PENOBSCOT EAST RESOURCE CENTER
43 School Street, P. O. Box 27, Stonington, Maine 04681
ted.ames7@gmail.com

Colonel Philip T. Feir, U. S. Army August 8, 2010

Co-Chair
International St. Croix River Watershed Board
696 Virginia Road Concord, MA 01742-2751

Dear Colonel Feir;

Thank you for the opportunity to comment on the Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, between the U. S. and Canada. Maine commercial fisherman and Penobscot East Resource Center urge the IJC to use its authority to require that alewives and other anadromous species be given free passage to their spawning areas in the St. Croix River Watershed once again.

Scientific studies indicate a restored St Croix watershed will produce annual runs of 24 million river herring. Many examples have been cited where sea-run alewives are compatible with and often enhance smallmouth bass populations as their prey and by providing nutrients essential for producing healthy plankton populations.

Opening the St Croix watershed fishways offers significant economic benefits for all the communities in this economically depressed area. A restored alewive spawning population of 24 million fish, each weighing approximately 1 lb/adult fish and with a sustainable capture rate of 80% would provide a fishery of approximately 20 million lbs/year. Using the current price of $25 for a 70 lb bushel for lobster bait, the fishery could easily generate over $7 million dollars of income to Washington County and New Brunswick. In addition, it would provide new recreational fisheries for striped bass and shad to further augment the income of guides and lodges. These benefits would be gained simply by allowing anadromous fish access to their spawning grounds.

Perhaps the greatest potential benefits reopening the St. Croix offers is the ecological restoration of depleted marine fish stocks in the Bay of Fundy and eastern Gulf of Maine. Recent and historical studies indicate that adult alewives are important prey for groundfish such as cod and pollock and attract these groundfish species to coastal waters. Juvenile alewives leaving fresh water spend their first year near their natal river and are an important source of local prey for marine species. Opening the St Croix fish ladders could reverse the precipitous decline of both river herring and groundfish and help restore these valuable fisheries for Maine and New Brunswick fishermen.

Unfortunately, the proposed adaptive plan fails to provide a timely restoration for any depleted anadromous native species. To accomplish that, the proposed plan should address the following deficiencies:

1. The entire watershed needs to be opened to river herring. At the same time, Spednic Lake needs to be rigorously monitored for any changes that may occur.

2. The linkage between adjusting alewife recovery to the status of the smallmouth bass stock has no scientific basis for being included in the restoration plan. It creates the absurdity of linking the annual landings of a very abundant but unrelated exotic species (smallmouth bass) to determine whether several seriously depleted native species (including alewives, bluebacks, shad, eels, and sturgeon) should be permitted to recover. It must be eliminated.

3. Limiting the recovery of this valuable fish to six alewives per acre is equally unjustifiable. Restoration will require the numbers of alewives per acre to be increased to that used in other river systems. Instead of six fish per acre, it should be increased to 236 fish per acre, of which 200 fish could be caught and sold.

4. The proposed plan suggests its implementation will add but 10 years to the recovery of river herring. In actuality, the plan provides mechanisms that prevent recovery and perpetuate the depleted status quo.

Maine fishermen and lobstermen acknowledge the concerns that recreational fishermen and registered guides have for their smallmouth bass fishery, even though it is a non-native species. But strangling the St. Croix watershed is seriously damaging our anadromous and marine fisheries and closure of its fishways should not be allowed to continue. We depend on alewives for bait and the marine ecosystem depends on alewives for prey. Anadromous fish and groundfish in eastern GOM are depleted and need to be restored. Opening the St. Croix system is a good first step in that restoration.

Approving the proposed Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed will only perpetuate the serious damage being done to our marine fisheries. We urge the IJC to reopen fishways throughout the St. Croix watershed and allow both the biological communities and the towns within the watershed to benefit from its productivity. We look forward to equity by your inclusion of these adjustments to the plan.

Respectfully,

Edward P. Ames
Retired Fisherman, Stonington Fisheries Alliance
MacArthur Fellow and Bowdoin Coastal Studies Scholar
Penobscot East Resource Center
Stonington, ME 04681

BLUE OCEAN INSTITUTE

Inspiration, Information, Action

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

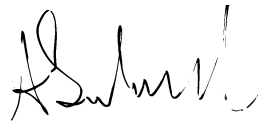
Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

5 August 2010

Dear Colonel Feir and Director Appleby,

I appreciate the opportunity to provide comments regarding the draft of "An Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick." Alewife is an ecologically important species to the St. Croix River and adjacent region, being a critical food source for many birds and other fish species that inhabit the river ecosystem. Alewife is also eaten by many marine species including commercially important finfish like Atlantic Cod, Hake and Pollock; some of these finfish species have very low abundance. Many coastal communities in Maine and New Brunswick rely on commercial fishing for employment, so successful management of a prey species is essential for healthy fisheries and economic viability of fishing communities. Commercial fishing also occurs for Alewife, and if populations and associated ecosystems were managed successfully, the fishery could expand to employ more people and generate higher profits for the region. It is therefore alarming that the proposed management of the St. Croix River Watershed is aimed more towards the non-native smallmouth bass, apparently because of non-scientific concerns regarding competition with Alewife. It is important for the ecological and economical health of the region that management decisions are based on science. It is therefore important to fully open the St. Croix River Watershed for unrestricted passage of Alewife.

Yours truly,



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Web: www.blueocean.org

Alewife Restoration

Full Name:
Alan R. Kane
City:
Gouldsboro
State / Province:
Maine

My reaction to the plan you propose is simple. I am deeply disappointed that the input of the guides takes precedent over all the other people directly or indirectly affected by the decline of alewives. Inland fisheries and those offshore are both greatly affected by their decline. The alewives are critical as a valuable member of the food chain for species too numerous to name. The lack of baitfish for lobstering alone should weigh equally to the guides needs. That is but a small issue compared to the importance of alewives to so many.
To add insult to the entire issue of preventing alewives from interfering with the bass fishery, they are in complete error in their theory and science. The only place I have even heard of alewives affecting bass is in the St. Croix! I can not find other examples. You need go no farther than the East Machias watershed to disprove this, as they have a healthy alewife run that survives with numerous great bass fishing areas. Keep going and you find that is the situation everywhere. I have heard of the theory that alewives will damage the other fisheries, yet I have yet to witness that the restoration of them caused any fishery decline. I have heard of just the opposite. Many skeptics have changed their viewpoint and seen them as beneficial. I think the same results would occur in the St. Croix. Mother Nature has created some good plans and as a result produced many a healthy fishery. To think we need to create an artificial boundary to keep a non native species flourishing borders on the insane. I don't want to take away the guides work, in fact I am all for seeing them thrive in their livelihoods. Preventing and inhibiting alewife restoration is not the answer. Restoring balance and ecological diversity in the region most assuredly will.

Exclusion of alewives

Full Name:
Alex Mendelsohn
City:
Kennebunk
State / Province:
Maine

Dear Commissioners:

The exclusion of alewives from their habitat in the St. Croix River watershed has been a grave ecological injustice.

Your draft plan for restoring alewives to the St. Croix improves upon the current situation, but your plan needs
to be stronger and must allow for alewives to have access to their full historic range in the St. Croix watershed.

Your draft plan fails to consider alewives in their broader ecological and economic context and it places them at a lower level of importance than the non-native smallmouth bass. Alewives are fundamental to the health of our rivers, lakes, estuaries, and ocean, providing food for everything from eagles and osprey to whales and cod. Alewives bring important marine-derived nutrients to our inland waters and they feed valuable recreational and commercial fish stocks in the Gulf of Maine.

The draft management plan is seriously flawed. The St. Croix River has the potential to produce a self-sustaining run of more than 20 million alewives, yet your plan could potentially limit alewives to a mere fraction of this. Your plan limits alewives to only 30% of their historic habitat and further holds their fate hostage to random fluctuations in the non-native smallmouth bass population with no scientific rationale for doing so. If implemented, the IJC's plan will fail to achieve the ecological and economic benefits associated with a rejuvenated population of this keystone species in the St. Croix watershed.

The IJC should act forcefully in the interests of the United States and Canada to adopt a plan that actively restores the St. Croix River's alewife run to its natural state. Doing so would greatly improve the health of this important international waterway and would provide a tremendous boost to the health of the Gulf of Maine.

Thank you!

St. Croix alewife restoration

Full Name:
Allison Wells
City:
Gardiner
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

Maine's fisheries are facing tremendous hardships. There are many reasons for this, among them, the blockage of fish passage among Maine rivers that are cruical for ecosystem health. Maine was foolish, and presumptious, to dam the St. Croix out of fear and misinformatin spread by special-interest groups like sport fishermen, who care more about introduced species than they do our own native alewife. While the IJC has made restoration of alewives a high priority, the proposed Adaptive Management Plan is too limited, and will be enacted too slowly, to allow the population to return to sustainable levels.

I know that you have heard from lobstermen and respectable scientists about how important alewives are as regional and international resource. That's why people all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine has blocked this species based on politics. The IJC's current proposed plan will continue to block alewives from the overwhelming majority of their ancestral habitat and puts severe limits on the pace at which alewives can repopulate the remaining habitat. This is not sound science, it goes against basic biology, and harms the reputation and purpose of the IJC.

Please reconsider the countless benefits of alewives to Maine, our nation, and our neighbors in Canada. They are crucial food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix. Please let science, and basic biology, rule over politics.

Please open the St. Croix immediately, for the good of all.

Sincerely,

Allison Wells

Support free access for native alewives in the St. Croix River!

Full Name:
Andrea Verrill
City:
Otisfield
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Andrea Verrill

St. Croix River

Full Name:
Andrew Stuart
City:
Brookline
State / Province:
MA

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

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Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Andrew Stuart

Alewife Access to Ancestral Streams

Full Name:
Anne B. Perry
City:
Harpswell
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

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Alewives and small mouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely, Anne B. Perry

Support alewive restoration on the St Croix River - NOW!

Full Name:
Barbara A.Witham
City:
Lamoine
State / Province:
Maine

Dear IJC Commissioners:

The 15 year exclusion of alewives from more than 98% of their historic habitat within the St. Croix River watershed has been a grave ecological injustice. Your draft plan for restoring alewives to the St. Croix improves upon the current situation, but your plan needs to be stronger and must allow for alewives to have access to their full historic range in the St. Croix watershed.

Your draft plan fails to consider alewives in their broader ecological and economic context and it places them at a lower level of importance than the non-native smallmouth bass. Alewives are fundamental to the health of our rivers, lakes, estuaries, and ocean, providing food for everything from eagles and osprey to whales and cod. Alewives bring important marine-derived nutrients to our inland waters and they feed valuable recreational and commercial fish stocks in the Gulf of Maine.

The draft management plan is seriously flawed. The St. Croix River has the potential to produce a self-sustaining run of more than 20 million alewives, yet your plan could potentially limit alewives to a mere fraction of this. Your plan limits alewives to only 30% of their historic habitat and further holds their fate hostage to random fluctuations in the non-native smallmouth bass population with no scientific rationale for doing so. If implemented, the IJC’s plan will fail to achieve the ecological and economic benefits associated with a rejuvenated population of this keystone species in the St. Croix watershed.

The IJC should act forcefully in the interests of the United States and Canada to adopt a plan that actively restores the St. Croix River’s alewife run to its natural state. Doing so would greatly improve the health of this important international waterway and would provide a tremendous boost to the health of the Gulf of Maine.

Sincerely,

Barbara A.Witham

Support free access for native alewives in the St. Croix River!

Full Name:
Barbara Klie
City:
Belfast
State / Province:
ME

Dear Colonel Feir and Director Appleby:

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Barbara Klie

Alewives restoration

Full Name:
Bill & Marilyn Voorhies
City:
West Tremont
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, sadly the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is far too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not, and never will be, acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011. This is an extremely critical issue.

Sincerely,

Bill & Marilyn Voorhies

Alewives St. Croix River

Full Name:
Brad Burns
City:
falmouth
State / Province:
ME

This issue has been needlessly debated for many years. Alewives are a native fish that should have precedent over non native smallmouth bass, and beyond that the science says that alewives are not harmful to the bass population anyway. There are a few bassfishing guides in Downeast Maine that have convinced the local politicians to do their bidding, and apparently the lawmakers from the rest of the state don't care enough about the issue to do the right thing. Give the alewives passage to their native spawning areas.

Support free access for native alewives in the St. Croix River!

Full Name:
Bryan Wells
City:
Old Town
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort. As an avid wildlife photographer, I see first-hand how important a healthy river habitat is to the success of all wildlife. I own 7 miles of Sunkhaze Stream which feeds the Penobscot River and this means all rivers are very important to me, personally.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Bryan Wells
http://www.oakleafs.com

Alewives in the St. Croix River

Full Name:
Carol Simon
City:
Swanville
State / Province:
ME

Help the alewives return to their spawning sites in the St. Croix River! According to scientific research, they do no harm to smallmouth bass, and they do great good for the rest of the food chain.

They need all the help they can get--and Maine needs them to prosper.

Please do your part to enhance the health of wildlife in and near the St. Croix River.

Restore Alewives to their full historic range in the St. Croix River

Full Name:
Chris Dalton
City:
Wells
State / Province:
ME

Dear IJC,

Alewives are a vital part of the marine ecosystem, and should be restored to their full historic range in the St. Croix River. The collapse of alewives in the St. Croix River has a domino effect on salmon, striped bass, cod, and other sea run fish populations throughout the Gulf of Maine.

Please eliminate any connection between smallmouth bass populations and alewive management. Smallmouth bass should be protected in Spodic Lake, while alewives are restored to the rest of their historic range. Gulf of Maine fisheries depend on the alewives. Please help reverse the tragic collapse of Gulf of Maine sea fisheries--and the US and Canadian livelihoods that depend on it--by restoring the millions of alewives that the St. Croix naturally used to feed to these fisheries.

Sincerely,
Chris Dalton

Alewive Restoration St Croix River

Full Name:
Claude Everett McGinley
City:
Sanford
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

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Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,
C.E. (Mac) McGinley

PERKINS, TOWNSEND, SHAY & TALBOT, P.A.
ATTORNEYS AT LAW

GEORGE W. PERKINS *(1922-2002)*
CLINTON B. TOWNSEND *(of Counsel)*
WARREN C. SHAY
J. MICHAEL TALBOT

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July 7, 2010

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
St. Croix Int'l Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
St. Croix Int'l Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Dear Colonel Feir and Director Appleby:

Thank you for the opportunity to review the Draft Adaptive Management Plan (hereafter 'the draft AMP') for restoration of native alewives (*Alosa pseudoharengus*), also known as gaspereau, to their historic range in the waters of the St. Croix River in the State of Maine in the United States and the Province of New Brunswick in Canada.

I consider the draft AMP disappointing for the following reasons:

1. The draft AMP fails to address the ecological, economic and social issues affecting both the inland and marine aspects of alewife restoration which were the reason why the Atlantic Salmon Federation (ASF), Maine Rivers (MR) and the Natural Resources Council of Maine (NRCM) filed their petition in March, 2009 requesting the International Joint Commission (IJC) to open the St. Croix River Watershed to access by alewives.

I will not further elaborate on those issues, which have been thoroughly documented, are well known to the IJC and to your Board, and are fully set forth in the petition.

However, an Adaptive Management Plan which is to be meaningful must take those issues into account much more fully than is done in the current draft. The draft AMP barely pays more than lip service to them, and fails to propose an adequate remedy for the current ill-considered and disastrous management program which will satisfactorily resolve those issues.

2. As I view the draft AMP, it is not a plan for restoration of native alewives at all. It is really a plan to protect non-native Small Mouth Bass (SMB).

SMB were introduced into the St. Croix River Watershed more than a century ago, and have adapted well to their new home. They are here to stay, and are economically important for recreational angling in Maine and New Brunswick.

Nevertheless, SMB are only a part of the total fishery management mix in the St. Croix River Watershed, and should not be the tail which wags the dog.

Yet that is precisely what the draft AMP does - allows non-native SMB management considerations to trump the restoration of native alewives.

The restoration of alewives is held hostage by the draft AMP to the varying fortunes of SMB. The draft recognizes that SMB are at the northern end of their range, and that their reproduction and growth may be affected by many factors which have nothing to do with the presence or absence of alewives.

Yet under the draft AMP, if SMB fail to thrive for any reason (and fishery managers may not have any understanding of what such a reason or reasons might be), the restoration of alewives will be curtailed.

This is not proper management of an important resource.

Alewives are arguably of greater ecological, economic and social importance than are SMB in the context of a forage source for fish (including SMB), birds and mammals both in the fresh water environment of the St. Croix River Watershed and also in the marine environment of the Gulf of Maine.

The St. Croix River has the potential for producing as many alewives into the Gulf of Maine as do all of Maine's other major rivers (Penobscot, Kennebec, Androscoggin and Saco) put together. This potential is much too important to be frittered away.

3. The timetable for alewife restoration and the proposed stocking rates are both far too conservative. Already, the returns for 2010, which are restricted to Woodland Flowage, are in the range of 50 to the acre for that waterbody.

A stocking rate of 6 fish per acre has no basis in science. It is purely an arbitrary figure, unrelated to the actual carrying capacity of the lakes in which alewives spawn. In my view, alewives returning to the St. Croix River in the next 10 years (roughly 2 generations) should be allowed unfettered access to Grand Falls Flowage and Big Lake. The issue of access to Spednic Lake and East Grand Lake can be sorted out in the meantime, based on science.

4. Lastly, in my view the suggestion contained in the final sentence of the FAQ addendum to the draft AMP, Q 18, that the IJC will ask the 2011 Maine Legislature to repeal Title 12, MRSA, § 6134, the statute barring alewife access at the Woodland and Grand Falls Dams which was enacted in 1995 and modified in 2009, is badly misguided.

That statute, in my opinion, flies directly in the face of the Supremacy Clause of Article VI of the United States Constitution, which provides, inter alia, that all treaties shall be the supreme law of the land.

It is my opinion that the IJC has the authority as established by the 1909 Boundary Waters Treaty to override the Maine legislation. It is further my opinion the IJC should do so.

Apparently the IJC, or your Watershed Board, are considering once again requesting the Maine Legislature to take up this politically highly charged matter.

I consider that to be a prescription for failure.

There has been a long history of prior failures to rectify the situation in the Maine Legislature, all as recited in the Petition.

