1251(a) (emphasis added). The Maine Legislature uses nearly identical language when it declares that it is the State of Maine's objective to "restore and maintain the chemical, physical, biological integrity of the State's waters ..." and to "enhance water quality," where standards are not being achieved. 38 M.R.S.A. §464(1) (emphasis added).

Prior to the construction of hydromechanical and hydroelectric dams on the Kennebec River, its native, migratory fish species conducted their migrations between the Kennebec River and the Atlantic Ocean without any interference or injury from manmade obstacles. Historic records show that when they were able to freely migrate from their freshwater habitat in the Kennebec River to their marine habitat, the native migratory fish of the Kennebec River were found as far inland as Moosehead Lake (American eel); Upper Kennebec Gorge, the Dead River, Sandy River and Carrabassett River (American eel, Atlantic salmon); Madison Falls and the Sandy River (American shad, alewife, blueback herring). (*See historic references in*: State of Maine. Kennebec River Resource Management Plan: Balancing Hydropower Generation and other Uses. Maine State Planning Office, 1993; Comments of State of Maine on Kennebec River DEIS, FERC/DEIS-0097, Evan D. Richert, Maine State Planning Office, April 4, 1996.)

With the construction of the Edwards Dam at the Kennebec River's head of tide in Augusta, Maine in 1837 the native migratory fish species of the Kennebec River were completely extirpated from the river above Augusta, except for small numbers of American eel which swam through the timber cribs of the dam. During the period 1920 to 1950 nine massive concrete dams were constructed on the Kennebec River from Waterville to Moosehead Lake (in ascending order): Lockwood, Hydro Kennebec, Shawmut, Weston, Abenaki, Anson, Williams, Wyman and Harris. The Maine

Legislature allowed all nine of these dams to be constructed without fish passage because they had previously allowed the Kennebec River's lowermost dam, the Edwards Dam in Augusta, to operate without any fish passage for a half century. [The Edwards Dam owners ignored explicit, legal fish passage requirements in their Legislative Charter for 50 years. In 1895 the Maine Legislature rewarded this intransigence by removing all requirements for fish passage from the dam's legislative charter.]

Today, none of the nine hydroelectric dams on the Kennebec River provide upstream or downstream passage for native, migratory fish -- nor have they ever since they were built.

This history is remarkably similar to that of the Presumpscot River, where, in October 2003 the Maine Board of Environmental Protection required immediate installation of safe and effective downstream passage at five dams on that river upon finding that:

"Based on historical records, the Presumpscot River throughout the project areas supported self-sustaining populations of various anadromous fish species, including Atlantic salmon, American shad, river herring (alewife and blueback herring), rainbow smelt and striped bass ... Over time, all anadromous fish were extirpated from the river by construction of dams that blocked passage and by pollution." (*See*: Brief of Appellee, Maine Department of Environmental Protection, before the Maine Supreme Judicial Court, Law Docket No. CUM-04-314, at 36.)

In the same Brief, the State of Maine declared: "The Department's water quality certification requires upstream eel passage and operational changes to prevent mortality of adult eels through the turbines during downstream migration. The certification also requires upstream and downstream fish passage for anadromous fish. The Department found, and the Board agreed, that these conditions are necessary to ensure that the project waters are suitable for the designated uses of fishing and habitat for fish, and that they

will be of sufficient quality kto support all species of fish indigenous to these waters." (citations omitted) Id.

In circumstances eerily similar to those on the Presumpscot River, the native migratory fish of the Kennebec River are today unable to safely migrate more than a short distance above the river's head of tide due to numerous impassable hydroelectric dams which lack safe and effective upstream or downstream passage facilities. Migratory fish artificially transported above these dams are unable to safely return to the Atlantic Ocean because none of the dams they face are equipped with safe and effective downstream fish passage. The one native migratory species which can climb over these dams (or crawl through cracks in them) -- American eel -- are slaughtered every year at these dams as they attempt to migrate back to their birthplace in the mid-Atlantic Ocean.

The first paragraph of the federal Clean Water Act states that is "the objective of this Act to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. §1251(a) (emphasis added). The Maine Legislature uses nearly identical language when it declares that it is the State of Maine's objective to "restore and maintain the chemical, physical, biological integrity of the State's waters ..." and to "enhance water quality," where standards are not being achieved. 38 M.R.S.A. §464(1) (emphasis added).

The *status quo* of no safe downstream passage for migratory fish at Kennebec River dams is now in its 168th year and is slated to continue into the future without end. Under these circumstances, the fundamental goals of the federal Clean Water Act (33 U.S.C. §1251(a)) or Maine's Water Quality Classification Law (38 M.R.S.A. §464(1)) are not being met on the Kennebec River -- nor can they ever be met.

Provision of safe and effective downstream passage for native migratory fish at hydroelectric dams is an integral part of the State of Maine's statutory water quality standards, 38 MRSA §§464-465 *et seq*., as affirmed by the Maine Supreme Judicial Court in S.D. Warren v. Board of Environmental Protection (2005 Maine 27) citing to Bangor Hydroelectric Company et al. v. Board of Environmental Protection, 595 A 2d. 438 (Maine 1991).

State of Maine Water Quality Certificates issued for the Weston, Shawmut, Hydro Kennebec and Lockwood Dams provide *no* safe and effective downstream passage native, migratory fish of the Kennebec River living above these dams. State of Maine Water Quality Certificates for these four dams, as amended in 1998, completely fail to provide "a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards" (40 C.F.R. §121.2 (a)(3)). Nor do these Water Quality Certificates ensure attainment of State of Maine narrative water quality standards for the Kennebec River. 38 M.R.S.A. §465 (3)(C). The Water Quality Certificates for these dams must be immediately amended so these dams will *stop killing* what is left of the Kennebec River's native, migratory fish.

B. Legal Justification for Modifying and Re-Opening a Previously Issued State of Maine Water Quality Certificate.

The Maine Supreme Judicial Court has ruled the Maine Board of Environmental Protection may place "any conditions" in a water quality certificate necessary to ensure a hydropower project's compliance with Maine water quality statutes:

"Because water quality standards are not presently being met, the BEP may impose any conditions necessary to ensure compliance with those standards .... The BEP found that the involved waters were not presently in compliance with the state water quality

standards, and that the conditions imposed were necessary to ensure future compliance with Maine's water quality standards." (S.D. Warren v. Board of Environmental Protection, 2005 ME 27, ¶19)

The Maine Supreme Judicial Court has affirmed the right and responsibility of the Maine Board of Environmental Protection to re-open and modify previously issued Water Quality Certificates to ensure Maine's statutory water quality standards are attained:

"The BEP is expressly granted the authority to issue section 401(a)(1), 33 U.S.C.A. § 1341(a)(1), certifications pursuant to 38 MRSA § 464(4)(F)(1-A). Considering the purpose of Maine's water quality standards, stated at 38 M.R.S.A. § 464(1) the authority to include "reopeners" is "essential to the full exercise of powers specifically granted" to the BEP. See Hallissey, 2000 ME 143, ¶ 11, 755 A.2d at 1072. This authority is essential because if the conditions are not as effective as planned, the water quality standards will not be met and the BEP's goal to "restore and maintain the chemical, physical and biological integrity of the State's waters ..." will not be achieved during the forty-year term of the FERC license. The Board's interpretation of 38 MRSA § 464 as implicitly authorizing the inclusion of "reopeners" is reasonable and the statute does not plainly compel a contrary result." (2005 ME 27 at ¶28).

The legal mechanism described above was used by the State of Maine and Maine DEP in 1998 to amend previously issued Water Quality Certificates for the Weston, Shawmut, Hydro Kennebec and Lockwood Dams to incorporate the terms and conditions of the 1998 Kennebec River Settlement Accords.

C. The Continued Lack of Safe Downstream Passage at the four Kennebec River Dams is Arbitrary, Inconsistent and Illegal.

The lack of any safe and effective downstream passage for native migratory fish at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams is inconsistent with existing conditions at other hydro-electric projects in the Kennebec River drainage, ie. the Sebasticook River sub-drainage. All five of the hydroelectric projects in the Sebasticook River sub-drainage of the Kennebec River now provide safe downstream passage for juvenile alewives and American shad via surface bypasses designed and installed for these species. These projects include the Waverly Avenue and Pioneer Dams on the West Branch Sebasticook River in Pittsfield and the Burnham, Benton Falls and Fort Halifax Dams on the main-stem Sebasticook River in Pittsfield, Benton and Winslow. Safe and effective downstream passage for adult American eel is now being installed at the Burnham and Benton Falls hydroelectric dams for the fall 2005 eel migration season. No biological rationale exists for the simultaneous lack of any safe downstream fish passage at the four main-stem dams of the Kennebec River referenced in this Petition.

Since fall 2004 the State of Maine has required safe and effective downstream passage for adult American eels at five hydroelectric dams on the Presumpscot River via Water Quality Certificates issued for these dams (*See*: Maine Department of Environmental Protection. Finding of Facts and Order Approving Continued Operation of the Presumpscot River Hydro Projects. April 30, 2003.) Licensee S.D. Warren appealed this Order on May 29, 2003. On October 2, 2003 the Maine Board of Environmental Protection unanimously rejected S.D. Warren's appeal. Warren appealed the Board's decision to Maine Superior Court on October 31, 2003. On May 4, 2004 Warren's appeal was denied by Justice Ronald Cole of the Maine Superior Court. Warren then appealed this decision to the Maine Supreme Judicial Court. On February 15, 2005 the Maine Supreme Judicial Court unanimously rejected Warren's appeal. Warren's appeal of requirements in its federal licenses for safe downstream passage for adult American eel on the Presumpscot River was rejected by the United States Court of Appeals on May 6, 2005.

In its February 6, 2004 Reply Brief to the Maine Superior Court in S.D. Warren v. Board of Environmental Protection, Maine's Attorney General stated: "With regard to downstream passage of eels, there is evidence in the record, and Warren does not dispute, that the dams are likely affecting populations by contributing to the mortality of adults migrating downstream, R. 174 at 94-98. In its Order, however, the Department noted the considerable uncertainty regarding the timing and duration of the downstream migration of adult eels. R. 259 at 18. Based on the uncertainties and considerations of cost, the Department accepted Warren's proposal to shutdown the turbines from four to eight hours a night and from four weeks to eight weeks a year during eel migration. R. 259 at 18." (Maine Attorney General's Feb. 6, 2004 Reply Brief at 11).