Senator Dennis Damon and Representative Leila Percy were the sponsors of the 2008 legislation. They were also respectively the Senate and House co-chairs of the Joint Standing Committee on Marine Resources.

As the consequence of term limits, neither of these capable and effective legislators will serve in the 2011 Legislature.

To consider that new champions of alewife restoration who have anything like either the concern for the resource or the political experience and clout of Senator Damon and Representative Percy will somehow magically appear in the 2011 Legislature is, in my view, a pipe dream.

Furthermore, it is my opinion that referring the matter of alewife passage back to the Maine Legislature would be an abdication of the authority of the IJC as established by the 1909 Boundary Waters Treaty and given supremacy by the United States Constitution.

Sincerely,

Clinton B. Townsend

CBT:msw
pc: Service List

Support access for alewives in the St. Croix River!

Full Name:
Colleen McKenna
City:
Brunswick
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Colleen T. McKenna

Alewives

Full Name:
Cynthia Simon
City:
Gorham
State / Province:
Maine

Please fully restore Alewives to the St. croix river by allowing them free access to their native habitats and spawning areas. Alewives are an economic staple to Maine, they are a rich environmental resource to the Gulf of Maine fisheries, and they are an important historical species to Maine. It is imperative that we, as stewards and resource extractors, replenish the healthy, biodiverse rivers of Maine.

46 Reed Avenue
St Andrews, NB
E3B 1A1
506-529-8838

Dear IJC Commissioners:

We are writing to comment on the *Adaptive Management Plan for Managing Alewife in the St Croix River Watershed*. While we appreciate activity on this file, we feel that the plan falls far short of adequately addressing the 15 year exclusion of alewives from more than 98% of their historic habitat within the St. Croix River system.

Our chief concern with the plan is that it makes alewife restoration contingent upon smallmouth bass, a non-native species; it values smallmouth bass over alewives. In effect, the alewives are being denied access to the full range of their historic habitat based on opinion not verified by the available science. Indeed, the available science clearly demonstrates that alewives do not harm smallmouth bass. The plan pits the two species against each other and, effectively, plays into the claim, not supported by the science, that they cannot co-exist.

The plan fails to consider the ecological and economic role alewife play in waterways such as the St Croix. Alewife serve as important feed stock for land and water based animals. Indeed, large schools of fish like the alewife draw ground fish species such as cod and pollock closer to shore and are thus key to any future restoration of a groundfish fishery. They also bring important marine-derived nutrients to inland waters. Further, healthy alewife populations support both commercial and recreational fisheries. They are especially valuable to the lobster fishery as bait.

We call on the IJC to take a forceful, science-based stance in mandating the opening of all the fishways in the St Croix River system to the alewife. The St Croix River has the potential to produce a self-sustaining run of more than 20 million alewives. The adaptive management plan would limit the run to a fraction of this, allowing alewife only 30% of their historic habitat. Under this plan, any further opening of the waterway to alewife would be contingent on unrelated fluctuation of another fish species, namely the smallmouth bass. This is hardly a science-based solution.

A healthy spawning population of alewife in the St Croix River system will help ensure a healthy St Croix watershed and, indeed, will assist in restoration of traditional fisheries in Passamaquoddy Bay and the Gulf of Maine. The IJC has an opportunity to mandate the restoration of the alewife to the St Croix River. We request that you take this opportunity.

Sincerely,

Dave Thompson and Matthew Abbott
Fundy Baykeeper

Subject: Support free access for native alewives in the St. Croix River!

Full Name:
Debbie McCarthy
City:
Phillips
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Debbie McCarthy

MAINE COUNCIL OF THE ATLANTIC SALMON FEDERATION

Fort Andross, Suite 406 ~ 14 Maine Street
Brunswick, ME 04011

August 15, 2010

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Dear Colonel Feir and Director Appleby:

The Maine Council of the Atlantic Salmon Federation (MCASF) respectfully submits the following comments on the draft Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed.

The MCASF is comprised of 18 different local angling, conservation, education, and watershed organizations from across the State of Maine. The MCASF represents more than 2,000 individual members and volunteers in Maine. The MCASF is one of seven regional councils affiliated with the Atlantic Salmon Federation, an international non-profit organization dedicated to the conservation, protection and restoration of wild Atlantic salmon and the ecosystems on which their well being and survival depends.

The MCASF is hopeful that the International Joint Commission and its International St. Croix River Watershed Board is finally ready to take action to reverse the horrendous situation that has existed on the St. Croix for the past 15 years. Your draft plan is certainly an improvement over the *status quo* in that it allows *some* alewives into *some* habitat above Grand Falls, but we strongly believe that the plan needs to be amended significantly and that alewives should be allowed access to their full historic range within the St. Croix.

The draft plan could fail to produce any meaningful ecological improvement to the St. Croix River and its watershed. The plan places severe limitations on both the scope and pace of alewife population recovery in the St. Croix by tying the allowed rate of alewife increase to arbitrary parameters and by only allowing alewives access to about 30% of their ancestral habitat. Neither of these is scientifically justified.

The plan seemingly places a higher priority on smallmouth bass (a non-native species) than on sea-run alewives (a native species) by tying the restoration decision-making process directly to success or failure of smallmouth bass recruitment. Myriad other factors are much more likely to impact negatively bass reproductive success, including water levels, predation, intra-specific competition, angling pressure, presence of non-native *landlocked* alewives, and environmental stochasticity. None of these factors are properly addressed within the draft plan.

Finally, and perhaps most importantly, the plan fails to restore any significant degree of ecological functioning to the St. Croix River system. From conveyors of marine-derived nutrients to serving as the forage base for a variety of fish, birds, and mammals, alewives are a fundamentally important component

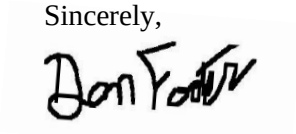
of our freshwater, estuarine, and marine ecosystems. Unfortunately, across much of their range, alewives are in serious decline.

Over the past 12 years, the MCASF has completed 8 different dam removal and fish passage projects in various watersheds across Maine. Each of these projects was done in order to benefit wild Atlantic salmon, alewives, and the many other sea-run fish species native to our rivers. While it is the Atlantic salmon that we ultimately intend to benefit from the majority of these projects, the reality is that alewives are the one species likely to get the biggest benefit from each and every one of these projects. Add in the annual budgets of the sea-run fish restoration programs of state and federal agencies, the several dozen smaller dam removal and fish passage projects that other organizations have completed, plus larger-scale efforts, such as the removal of the Edwards and Fort Halifax Dams in the Kennebec River watershed and the ongoing Penobscot River Restoration Project, and you're looking at in excess of $100 million being spent on sea-run fish restoration in Maine in the recent past and the foreseeable future.

Conservation and environmental organizations, state and federal agencies, tribal governments, towns and cities, commercial fishermen, and even large commercial land-owners have all recognized the importance of fisheries restoration. I cite these examples to demonstrate to you the over-whelming public support for sea-run fish restoration and the huge public and private investment going towards restoring our rivers. Yet, literally without spending more than a few dollars for the wood to replace the baffles in the Grand Falls Dam fishway, we could begin to restore the region's largest native alewife population within the St. Croix watershed. But, instead, two decades have been spent kowtowing to the special interests of a few, while the greater public good has suffered.

The time has come to once and for all reverse course and do what is right for the St. Croix River and the people of Maine and New Brunswick. The IJC must act forcefully in the interests of the United States and Canada to adopt a plan that actively restores the St. Croix River's alewife run to its natural state.

Sincerely,



Don Foster, President
Maine Council of the Atlantic Salmon Federation

Androscoggin River Alliance
Cove Brook Watershed Council
Dennys River Sportsman's Club
Downeast Salmon Federation
Eddington Salmon Club
Friends of Craig Brook NFH
Friends of Green Lake NFH
Friends of Tunk
George's River Chapter – Trout Unlimited
Kennebec Coalition
Kennebec Valley Chapter – Trout Unlimited
Maine Council – Trout Unlimited
Penobscot County Conservation Association
Penobscot River and Bay Institute
Penobscot Salmon Club
Saco River Salmon Club
Union Salmon Association
Veazie Salmon Club

Full Name:
Donald Holmes
City:
Sedgwick
State / Province:
Maine

Alewives were once a common and critical component of all of Maine's river and coastal ecosystems. Unfortunately, they are no longer present at ecologically significant levels in most systems. This has had demonstrable negative effects on natural resources and the humans that once depended on them. The historical loss of alewives may, in fact, be one of the reasons for the lack of rebound in our flounder and cod populations. Declining numbers are certainly a current concern to our lobster fishermen, who depend on them for bait.

In 1995, the Maine legislature passed a law preventing upstream alewife passage at two dams on the St. Croix River, one of the major alewife rivers on the east coast. I understand that this was done in response to claims from a few ill-advised fishing guides that growing numbers of sea-run alewives had caused the collapse of Spednic Lake smallmouth bass populations.

It appears that NO scientific evidence was provided to support those claims, but apparently lack of facts had no influence on the political decisoin-makers of that day. The amendment of the law in 2008 to allow for reopening Woodland Dam was a laudatory first step. However, the result is that alewives can still access only about 2 percent of their historic native habitat in the St. Croix watershed.

Significant private and public studies performed since 1995 (and before) clearly demonstrate that sea-run alewives pose no threat to smallmouth bass and that bass may, in some cases, actually benefit from the presence of alewives. The current draft alewife management plan is a definite step forward, but it allows return of alewives to only about 30 percent of their historical habitat in the St. Croix watershed. In limiting the recovery goals to that extent, it essentially ignores the ecological, economic, and social importance of alewives in the entire Gulf of Maine.

There is no reason, given today's improved knowledge of alewife/bass interactions, to repeat the mistakes of 1995 or to take a half-baked approach to solving a very real problem that is amenable to a relatively simple solution. The goals of the draft alewife management plan should be re-thought and strengthened so that its implementation results in a truly meaningful potential for significant recovery of this critical species in the St. Croix watershed and the associated positive effects on fish and wildlife populations in the Gulf of Maine.

Bottom Line - Good science should trump old wives tales (alewives tales) this time around!

St Croix RIver Alewife Recovery Plan

Full Name:
Donald Holmes
City:
Sedgwick
State / Province:
ME

Alewives were once a common and critical component of Maine’s river and coastal ecosystems. Unfortunately, they are no longer present at ecologically significant levels and this has had demonstrable and dramatically negative effects on natural resources and the huimans that once depended on them. Their historical loss may, in fact, be one of the key reasons for the lack of rebound in our cod populations.

To the credit of the State of Maine, a draft plan has been developed to restore alewife numbers in the St. Croix River, which has the potential to produce a major self-sustaining run. In 1995, the Maine legislature dim-wittedly passed a law preventing upstream alewife passage at two dams on the St. Croix River in response to claims from a few ill-advised fishing guides who believed that growing numbers of sea-run alewives had caused the collapse of Spednic Lake smallmouth bass populations.

NO scientific evidence was provided to support those claims, but that had no influence on our politicians of that day. In 2008, the law was amended to reopen the Woodland dam, but the result of that laudatory action is that alewives can access only 2% of their native habitat in the St. Croix watershed.

Significant private and public studies have been performed since 1995 to investigate the interactions between alewives and smallmouth bass in the St. Croix watershed. The results clearly demonstrate that sea-run alewives pose no threat to smallmouth bass. In fact, the data show that in some down east lakes, smallmouth bass benefit from the presence of anadromous alewives.

The current draft plan is a definite step forward. Unfortunately, however, it only allows return of alewives to about 30% of their historical habitat in the St. Croix watershed. In doing so, it ignores the tremendous ecological, economic, and social importance of alewives in the Gulf of Maine.

There is no reason today to repeat the mistakes of 1995 or to take a half-baked approach to solving a very real problem that is amenable to a simple solution. The St. Croix River is potentially the most productive alewife river in Maine and perhaps the whole eastern seaboard. Please re-think the goals of the draft management plan and strenghten it so that its implementation results in a meaningful recovery of this critical species in the St. Croix watershed.

St. Croix alewife-bass plan

Full Name:
Dr. Theodore Willis
City:
Portland
State / Province:
Maine

To Whom It May Concern,

My name is Theodore Willis. I have a doctorate in ecology, which I put to use on the St. Croix alewife - smallmouth bass issue in 2005 and 2006. My impression from that experience was that the various sides of this issue were no closer to resolution at the end of the St. Croix project than at the beginning. I have reviewed the current plan and find it to be a welcome improvement over the previous deadlock. However, I feel the plan is too cautious in its provisions to safe guard the bass population and not creative enough at the same time.

I agree that the alewife population in the St. Croix should not be allowed to increase unchecked, as the previous recovery demonstrated that the population has the capacity for near exponential growth. However, the escapement constraints based on bass population performance are vague and too restrictive. Specifically, holding escapement levels in consecutive years is an acceptable course of action, but rolling back escapement when bass population performance is subpar is not acceptable. A variety of factors can affect the success of smallmouth bass year classes, especially at the northern extent of their range, as the Washington Co. population is. The constraints and actions currently in the plan maintain the notion that bass year class success is wholly determined by interactions with alewife. There are many lakes in the area that point to the contrary.

As an alternative, I would suggest timing the releases of alewives past the Mill Town, Baileyville and Grand Falls dams. Work in New Brunswick demonstrated that smallmouth populations performed better in the presence of alewives if the alewives arrived in the lake over an extended time period. This timing aspect could be adapted such that pulse releases of alewives are spread by days. This type of intervention in red light bass years would guarantee that a wide variety of juvenile alewife sizes were accessible to YOY bass in late summer when YOY bass need high energy food to prepare them for winter.

There are no provisions in the plan that would change current bass management in the event of yellow or red light years. Actions like closing the St. Croix lakes to fishing while bass are on their nests would also improve year class survival. Research from the midwest demonstrates that bass eggs and fry are most vulnerable when males are removed from the nest, even temporarily, usually as a consequence of angling.
Finally, I would stress that in the lakes in question, the analysis I conducted using IFW's data demonstrated that back-calculated length and differences between size classes were larger when alewife were present in Big Lake and Grand Falls Flowage. I interpreted this difference between years when alewife were present vs. absent as a sign of positive growth. At the very least, there were no signs of negative growth in the presence of alewives. These data are probably the best indicators we have that the reintroduction of alewives to the St. Croix lakes will not prove

catastrophic, and may even be beneficial to the bass and the industry that depends on them.

Sincerely,

Theodore Willis, PhD
University of Southern Maine
Environmental Science
Gorham, ME 04038

Friends of Merrymeeting Bay

P. O. Box 233
Richmond, ME 04008
207-666-3372
www.friendsofmerrymeetingbay.org

IJC Electronic Filing Only

August 13, 2010

Philip T. Feir
Colonel, U.S. Army
U.S. Co-Chair
St. Croix Int'l Watershed Board
696 Virginia Rd.
Concord, MA 01742

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
St. Croix Int'l Watershed Board
45 Alderney Dr.
Dartmouth, NS B2Y 2N6

Dear Colonel Feir and Director Appleby,

Thanks for the opportunity to review the IJC Draft Adaptive Management Plan [ADMP] for native alewives and introduced smallmouth bass in the St. Croix River. Unfortunately, in what appears to be a feeble attempt to "split King Solomon's baby", there is nothing good to report. You have received many comments on the Plan and we echo those concerns of for example Kerry Hardy, Clinton Townsend, and NOAA.

The plan as presented is an abject failure in that it:

1. Has no basis in science.
2. Delays full alewife restoration efforts indefinitely.
3. Bases the well-being and restoration of a native species on the health of an introduced population.
4. Does not address inshore or offshore ecological, economic and social benefits that come with the restoration of a native alewife fishery.
5. Perpetuates the degradation of water quality [non-attainment] as promulgated illegally by the Maine State Legislature in violation of the U.S. Clean Water Act.

It appears unclear to us what the extent of the IJC authority and jurisdiction really is in this situation. Clearly there are mandates for the Commission to wield authority in cases affecting water levels on shared bodies of water. The St. Croix is a broad river system however and it may be that IJC authority only applies to the main stem where the border runs. It is also questionable whether the Commission can actually overrule the U.S. Clean Water Act [CWA]. Our belief is that responsibility for enforcement of the Clean Water Act rests only with the U.S. Environmental Protection Agency [EPA]. In eliminating an

existing use [alewives] of the river, the Maine Legislature has violated antidegradation language in Maine Statute and the CWA which says existing uses must be maintained. If these uses are not maintained, the water classification is essentially being downgraded and the state must perform a Use Attainability Analyses [UAA] which is then reviewed by EPA and rejected or approved. UAA's are extremely rare in occurrence and certainly a UAA whose fundamental purpose was to justify the extirpation of a species would probably not fare well. A UAA for the St. Croix was never performed prior to or since the closure of the river to alewives.

Friends of Merrymeeting Bay [FOMB] has submitted a letter to Region 1 of the EPA expressing our concerns on this legal issue and incorporated into our letter by reference those legal comments also submitted to the EPA by Douglas Watts. In an EPA response dated August 9th, they indicate a response addressing specific issues we have raised will be forthcoming in the near future.

Please find attached as appendices to these comments, our EPA letter and those comments submitted by Mr. Watts both of which are incorporated herein.

Thank you for the opportunity to comment on this draft plan. We urge you to reconsider and modify your draft providing a new revised plan for immediately implementing watershed-wide alewife restoration in keeping with US and Canadian laws.

Sincerely,

Ed Friedman, Chair

Attachments:

Appendix A: FOMB Letter to EPA

Appendix B: Douglas Watts Letter to EPA

Appendix A.

Mr. Curt Spalding
US EPA Regional Administrator
5 Post Office Square, Suite 100
Boston, MA 02109-3912
July 19, 2010

RE: St. Croix River, Maine

Mr. Spalding,

By this letter, Friends of Merrymeeting Bay [FOMB] requests you invoke your authority as Regional EPA Administrator to review the changes in Maine water quality standards and designated uses of the St. Croix River made by the Maine Legislature in 1995 and 2008. FOMB requests you determine if these changes are in compliance with the U.S. Clean Water Act [CWA].

These laws have never been reviewed or approved by US EPA for conformance and compliance with the Clean Water Act.

These two laws have:

1. Caused 98 percent of the St. Croix River watershed to go from attainment to non-attainment of its legally assigned water quality classification standards.

2. Caused an existing, legally assigned designated use of the St. Croix River to go from being actually present to being non-existent.