In this Feb. 6, 2004 Reply Brief, Maine's Attorney General further stated: "The Department's water quality certification requires upstream eel passage and operational changes to prevent the mortality of adult eels through the turbines during downstream migration. R. 259 at 17-18. These conditions were necessary to ensure that the project waters were suitable for designated uses of fish and habitat for fish, and that they would be of sufficient quality to support all species of fish indigenous to these waters." (Reply Brief at 34-35.)

The water quality statutes cited by the State of Maine in its requirements for safe downstream passage for adult American eel at hydroelectric dams on the Presumpscot River do not apply solely to the Presumpscot River. These statutes apply equally to the Kennebec River and hydroelectric dams located on the Kennebec River. As such, the State of Maine's failure to require similar measures to ensure safe downstream passage for adult American eel at the four Kennebec River dams referenced in this Petition is arbitrary, capricious and has no basis in fact or law.

In past years, the State of Maine has strongly asserted its statutory right to condition Water Quality Certificates to ensure Maine's water quality standards are fully attained. On April 23, 1997 members of the Kennebec Hydro Developers Group (KHDG) filed a motion before the Federal Energy Regulatory Commission to postpone established deadlines for fish passage on the Kennebec and Sebasticook Rivers. On June 13, 1997 the State of Maine filed a formal Protest with the Commission over these proposed changes, which the State alleged would violate Maine water quality statutes and specific conditions in Water Quality Certificates issued for these dams. In this Protest, the State of Maine declared:

"The water quality classifications applicable to all KHDG's projects include 'habitat for fish and other aquatic life' among the legally 'designated uses' of those waters, and in narrative criteria specify that 'the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters' .... Maine's highest court unequivocally upheld MDEP's interpretation of of these water quality standards and clearly explained that Maine's 'designated use' standards are 'an integral part of the state water quality standards applied to a hydro licensing proposal.' .... In its 1994 decision in PUD No. 1 of Jefferson County v. Washington Department of Ecology, the United States Supreme Court has resolved this issue with no less clarity, ruling that 'under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards." (Motion to Intervene, Protest and Comments of State of Maine Before the Federal Energy Regulatory Commission, June 13, 1997).

Continued failure by the State of Maine to require safe and effective downstream passage in its Water Quality Certificates for these four dams is further contradicted by the State of Maine's April 4, 1996 filing before the Federal Energy Regulatory Commission, which declares:

"The State of Maine is authorized to impose conditions necessary to ensure that the continued operation of the subject projects will comply with all aspects of Maine's water quality standards, including designated uses, numeric and narrative criteria, and the State's antidegradation policy." (March 25, 1996 memorandum of Dana P. Murch, Maine DEP to Betsy Elder, Maine State Planning Office, *in* Comments of State of Maine on Kennebec River DEIS, FERC/DEIS-0097, Evan D. Richert, Maine State Planning Office, April 4, 1996).

These citations show that over the past decade the State of Maine has repeatedly asserted its authority to craft and amend Water Quality Certificates at hydroelectric projects which ensure attainment of applicable water quality standards. These citations show the State of Maine has repeatedly asserted that provision of safe and effective downstream passage for native migratory fish species is an integral part of Maine's water quality standards. Over the past decade the State of Maine has repeatedly cited state and federal court decisions affirming this authority. Herein, Petitioner simply requests the State of Maine assert the authority it has repeatedly stated it possesses under state and federal law -- and do it on the Kennebec River.

Given the State of Maine's numerous and consistent legal assertions on this topic, the only matter left at question is whether safe downstream passage for native migratory fish species is necessary at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams to ensure attainment of applicable water quality standards on the Kennebec River. Using the exact same standards used by the State of Maine on the Sebasticook and Presumpscot Rivers, the answer is yes. The only two issues of fact are: (a) whether native, indigenous migratory fish reside above the dams in question; and (b) whether the dams now provide safe and effective downstream passage for these species to survive and complete their lifecycle. Evidence shows that native, migratory fish species now reside above the

Weston, Shawmut, Hydro Kennebec and Lockwood Dams. Evidence shows none of these dams now provide safe and effective downstream passage for Atlantic salmon, Alewife, American shad, Blueback herring and American eel. Records show the State of Maine has *never asserted* the Weston, Shawmut, Hydro Kennebec and Lockwood Dams provide safe and effective downstream passage for the native, migratory fish species of the Kennebec River. In a 200+ page filing before the Federal Energy Regulatory Commission on June 13, 1997, the State of Maine declared these four dams *must* be equipped with safe and effective downstream fish passage no later than 2001 or two years after the removal of the Edwards Dam. The Edwards Dam was removed six years ago. It is not 2001.

The review of records above shows that in recent years the State of Maine has enforced water quality standards on a selective and *ad hoc* basis at various Maine waterbodies even when the water quality impacts have been identical, ie. the killing of native migratory fish in hydroelectric turbines due to a lack of safe downstream passage at hydroelectric dams. Such selective enforcement of Maine's water quality standards through the Water Quality Certification process is illegal because it subjects the same fish species in different waterbodies to entirely different levels of protection; and applies different standards of protection to waterbodies which have identical water quality classifications. In a June 17, 2005 letter, Maine DEP staff member Dana P. Murch stated it is the Department's policy to *selectively* enforce Maine's narrative water quality standards regarding the American eel in different Maine waterbodies:

"*Other Projects: DMR will investigate the need for upstream and/or downstream eel passage at other selected hydropower projects as staff time allows.*"

Based on the State of Maine's own assertions over the past decade to the Maine Superior Court, the Maine Supreme Court and the Federal Energy Regulatory Commission, the Maine DEP's self-described policy of "selective" enforcement of Maine water quality

standards regarding safe downstream passage for adult American eel at hydroelectric dams is illegal. The Maine Board of Environmental Protection has the authority under Maine law to correct this selective and illegal enforcement policy. Petitioner Douglas H. Watts requests the Board assert this authority by amending existing Water Quality Certificates at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams to require immediate provision of safe downstream passage for the native migratory fish species of the Kennebec River.