3. Prevented the legally assigned water quality standards and designated uses of the St. Croix River from being attained in perpetuity.

4. For all intents and purposes, illegally downgraded/ degraded the river when banning the passage of migratory alewives from anywhere but the bottom few miles of the St. Croix.

This major drainage once had one of the largest river herring populations in North America. Does the intentional extirpation [within the statutory CWA time parameters] of a native species trigger anti-degradation language in the CWA? Is the EPA responsible for ensuring designated uses are maintained?

Partly in an effort to avoid needless duplication and partly because his case is so well stated, FOMB herein incorporates by reference in its totality, the request sent you on July 9, 2010 by Douglas Watts of Augusta, ME.

By statute in 1995 and 2008 the Maine Legislature ordered the extirpation of alewives on the St. Croix, formerly home to probably the largest alewife run in North America. In so doing, the state has unilaterally made the decision to get rid of an "existing use" by shutting down over 90% of the river to alewives. In a recent proposal, The International Joint Commission suggests expanding alewife access to only 30% of their former habitat still with no scientific or legal basis for the restriction.

As you well know, anti-degradation language in the CWA and Maine Statute, prohibits the reduction of water quality [which includes fish populations not just water chemistry] without a Use Attainability Analyses [UAA] approved by EPA. A UAA has to our knowledge never been performed for the St. Croix River. Under the doctrine of "constructive submission", just because the State did not conduct or submit a UAA or request a change in water quality classification the EPA is in no way relieved of its authority, obligation and responsibilities under the CWA to promulgate and or maintain water quality standards.

After your review of this and the Watts letter, please advise us of your intentions.

Thank you very much.

Sincerely,

Ed Friedman, Chair

Founded in 1975, Friends of Merrymeeting Bay (FOMB) utilizes research, education, advocacy, and land conservation to preserve, protect, and improve the unique ecosystems of Merrymeeting Bay. Diadromous fish restoration in the Bay and Gulf of Maine is an important focus of the group.

In 2001, FOMB Chair Ed Friedman was the recipient of an Environmental Merit Award from Region 1 of the EPA.

Appendix B.

Mr. Curt Spalding
US EPA Regional Administrator
5 Post Office Square, Suite 100
Boston, MA 02109-3912
July 4, 2010

RE: St. Croix River, Maine

Dear Mr. Spalding,

By this letter and evidentiary appendices I am requesting you invoke your authority as Regional EPA Administrator to review the changes in Maine water quality standards and designated uses of the St. Croix River made by the Maine Legislature in 1995 and 2008 to determine if they are in compliance with the U.S. Clean Water Act.[1] These laws have never been reviewed or approved by US EPA for conformance with the Clean Water Act. These two laws have:

1. Caused 98 percent of the St. Croix River watershed to go from attainment to non-attainment of its legally assigned water quality classification standards.
2. Caused an existing, legally assigned designated use of the St. Croix River to go from being actually present to being non-existent.
3. Have prevented the legally assigned water quality standards and designated uses of the St. Croix River from being attained in perpetuity.

[1] US EPA Water Quality Handbook, Section 6.3.: "When States adopt new or revised water quality standards, the State is required under CWA Section 303(c) to submit such standards to EPA for review and approval/disapproval. Section 131.20(c) of the Water Quality Standards Regulation requires the submittal to EPA to occur within 30 days of the final State action."

I. Background.

The International Joint Commission (2008) states:

"Alewife management strategies in the [St. Croix River] watershed historically have been geared toward the design, construction, and maintenance of fishways to allow passage around dams. Prior to 1980, an old fishway at Milltown allowed only limited passage of alewives. In 1981, the completion of a new fishway at Milltown Dam, together with modern fishways constructed in 1964 at Woodland and Grand Falls, greatly improved alewife passage on the St. Croix and resulted in a resurgence of the anadromous alewife population (Flagg 2007). Anglers began to see schools of alewives below the West Grand Lake Dam and in Spednic Lake. Between 1981 and 1987, alewife returns increased from 169,000 to 2,625,000.

"This alewife resurgence coincided with a drastic decline of smallmouth bass in Spednic Lake, and raised concerns that the increased alewife population might be impacting smallmouth bass. As a result of these concerns, alewives were blocked from Spednic in May of 1987 and, as part of an assessment program aimed at developing a long-term alewife management plan, alewives were temporarily blocked at Grand Falls in 1991. In 1995, the State of Maine enacted emergency legislation to close both the Woodland and Grand Falls fishways to migrating alewives. After these closings, the St. Croix alewife population fell from a high of 2.6 million fish in 1987 to a low of only 900 returning adults in 2002.

"The Milltown Dam was not subject to the 1995 legislative action and, beginning in 2002, the Canada Department of Fisheries & Oceans began trucking alewives from the Milltown fishway 16 kilometers (10 miles) upstream to the Woodland Flowage where they were released to spawn. This effort allowed the alewife run to rebound to about 12,000 in 2006 (Flagg 2007).

In March of 2008, the Maine Legislature's Marine Resources Committee heard testimony on LD 1957, an act to overturn the 1995 state law closing fishways at the Woodland and Grand Falls Dam to anadromous alewives. While the original bill would have provided access to 52% of the spawning habitat available in the 1980s, an amended bill was passed, opening fish passage at the Woodland Dam only and restoring alewives to just over 2% of that habitat."

Prior to 1995, the St. Croix River hosted one of the largest, if not the largest, population of migratory alewives *(Alosa pseudoharengus*) in the United States (IJC 2010).

In 1995, the Maine Legislature passed a law prohibiting the passage of spawning alewives to their critical, native habitat in the St. Croix River above the Woodland Dam near the river's head of tide. 12 MRSA §6134 (1995).

In 2008, the Maine Legislature amended this 1995 law to allow alewife passage at the Woodland Dam but to continue prohibiting alewives from migrating past the Grand Falls Dam. 12 MRSA §6134 (2008). This law deprives the few remaining St. Croix River alewives from access to 98 percent of their spawning and nursery habitat in the St. Croix River drainage (IJC 2008, 2010).

The 1995 and 2008 laws have altered the legally assigned water quality standards and designated uses of the entire St. Croix River watershed. These laws direct the Maine Commissioner of Inland Fisheries and Wildlife to ensure that no alewives can reach their spawning and nursery grounds in the vast lakes of the St. Croix River in Maine and Canada.

The sole purpose of these laws is to cause the extinction of native alewife in the St. Croix River. These laws do not apply to any other native fish species of the St. Croix River watershed. All native fish species are allowed to use the fishways installed at the Woodland and Grand Falls dams -- except the native alewife.

As best as can be discerned by the legislative record, Maine did not submit these laws to the US EPA for approval under the CWA upon enactment because Maine believed these laws dealt only with "fisheries management issues" and did not constitute material alterations to state water quality standards and legally designated uses of the St. Croix River requiring US EPA approval. The nature, intent and effect of these statutes shows Maine was incorrect in making this judgement. US EPA retains final authority to determine if a state statute qualifies as a change in water quality standards or legally designated uses of a waterbody and if the state is required to submit the statute to US EPA for review and approval. This what I am asking you to do now in your position as US EPA Regional Administrator regarding these two Maine laws which affect the St. Croix River watershed.

II. The 1995 and 2008 Maine alewife ban laws altered the legal water quality standards and designated uses of the St. Croix River and its tributaries.

In 1995 the Maine Legislature passed a law which ordered the Maine Commissioner of Inland Fisheries & Wildlife to prevent native alewives from passing through existing fishways at the Woodland and Grand Falls dams on the St. Croix River. In 2008 the Maine Legislature amended this law to order the Commissioner to prevent native alewives from passing through the fishway at the Grand Falls Dam.[2]

While these two laws do not explicitly amend the statutory water quality classifications for the St. Croix River and its tributaries and their legally assigned designated uses, they have directly done so. The IJC (2008, 2010) states these laws directly eliminate access by native alewife to 98 percent of their native habitat in the St. Croix River and have caused the native St. Croix River alewife population to fall from 2.6 million adults in 1987 to 900 adults in 2002.

[2] Because these two hydroelectric dams were constructed by Congressional approval in 1916 they do not fall under jurisdiction of the Federal Power Act or the Federal Energy Regulatory Commission. Fishways at these dams are operated under the supervision and authority of the Maine Dept. of Inland Fisheries & Wildlife.

The sole purpose and intent of these Maine laws was (and is) to cause the extinction of a native fish species, the alewife, from virtually all of its native and occupied habitat in the St. Croix River system. The laws have succeeded in their purpose. Today, only a tiny, remnant population of native alewives exists in the lowermost reaches of the St. Croix River.

The 1995 and 2008 laws rendered null and void the legal water quality standards designated uses established for the St. Croix River which pertain to the native alewife. They have done this by directing the Maine IF&W Commissioner to prevent any alewives from entering the St. Croix via existing fishways at the Woodland and Grand Falls dams. These fishways, located on the Maine side of the St. Croix River, are the only method by which native alewives can migrate from the ocean to their spawning grounds in the St. Croix River watershed above these dams. These laws have caused the St. Croix River above the dams to no longer provide suitable habitat for all indigenous aquatic species, as Maine's water quality classification statutes require.

The Maine DEP and Maine BEP have previously ruled that Maine water quality standards and designated uses for migratory fish species require the use to be actually present in the waterbody. *See* Maine BEP, Findings of Fact and Order Denying Appeal of S.D. Warren Company, Presumpscot River Hydro Relicensing, Sept. 3, 2003:

"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)."

The Maine DEP and Maine BEP's interpretation was upheld by the Maine Supreme Court in 2005. See *S.D. Warren v. Maine BEP*, 2005 ME 27 at ¶21: "Maine's law is settled in this area. In *Bangor Hydro-Electric Co.*, 595 A.2d at 442 n.4, we concluded that narrative criteria at 38 M.R.S.A. §465 (2001 & Supp. 2004), which requires waters "of sufficient quality to support all indigenous fish species," was intended to be an integral part of the water quality standards for the BEP to consider. We also concluded, based upon the specificity of the designated uses at 38 M.R.S.A. §465, that the Legislature's purpose for the language "suitable for the designated uses" was "that the designated uses actually be present." Id. at 442."

The 1995 and 2008 Maine laws directed the Maine IF&W Commissioner to make a legally designated use of the St. Croix River go from being 'actually present' to being non-existent. The Commissioner of Maine IF&W did not unilaterally decide to block alewives from the fishways of these St. Croix River dams in 1995 and 2008. He was ordered to do so by a statute enacted by the Maine Legislature.

Legislatures cannot pass laws which order state agencies to break the law. The Legislature must first amend the underlying law so as to make the activity lawful and then direct the agency to undertake the previously unlawful activity. The text of the 1995 and 2008 statutes shows the Legislature performed the second component, but not the first. The 1995 and 2008 statutes fail to perform the first and essential task of amending the underlying statutory water quality standards and designated uses of the St. Croix so as to allow the Maine Legislature to order the Commissioner of IF&W to break them. This was not done. [3]

[3] Maine executive agencies are bound to obey all applicable U..S. and Maine laws. Except by directly amending the relevant statute, the Maine Legislature has no authority to direct a state agency to violate any state law. For this reason, the only reasonable inference of legislative intent one can draw from the 1995 and 2008 laws is that the Maine Legislature intended through these laws to amend the existing legal water quality changes to be submitted to US EPA for approval within 30 days of enactment. They were not.

Under either scenario, the 1995 and 2008 Maine laws are null and void because they violate the most basic tenets of the U.S. Clean Water Act. In the first scenario, in which the laws are interpreted as the Maine Legislature directing a state agency to violate the CWA, the laws are null and void since the Maine Legislature has no authority to direct anyone to violate the U.S. Clean Water Act.

In the second scenario, wherein these laws are interpreted as amendments of state water quality classification standards and legally designated uses of the St. Croix River, these laws are null and void because the U.S. Clean Water Act requires legislatures to submit any amendments to state water quality standards to US EPA for approval within 30 days of enactment.

Whatever the Maine Legislature's conscious intent may have been when passing these laws in 1995 and 2008, these laws amend the legal water quality standards and designated uses of the St. Croix River. They order the Maine IF&W Commissioner to forcefully extirpate a native fish species from its native habitat so that it will become extinct in that habitat. Maine water quality standards and legal designated uses of the St. Croix require that it be suitable habitat and capable of supporting all indigenous fish species, including the native alewife. The 1995 and 2008 laws have the sole purpose and effect of preventing these existing legally designated uses and water quality standards from ever being achieved.[4]

II. The 1995 and 2008 Maine alewife ban laws are null and void under the U.S. Clean Water Act.

These laws are null and void because by prohibiting alewife passage in the St. Croix River drainage, the Maine Legislature created a new sub-category of water quality

[4] In *FPL v. Maine BEP*, 2007 ME 97, the Maine Supreme Court analyzed whether a legislative resolution, or any other non-explicit amendment of water quality standards enacted by the Maine Legislature could nullify existing standards for a waterbody. The Court ruled that any legislative effort to alter legal water quality standards and designated uses of a waterbody must be submitted to US EPA for approval, regardless of its specific mechanism. No procedural or statutory 'back doors' are permitted.

standards and designated uses for the St. Croix River, specifically a subcategory intended to prevent a native fish species, the alewife, from living in its native habitat in the St. Croix River and to extirpate this species from its existing habitat in the St. Croix River.

Under the U.S. Clean Water Act, whenever a state creates a new sub-category of water quality standards and designated uses for a waterbody those changes must be submitted to the U.S. Environmental Protection Agency (US EPA) for review and approval. 40 CFR 131.10 (g)(h).

The State of Maine has never submitted the changes made in the 1995 and 2008 laws to the US EPA for approval, as required by the U.S. Clean Water Act, and the US EPA has never approved them, as required by the U.S. Clean Water Act. Under the U.S. Clean Water Act, the changes made by Maine in 1995 and 2008 require a Use Attainability Analysis be conducted. Maine has never conducted such an analysis.

For this reason, even if Maine now submitted these legislative changes to the US EPA for approval, the US EPA could not approve them since Maine has never conducted a Use Attainability Analysis for these changes, as required by the U.S. Clean Water Act.[5]

Maine's water quality statutes establish a legal classification system for its waters, including those in the St. Croix River drainage lying within the boundaries of the State of Maine.[6] This classification system is required by the U.S. Clean Water Act. The CWA requires Maine to establish narrative and numerical water quality standards for each classification and to assign designated uses for each classification. The CWA further requires Maine to assign each waterbody in the state to one of several classification categories. No waterbodies can be left unassigned to a classification.

Maine law puts natural lakes and ponds into the GPA classification and it puts rivers, brooks and streams into one of four classifications, AA, A, B and C. The natural ponds

[5] *See* 40 CFR 131.10 (g) and (h) and discussion at the US EPA Water Quality Handbook, on-line at http://www.epa.gov/waterscience/standards/handbook/chapter02.html#section7

[6] The classification standards for waters in the St. Croix drainage are set forth in 38 MRSA §467(13).

and lakes of the St. Croix River watershed are assigned to Class GPA; the rivers, streams and brooks of the watershed, including the mainstem of the St. Croix to its head of tide, are assigned variously to the AA, A, B and C classifications. 38 MRSA §467(13).

All of Maine's waterbody classification categories contain a narrative water quality standard which states the waterbody must be of suitable quality to support all aquatic life indigenous to that waterbody. 38 MRSA §465 and 465-A. 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). Maine's lowest water quality standard, Class C, requires there shall be no detrimental changes in the resident biological community. 38 MRSA § 465(C).[7] This standard also applies to all Class B, A and AA waters. "Detrimental changes" is defined as "no significant loss of species excessive dominance by any species or group of species attributable to human activity." 38 MRSA §466(12). The narrative water quality standard for Class GPA waters (ie. natural lakes and ponds) states the habitat must be characterized as natural. 38 MRSA §465-A (1)(A). Natural is defined as "living in, or as if in, a state of nature not measurably affected by human activity." 38 MRSA §466(9).

A large amount of historic, archaeological and scientific evidence shows the native, migratory alewife is an aquatic species indigenous to West Grand Lake, Spednic Lake and the other watershed segments referenced in the Plan. No historic or scientific evidence exists to suggest the contrary.

All of Maine's various water quality classifications include indigenous fish and suitable habitat for them as a designated use. Alewives, as the IJC Plan notes, are indigenous to the St. Croix River drainage above the Woodland and Grand Falls dams. As such, under Maine law their existence in the St. Croix River drainage is a designated use under

[7] See *FPL v. Maine BEP* (2007 ME 97) at 14: "Class C is Maine's minimum EPA-approved water quality standard for hydropower impoundments and, therefore, under federal law, Maine is not permitted to apply a less stringent standard than Class C to a hydropower impoundment unless a UAA [Use Attainability Analysis] has been conducted and EPA approval has been obtained. See 38 M.R.S.A. § 464(9) (Supp. 1992); 38 M.R.S.A. § 465(4)(C); 33 U.S.C.S. § 1313; 40 C.F.R. §§ 131.10(g), (j), 131.20(c)."

Maine's water quality standards of classification which must be protected and maintained. If Maine wishes to specifically exclude native alewives as a designated use of the St. Croix River, as it did by statute in 1995 and 2008, the U.S. Clean Water Act requires Maine to conduct a Use Attainability Analysis and submit it and any statutory changes to the US EPA for review and approval. This has never been done.

US EPA rules state: "Once a use has been designated for a particular water body or segment, the water body or water body segment cannot be reclassified for a different use except under specific conditions. If a designated use is an existing use (as defined in 40 CFR 13 1.3) for a particular water body, the existing use cannot be removed unless a use requiring more stringent criteria is added." 40 CFR 131.10 (g) (h).[8]

US EPA rules state: "When States adopt new or revised water quality standards, the State is required under CWA Section 303(c) to submit such standards to EPA for review and approval/disapproval. Section 131.20(c) of the Water Quality Standards Regulation requires the submittal to EPA to occur within 30 days of the final State action." US EPA Water Quality Handbook, Section 6.2. 40 CFR 131, Subpart C. Because Maine never submitted these changes to US EPA within 30 days of enactment in 1995 or 2007, these changes are illegal under 40 CFR 131(C).

The Maine Supreme Court ruled in 2007:

"Pursuant to the Clean Water Act and its implementing regulations, states are required to designate uses of waterbodies within their borders. 33 U.S.C.S. § 1313 (2001); 40 C.F.R. § 131.10 (2006). Once such designated uses have been established and approved by the EPA, states are permitted to adopt subcategories of use for specific waterbodies, requiring less stringent criteria, provided they conduct a UAA and obtain EPA approval of any subcategory. 40 C.F.R. §§ 131.10(g), (j), 131.20(c) (2006)."[9]

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[8] *See* US EPA Water Quality Handbook, Section 2.7.3: "A State may change activities within a specific use category but may not change to a use that requires less stringent criteria, unless the State can demonstrate that the designated use cannot be attained." http://www.epa.gov/waterscience/standards/handbook/chapter02.html#section7

[9] *FPL v. Maine BEP*, 2007 ME 97 at 13-14.

US EPA rules define a Use Attainability Analysis as: ‘a structured scientific assessment of the factors affecting the attainment of a use which may include physical, chemical, biological, and economic factors as described in section 131.10(g).’ 40 CFR 131.3.

As noted by the Maine Supreme Court, the U.S. Clean Water Act requires Maine to conduct a Use Attainability Analysis if it wishes to create a new sub-category of designates uses of a waterbody if the new designated use would require less stringent water quality criteria and standards than the existing standards.

Prior to 1995, all of the St. Croix River drainage was required by law to be suitable habitat for all indigenous aquatic species, including the native alewife. The 1995 law created a new sub-category of water quality standards and designated uses for the St. Croix River which, in effect, stated the St. Croix was no longer required to provide suitable habitat for one native species, the alewife.

The 2008 law, which prohibits alewife passage above the Grand Falls Dam, has the same effect. Both laws create new sub-categories of water quality standards and designated uses for the St. Croix River that are less stringent than previously existing standards, which required the St. Croix be suitable habitat for native alewives.

Due to the effect and intent of the 1995 and 2008 laws, the U.S. Clean Water Act requires Maine to conduct a Use Attainability Analysis prior to making these changes. Maine has never conducted a Use Attainability Analysis of these changes before or since enacting them by statute in 1995 and 2008. As such these changes are in violation of the U.S. Clean Water Act and are null and void.

III. The 1995 and 2007 Maine alewife ban laws on the St. Croix River violate the U.S. and Maine’s Anti-Degradation Laws.

The U.S. Clean Water Act requires all states, including Maine, to include in their state water quality standards and classification system what is called an "antidegradation

clause." This clause states that once a waterbody actually meets a certain level of quality, no action can be taken which would cause the waterbody to fail to achieve the level of quality it is presently achieving.

Maine, as required by the U.S. Clean Water Act, has included an anti-degradation clause in its general water quality standards. 38 MRSA §464 (4)(F)(1) *et seq*. This statute states in pertinent part:

"The antidegradation policy of the State is governed by the following provisions. (1) 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 water uses are those uses which have actually occurred on or after November 28, 1975, in or on a water body whether or not the uses are included in the standard for classification of the particular water body. Determinations of what constitutes an existing in-stream water use on a particular water body must be made on a case-by-case basis by the department."

The IJC Plan (2010) notes that alewives were present in their indigenous habitat in Spednic Lake and other parts of the St. Croix River drainage above the Woodland and Grand Falls dams in large numbers until the mid 1990s and they were present and abundant in these areas after November 28, 1975. This means that the ability of alewives to inhabit those portions of their indigenous habitat in the St. Croix River drainage which they actually occupied after Nov. 28, 1975 is an "existing in-stream water use" under Maine's anti-degradation statute which must be "maintained and protected." 38 MRSA §464 (4)(F)(1).

Maine's anti-degradation law requires the Maine DEP to make a "case by case" decision on what constitutes an "existing in-stream use" of the St. Croix River under Maine law. The Maine DEP has never made or issued such a "case by case" decision regarding alewives in the St. Croix River. Because alewives were living throughout the St. Croix drainage in large numbers after 1975, in the absence of such a Maine DEP "case by case" decision to the contrary, they qualify as an "existing in-stream use" of the St. Croix River

under Maine's anti-degradation law, and this use must be maintained and protected. The 1995 and 2008 Maine alewife ban laws directly violate Maine's anti-degradation law because they had the intent and effect of eliminating an existing in-stream use of the St. Croix River by native alewives by preventing the alewives from physically gaining access to the river and living in it, as they did between 1995 and 1975. This was not an inadvertent or unplanned effect of the laws: it was their sole intent.

The U.S. Clean Water Act requires all states, including Maine, to include an antidegradation clause in their state water quality statutes. 40 CFR 131.12. Maine's existing anti-degradation clause was reviewed and approved by US EPA when it was last amended in 1991. The 1995 and 2008 alewife ban laws clearly violate Maine's anti-degradation statute, as last amended in 1991, because they eliminate an existing in-stream use of the St. Croix River by native alewives. Furthermore, Maine's anti-degradation statute requires the Maine DEP to conduct a "case by case" analysis when determining what is, and what is not, an existing in-stream use. The Maine DEP has never made such a "case by case" decision regarding native alewives in the St. Croix in regards to the 1995 and 2008 alewife ban laws.

US EPA regulations state, regarding anti-degradation laws: "An 'existing use' can be established by demonstrating that: fishing, swimming, or other uses have actually occurred since November 28, 1975; *or* that the water quality is suitable to allow the use to be attained--unless there: are physical problems, such as substrate or flow, that prevent the use from being attained." 40 CFR 131.12(a)(1).

In the case of native alewives, it is well proven that between 1975 and 1995 there were millions of alewives inhabiting the St. Croix River watershed annually. There is no question native alewives are an "existing in-stream use" of the St. Croix River as defined by the U.S. Clean Water Act.

The US EPA Water Quality Handbook states: "Section 131.12(a)(l) provides the absolute floor of water quality in all waters of the United States. This paragraph applies a

minimum level of protection to all waters .... If a planned activity will foreseeably lower water quality to the extent that it no longer is sufficient to protect and maintain the existing uses in that water body, such an activity is inconsistent with EPA's antidegradation policy, which requires that existing uses are to be maintained. In such a circumstance, the planned activity must be avoided or adequate mitigation or preventive measures must be taken to ensure that the existing uses and the water quality to protect them will be maintained."

The US EPA Water Quality Handbook at Section 4.4.2 states: "No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State's water quality standards ... Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. Any lowering of water quality below this full level of protection is not allowed."[10]

The 1995 and 2008 St. Croix alewife ban laws violate 38 MRSA §464 (4)(F)(1) *et seq.* by failing to "maintain and protect" the existing in-stream use by native alewives of their indigenous, accessible habitat in the St. Croix River drainage, a use which actually occurred for many years on and after Nov. 28, 1975. These laws were designed to make alewives extinct in the St. Croix River, in violation of 38 MRSA §464 (4)(F)(1). It is hard to reconcile "drive to extinction" with "maintain and protect."

IV. The Maine Legislature has no authority to order the Maine Commissioner of Marine Resources and the Commissioner of Inland Fisheries & Wildlife to violate the U.S. Clean Water Act on the St. Croix River.

Section 2 of Maine's 2008 alewive ban states: "**2. Grand Falls Dam.** The commissioner and the Commissioner of Inland Fisheries and Wildlife shall ensure that the fishway on the Grand Falls Dam is configured or operated in a manner that prevents the passage of alewives." 12 MRSA §6134(2). The Maine DMR and IF&W Commissioners have no

[10] *See* US EPA Water Quality Handbook, Section 4.4.2, on-line at: http://www.epa.gov/waterscience/standards/handbook/chapter04.html#section4

legal authority to extirpate alewives from the St. Croix River by barring their passage at the Grand Falls dam, any more than the Commissioners have legal authority to dump rotenone into alewife spawning areas in the St. Croix River for the purpose of extirpating native alewives. The Maine Legislature has no authority to enact a law ordering an executive branch commissioner to directly violate the U.S. Clean Water Act. Yet, this is the sole purpose and effect of 12 MRSA §6134 as enacted on April 9, 2008.

V. Conclusion

The 1995 and 2008 State of Maine St. Croix River alewife ban laws have caused alewives to become extinct from 98 percent of their native habitat in the St. Croix River watershed; today, only a tiny remnant alewife population remains in the St. Croix. (IJC 2010). By law, the Maine Legislature was required to submit these 1995 and 2008 legislative changes to the US EPA for review within 30 days of enactment. Because Maine failed to do so, these laws are null and void. US EPA must now vacate them pursuant to its non-discretionary duties under the U.S. Clean Water Act.

Thank you for your time.

Sincerely,

Douglas H. Watts
131 Cony Street
Augusta, ME 04330
207-622-1003
info@dougwatts.com

References cited:

International Joint Commission. 2008. Saint Croix River: State of the Watershed Report. On-line at http://www.ijc.org/rel/boards/saint/watershed_report.pdf.

International Joint Commission. 2010. Alewives and the St. Croix River: An Adaptive Management Plan (draft). On-line at http://www.ijc.org/rel/st-croixalewife/sites/default/files/st_croix_amp.pdf.

Alewife Restoration

Full Name:
Edward W. Spurr
City:
Contoocook
State / Province:
New Hampshire

Dear Colonel Feir and Director Appleby:

I was once responsible for Alewife and river herring restoration for the state of New Hampshire, I retired from the New hampshire Fish and Game Department as Assistant for Special Projects some years ago but find it almost reprehensible that the state of Maine would want to continue to unilaterally block alewives from the vast majority of the St. Croix River which they have done since 1995. As a result of this misguided policy, the run has plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. The Atlantic States Marine Fisheries Commission, on which I represented New Hampshire for seventeen years, has also given alewife and river restoration a high priority and are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,
Edward W. Spurr

Alewives in the St. Croix River

Full Name:
Edward Walworth, MD
City:
Lewiston
State / Province:
Maine

Dear Sirs,

I think the recent compromise decision still favors the bass over the alewives. The biological and economic benefit of unfettered upstream access for the alewives far outweighs any real or imagined effect on the small mouth bass in the lakes of Washington County. At a time when the American fishing industry is troubled and the global supply of fish is diminishing, let's remove whatever barriers that are practical - and this is one good example.

Support free access for native alewives in the St. Croix River!

Full Name:
Elena Bennett
City:
Boynton Beach
State / Province:
Florida

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

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Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Elena Bennett

St. Croix alewives

Full Name:
Elizabeth McPherson
City:
Damariscotta
State / Province:
Maine

Subject: Support free access for native alewives in the St. Croix River!

Dear Colonel Feir and Director Appleby:

I appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Elizabeth McPherson

Support free access for native alewives in the St. Croix River!

Full Name:
Eric DesRoberts
City:
Old Town
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

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Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Eric DesRoberts

Fisheries and Oceans Canada
Pêches et Océans Canada
P.O. Box 1035
Dartmouth, NS
B2Y 4T3

JUL 22 2010

Ms Nadine MacKay
Environment Canada
16th Floor, 45 Alderney Drive
Dartmouth, NS
B2Y 2N6

Dear Ms. MacKay:

This will respond to the June 9, 2010 letter from Mr. Bill Appleby requesting comments on the proposed discussion document *An adaptive Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick.*

Fisheries and Oceans Canada (DFO) generally supports this proposal and is pleased that Dr. Jamie Gibson of our Science Branch Population Ecology Division was one of the Contributors.

From a Canadian fisheries management perspective, our preference would be for a greater focus on restoring a self-sustaining alewife population than the current priority for maintaining the small mouth bass population for the recreational fishery. Nevertheless, the proposal does offer a way forward, that we can support.

We are, however, concerned about the costs associated with implementation of this adaptive plan. Costs as outlined in Table 8 of the discussion document estimate one-time implementation costs to DFO at $16,000 with annual costs of about $16,000 minimally for the first 5 years. These are likely underestimates, and DFO is unable to make a commitment to fund at this time or at this level.

Yours sincerely,

Faith G. Scattolon
Regional Director-General
Maritimes Region

Cc: Bill Appleby

Canada

300 Horseback Road
Carmel, Maine 04419

13 August 2010

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River
Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Dear Colonel Feir and Director Appleby:

I am writing regarding the proposed **Adaptive Management Plan** and the re-introduction of anadromous alewives, *Alosa pseudoharangus*, to the St. Croix River watershed along the Maine/New Brunswick boarder. I fully support this effort and encourage you to take the necessary steps to allow full access to alewife migration throughout the watershed.

My qualifications include being a Certified Fisheries Scientist by the American Fisheries Society, of which I am a Life Member. I am also a Fellow with the American Institute of Fisheries Research Biologists and retired from government service after nearly 40 years as a Fishery Research Biologist with the Maine Department of Inland Fisheries and Wildlife (IFW) and 3 years as Executive Director of the Atlantic Salmon Commission.

During my tenure with IFW I was charged, among other tasks, with evaluating possible interactions between anadromous alewives and resident freshwater fishes. This 11 year study was conducted on Lake George in Central Maine. Resident fishes in Lake George included a wide assemblage of native Maine fish species and the introduced smallmouth bass, *Micropterus dolomieu.* This study (Kircheis, et. al 2004) clearly showed that there was no scientific basis for suspecting that alewives had any survival, reproductive, or growth impact upon smallmouth bass. Nor did the study identify any negative impacts on any of the other resident fishes of Lake George. On the contrary, young-of-the-year rainbow smelt, *Osmerus mordax*, exhibited faster growth in the presence of anadromous alewives than in the absence of alewives. Chain pickerel, *Esox niger*, also showed better growth in the presence of alewives. The white perch (*Morone americana*) population fluctuated in abundance regardless of the presence of alewives. There are other studies that support our findings on Lake George but most notable among them is the one published by T.V. Willis (2006) that was conducted on the St. Croix River and charted especially because of on-going efforts to re-introduce alewives to the system

Also during my tenure with IFW I was involved with evaluating the smallmouth bass situation at Spednic Lake in the upper St. Croix watershed. While it is indisputable that the smallmouth bass population suffered a severe population crash it is also quite unclear what caused the decline. It is easy to point a finger at the recently re-introduced alewife as the culprit, however, there is no scientific evidence to support such claims. Other influences affecting the lake at the same time included unregulated water level draw downs that occurred during the smallmouth bass spawning and nursery seasons.

A large number of other species would benefit from the re-introduction of anadromous alewives to the St. Croix watershed: avian predators (especially bald eagles and osprey), mammalian predators (mink, otter, bears, raccoon), marine predators (seals, several ground fish species), and Atlantic salmon (which would benefit from having out-migrating smolts screened from predation by in-migrating alewives), and the freshwater mussel, the alewife floater (*Anadonta implicata*), whose glochidia are dependant upon the alewife, and perhaps shad and river herring, for survival.

In conclusion, the ecological, and economic benefits that would accrue from a healthy and abundant anadromous alewife population in the St. Croix River watershed are huge and well known. I highly recommend that the IJC allow for full and free access to the St. Croix River watershed. The scientific evidence supports such a decision.

Sincerely,

Frederick W. Kircheis
Phone: 207 848 3797
e-mail: fred.kircheis@roadrunner.com

Citations:

Kircheis, F.W., J.G. Trial, D.P. Boucher. B. Mower, T. Squires, N. Gray, M. O'Donnell, and J.S. Stahlnecker. 2004. analysis if impacts related to the introduction of anadromous alewife into a small freshwater lake in central Maine. USA. Maine DIFW, Maine DMR, Maine DEP.

Willis. T.V. 2006. Two reports on alewives in the St. Croix River: St. Croix River alewife-smallmouth bass interaction study. Maine Rivers. Hallowell, Maine.

RESTORE ALEWIVES FULLY TO THE ST. CROIX RIVER

Full Name:
Gabrielle Rigaud
City:
Jefferson
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

Since 1995, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River, resulting in a dramatic decline from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan does not do enough to fully restore the fishery.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please take action now that will free access for alewives to the St. Croix River starting in 2011.

Sincerely,
Gabrielle Rigaud

Observations of positive interactions between sea-run alewives and other species including smallmouth bass in the Oromocto River (NB)

Full Name:
Geoff Giffin
City:
Oromocto
State / Province:
NB

I am submitting the following letter on behalf of Robin Hanson, President of the Oromocto Watershed Association. I read most of this letter on Robin's behalf at the meeting in Princeton, Maine on the evening of August 4th. In this letter, Robin clearly outlines the many benefits that a healthy run of native anadromous alewives bring to the Oromocto River watershed, a very large sub-watershed of the St. John River and relatively close to the St. Croix watershed.

OromoctoWatershed
PROTECTION AND ENHANCEMENT OF THE OROMOCTO RIVER

August 11, 2010

Colonel Philip T. Feir
U.S. Army
U.S. Co-Chair,
International St. Croix River Watershed Board,
696 Virginia Road,
Concord, MA 01742-2751

Dear Colonel Feir:

As President of the Oromocto Watershed Association here in New Brunswick, I have a keen interest in matters pertaining to native sea-run alewives (or "gaspereau" as we commonly refer to them in NB) because our river is blessed to have very healthy annual runs which we embrace as fundamentally important to all aspects of our watershed, including biological functioning, commercial fisheries as well as recreational fisheries.

I was pleased to submit the following observations to the meeting held in Princeton, Maine, that were read on my behalf by Geoff Giffin, the NB Regional Director of the Atlantic Salmon Federation. Please consider this letter as part of the collective comments that groups and individuals are submitting in response to the Adaptive Management Plan.

Our watershed is 2,500 square kilometres in geographical area and is a major sub-watershed of the St. John River. It is located between the main stem of the St. John River and the St. Croix. The Oromocto system has a great population of native, sea-run alewives that is estimated to be around 4 million adults returning annually to spawn in our tributaries and headwater systems. The Oromocto has two major branches with large lakes at their highest source and is alive with fish, wildlife and outdoors enthusiasts.

1- There is a commercial fishery of alewives which last year harvested around 3 million fish. Our Watershed Association is working with DFO to have quotas placed on this fishery in the order of 33% capture rate of the migration to insure the species survives and has the ability to be the food foundation for the many species of our watershed.

2- The alewife migration starts in mid April and lasts till the second week in June. There are six weeks in the middle of this migration which is peak.

3- The Bald Eagle count goes from approximately 12 to 50 during this migration. The majority of the eagles are immature. There are a number of feasting stations along the river where 25 eagles can be seen at one time. The adult alewives are easily caught and furnish a much needed food supply to help sustain the eagle population.

4- The same can be said of the Black Bear in the more remote locations of the Oromocto River.