D. Burden of Proof.

Past practice of the Maine Department of Environmental Protection and Maine Board of Environmental Protection does not require direct and exhaustive evidence of fish kills at hydroelectric dams as a precondition for installation of safe and effective downstream fish passage pursuant to Maine's water quality statutes. Rather, the Maine DEP uses documented fish kills as one of many sources of evidence when crafting or amending Water Quality Certificates. Maine DEP water quality requirements for installation and operation of safe and effective passage for juvenile alewife and American shad on the Burnham, Benton Falls and Fort Halifax Dams on the Sebasticook River were made without direct evidence of severe kills of these fish species at these dams. Maine DEP Water Quality Certificates requiring safe downstream passage for adult American eels at five hydroelectric dams on the Presumpscot River were crafted without any direct evidence of severe eel mortality in the turbines of these dams.

Records show that Kennebec River dam owners and the State of Maine have made virtually no attempt to quantify the number of migratory fish killed in the turbines of these four dams during the past eight years. This is the *only reason* why quantitative information on the number of migratory fish killed at these dams is not available at present. After repeated complaints by citizens, very limited searches for dead American

eels at the Lockwood and Shawmut Dams were begun by staff of the Maine Dept. of Marine Resources in late October 2004. In 2004, Maine DMR staff found American eels killed by hydroelectric turbines at both dams. In October 2004 Petitioner Douglas Watts found dead American eels below the Shawmut Dam and met several trout fishermen who reported seeing the carcasses of large American eels directly below the Shawmut Dam powerhouse tailrace several days earlier. In June 2005, angler and outdoor writer Marshall DeMott of Oakland, Maine collected and photographed an adult, post-spawned alewife chopped cleanly in half by the turbines of the Shawmut Dam.

Difficult access, high water velocity and depth, and the sheer width of the Kennebec River (+1,000 feet) below the Weston, Shawmut, Hydro Kennebec and Lockwood Dams make visual identification of fish killed at these dams difficult and dangerous for State of Maine employees and concerned Maine citizens, especially during the fall American eel migration season. Kennebec River water temperatures during the October-November American eel migration season are approx. 45 degrees and river flows are very strong. Searching for dead American eels below these dams under these conditions can easily result in death by drowning or hypothermia. Neither citizens or employees of the State of Maine should be expected to risk their own lives in fast-moving, bone-chilling water to establish a full, quantitative accounting of the number of native fish killed at these dams as a precondition for installation of safe and effective downstream fish passage. For this reason the Maine Supreme Judicial Court has affirmed the legal right of the State of Maine to require safe and effective downstream passage for native migratory species at Maine hydroelectric dams even when direct and exhaustive evidence of severe fish kills at a specific dam has not been gathered.

E. The "Three Year" Adult American Eel Study.

Water Quality Certificates amended in 1998 pursuant to the Kennebec River Settlement Accord require that Kennebec River dam owners and the State of Maine, in consultation with National Marine Fisheries Service and U.S. Fish & Wildlife Service and subject to approval by the Federal Energy Regulatory Commission, undertake a three-year research project to determine 1) the appropriate placement of upstream passage for American eel at each of the seven KHDG facilities based upon field observations of where eel are passing or attempting to pass upstream at each facility, and 2) appropriate permanent downstream fish passage measures, based on radio telemetry and other tracking mechanisms and field observations. Consultation between KHDG and the resource agencies to design and coordinate the research project shall begin no later than June 1, 1998. Performance of the studies shall begin during the 1998 migration season if possible, but in no case later than the 1999 migration season. The studies shall be in effect for three complete migration seasons, and shall be completed including data compilation and analysis, by December 31, 2001. Based on the results of these studies and beginning no later than January 1, 2002, and ending no later than June 30, 2002, KHDG dam owners and the resource agencies shall engage in consultation to attempt to reach agreement on the appropriate location of upstream eel passage at each facility, and the appropriate permanent downstream passage measure to apply to each facility. If consensus is not reached on either upstream passage location or downstream passage measures by June 30, 2002, any party shall be free to petition FERC to amend any license to insert appropriate terms and conditions.

As of 2005, this "three-year" American eel downstream passage study is now in its *eighth year* and still has not been completed. Annual summary reports of this study by the Maine Dept. of Marine Resources show site-specific studies of downstream adult American eel passage have yet to be conducted at the Weston, Shawmut or Hydro Kennebec Dams and no studies at these sites are contemplated in the future. In 2000, Maine DMR conducted a radio telemetry study of adult American eel passage at the Fort Halifax and Benton Falls

Dams on the Sebasticook River. In 2001, Maine DMR conducted a radio telemetry study of adult American eel passage at the Benton Falls Dam. In 2002, Maine DMR conducted a radio telemetry study of adult American eel passage at the Lockwood Dam on the Kennebec River. In fall 2003, Maine DMR attempted to continue its study at the Lockwood Dam but Maine DMR staff failed to capture any adult American eels in a weir erected on a Kennebec River tributary above the Lockwood Dam. In fall 2004, Maine DMR elected to conduct a *third* year of study at the Lockwood Dam. According to Maine DMR's 2004 report summary: "The study was discontinued in mid-October 2004 because no eels had been captured and the biologist was needed to investigate a reported eel kill."