5- Sea gulls gather in the hundreds to take their share.

6- We have one of the highest concentrations of Ospreys in Atlantic Canada. NOTE- The large number of predators in our watershed is directly related to the vast numbers of returning alewives.

7- The local community comes alive as a tourist attraction; hundreds of visitors come to net dip the Gaspereau; hundreds more come to watch the migration pass through the rapids along the river, still more come to photograph and watch nature in action.

NOTE- OBSERVATIONS ON OTHER FISH SPECIES IN THE RIVER

8- We have noticed that Trout and Salmon Parr flourish and fatten up during the migration of alewives. They feed on the eggs and feed on the fry as they migrate back to the ocean. When the alewives are in abundance the other species in the river become healthier and greater in abundance.

9- Although American Eel numbers are down greatly in rivers along the Atlantic seaboard, in some areas as much as 90 %, this is not the case in the Oromocto River system. The commercial eel fishery has remained very stable in the Oromocto River with catches varying only slightly over the years. The eels feed heavily on the sea ward migration of baby alewives. This migration starts around August first and goes until September. Tens of millions of alewife fry form long ribbons of schools. This creates another opportunity for a feeding frenzy to pretty near all the rest of the species in the river. The American eel schools up in fast water pools just below rapids and small falls to feed. I have personally witnessed up to 400 eels twisting and turning feasting on fry.

10 -The Smallmouth Bass entered our watershed in 1975 and has had a dramatic effect on our Watershed. The larger streams have been taken over by Smallmouth Bass. The smaller streams have not. We have seen species shift in territory. The two main branches of the Oromocto River have large quantity of bass in all sizes. What we have noticed - When gaspereau are running in the spring the bass are in their greatest abundance in the fast water streams. Many of the larger bass leave the faster water as the season progresses but not the small ones. These small bass approximately 6 to 7 inches are in every little riplet one can find. We have witnessed the feeding frenzy of these small bass on the alewife fry. This usually takes place in the last hours of day light and is exciting to watch. There is no question that alewife fry are the main food source to the very young smallmouth bass in a big way.

11- The smallmouth bass recreational fishery is excellent in the Oromocto system. We have interviewed bass fishermen who have told us there are more smallmouth bass in the Oromocto River than anywhere else in the province. Bass fishers have told us the fish are bigger and healthier in the Oromocto Watershed.

12- Our watershed is still pristine and very healthy. We strongly believe that without alewives in our watershed as a foundation nutrient supplier and food source we could not boast the great abundance of predator wild life and great recreational fishery.

13- We believe the contribution of native sea-run alewives to our watershed is fundamental to its health and welfare and that the same can be said of other rivers along the eastern seaboard. We can only imagine the nutrition's and food source the alewife is supplying to its predators in the ocean.

14- OUR RECOMENDATION ON ALEWIVES FOR THE ST. CROIX:

Bring back the alewives to your river and you will enhance all wildlife in your system, including the health and vitality of the smallmouth bass, and you will be glad you did - so just do it.

Thank you,

Robin Hanson
President
Oromocto River Watershed Association Inc.

Colonel Philip T. Feir
US Army
US Co-Chair
International St Croix River Watershed Board
696 Virginal Road
Concord, MA 01742-2751

Dear Colonel Feir:

I am writing to writing to express my strong support for the restoration of alewives throughout their historic range in the St. Croix River, including above Grand Falls.

As a fifth-generation commercial fisherman from Port Clyde, Maine, I am well aware of the ways in which the ecology of the Gulf of Maine has been disrupted, and the devastating effects on communities up and down the coast just like my own. I have worked on behalf of the groundfish industry to allow for the recovery of depleted stocks, and develop plans to manage sustainably into the future. Maine fishermen have made tremendous sacrifices to allow for the recovery of the species that were once so abundant in our waters. I firmly believe that a critical component in groundfish recovery is adequate forage fish (alewives) to rebuild near-shore cod and haddock stocks in the Eastern Gulf of Maine. Healthy and thriving alewife runs would also generate enough fish to supplement the bait needs for Maine's $250 million lobster industry, which is currently struggling with inadequate herring supplies.

I am also a lifelong recreational fisherman, with a great deal of passion for this sport and have fished in many lakes and rivers of the state. Over and over again, I have seen instances where alewives and smallmouth bass coexist in abundance, with Damariscotta Lake as just one example. It makes no sense to me that the restoration of alewives, a native fish with an important role in the ecology of freshwater, estuarine, and marine environments, is being sacrificed because of unsupported concerns over the potential impacts on smallmouth bass.

Finally, I serve as a member of the Zone D Lobster Council, the state Lobster Advisory Council, the Board of the Maine Lobstermen's Association, and the Mid-coast Fishermen's Association. My involvement in management brings me often to the Maine Legislature, where I have participated in many policy discussions about the future of Maine's fisheries. I watched the Marine Resources Committee struggle with the St. Croix issue in 2008, and would fully expect that another attempt within the Legislature would bring it no further to the appropriate resolution. For this reason, I ask that the IJC exercise its own authority to undertake the restoration of these fish, which is so long overdue.

Sincerely,

Gerry Cushman

Support free access for native alewives in the St. Croix River!

Full Name:
Gerry Milliken
City:
Oroville
State / Province:
WA

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely, Gerry Milliken

STATE OF MAINE
OFFICE OF THE GOVERNOR
1 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0001

JOHN ELIAS BALDACCI
GOVERNOR

September 17, 2010

Colonel Philip T Feir, US Army
US Co-Chair
International St Croix River Watershed Board
696 Virginal Road
Concord, MA 01742-2751

Dear Colonel Feir:

I want to thank the International Joint Commission (IJC) and the St. Croix River Watershed Board for your continued efforts to restore alewives to their historic range within the St. Croix River. I appreciate the IJC efforts on the proposed *Adaptive Management Plan for Managing Alewives in the St Croix River Watershed, Maine and New Brunswick* (AMP) for restoring alewives to the St. Croix River and your work in organizing and facilitating the public meeting in Princeton held on August 4, 2010.

As you know, I viewed the development of the AMP as the best way to bring opposing sides together to find the consensus needed to begin restoration of alewives, thus ending this long and bitter disagreement. In a letter dated August 10, 2009, I clearly indicated my intent to reintroduce legislation that would reopen the fishway at the Grand Falls Dam, assuming an agreement was reached with all parties. My willingness to do so was based on an expectation that such consensus on the AMP could be achieved. However, it is now apparent that despite the best efforts of the IJC to acknowledge and address all concerns, there still is no broadly supported agreement regarding the best path forward.

With the lack of any agreement, attempts to advance this discussion legislatively are not likely to produce a markedly different result than past efforts. For this reason, I encourage the IJC to utilize its authority and reopen the fishways at the Grand Falls Dam.

The State of Maine could support the Adaptive Management Plan (AMP) but believes it will result in delays to restoring a sustainable population of alewives. Therefore, if the IJC chooses to use the AMP, it should do so only for eight years (two generations of alewives) and then reopen free access to boundary waters in the St. Croix watershed for alewives. The State of Maine would also be comfortable, however, if the IJC considers taking a more aggressive approach, such as using the plan for only four years (one generation of alewives). The State of Maine would monitor alewife restoration during this time, along with biologists from other relevant federal and Canadian agencies. If reintroduction is successful and the ecosystem responds acceptably to the return of alewives, the IJC could then open free access to boundary waters in the St. Croix after four years.

If you have further questions please contact Patrick Keliher at the Maine Department of Marine Resources at 207-287-9973.

Sincerely,

John E Baldacci
Governor

cc Honorable Shawn Graham, Premier of New Brunswick
Honorable Hugh Akagi, Passamaquoddy St. Croix Schoodic Band, New Brunswick
Honorable Reuben Cleaves, Chief-elect, Passamaquoddy Tribe at Pleasant Point, Maine
Honorable Joe Socobasin, Governor-elect, Passamaquoddy Tribe at Indian Township, Maine
Rep Leila Percy, Co- Chair, Joint Standing Committee on Marine Resources
Sen. Dennis Damon, Co-Chair, Joint Standing Committee on Marine Resources
Roland Martin, DIFW Commissioner
George Lapointe, DMR Commissioner
Patrick Keliher, DMR, Director of Sea Run Fisheries
John Boland, DIFW, Acting Director of Resource Management
Jamie Bissonette Lewey, MITSC Chair

STATE OF MAINE
OFFICE OF THE GOVERNOR
1 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0001

JOHN ELIAS BALDACCI
GOVERNOR

June 23, 2010

Philip T. Feir
Colonel, U.S. Army
U.S. Co- Chair
International St Croix Watershed Board
696 Virgina Road
Concord, MA 01742-2751

Dear Colonel Feir:

Thank you for your letter dated June 9, 2010 and the draft *Adaptive Management Plan for Managing the Alewife in the St Croix River Watershed, Maine and New Brunswick* (AMP). I applaud the International Joint Commission and its St. Croix River Watershed Board for providing a bi-national forum on this matter. I am very pleased to see the progress made on gathering input from the Tribes, key parties and the public. Finding consensus is essential to a final solution.

As you know, staff from the Department of Inland Fisheries and Wildlife and the Department of Marine Resources assisted in the development of the draft AMP. After further review, the State has no substantive comments at this time, but we do reserve the right to submit additional comments after the public meeting scheduled for August 4, 2010.

Again, thank you for moving this process forward.

Sincerely,

John E. Baldacci
Governor

cc: Patrick Keliher, Department of Marine Resources
John Boland, Department of Inland Fisheries & Wildlife

alewife

Full Name:
hubert r noyes jr
City:
alexander
State / Province:
maine

Thank you for a chance to comment on this project. I was guiding years ago when the alewife's were let up into the st croix flowage
and long lake -big lake watersheds. I watched the decline of the bass populations and talked to people who fished spednic lake and
seen the same thing happen. as the bass declined so did the amount of out of state sportsmen coming here to fish. I feel that another
round of alewife's will finish off a way of life leftover in part of the lake and river-driving days. Sporting camps will fade away because
salmon fishing deer hunting and bird hunting will not be enough to keep them alive. First it was the coyote then the alewife what is next
the wolf? I watch the eagle's go up by my camp when the suckers run up stream in the spring and they come back every year.
It is a hard balance between humans and nature but what balance suits what humans the one's who have been here or the one's who
came here because of the beauty of nature.

Letter from the Environmental Defense Fund

Full Name:
Jake Kritzer, Ph.D.
City:
Boston
State / Province:
Massachusetts

Please see attached letter from the Environmental Defense Fund.

EDF
ENVIRONMENTAL DEFENSE FUND
Finding the ways that work

Barbara Blumeris
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742

Nadine Mackay
International St. Croix River Watershed Board
c/o Environment Canada
16th floor Queen Square, 45 Alderney Drive
Dartmouth, NS B2Y 2N6

July 21, 2010

Dear Ms. Blumeris and Ms. Mackay,

I am pleased to submit the comments on the following pages on the IJC's Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed. EDF has a long history of work to conserve and restore alewife populations and fisheries. Our efforts have included state- and place-based fish passage, watershed management, habitat protection and fisheries management projects, as well as regional and coast-wide initiatives involving the Atlantic States Marine Fisheries Commission (ASMFC), New England Fishery Management Council (NEFMC), and Atlantic Coastal Fish Habitat Partnership (ACFHP).

To introduce myself, I am the Senior Marine Scientist for the New England region of EDF. I serve on the ASMFC Habitat Committee and chair the Science Work Group within ACFHP, both of which include fish passage as a core focus. I also serve on the NEFMC Scientific and Statistical Committee, which does not address alewife management directly, but has wrestled with rebuilding groundfish stocks. Growing the forage base for groundfish species through alewife restoration in the St. Croix can aid the rebuilding process. EDF supports a spatial modeler as a post-doctoral fellow at the University of New Hampshire under my supervision, who is working with NEFMC's Atlantic Herring Plan Development Team to analyze strategies for mitigating alewife bycatch in ocean fisheries. Finally, I serve on the Board of Directors of the Alewife Harvesters of Maine, and I second the comments submitted by the Harvesters highlighting the socio-economic importance of alewife restoration.

All in all, our interests and involvement in alewife restoration for both ecological and socio-economic sustainability are diverse, and we view the St. Croix as a key component of regional ecosystem recovery.

Please do not hesitate to contact me with any questions you might have on our comments. I look forward to working with the IJC on the evolution of the plan.

Sincerely,

Jake Kritzer, Ph.D.
Senior Marine Scientist
(617) 406-1817
jkritzer@edf.org

Comments on the IJC Draft Adaptive Management Plan for Managing Alewife in the St. Croix Watershed

Submitted by,

Jake Kritzer, Ph.D.
Senior Marine Scientist
Environmental Defense Fund

July 19, 2010

EDF is encouraged that the debate over alewife restoration in the St. Croix River system is moving past hyperbole and rhetoric, and toward science-based planning and management. The draft adaptive management plan is an important symbol of this change. However, we are concerned by several elements of the plan, and urge careful attention to these issues in order to craft a more rational, effective and equitable plan. Specifically, we are concerned by five key attributes of the plan, as outlined below. Additionally, we offer an alternative approach that would overcome these deficiencies, and create more robust ecological and socio-economic outcomes from the ecosystem and its living resources.

Misaligned priorities

The plan implies a pronounced hierarchy wherein a non-native species, smallmouth bass, takes precedence over a native species, alewife. This is not consistent with sound public policy or ecosystem-based management. Furthermore, alewives have experienced pronounced declines along the Atlantic coast, to the point where NOAA has designated the species as a "Species of Concern" (forewarning potential listing as Threatened or Endangered if status is not reversed) and ASMFC has passed a default closure of all directed fisheries. MAFMC has called upon the Secretary of Commerce to take emergency action on ocean bycatch given the depletion of alewives and NEFMC is currently developing alternatives to mitigate ocean bycatch, despite alewives not currently being a managed species by either body. Given the widespread conservation concern evidenced by these actions, along with numerous complementary restoration efforts at the regional, state and local level along the coast, IJC's implicit designation of alewife as a secondary management concern is inconsistent.

This is not to deny the value of the smallmouth bass fishery to the local economy. Despite being a non-native species, smallmouth bass are established in the system, and therefore should provide economic benefit. However, a restored alewife population also represents opportunity for currently untapped economic benefit, and likely at no cost to the bass fishery (as discussed under "Foundation" below). The St. Croix could support by far the largest alewife run in Maine, and perhaps the largest on the Atlantic coast. A fishery based upon the run could generate income for harvesters and support services. Furthermore, the harvested alewives would provide bait for local lobstermen, supporting Maine's largest fishery. As a key forage species, alewives can support much needed rebuilding of groundfish stocks in the eastern Gulf of Maine (Ames 2010), enhance recreational fishing and birding opportunities, and serve as an eco-tourism

attraction in their own right, as they do during the annual Alewife Festival on the Damariscotta River and other similar festivals along the coast.

Weak foundation

The plan is based not only on misaligned priorities, but also on a weak scientific foundation. The evidence for a negative effect of alewives on the smallmouth bass population is either non-existent or at best equivocal (Hanson and Curry 2005; Willis 2006; Fig. 1). Indeed, the plan offers no evidence for a negative impact, and seems to be based entirely on a "perceived" impact (p. 2). Yet, alewife and smallmouth bass co-existed at high abundance for decades after the introduction of the latter in the 1800s. In fact, the more likely scenario is that alewives have the potential to enhance the bass population. Alewives not only provide a direct food source to predatory fish in freshwater ecosystems (e.g., Moring and Mink 2002), but also enhance those ecosystems by upstream delivery of carbon, nutrients and energy lost through unidirectional flow of water to sea (Durbin et al. 1979; MacAvoy et al. 2000; Walters et al. 2009). These inputs help promote aquatic insect populations and food web dynamics necessary for healthy freshwater ecosystems. These dual functions of an anadromous fish and a forage fish make alewife a keystone species, the restoration of which should be a top priority.

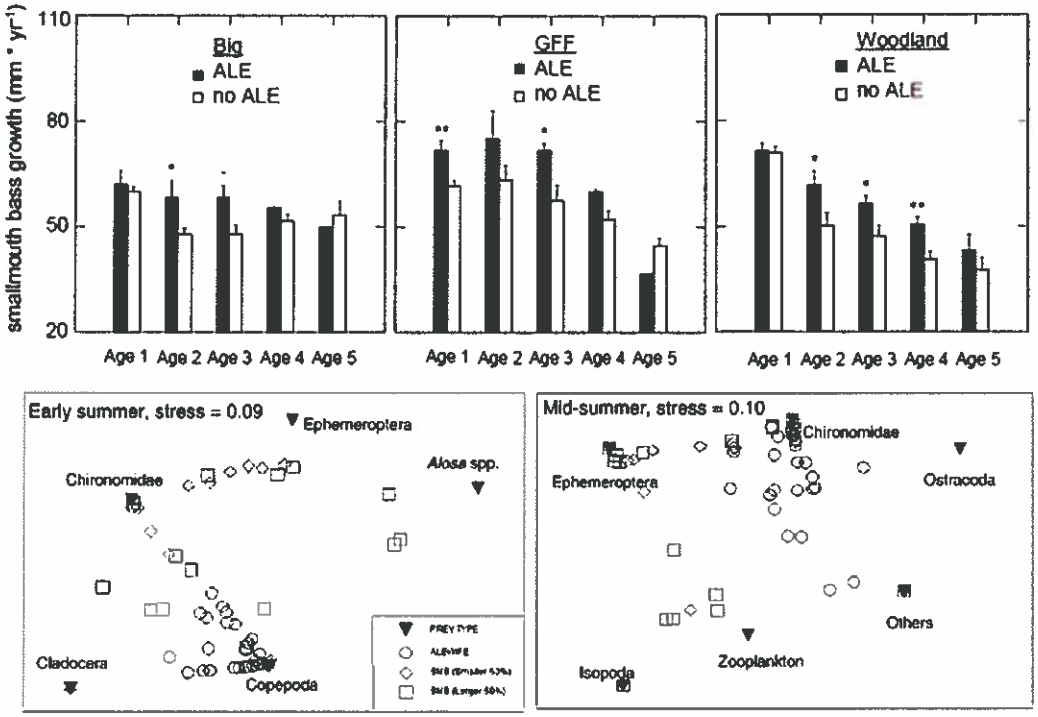

Figure 1. Evidence of little to no negative impacts of alewives on smallmouth bass, including equivalent or superior growth of bass in the presence of alewives in the St. Croix system (top plots) and limited dietary overlap of alewives and bass in the Mactaquac Arm, New Brunswick. (Top plots from Fig. 6 in Willis, 2006; Bottom plots from Fig. 6 in Hanson & Curry, 2005)

In fact, the rationale for the plan, as well as the computer simulations used to justify it, implicitly acknowledge the lack of an effect by incorporating no linkages between the alewife population and the bass population. Recruitment of bass is random in the model, and the same rules and consequent actions taken to suppress or reverse growth of the alewife population take effect regardless of whether the alewife population is 200,000 or 2 million or 20 million, and

regardless of how long the alewife and bass populations have co-existed at high abundance, as they did for most of the 20th century. According to the plan, a measured dip in bass production means the alewife population must suffer, with no consideration of observed co-occurrence and/or understanding of ecological mechanisms between them.

Quick triggers

Despite being based on misaligned priorities and founded upon a weak scientific basis, the plan is extremely trigger-happy. In other words, normal and natural fluctuations in the smallmouth bass population lead to drastic constraints on alewife restoration, or even intentional reductions in population size.

Most smallmouth bass populations show maximum ages of more than 10 years (Beamesderfer and North 1995). Long lifespans often evolve in species with high fecundity that experience regular episodes of low recruitment, which selects for reproduction over multiple years in order to capitalize on one or a few good years to ensure replacement (i.e., the "storage effect"; Warner and Chesson 1985).

Smith et al. (2005) have modeled smallmouth bass recruitment, and shown it to be not only highly variable through time, but also driven in large part by changes in freshwater inputs (Fig. 2). Therefore, variable and sometimes low recruitment is a normal aspect of smallmouth bass population dynamics, is more likely due to other environmental variables, and therefore is a poor basis for triggering suppression or reversal of recovery of a species desperately in need of restoration.

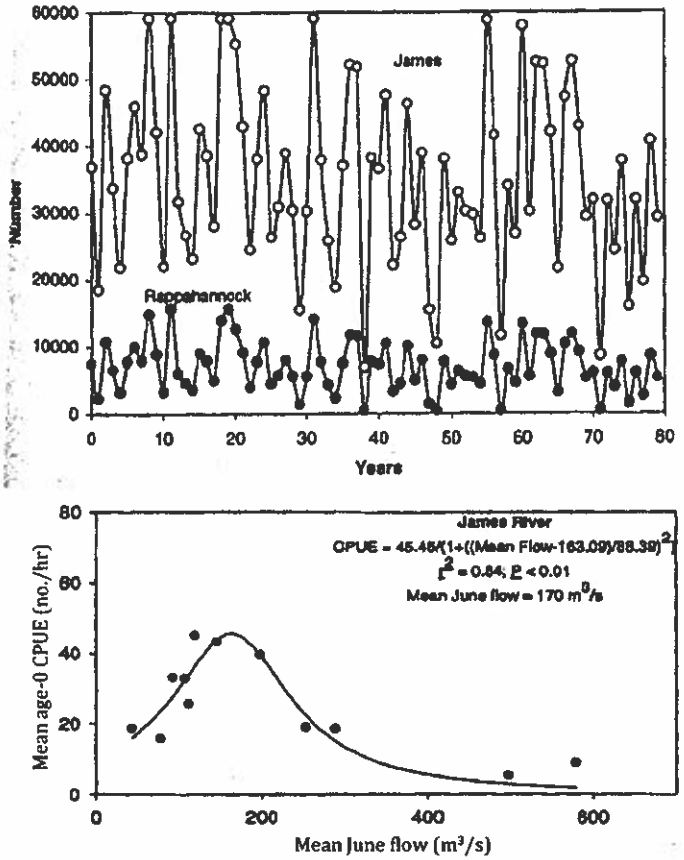

Figure 2. Modeled effects of variable recruitment on adult abundance (top), and the relationship between June river flow and YOY smallmouth bass abundance in the James River, VA (bottom). (From Figs. 2 & 5 in Smith et al. 2005)

Disproportionate scaling

Exacerbating the effects of the quick triggers, the plan scales the size of the alewife population and its growth in such a way as to almost guarantee that its full recovery will not be achieved, thereby indefinitely foregoing the important ecological and socio-economic gains to be had from restoration. Furthermore, the key population reference points used in the plan – carrying capacity, spawning escapement and minimum population size based on stocking targets – are all

potentially underestimates when compared with alternatives estimates, as illustrated in Table 1 below. The plan notes that more precise determination of reference points can take place at a later date given the currently low alewife abundance coupled with the likely time needed to reach larger population sizes. However, the plan also uses the simulated time needed to rebuild to the preliminary reference points as justification for its merits. Therefore, these reference points, while supposedly preliminary, are having an influence now and warrant closer scrutiny.

The plan estimates carrying capacity, *K*, as being around 23.6 million fish. An alternative estimate reported by Lotze and Milewski (2004), but not cited in the plan, is substantially higher at 31.7 million fish[1]. The plan then proposed a 20% escapement target of around 4.5 million fish. Obviously, 20% escapement using the higher estimate of *K* would be much higher, at around 6.3 million fish.

Table 1. Summary of alewife population reference points for the St. Croix River from the IJC Draft Adaptive Management Plan and other sources.

Population reference points	**Spawners**	**%K1**	**%K2**
Carrying capacity, K1, from data compiled by Lotze &Milewski (2004)	31,700,000	100	134
Carrying capacity, K2, as estimated in the Plan	23,600,000	74	100
43% escapement target implied by Maine's 4-day fishing week, using K1	13,631,000	43	58
43% escapement target implied by Maine's 4-day fishing week, using K2	10,148,000	32	43
20% escapement target, as proposed in the plan, using K1	6,340,000	20	27
20% escapement target, as proposed in the plan, using K2	4,500,000	14	20
Minimum population threshold based on stocking target of 35 fish·acre^{-1}	853,510	2.7	3.6
Minimum population threshold based on stocking target of 6 fish·acre^{-1}	146,316	0.5	0.6

However, the State of Maine requires a four-day fishing week, and therefore three days per week of unimpeded escapement. This implies a minimum escapement target of 43% (i.e., 3/7), which is 10.1 million fish when using *K* from the plan and 13.6 million fish when using *K* from Lotze and Milewski's paper. This is not to say that the 20% escapement target is inadequate. After all, river herring populations in other regions have been shown to be fairly productive (Crecco and Gibson 1990), as noted in the plan. Still, the plan refers to "regional proxies" (p. 7), so the reference points should be developed and evaluated with consideration of both Maine and New Brunswick fisheries management policy, not to mention federal policy in both countries.

Most importantly, the minimum population size at which neither reduction nor suppression of growth will occur, i.e. the implicit minimum population threshold of 146,316 fish, is woefully small. This figure is based on a stocking target of 6 fish·acre^{-1}, yet the State of Maine uses a stocking target of 35 fish·acre^{-1} elsewhere. Using this stocking target results in a lower threshold of 853,510 fish, nearly 6 times the minimum threshold proposed in the plan. The threshold based on 6 fish·acre^{-1} is less than 1% of either *K* value, while the threshold based on 35 fish·acre^{-1} is less than 4% of either *K*. Even relative to the minimum escapement targets rather than *K* estimates, these thresholds are extremely small: the 6 fish·acre^{-1} threshold is only 3.2% of the

[1] Lacking the original source of this estimate, one might speculate that the difference is due to the inclusion of Spednic Lake in the estimate reported by Lotze and Milewski (2004), analytical and/or data differences in the calculation, or both.

lower 20% escapement value, and 1.4% of the lower 43% escapement value. Even the 35 fish·acre^{-1} threshold is less than 20% of the lower 43% escapement target.

These comparisons are important because the lower threshold, whether it is set using the 6 fish·acre^{-1} target as proposed in the plan or the 35 fish·acre^{-1} target as consistent with Maine stocking policy, determines when suppression or active reduction of the alewife population can begin. The plan's appendix justifies the lower thresholds and rules for manipulation of population growth using computer simulations that show 20% escapement targets being reached in 10 to 40 years, depending upon the assumptions used. But that represents the time taken to reach the minimum population that could support any fishing whatsoever. Achieving a population that could provide meaningful fishery production would take much longer, and achieving a population that could fully provide the valuable ecosystem functions of alewives would take longer still. If either 43% escapement target were used instead of the 20% target, the rebuilding time would be even longer.

Ultimately, the plan essentially traps the alewife population at a size that is a small fraction of not only its potential maximum, but also a fraction of levels that would allow fishery value to be extracted and ecosystem services to be provided. It does this by setting a small starting point and then imposing a series of quick triggers for drastic suppression of growth and even reduction of population size.

Absence of a research plan

At present, the plan is founded upon perceived causes of a one-time bass population decline that was not abnormal for a long-lived species subject to high recruitment variability, and was more likely due to a myriad of other causes. Instead, the plan should set as a high priority a research program to make a much stronger case for the perceived effects, or more likely easing once and for all the ill-founded suspicions driving the drastic suppression of alewife restoration. In fact, Maine Rivers has already supported a compelling research effort to shed more light on the ecological dynamics of the system (Willis 2006). However, the continuation of this debate suggests that work was not sufficient in all stakeholders' eyes, a conclusion with which we strongly disagree. Therefore, the evidence needed to settle this debate should be made explicit, and the research plan needed to collect that evidence should be outlined, including:

- Clear response variables/metrics (e.g., bass growth and recruitment).
- Effect sizes and statistical power needed to demonstrate a meaningful relationship.
- Most importantly, convincing demonstration of the mechanisms underlying changes in the chosen metrics (i.e., more than simple correlation).

In the absence of a research strategy containing these elements, the plan is poised to continue *ad infinitum* on a foundation of perception (or perhaps misperception), hindering recovery of ecosystem function and greater socio-economic value. As it stands, the plan has no mechanism for improved understanding.

One particularly noticeable omission from the plan is barely any mention, let alone discussion, of Spednic Lake. There is no rationale given for not including Spednic Lake among the destinations for restored alewife spawning, and therefore no clear indication of the evidence needed to incorporate this potentially valuable spawning habitat. If restoration of alewife into

Spednic Lake is too politically contentious to even be considered at present, then at the very least the lake should be used to improve understanding. Specifically, research and monitoring in Spednic can provide a control setting with which to compare smallmouth bass dynamics and bass-alewife interactions in lakes where the species co-occur. The plan should outline ways to take advantage of the political barriers that keeps Spednic out of the restoration plan at present.

An alternative approach

Instead of continuing down the track of over-reaction to perceived but unproven effects of a native species on a non-native species, an alternative plan could be crafted that aims to restore the alewife population to the greatest abundance possible as soon as possible in order to generate revenue and a range of valuable ecosystem services. Switching the goal from overly cautious protection of the bass fishery to establishment of thriving alewife run capable of supporting harvest, sale as bait for lobstermen, and provision of forage for a variety of marine, estuarine, freshwater and terrestrial predators can produce these benefits.

The Alewife Harvesters of Maine represent an ideal organization to help plan a harvest strategy, in collaboration with other government and non-governmental partners. The plan identifies funding needs (even in the absence of a research strategy) but no clear source of those funds, so initially the harvest of a restored St. Croix alewife population could be done on a non-profit basis to help fund research, monitoring, education, creation of tourism infrastructure, and habitat protection and restoration. A harvest cooperative, under the direction of an advisory board composed of a diversity of local stakeholders (tribal representatives, bass guides, lobstermen, groundfish fishermen, environmental organizations, municipal governments, etc.), could plan and prosecute the fishery. If negative effects on bass are detected, the harvest work could be contracted to the bass guides to offset economic losses. In the more likely event that the restored alewife population leads to increased revenue without adverse effects on bass, the cooperative could decide whether to maintain non-profit status for broader watershed benefit, or switch to a for-profit approach to meet local employment needs.

Clearly, this idea requires more discussion and detail. But the goal of rebuilding a fishery and creating a harvest cooperative to sustainably manage the resource while reaping socio-economic benefit is much more consistent with sound public policy and ecosystem-based management, and has the potential to best serve the widest range of stakeholders.

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Alewives in the St. Croix

Full Name:
Jane Dineen
City:
Lovell
State / Province:
ME

Dear Colonel Feir and Director Appleby:

Maine has blocked alewives from most of the St. Croix River since 1995. As a result, the run plunged from more than 2 million fish in the 1980s to a few thousand in 2008. The IJC has made alewife restoration a high priority, but the proposed Adaptive Management Plan is too limited to allow successful restoration.

Alewives are a regional and international resource; their numbers have plummeted. People in Maine and other states are working to restore them, but, on the St. Croix, Maine blocks them on purpose because of a misperception—that they will harm smallmouth bass (a non-native species!). The IJC's proposed plan will continue to block alewives from 70% of their habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the U.S. East Coast, and Canada. They can do so in the St. Croix.

Please act now to allow access for alewives to the St. Croix River starting in 2011.

Sincerely,

Jane Dineen

Support free access for native alewives in the St. Croix River!

Full Name:
Jaremy Lynch
City:
Harpswell
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Jaremy Lynch

SUSTAINABLE FISHERIES COALITION
www.fisheriescoalition.org
PO Box 440 Winterport, Maine 04496-0440

The Sustainable Fisheries Coalition is an organization of the Atlantic herring and Atlantic mackerel mid-water trawl and purse seine industry, operating from Maine through New Jersey. The Coalition was established in 2007 to improve public outreach and education and increase awareness of the economic importance and environmental sustainability of the Atlantic herring and Atlantic mackerel fisheries.

August 16, 2010

Philip T. Feir
Colonel, U.S. Army
U.S. Co-Chair
International St. Croix River Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Dear Colonel Feir and Director Appleby

On behalf of the fishermen and plant employees of the Atlantic herring and mackerel companies organized as the Sustainable Fisheries Coalition; Cape Seafoods, Inc. of Gloucester, Massachusetts; Irish Venture, Inc. of New Bedford, Massachusetts; Lund's Fisheries, Inc. of Cape May, New Jersey; and NORPEL (Northern Pelagic Group) of New Bedford, Massachusetts, I am writing to provide you with our comments concerning the International Joint Commission's (IJC's) proposed *Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick*.

We are opposed to the plan's limited scope and encourage the IJC to act immediately to re-open all of the St. Croix's boundary dam fishways to alewife passage, as envisioned by the 1909 Boundary Waters Treaty. We do not believe there is a scientific basis to suspect that important recreational bass fisheries taking place in the watershed would be negatively affected by the introduction of alewife above either Spednic Lake or West Grand Lake. At the same time, we understand that more than 22,000,000 alewife could be sustained by maximizing the St. Croix watershed's available habitat.

Our companies directly employ about 350 people and have collectively invested approximately $80 million in plants and vessels, in addition to providing markets for many independent vessels, and are nearly 100 % dependent upon the Atlantic mackerel and Atlantic herring fisheries. Historically, alewife and blueback herring have been taken as an incidental catch (often referred to as 'bycatch') in these fisheries, depending upon the place and time of year. Those that may be caught are usually used as lobster bait.

In recent years, the Atlantic States Marine Fisheries Commission (ASMFC), and the New England and Mid-Atlantic Fishery Management Councils, have been considering the condition of blueback herring and alewife stocks, from Cape Hatteras to the Canadian Border, and investigating sources of mortality including the incidental harvest of some portion of these resources through 'directed' fisheries that utilize small mesh nets for pelagic fishing. An assessment of these populations will not be available before 2012.

The plan mentions the National Marine Fisheries Service's 2006 designation of alewife and blueback herring as species of concern and highlights the agency's intention to foster voluntary efforts and conserve the species before listing becomes warranted. Recognizing this goal as an opportunity, we are engaged in modifying our fishing practices to avoid these fish, as required by federal fisheries law.

ASMFC's shad and river herring fishery management plan (FMP) is intended to address the health of alewife and river herring stocks throughout their range, which should include Atlantic Canada, in our view. As the FMP states, "much of this reduction has been related to spawning and nursery habitat degradation or blocked access to habitat, resulting from human activity (e.g. human population increase); sewage and storm water run off; industrialization; dam construction; increased erosion, sedimentation and nutrient enrichment associated with agricultural practices; and losses of riparian forest and wetland buffers associated with resource extraction and land development". In addition, the FMP describes current threats to these populations as "barriers to migration; water withdrawals; toxic and thermal wastewater discharge, channelization, dredging and instream construction; inappropriate land uses; atmospheric deposition; climate change; competition and predation by invasive and managed species; fisheries activities; and instream flow regulation." In other words, as a river herring scientist opined in a meeting one day, "Habitat is where it's at."

We agree with the ASMFC's statement, in a recent letter to the ICJ commenting on this Plan that "a rebuilt alewife population on the St. Croix will provide numerous benefits beyond (those who are employed by and benefit from) directed commercial and recreational fisheries

We also agree with the ASMFC that the proposed Adaptive Management Plan is unlikely to result in significant ecological or economic benefits in the near future. We believe the Plan represents 'business as usual', given the local politics on this issue, and represents a lost opportunity. We encourage the St. Croix Watershed Board, and the ICJ, to aggressively pursue the expansion of alewife productivity by providing access to the remainder of St. Croix spawning habitat and amend the Plan accordingly.

Thank you for your attention to, and consideration of our comments. Please do not hesitate to contact us if we can provide you with additional information.

With best regards,

Jeff Kaelin
SFC Clerk; Lund's Fisheries Inc.

Dave Ellenton
Cape Seafoods, Inc., President

Peter Mullen
Irish Venture, Inc.

Jeffrey Reichle
Lund's Fisheries, Inc., Treasurer

Peter Moore
NORPEL

Brady Schofield
NORPEL

Jerry O'Neill
Western Sea Fishing Co., Inc.

St. Croix Alewife

Full Name:
Jeff McEvoy
City:
Grand Lake Stream
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

I am writing today in support of alewives in the St. Croix watershed. The compromise plan put forth by the IJC would end the divisive debate about restoring these fish and be first step in bringing the local guides inline with the biology of the fish at issue. As one of the largest commercial fishing lodges in the region, I do not see this plan as a threat to our way of life. As a member of the Grand Lake Stream Guides Association and a licensed Master Maine Guide of 27 years, do not subscribe the to position of the Association on this issue.

Thank you for your consideration.