These records show that Maine DMR's "three-year" study is now in its eighth year and has examined adult American eel passage at only three of the *seven* KHDG hydroelectric dams the study was intended to examine. At Maine DMR's current rate of "progress" it could easily take *20 years* for this "three-year" study to be completed. To make matters even more bizarre, in 2004 Maine DMR was forced to cancel its *third year* of study of downstream American eel passage at one dam, Lockwood, because the DMR biologist in charge of the study was needed to investigate a severe kill of American eels at a KHDG dam that Maine DMR had already studied: the Benton Falls Dam. When a "three-year study" of adult American eel passage is in its seventh year, spends three years at one dam alone, and must be postponed because biologists are needed to respond to a severe kill of American eels at a dam which has already been "studied" -- something is askew with the "study."

The original purpose of the "three-year" study required in the 1998 Kennebec River Settlement Accords was to produce, within three years, scientific data for the State of Maine to recommend permanent downstream fish passage methods for adult American eel at the seven Kennebec River and Sebasticook River dams subject to the Accords. Eight years later none of this has happened because Maine DMR still has not completed

its "three-year" study, has not examined American eel passage at four of the seven subject dams, and has yet to state when or if its "three-year" study will *ever* be completed. Yet, at the same time, owners of dams subject to the Accord have stated they should not be required to provide any safe passage for adult American eels until this "study" is completed; and the State of Maine has informed concerned citizens it cannot legally require safe passage for adult American eels until this "three-year" study is completed -- even if severe kills of American eels are repeatedly documented at the subject dams.

If nothing else, the eight years of experience at the dams subject to the 1998 Accords shows the operational pitfalls of mandating open-ended studies of downstream fish passage as a substitute for requiring the immediate installation of downstream fish passage facilities. This experience is why, in 2003, the State of Maine required *immediate* downstream fish passage for adult American eel in its Water Quality Certificates for five Presumpscot River Dams with effectiveness studies conducted *after* the requisite downstream fish passages were installed and in operation. As the State of Maine has opined to the Maine Board of Environmental Protection, the Maine Superior Court and the Maine Supreme Judicial Court, only through the *immediate* installation of downstream American eel passage can Maine assure its water quality standards on the Presumpscot River are attained and maintained.

The regulatory path chosen by the State of Maine in Water Quality Certificates amended through the 1998 Kennebec River Settlement Accords has failed to protect the lives of native, migratory fish species in the Kennebec River; has caused the annual killings of thousands of native, migratory fish during the past eight years; and has yet to produce *any* concrete measures by the State of Maine to provide safe and effective downstream fish passage at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams. Records show the three-year "study" of downstream American eel passage at these dams has become a legal shield used by the State of Maine and dam owners to resist implementation of *any*

downstream passage protection for American eels and other migratory fish species at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams.

F. Inconsistency of State of Maine Statements and Actions

Since 2000, Petitioner Douglas Watts has repeatedly documented and alerted State of Maine officials to severe kills of out-migrating pregnant, female American eel at several hydro-electric dams in Kennebec River drainage. The cause of death of these eels is entrainment in hydro-electric dam turbines. This entrainment and death is caused by the lack of safe passage for adult American eels at these hydroelectric dams. After discovering and documenting a severe and ongoing kill of American eels at the Benton Falls Dam on the Sebasticook River on October 15, 2004, Mr. Watts was informed by the State of Maine on October 18, 2004 that this severe kills of female American eel was not in violation of *any* Maine law. This determination is stated in an October 18, 2004 e-mail by Mr. Dana P. Murch of the Maine Department of Environmental Protection:

-----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 is the same Dana P. Murch who wrote in March, 1996:

"The State of Maine is authorized to impose conditions necessary to ensure that the continued operation of the subject projects will comply with all aspects of Maine's water quality standards, including designated uses, numeric and narrative criteria, and the State's antidegradation policy." (March 25, 1996 memorandum of Dana P. Murch, Maine DEP to Betsy Elder, Maine State Planning Office, *in* Comments of State of Maine on Kennebec River DEIS, FERC/DEIS-0097, Evan D. Richert, Maine State Planning Office, April 4, 1996).

This is the same Maine Department of Attorney General who wrote in June, 1997:

"The water quality classifications applicable to all KHDG's projects include 'habitat for fish and other aquatic life' among the legally 'designated uses' of those waters, and in narrative criteria specify that 'the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters' .... Maine's highest court unequivocally upheld MDEP's interpretation of of these water quality standards and clearly explained that Maine's 'designated use' standards are 'an integral part of the state water quality standards applied to a hydro licensing proposal.' .... In its 1994 decision in PUD No. 1 of Jefferson County v. Washington Department of Ecology, the United States Supreme Court has resolved this issue with no less clarity, ruling that 'under the literal

terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards." (Motion to Intervene, Protest and Comments of State of Maine, June 13, 1997).