Respectfully,

Jeff McEvoy
Owner/Guide
Weatherby's Resort
Grand Lake Stream, Maine 04637
207-796-5558
www.weatherbys.com

P.O. Box 2613
Augusta, ME 04330

August 16, 2010

Philip T. Feir
Colonel, U.S. Army
U.S. Co-Chari
International St. Croix River Watershed Board

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board

Dear Colonel Feir and Director Appleby:

I am writing to comment on the Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed. I urge the IJC to strengthen the plan and promote its immediate adoption. Unimpeded recovery of alewife and other sea-run fish on the St. Croix River should be driven by the best available science, and should be consistent with policies in the U.S. and Canada to promote recovery of self-sustaining populations of native species. The St. Croix River has the potential to produce a vast herring resource which will have significant benefits both within the St. Croix watershed and in the Gulf of Maine. The current practice of blocking fishways must be ended.

If there were any credible evidence that native sea-run alewife and non-native smallmouth bass cannot co-exist, the current conflict would be unfortunate. In the face of abundant evidence that alewife and smallmouth bass populations co-exist up and down the New England coast, the current situation is tragic. Within 30 miles of my house are two of the most productive alewife fisheries on the East coast: the Sebasticook River, where a population of well over 1 million alewives has been restored since the removal of the Edwards Dam; and the St. George River, where a robust alewife population appears to be growing after the removal of the Sennebec Dam opened several headwater lakes that had been inaccessible for over a century. Both watersheds contain multiple high quality smallmouth bass fisheries that co-exist with robust herring runs. The biggest problem a bass angler faces in these fisheries is how best to match a 2-3 inch juvenile alewife, which is the forage of choice for bass from mid-summer through the end of the fall outmigration. If alewife recovery is allowed on the St. Croix, the same will be true in every water to which alewives are allowed access.

I believe the Adaptive Management Plan, as currently drafted, is over-conservative in several ways:

- There are no provisions, under any circumstances, to restore alewives to Spednic Lake or the West Grand Lake. These lakes historically supported alewife, a native species. I understand that the desire to delay re-introduction on these waters until results are available from bass monitoring on other waters, but the plan should contain some provision for eventual reintroduction to all historically-accessible waters. The lack of such a plan gives credence to unsupported hypothesis that alewives are somehow bad for bass.
- The plan appears to delay proceeding with alewife reintroduction if juvenile bass production drops for any reason. While it may be appropriate to monitor bass/alewife interactions and delay alewife recovery if there is evidence that alewives cause bass declines, it is not appropriate to delay alewife recovery if bass production is affected by other factors, such as weather, water conditions, disease, etc. This concern is particularly acute because bass in the St. Croix are near the northern edge of their introduced range, and are known to be subject to widely varying year-class success due to weather and water conditions.
- It is not clear in the plan who—if anyone—will be carrying out the bass monitoring and reporting those results. It is also not clear what resources will support this effort. These are critical details, and the final version of the plan needs to address them.

In closing, restoration of anadromous herring is critically important to the ecology of the Gulf of Maine. I urge you bring the St. Croix River back to its historic condition, by proceeding immediately to implement an improved version of the Adaptive Management Plan. Thank you for the opportunity to comment.

Sincerely,

Jeff Reardon, New England Conservation Director

Alewife Harvesters of Maine

"Conserving to preserve Maine's heritage."

Monday, July 19, 2010

Barbara Blumeris
US Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742

Dear Ms. Blumeris,

In response to the International Joint Commission's Adaptive Management Plan dated, June 9, 2010,; The Alewife Harvesters of Maine feel the socio-economic gains to be had from a restored Alewife population will far outweigh those of maintaining the system as a Bass only fishery. One just needs to look at the old Commissioner's reports (Atkin 1887, Perley 1852, Flagg 2007) to realize the vast Alewife fishery potential of the system. Tens of thousands of bushels of Alewives at today's prices ($17.50 per bushel in 2009) equates to a large source of supplemental revenue for stakeholders in the region, perhaps including the Passamaquoddy Tribes, the Smallmouth Bass guides, and the towns where the harvest occurs.

We estimate that there could be 6-12 good harvest sites in the St. Croix System. A typical Alewife harvest employs 3 to 8 people per site, depending on the type of gear and topography.

The other benefits of a restored Alewife run would be to strengthen the forage base needed to rebuild near-shore Cod and Haddock stocks in the Eastern Gulf of Maine, (essential to rebuild the ground-fish fleet.) An Alewife fishery would also provide a dependable supply of much-needed bait for lobstermen, the largest fishing fleet left in Maine. Additionally, Alewives support passive recreation such as birdwatching and other nature tourism.

All of these benefits can be gained without compromising the Smallmouth Bass fishery, for the fishing of Bass in other watersheds with Alewife runs has dramatically increased. For example:

*Garland Lake in East Machias bass tournament 2009, a 5.lb Bass won the tournament.

*Gram Lake in Ellsworth, best Bass fishing in years; Alewife introduced to Gram Lake in the Union River in the 1970's

*Kennebec River System overrun with Bass.

*Webber Pond full of Bass; Alewife re-introduced ten years ago.

*In years before the crash, Bass grew faster in Big Lake in Grand Falls flowage with Alewives present. (IFW data)

Smallmouth Bass were introduced into the St. Croix in the 1860's, and coexisted with the historical population of Alewife. That is why in the early 1900's, it became an attractive sports fishery.

Rather than being an effect of interactions with Alewives, the crash at Spednic Lake was more likely caused by the water draw downs of Domtar; (in the neighborhood of 6 vertical feet, exposing around 3700+ acres of spawning habitat for Smallmouth Bass). Alewives and Smallmouth Bass coexist in every Alewife run in the State of Maine and the Eastern Seaboard. It seems to be a great stretch of both experience and logic to think that Alewives caused the crash in the St. Croix System, given the survival of Smallmouth Bass alongside Alewives from 1860 onward.

We feel that the immediate opening of the St. Croix to it's historical Alewife population could within a decade bring millions of dollars into all of Washington County in the Spring of the year annually. That would help the entire region.

In closing, we support:

1. Keeping Spednic Lake closed to Alewives for the time being as a Reference lake.
2. Starting to restore the Alewife to its historical abundance in the rest of the St. Croix System, ASAP.
3. Starting to work on harvest sites and plans to be in place for the benefit of the Passamaquoddy People, the Smallmouth Bass guides and the town in which harvest sites are located.
4. The immediate re-opening of the St. Croix to its historical Alewife population, which will put the St. Croix in compliance with the Clean Water Act, and satisfy the EPA requirements. (As of today, the St. Croix is not in compliance with several statutes and regulations.
5. Reaping the benefits of a healthy river system that also helps restore the Eastern Gulf of Maine ecosystem to bring back near-shore Cod and Haddock stocks, other fishermen and tourists.

Respectfully Submitted,

Jeffrey Pierce
Executive Director, Alewife Harvesters of Maine

PO Box 51, Dresden, Maine, 04342 (207) 737-9051, (207) 441-3006 jeffreypiercerr@roadrunner.com

An Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick

Full Name:
Jennifer Burns Gray
City:
Falmouth
State / Province:
ME

August 16, 2010

Dear Colonel Fei and Director Appleby:

I am writing on behalf of Maine Audubon and our 11,000 members and supporters and our Fundy Chapter in regard to the Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick.

We commend the International Joint Commission (IJC) and its International St. Croix River Watershed Board for making alewife restoration in the St. Croix basin a high priority. Alewives are a native species which historically moved freely between sea and inland waterways, carrying nutrients back and forth and fueling a rich food web in both salt and fresh water systems. Alewives are an important food source for striped bass, cod, haddock, bass, trout, salmon, ospreys, eagles, kingfishers, cormorants, mink, otter, seals, and dolphins. They are a primary bait fish used by the lobster industry. Since the alewife population has dropped from 2.6 million adults in 1987 to 1,300 adults in 2007, other species that depend on the alewife, including the cod, have declined as well.

Unfortunately, the draft Adaptive Management Plan has significant flaws and will fail to achieve the ecological and economic benefits associated with a healthy alewife population.

1. The draft plan drastically limits the scope and pace of alewife restoration in the St. Croix.

The draft plan recommends allowing the St. Croix's alewife population be permitted to rebuild until a level of six alewives per acre is reached within the Grand Falls flowage and adjacent, interconnected waterbodies. There is no scientific justification to limit the initial alewife restoration to this level. In our region, a level of 35 fish per acre is generally required in order to consider an alewife run capable of withstanding s sustainable harvest. Natural carrying capacities for alewives are generally considered even higher.

In addition, alewives should be allowed to increase at their natural rate and not an artificially imposed rate of 1.5 times the previous year's population, within the Grand Falls flowage, Big Lake, Long Lake, and interconnected waterbodies.

2. The draft plan holds alewife restoration hostage to random fluctuations in smallmouth bass reproduction

The plan identifies a yearly scoring system that will determine the number of adult alewives allowed access to the watershed in a given year. The system depends on the population status of bass in five lakes. The plan states that: “Given that the bass index is expected to undergo natural variation, the framework has the potential to restrict, potentially severely, alewife population recovery if a few years of poor bass YOY [young of year] abundance occur by chance, even if alewife have no impact on the bass population” (P. 23). Restoration could take decades longer than if alewives were allowed to recolonize the watershed at a natural rate; under the plan, it is plausible that alewife numbers will essentially be capped for decades, or even permanently, without a credible scientific basis for doing so.

Maine and New Brunswick are near the northern limit of where introduced smallmouth bass are able to survive. Although this species has proven adept at developing naturalized populations in a wide variety of environments outside of its natural range, the climate in our region is a challenge to bass, and the species is highly susceptible to an array of
natural and unnatural variables affecting its reproduction. As a result, it is highly likely that bass will have good recruitment years and poor recruitment years, depending on environmental and/or anthropogenic factors that have nothing to do with alewives. It is unscientific and unacceptable to hold the restoration of an important native species hostage to such unrelated factors.

3. The draft plan only allows alewives to return to about 30% of their ancestral habitat

The plan only allows access above Grand Falls and does not address allowing future access to the other areas of the watershed under IJC jurisdiction currently barred from alewife passage. The plan should address when and how the IJC will restore alewives to the rest of their habitat under its jurisdiction after the area above Grand Falls but below Spednic has reached full recovery.

In addition, we have significant concerns with the plan’s language regarding possible “long term agreements” to block alewife restoration to Spednic Lake. Establishing long-term agreements that block a native species from boundary waters under the IJC’s jurisdiction will harm the long-term interests of both the United States and Canada, and thus would not be consistent with the mission of the IJC.

4. The draft plan ignores the tremendous ecological and economic importance of alewives

Restoring Gulf of Maine and Bay of Fundy ground fisheries is of critical economic and ecological importance to both the US and Canada, but the adaptive management plan does not even mention the positive role a healthy St. Croix alewife population will have on groundfish. The plan clearly treats smallmouth bass as a more important resource than Gulf of Maine and Bay of Fundy fisheries stocks. Failure to recognize the commercial and ecological values associated with healthy alewife runs is not in the interests of either the U.S. or Canada in terms of environmental protection, the survival of regional commercial fisheries, and food security.

Conclusion

The IJC must consider the ramifications this plan may have for future natural resources management conflicts. The draft adaptive management plan places greater importance on smallmouth bass, a non-native sport fish, over a native species with high ecological value and

regional and international importance as a food resource. It does so without scientific evidence that alewives harm smallmouth bass.

Maine Audubon urges the IJC to act forcefully in the interests of both the U.S. and Canada to restore the St. Croix alewife run to its natural state and not pursue the flawed strategy presented in the draft plan.

Thank you for your consideration.

Sincerely,

Jennifer Burns Gray
Staff Attorney and Advocate
Maine Audubon
20 Gilsland Farm Rd.
Falmouth, ME 04105
207-781-6180 ext. 224

We Need More Stringent Policies To Allow Alewife Populations To Thrive in The St. Croix River

Full Name:
Jeremy Smith
City:
Farmington
State / Province:
ME

We more stringent laws to protect alewives in the St Croix..

Support free access for native alewives in the St. Croix River!

Full Name:
John Albertini
City:
Charleston
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

John Albertini

please do all possible to restore alewife runs in the St. Croix River

Full Name:
John Baugher
City:
Cape Elizabeht
State / Province:
Maine

I urge you to please do all possible to protect and restore alewife runs in the St. Croix River. As I am sure you are aware, alewives are critical to the survival of numerous forms of wildlife in our beautiful state.

BOWDOIN COLLEGE

August 12, 2010

Colonel Philip T. Feir
U. S. Army
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Dear Colonel Feir,

I am an ecosystem ecologist interested in the ecological recovery of Maine's rivers and estuaries. My research is focused on the Kennebec and Androscoggin rivers in mid-coast Maine. I attended the public meeting in Princeton on August 4 with much interest in the debate about alewive restoration in the St. Croix watershed as well as in how scientific information would be used to decide the issue. I offer my comments on the proposed plan for reintroduction of alewives to the lower lakes as an ecosystem ecologist interested in river and lake recovery. In short, I think alewive reintroduction throughout the St. Croix watershed is supported by the available scientific evidence and that the IJC plan for allowing small numbers of alewives into the lower lakes may exacerbate the misinformation and hard feelings surrounding the issue, rather than ameliorate them.

I went to the St. Croix meeting with a more or less open mind, but was rather disappointed with the debate, especially the evidence presented by the sports fishing guides and Chief Nicholas. Their strongly held view that alewive reintroduction in the late 1980s led to the decline of the smallmouth bass fishery seemed anything but scientific to me. In other words, they presented no evidence other than the temporal correlation between alewive reintroduction and the decline in the sports fishery. I teach ecology and environmental studies at Bowdoin College and I am interested in understanding how scientific information can be better used in the public realm. In my view, the argument presented against alewive re-introduction was extremely weak. I have read many of the historical reports of anadromous fish runs such as those of the 19th century fish commissioner, Charles Atkins, as well as the recent reports by Flagg, Willis, and Bentzen and Paterson. Although additional studies might be helpful, it is clear that enough is known about the past distribution of alewives and their current foraging ecology to support the reintroduction of alewives throughout the St. Croix watershed.

Although the IJC plan to reintroduce small numbers of alewives into the lower lakes and carefully assess the impact on smallmouth bass recruitment may seem prudent, I think the plan is flawed and may do more harm than good. Because there are no data describing natural fluctuations in smallmouth bass recruitment in the three lower lakes in the absence of alewives,

DEPARTMENT OF BIOLOGY

6500 College Station • Brunswick • Maine 04011-8465 • Tel 207.725.3582 • Fax 207.725.3405

any decline in bass recruitment following reintroduction of alewives will likely be perceived as being the direct consequence of alewive reintroduction. Field surveys of fish populations can be extremely variable and long time series are required to understand the year-to-year variation associated with internal population dynamics; that is, chance fluctuations in population size that are unrelated to environmental change or interactions with other species. Unlike some who spoke for alewive reintroduction, I think that allowing alewives into these lakes ***is*** likely have an initial effect on smallmouth bass recruitment. As an ecologist who studies multiple species interactions, I would expect the introduction of any species, native or non-native, to reverberate throughout the food web of the lake ecosystem causing shifts in the abundances of many species. For the most part these shifts are unpredictable. However, based on the evidence from the many other lakes and rivers where smallmouth bass and reintroduced alewives are both thriving, any initial negative effect of alewive reintroduction on smallmouth bass populations is likely to be temporary. From my understanding of the ecology of Maine's rivers and lakes, I see little reason to suspect that lakes in the St. Croix watershed would respond differently than the other lakes in the region where alewives have been successfully reintroduced. In all likelihood, the reintroduction of alewives to these other lakes probably resulted in transient shifts in invertebrate and vertebrate populations during the first few years following reintroduction without causing a collapse in any species.

Lacking a solid understanding of the natural year-to-year variability in smallmouth bass recruitment in these lakes, which admittedly would require a huge effort over a long period of time, I think the best action to take is to let as many alewives enter the lakes as is possible for several years and then assess the situation. In this way, the inherent noise or variability in smallmouth bass recruitment will not deter the recovery of alewives or the response of the ecosystem to the reintroduction of alewives. In other words, it will allow the ecosystem to respond as quickly as possible. Although introducing a few alewives (i.e., 6 per acre) to the lower lakes may seem prudent, it is unlikely to resolve the issue and may obfuscate the situation if smallmouth recruitment fluctuates significantly during the period of alewive reintroduction. Based on the coexistence of smallmouth bass and alewives in many other lakes and rivers, it is most likely that smallmouth bass will adjust quickly to the ecosystem-level changes brought about by the reintroduction of alewives in this system. Even numbers of alewives in the hundreds of thousands are trivial relative to what these lakes could sustain. Allowing alewives to recovery quickly to populations numbering in the millions would bring the period of adjustment to an end sooner. As described by several people during the meeting, allowing numerous alewives into the watershed would have the added benefit of providing an additional source of income to individuals and communities along the waterways through the direct harvest and sale of alewives. The Passamaquoddy seem to be in a particularly good position to benefit from annual alewive harvests.

Lastly I offer a comment regarding the possibility of analyzing sediment cores to reconstruct a long-term history of alewive distribution throughout the St. Croix watershed. Nitrogen and carbon isotopes have been used successfully to document the influx of marine-derived nutrients (via salmon migration) into freshwater streams in the Pacific Northwest. My research group is currently working with sediment cores from Damariscotta Lake to determine if similar chemical signals can be used to reconstruct historical abundances of alewives. Because Damariscotta Lake has the best documented record of the number of alewives entering a lake to spawn, we expected the isotope signal to be easy to interpret, but found it disappointingly ambiguous. Although we do see the carbon and nitrogen isotopes representative of anadromous fish inputs, the signal is confounded with carbon and nitrogen isotopes derived from local farming and wastewater inputs. Therefore, the isotopic signal is influenced by both the reintroduction and recovery of alewives since the first fish ladder in 1807 and by increasing human population and expanding area cleared for farmland within the watershed. Perhaps interpreting isotopes from sediments would be less problematic in the St. Croix lakes than in Damariscotta Lake because of fewer people and nearby farms, but I wish to point out that isotopic analyses may not resolve the issue about past alewive presence in these lakes. The point is that we know alewives have been spawning in Damariscotta since 1807, yet the isotopic signals were still ambiguous.

I am available if you have further questions or if I can help in any way.