This is the same Maine Department of Attorney General who wrote in February, 2004:

"When issuing a water quality certification, the State must determine whether all three parts of Maine water quality standards will be met; the designated uses, the numerical criteria for water chemistry, and the narrative criteria. Bangor Hydroelectric Co. v. Board of Environmental Protection, 595 A.2d 438, 442 (Maine 1991). In deciding whether a project will comply with the designated uses of a water body, it is not enough to find that the quality of water is 'suitable' for the designated uses; the agency must find 'whether the designated uses actually were achieved in a particular river.' Id."

As of the date of this Petition, the Maine Dept. of Marine Resources is still "studying" appropriate permanent downstream passage measures for American eels at the Kennebec and Sebasticook River dams; the described meeting between Maine DMR Commissioner Lapointe and the "entire Maine hydro industry" has produced *no concrete measures* to protect adult American eels; the State of Maine has still taken *no action* to amend its Water Quality Certificate at the Benton Falls Dam or any other Kennebec or Sebasticook River dam to require safe and effective downstream passage for adult American eels; and the Maine Attorney General is still saying the annual slaughter of American eels at these dams violates no Maine law.

During the first week of September 2005, the operator of the Benton Falls Dam reported to the State of Maine that at least 52 adult American eels were killed in the turbines of the Benton Falls Dam.

These records show that on the Kennebec and Sebasticook Rivers, the State of Maine has repeatedly declared it has no legal authority to prevent or stop ongoing killing of American eels at hydroelectric dams because Water Quality Certificates issued by the State of Maine for these dams do not explicitly require safe and effective downstream passage for adult American eels. These same records show the State of Maine refuses to re-open or amend existing its Water Quality Certificates for these dams to stop this documented, annual killing. In response to these kills, the State of Maine has said its "hands are tied" by previously issued Water Quality Certificates and is unable to do *anything* to stop these annual, severe fish kills. The record shows the State of Maine has tied its own hands -- and refuses to untie them.

Since the severe kills of American eels documented on the Sebasticook River in October 2004, and eel kills documented on the main-stem Kennebec River several days to weeks later, the State of Maine has now had a full calendar year to amend its Water Quality Certificates for these dams to explicitly require safe downstream passage for adult American eels. The State of Maine has refused to do so despite compelling physical, documentary evidence collected by its own staff showing these dams are killing hundreds and thousands of female American eels each fall.

G. Anti-Degradation.

State water quality standards must consist of designated uses of its waters, and water quality criteria based on such uses. 33 U.S.C. §1313(c)(2)(A). State water quality standards must also include an "antidegradation" policy to ensure that "existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 C.F.R. §131.12. States are primarily responsible for both adopting and enforcing water quality standards. 33 U.S.C. §§1313, 1319. Maine's water quality standards also contain an antidegradation policy, as required by the Clean Water

Act, that "[e]xisting in-stream water uses and the level of water quality necessary to protect those existing uses must be maintained and protected." 38 M.R.S.A. §464(4)(F)(1). Maine law authorizes the Department of Environmental Protection to issue water quality certifications pursuant to the Clean Water Act, "where the standards of classification of the waterbody ... are met." 38 M.R.S.A. §464(4)(F)(3).

The American eel (*Anguilla rostrata*) is indigenous to the entire Kennebec River and exists throughout the river drainage today. Unique among the Kennebec River's native fishes, the American is born in the mid-Atlantic Ocean, swims up coastal rivers as small juveniles, and may spend 10 to 50 years living in freshwater lakes, rivers, ponds prior to reaching sexual maturity and migrating back to the mid-Atlantic Ocean to give birth and die. Since hydroelectric dams were first constructed on the Kennebec River in the early 20th century, adult American eels have never been afforded safe passage at these dams during their long migration to the Atlantic Ocean. The continued existence of American eel in the Kennebec River for millennia gives this animal especial status as an "existing use" of the Kennebec River which long pre-dates the very existence of these dams. As such, the "existing use" of the Kennebec River as habitat for American eel is a use which must be "protected and maintained" pursuant to 38 M.R.S.A. §464(4)(F)(1) and 40 C.F.R. §131.12.

State of Maine Water Quality Certificates issued for Weston, Shawmut, Hydro Kennebec and Lockwood Dams do not require safe and effective passage at these dams for adult American eel during their migration to the Atlantic Ocean to give birth. The lack of safe downstream for American eel at these dams is expressly prohibited under the "antidegradation" language of the Clean Water Act and Maine's Water Classification Law because the "existing use" of the Kennebec River as habitat for indigenous American eel is not "protected and maintained."

Unlike juvenile American eels, Atlantic salmon, American shad and Alewife are too large in size to wriggle through or over hydroelectric dams to reach their native habitat in the Kennebec River . For this reason, these native species became extinct from the Kennebec River above the Edwards Dam in Augusta by the mid 19th century. Since the early 1990s, the Maine Department of Marine Resources (Maine DMR) has annually transported and released juvenile American shad into the Kennebec River above the Lockwood and Hydro Kennebec Dams to begin the process of restoring this species to its native habitat in the Kennebec River above Waterville, Maine. Since the early 1990s, Maine DMR has annually transported and released adult alewives into their native spawning habitat in Wesserunsett Lake in Cornville, Maine so this species can begin restoring itself to its native habitat in the Kennebec River above Waterville, Maine. Wesserunsett Lake lies upstream of the Shawmut, Hydro Kennebec and Lockwood Dams. Beginning in the early 2000s, the Maine Atlantic Salmon Commission has begun annually releasing young-of-year Atlantic salmon into their native habitat in the Sandy River above Farmington, Maine. The Sandy River is located above the Weston, Shawmut, Hydro Kennebec and Lockwood Dams. These annual releases of Atlantic salmon, American shad and Alewives are necessitated by the continued lack of upstream fish passage facilities at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams.

Because Atlantic salmon, American shad and Alewives now seasonally occupy their native habitat in the Kennebec River above Waterville, Maine they constitute an "existing use" of the Kennebec River above Waterville, Maine which must be "protected and maintained" pursuant to 38 M.R.S.A. §464(4)(F)(1) and 40 C.F.R. §131.12. The lack of any safe and effective downstream passage facilities at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams for these native species prevents them from safely reaching and occupying their requisite marine habitat in the Atlantic Ocean. State of Maine Water Quality Certificates for these four dams do not require safe and effective downstream passage for the Atlantic salmon, American shad and Alewives which now

seasonally occupy their native habitat above these dams. For this reason, State of Maine Water Quality Certificates for these dams fail to "protect and maintain" the existing use of the Kennebec River for Atlantic salmon, American shad, and Alewives as required under 38 M.R.S.A. §464(4)(F)(1) and 40 C.F.R. §131.12.

Beginning in May 2006, an upstream fish passage facility at the Lockwood Dam in Waterville, Maine will allow the State of Maine to capture adult, spawning Atlantic salmon, American shad, Alewife and Blueback herring below the Lockwood Dam and transport them by aerated tank truck to their native habitat above the Lockwood, Hydro Kennebec, Shawmut and Weston Dams. All of these native migratory species require safe egress back to their marine habitat after spawning, as do their offspring. The lack of any safe and effective downstream passage facilities at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams for these native species prevents them from safely reaching and occupying their requisite marine habitat in the Atlantic Ocean. State of Maine Water Quality Certificates for these four dams do not require safe and effective downstream passage for the Atlantic salmon, American shad and Alewives which now seasonally occupy their native habitat above these dams. For this reason, State of Maine Water Quality Certificates for these dams fail to "protect and maintain" the existing use of the Kennebec River for adult Atlantic salmon, American shad, Alewives, Blueback and their progeny, as required under 38 M.R.S.A. §464(4)(F)(1) and 40 C.F.R. §131.12.

No factual evidence exists which demonstrates that Atlantic salmon, American shad, Alewife and Blueback herring can maintain a self-sustaining population when deprived of safe access between their freshwater and marine environments. This is the *only reason* why these species were completely extirpated from their native habitat in the Kennebec River above Augusta, Maine by the mid-19th century. In 2005, the continued lack of upstream and downstream access for these species to the Kennebec River above Waterville, Maine is the *only reason* self-sustaining populations of these animals have

still not been restored to their native habitat in the Kennebec River above Waterville, Maine.

The first paragraph of the federal Clean Water Act states that is "the objective of this Act to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. §1251(a) (emphasis added). The Maine Legislature uses nearly identical language when it declares that it is the State of Maine's objective to "restore and maintain the chemical, physical, biological integrity of the State's waters ..." and to "enhance water quality," where standards are not being achieved. 38 M.R.S.A. §464(1) (emphasis added).

Without safe and effective downstream passage for native migratory fish at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams the above goals of the Clean Water Act and State of Maine water quality statutes will *never* be achieved on the Kennebec River. Prior to the construction of dams on the Kennebec River, American eel and Atlantic salmon inhabited virtually the entire 5,000 square mile expanse of the Kennebec River. American shad, Alewives and Blueback herring occupied the entire river drainage below Madison Falls. Except for American eel, these native species have been completely extirpated from the Kennebec River above a point 18 miles from the river's head of tide.

The United States Clean Water Act and State of Maine water quality statutes establish an explicit goal of restoring the nation's and Maine's waterways to a condition of health. These milestones have not been achieved on the Kennebec River. This is shown by the fact that self-sustaining populations of Atlantic salmon, American shad, Alewife and blueback herring are *still* absent from the Kennebec River above Waterville, Maine after their extirpation 168 years ago.

State of Maine Water Quality Certificates for the Weston, Shawmut, Hydro Kennebec and Lockwood Dams actively prevent the goals of the United States Clean Water Act and State of Maine water quality statutes from *ever* being achieved on the Kennebec River. This is because State of Maine Water Quality Certificates allow these dams to kill and injure thousands of native, migratory fish each and every year at the very moment these animals are attempting to reach the Atlantic Ocean so they may grow, survive and give birth. Recruitment requires parents. Parents cannot give birth to children if they are dead. Children cannot grow to become parents if they are dead. Until this lesson is heeded, the Kennebec River will remain dead for a third century.

VII. REQUEST FOR PUBLIC HEARING

Petitioner Douglas H. Watts requests the Maine Board of Environmental Protection conduct a public hearing on this Petition pursuant to Department Rules Chapter 2, §24 (b)(1) because of the substantial public interest involved.

In its official Comments to the Federal Energy Regulatory Commission dated April 4, 1996 regarding federal-relicensing of the most of the hydro-electric dams on the Kennebec River, the State of Maine declared:

"The Kennebec is Maine's greatest river, its varied resources being among the State's most valuable and cherished public assets ... Historically, the Kennebec River supported diverse and abundant anadromous fish resources and fisheries. The Kennebec River system is unique in that it is the only river system in the United States north of the Hudson River which supports spawning populations of all anadromous fish species native to the northeastern U.S."

Facts contained within this Petition show that provision of safe and effective downstream passage for native migratory species at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams is essential to restoration of these animals to their historic range and abundance in the Kennebec River drainage and to achieve the State of Maine's goals for the Kennebec River as established in its 1993 comprehensive plan for the Kennebec River.

These excerpted remarks made by the State of Maine in 1996 show that the State of Maine itself considers restoration of the native migratory fisheries of the Kennebec River to be a subject of substantial public interest given that the State of Maine has itself declared the Kennebec is "Maine's greatest river" and its varied resources are among the "State's most valuable and cherished public assets."

VIII. CONCLUSION

Native migratory fish cannot live, survive or be restored to their historic abundance in the Kennebec River if they are killed *en masse* in hydroelectric dam turbines each year as they attempt to swim downstream to their marine habitat. This is why the Maine Department of Environmental Protection, the Maine Board of Environmental Protection and the Maine Department of Attorney General have adopted the position that safe and effective downstream passage for migratory fish at hydroelectric dams is an integral part of Maine's water quality statutes. This position has been twice affirmed by the Maine Supreme Judicial Court.

Today there is no safe and effective downstream passage for native migratory fish at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams. As a result, native migratory fish are being killed each and every year at these dams in violation of Maine law. Maine statutes, case law and factual evidence provided in this Petition compels the Maine Board

of Environmental Protection to modify Water Quality Certificates to require *immediate* installation of safe and effective downstream fish passage at the Weston, Shawmut, Hydro Kennebec and Lockwood Dams on the Kennebec River. Given provision of safe downstream passage at these dams is now *eight years late* and female American eels are being slaughtered at these dams at this very moment, any further delay is unacceptable and unlawful.

September 28, 2005.

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Pursuant to Chapter 2 of Maine DEP Rules and Regulations, copies of this Petition and Attachments have been sent by First Class Mail to the owners/operators of the hydroelectric dams referenced in this Petition: FPL Energy Maine (Weston and Shawmut Dams), Merimil Limited Partnership (Lockwood Dam), Great Lakes Hydro America LLC and Madison Paper Industries (Hydro Kennebec Dam).

IX. APPENDICES (on CD-ROM)

EXHIBIT ONE -- Photographs showing effect of turbine passage on migratory fish of the Kennebec River drainage, 1999 - 2004 and photographs of typical hydroelectric turbines.

EXHIBIT TWO -- Documents and Scientific Reports regarding the population status and threats to the American eel in Maine and the United States.

a. July 6, 2005 Federal Register Notice announcing 12-month Status Review of the American eel pursuant to the U.S. Endangered Species Act.

b. November 12, 2005 Petition for Listing the American eel as an Endangered Species pursuant to the U.S. Endangered Species Act.

c. March 10, 2004 announcement of Atlantic States Marine Fisheries Commission regarding declining American eel stocks.

d. "Worldwide decline of eel resources necessitates immediate action." December 2003 edition of *Fisheries* magazine. American Fisheries Society.

e. Keynote Presentation of Boyd Kynard, S.O. Conte Anadromous Fish Research Center. Review of Migration, Research Methods and Passage for Downstream Migrant Fishes in the Northeast USA *in* Downstream Movement of Fish in the Murray-Darling Basin. Canberra Workshop. Canberra, Australia. June 2003.

f. Report of the ICES/EIFAC Working Group on Eels. ICES Headquarters, 28-31 August 2001.

g. American Eel White Paper. The Decline of American Eel (*Anguilla Rostrata*) In the Lake Ontario/St. Lawrence River Ecosystem: A Modelling Approach to Identification of Data Gaps and Research Priorities. Lake Ontario Committee. Great Lakes Fishery Commission. Ann Arbor, Michigan.

h. Presentation slides of John Casselman, Ontario Ministry of Natural Resources, at International Eel Symposium, American Fisheries Society Meeting. 11-13 August, 2003.

i. Casselman, J.M. 2001. Dynamics of American Eel Resources: Declining Abundance in the 1990s. Extended abstract of a paper presented to Advances in Eel Biology, Tokyo, Japan, September 28-30, 2001. Ontario Ministry of Natural Resources.

j. Atlantic States Marine Fisheries Commission. 1999. Interstate Fishery Management Plan for American Eel (*Anguilla rostrata*). Fishery Management Report No. 36.

EXHIBIT THREE -- May 2005 Petition of Douglas Watts, Timothy Watts, Friends of the Merrymeeting Bay and the Maine Toxics Action Coalition to list the Atlantic salmon of the Kennebec River as an endangered species pursuant to the United States Endangered Species Act.

EXHIBIT FOUR -- Documents showing the continued failure of the State of Maine to stop the documented killing of American eel and other migratory species at hydroelectric dams in the Kennebec River drainage.

EXHIBIT FIVE (paper copy) -- June 17, 2005 Letter of Dana Murch, Maine Dept. of Environmental Protection describing lack of safe and effective fish passage facilities for native, migratory fish species at the Lockwood, Hydro Kennebec, Shawmut and Weston Dams.