Sincerely yours,

John Lichter
Biology and Environmental Studies
Bowdoin College
jlichter@bowdoin.edu
207-725-3653

alewives on the St. Croix River

Full Name:
John Neal
City:
Greene
State / Province:
Maine

Subject: Support free access for native alewives in the St. Croix River!

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,
John Neal

Atlantic States Marine Fisheries Commission's comments on the IJC's proposed Adaptive Management Plan for the St. Croix river alewife

Full Name:
John V. O'Shea
City:
Washington
State / Province:
DC

Please find attached the Atlantic States Marine Fisheries Commission's comments on the IJC's proposed Adaptive Management Plan for St. Croix river alewife.

Atlantic States Marine Fisheries Commission

1444 Eye Street, N.W., Sixth Floor
Washington, D.C. 20005
(202) 289-6400
(202) 289-6051 (fax)
www.asmfc.org

Robert H. Boyles, Jr. (SC), Chair
Paul Diodati, (MA), Vice-Chair

John V. O'Shea
Executive Director

Working towards healthy, self-sustaining populations for all Atlantic coast fish species, or successful restoration well in progress, by the year 2015

August 9, 2010

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, Massachusetts 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Dear Colonel Feir and Director Appleby,

I am writing at the direction of the Atlantic States Marine Fisheries Commission's (ASMFC) Shad and River Herring Management Board which met last week and discussed the International Joint Commission's (IJC) proposed Adaptive Management Plan for St. Croix river alewife. ASMFC believes that the proposed plan should be modified to allow for unrestricted alewife access to their historic habitat throughout the St. Croix watershed. The IJC should allow free access to alewives in the St. Croix to gain greatest ecological and economic benefits for both the watershed and regional fisheries.

A rebuilt alewife population in the St. Croix will provide numerous benefits including directed commercial and recreational fishing opportunities. Alewife serve an important ecological role in both the freshwater and marine environments. Alewife are also an important forage base for rebuilding groundfish stocks in the Gulf of Maine. In addition, rebuilt river herring stocks can be used as a source of bait for the lobster industry in light of reduced quotas on Atlantic herring.

However, alewife populations have declined dramatically in recent years. In fact, between1985 and 2007, commercial landings of river herring decreased by 93 percent from 13.6 million pounds to 883,500 pounds. In response to declining stocks within their own waters, four states – Massachusetts, Rhode Island, Connecticut, and North Carolina – have closed their river herring fisheries. In addition, ASMFC's Amendment 2 will close all state waters to alewife fishing by 1 January 2012 unless it can be proved that the fishery is sustainable.

Thank you for the opportunity to comment on this important issue.

Sincerely,

John V. O'Shea

cc: Marine Resources Committee of the Maine State Legislature
Jaime Gieger, Ph.D, US Fish and Wildlife Service
Patricia Kurkul, National Marine Fisheries Service
ASMFC Shad and River Herring Management Board

Support free access for native alewives in the St. Croix River!

Full Name:
Justin Lamkin
City:
Kittery
State / Province:
ME

Subject: Support free access for native alewives in the St. Croix River!

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Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Justin Lamkin

Alwives and the St. Croix River

Full Name:
Kenneth L. Crowell
City:
Deer Isle
State / Province:
ME

As a sport fisherman and a population ecologist who taught Conservation Biology for 25 years, I strongly urge you to allow alewives access to the St. Croix drainage. I will not recite the arguments and evidence with which you are familiar, but simply ask that you apply good science in making your decision.
Sincerely,
Kenneth Crowell, Ph.D.

Statement of Kenneth S. Cline
Professor of Environmental Law & Policy
College of the Atlantic Bar Harbor, Maine ksc@coa.edu

My name is Ken Cline; I live in Bar Harbor, Maine.

In talking about the current destruction of natural habitat and the loss of species occurring in the world, prominent biologist Edward O. Wilson remarked that "This is the folly our descendants are least likely to forgive us." I think that Dr. Wilson is right and I am here to speak because the International Joint Commission has the opportunity, in fact the legal duty, to ensure that this tragedy not occur on the boundary waters under its jurisdiction – specifically the St Croix River and its watershed.

Article III of the 1909 Boundary Waters Treaty grants the IJC the power to approve all uses or obstructions of boundary waters. Further Article VIII requires the IJC to make sure that adequate provision has been made for the protection of all interests injured by such obstructions.

In the 1970's with the Garrison Diversion controversy in North Dakota, in the 1980's with the Flathead River in Montana, and for several decades with the Great Lakes, the IJC has specifically considered injuries to fisheries and native aquatic species as part of its scope of concern. In fact, the 2007 directive establishing the International St. Croix River Watershed Board recognizes this responsibility explicitly. The directive states:

The Board's duties shall be to: recommend, as appropriate, water quality or aquatic ecosystem health objectives for the boundary waters of the St. Croix River, and maintain continuous surveillance over the quality of water and health of the St. Croix River boundary waters aquatic ecosystem

Given this legal power and obligation, it is disturbing that it has taken the IJC so long to act regarding the obstruction of fish passage on the St. Croix River. Now that it proposes to act, the IJC's Draft Adaptive Management Plan is inadequate and will do little to restore the "ecosystem health" of the St. Croix system. Overall, I am disappointed by the Commissions refusal to base its decisions on the best science and to instead treat mere speculation and myth on an equal plain with careful scientific studies from independent researchers and government agencies. There is no scientifically credible evidence that alewives negatively impact the populations of small mouth bass. I understand the Commissions desire to be a mediator and to credit "local knowledge" in its decisions. However, privileging some local knowledge over others and ignoring the best scientific and economic

analysis makes no sense and violates the spirit if not the mandate of the Boundary Waters Treaty. The incredible work that the Commission has undertaken in the Great Lakes to eliminate persistent pollutants and restore those ecosystems would have been completely undermined had the commission taken a similar approach there.

I have six specific objections:

1. The draft plan proscriptions basically ignore the significant ecological and economic importance of alewives.

The draft plan does very little to protect the significant ecological role that alewives play in the St. Croix system. It also dismisses the valuable role that alewives play in regional oceanic commercial fisheries. It treats smallmouth bass as a more important resource than Gulf of Maine and Bay of Fundy fisheries stocks. Failure to recognize the commercial and ecological values associated with healthy alewife runs is not in the interests of either the U.S. or Canada in terms of environmental protection, the survival of regional commercial fisheries, and food security. Restoring Gulf of Maine and Bay of Fundy ground fisheries is of critical economic and ecological importance to both the US and Canada, but the adaptive management plan does not even mention the positive role a healthy St. Croix alewife population will have on ground fish.

2. **The draft plan only allows alewives to return to about 30% of their ancestral habitat.**

The plan only allows access above Grand Falls and does not address allowing future access to the other areas of the watershed under IJC jurisdiction which are blocked by IJC-approved dams. The plan should address when and how the IJC will restore alewives to the rest of their habitat under its jurisdiction.

Furthermore, the plan's language about possible "long term agreements" to block alewife restoration to Spednic Lake seems short-sighed and unnecessary. Establishing long-term agreements that block a native species from boundary waters under the IJC's jurisdiction will harm the long-term interests of both the United States and Canada, and thus would not be consistent with the mandate of the IJC. It also defeats the whole purpose of an "adaptive" management plan – you are supposed to adapt your management to future evidence.

3. The draft plan unreasonably limits the scope and rate of alewife restoration in the St. Croix

This draft plan proposes that the St. Croix's alewife population only be allowed to rebuild until a level of six alewives per acre is reached within the Grand Falls flowage and adjacent, interconnected water bodies. There is no scientific justification for this limit. The Atlantic States Marine Fisheries Commission and the Maine Department of Marine Resources generally require a minimum of 35 fish per acre to consider an alewife run capable of withstanding a sustainable harvest. Natural carrying capacities for alewives are significantly higher than that, as your own plan documents.

Limiting alewife population numbers to increase at an arbitrary rate of 1.5 times the previous year's population, within the Grand Falls flowage, Big Lake, Long Lake, and interconnected water bodies does not seem supported by any science. Alewives should be allowed to increase at their natural rate.

4. The draft plan impermissibly links alewife restoration to random fluctuations in smallmouth bass reproduction

The plan outlines an elaborate scoring system that will determine the number of adult alewives allowed access to the watershed in a given year. As best I can tell, the system depends on the population status of bass in five lakes. The plan states that: "Given that the bass index is expected to undergo natural variation, the framework has the potential to restrict, potentially severely, alewife population recovery if a few years of poor bass YOY [young of year] abundance occur by chance, even if alewife have no impact on the bass population" (Plan at 23). The Commissions' own FAQ's acknowledge that this will take decades longer for restoration to occur versus a science-based plan that allows alewives to decolonize the watershed at a natural rate.

Holding a native species hostage to the vagaries of an introduced species population fluctuations is foolhardy at best. Introduced smallmouth bass are highly susceptible to an array of natural and unnatural variables affecting their reproduction. As you acknowledge, it is highly likely that bass will have good recruitment years and poor recruitment years, depending on environmental and/or anthropogenic factors that have nothing to do with alewives. It is unscientific and fundamentally misguided to link the restoration of an important native species to such unrelated factors.

5. The draft plan sets a dangerous precedent

The IJC must consider the ramifications this plan may have for similar natural resources management conflicts. The draft adaptive management plan places greater importance on a non-native sport fish -- smallmouth bass -- over a native

species with high ecological and economic value. Worse yet, it does so without scientific evidence that alewives harm smallmouth bass.

I have always admired the Commission's use of the precautionary principle in its work, but the FAQ responses on your web-page seem like a perversion of that important principle. The Commission seems to be privileging and maintaining an unnaturally impoverished ecosystem caused by the very dams authorized by prior commissions, not seeking to protect the ecological health of the river system. This is as though you premised the RAP on the Cuyahoga River on maintaining its ability to catch on fire and only took remedial actions which did not measurably reduce its flammability. This is backward.

6. The IJC should not defer to the Maine Legislature

Under the terms of the Boundary Water Treaty and the US Constitution (Art. VI), the State of Maine does not have the legal authority to operate dams in a boundary water in contravention of an IJC's order. State game laws or other prescriptions that explicitly conflict with an international treaty have been overturned by courts for decades. (See, e.g. *Missouri v. Holland.*) Although out of comity, the Commission proposes to request a change in Maine law, recent history shows that special interest groups will not allow that to happen and the alewives and the ecological health of the whole system will suffer as a result. The IJC should execute its management plan through the national governments of the United States and Canada.

In closing, I appreciate the fact that the IJC has finally stepped forward to address this issue. However, I strongly urge the Commission to act forcefully in the interests of both the U.S. and Canada to restore the St. Croix alewife run to its natural state and not further prolong the ecologically devastating limitations that would be only be continued by the draft plan.

Sincerely yours,

Kenneth S. Cline
Professor of Environmental Law & Policy
College of the Atlantic
105 Eden St.
Bar Harbor, ME 04609
ksc@coa.edu

Proposed St. Croix AMP: Alewives Get Smoked Again

To the International Joint Commission managing the St. Croix River fisheries:

The proposed adaptive management plan for alewives in the St. Croix River watershed that was recently submitted to the IJC is a fatally flawed document, because it rests on at least three faulty assumptions:

> 1) That the IJC has the authority to ignore and contravene the U.S. Clean Water Act—they don't, as the comments filed by Douglas Watts of Augusta make clear.
>
> 2) That smallmouth bass are more important than alewives in this watershed—they aren't, and I'll give some reasons why.
>
> 3) That there is adverse competition between alewife and bass populations in a shared habitat—there isn't, and even the ad hoc group drafting this proposal admits as much (and then promptly forgets it).

The plan that ultimately develops from these three flawed assumptions must be rejected. It's akin to building a house on top of a botched foundation, with no attention paid to permits, code, or property lines. Yes, it can be done—but why would you? And how long can it hope to stand? The drafters go on to erect a fine-*looking* house; one that claims to have used the "best available science"— but the sills are all rotten. It's a lopsided, illegal, ticking time bomb of a house, but it nicely suits its proposed tenants: the handful of bass-fishing supporters whose fears it addresses, and whose interests it serves.

I'd like to focus my comments on the second and third assumptions I listed above. The first, which involves the Clean Water Act and the perennial question of whether or not the State of Maine will abide by it, is thoroughly addressed in comments by Douglas Watts of Augusta. He rightly concludes that the State has been operating outside this law for many years in the St. Croix watershed, and that State laws passed affecting the alewife fishery here must be considered null and void. I urge you to carefully consider his comments; he knows the specifics of the Clean Water Act better than any legislator, natural resource commissioner, or bass guide that I've ever encountered. He certainly knows it better than the State of Maine's executive branch, which in recent years has gotten multiple spankings in the Federal woodshed for its failures to enforce and abide by national environmental laws. Our state has proven itself to be an unreliable steward of resources like Atlantic salmon, shad, alewives, eels, and lynx—and if we accept this plan, **a plan which clearly favors an introduced species at the expense of a native one**, we will discredit ourselves even further.

Let me first offer some specific examples of the inherent bias towards smallmouth bass in this plan. Bear in mind that this species doesn't even *belong* in this watershed--if you or I were to introduce a non-native, spiny-finned fish to a Maine lake today, we'd be severely punished for it, and rightly so, under current state law.

For starters, the ad hoc group makes no attempt to estimate the historic range or population levels of alewives in the St. Croix watershed. By abdicating this responsibility, they pave the way for their most arbitrary decision—**that alewives are not entitled to pass into West Grand Lake or Spednic Lake**. This decision has no evidentiary basis—in fact, it contradicts the existing historical accounts, which tell of alewife runs so massive that only a huge watershed, one that included both West Grand and Spednick/East Grand, could have supported them. The ad hoc group's bibliography references Charles Atkins, Maine's first Commissioner of Fisheries, but for some reason they spare us his actual description of the historic alewife fishery:

"The Saint Croix is remarkable, even among the rivers of Maine, for the great extent of the lake surface among its tributaries. On the best maps are represented 61 lakes. . . their aggregate area is about 150 square miles, which is about 15 per cent. of the entire basin of the river. These lakes afforded breeding ground for great numbers of alewives. . .The exact limit of the upward migration of all these fishes is very naturally unknown with any degree of exactness. . . but the fact of **their existence in great numbers in the river shows that they must all have passed the only serious obstacle to their ascent, the natural fall at Salmon Falls near the head of the tide, and found their breeding grounds in the upper waters.**

From the first settlement of the country till 1825 there was annually a great abundance of salmon, shad and alewives. Vessels from Rhode Island, of 100 to 150 tons burthen, followed the fishing business on the river and were never known to leave without full cargoes. There were also several seines belonging to the inhabitants. . .the owners of which put up annually from 1,500 to 2,000 barrels of alewives for exportation, besides a sufficiency for country use."

-Atkins, in *Fisheries and Fishery Industries of America*, Geo. B. Goode, 1887

The 1852 Perley report, also referenced in the plan's bibliography but ignored in its text, offers a similar picture of massive alewife runs in the river's past. Not referenced anywhere is an even earlier testimonial to the St. Croix's abundance, from Samuel de Champlain's 1605 visit:

"In May and June, so great is the catch here of herring [alewives] and bass [striped bass] that vessels could be loaded with them. . .the Indians resort thither sometimes five or six weeks during the fishing season."

-The Works of Samuel de Champlain, Vol. II, p.273

By ignoring or suppressing pieces of anecdotal evidence like these, the drafters of this plan apparently feel justified in summarily awarding West Grand Lake and Spednick/East Grand Lake—a combined surface area of more than 31,000 acres!-- to the bass, despite the strong likelihood that alewives once spawned there. With that fell stroke, roughly two-thirds of the available alewife habitat in the St. Croix watershed is off the table. The alewives must fend for themselves in the third allotted to them—but woe to them if they succeed too well!

In fact, woe to the alewives if anything comes along to reduce the "desired" levels of bass in the watershed, be it spawning failure, disease, predation, or whatever. By some sort of executive fiat, the drafters have decided that bass population is the overriding parameter; the tail that will wag the dog and determine how many alewives will be allowed to exist in the watershed. This is comparable to a homeowner deciding that it's time to shoot a few more chickadees and bluejays, because there just aren't enough starlings showing up at his birdfeeder!

Such a distorted sense of each species' relative worth is hard to understand. Alewives contribute a biomass and a functional ecological value to the lakes, rivers and oceans that truly dwarfs any such contributions made by smallmouth bass. Alewives are the native, *naturally-evolved* protein motor of this ecosystem; they are food for eagles, ospreys, cormorants, seals, porpoises, striped bass, cod, and a host of other fresh- and salt-water predators. When millions of alewives descended our ancient rivers to the sea, many hundreds of thousands of young Atlantic salmon and shad found safety in their midst.

Bass, on the contrary, are primarily a non-food prey for large men in large boats. This predator-prey relationship isn't ecologic, it's economic: Bass represent money, and money—at least in this plan—trumps common sense and sound ecology. In fact, this plan even gets its economics wrong, because if we allowed the St. Croix to produce 20 million alewives a year, the offshore fishing would improve, lobstermen would actually have affordable bait once again, and the municipal alewife rights along the river would resume producing income—*and we'd still have the bass and the income they provide!*

This brings me to my final complaint about this plan: It claims to use the "best available science," but in fact it ignores scientific reality and instead caters to the misguided fears of those individuals who derive their living from bass fishing. **The most telling proof of this is the omission of one particular study; a ten-year-long examination of bass and alewives in Lake George, Maine** (Kircheis et al., 2002). Simply put, this was the first, the longest, and the best study of the interactions between these two species in a shared water body—and it showed that the presence of alewives in no way inhibits the health, size, or abundance of smallmouth bass. Subsequent studies in eastern Maine have echoed these findings—and yet, for some reason, the Kircheis study is not even cited in the draft plan's bibliography, though the IJC has always been aware of it. Once again, the ad hoc group sees the world through bass-colored glasses, and important evidence is filtered out. The ad hoc group does state, in barely a whisper, that alewives have not been specifically shown to inhibit bass populations—and then proceeds to draft a plan that implies just the opposite! This isn't science; it's *politics*, pure and simple, and it shouldn't fool a five-year-old.

Alewives belong in this watershed, and always have. Strictly speaking, bass don't. Nobody thought much about such things in 1877, and since the dams had already killed the alewives anyway, why not throw in some bass? Once they were introduced, the bass quickly made themselves at home, like dandelions in the lawn. This is not a condemnation of bass or dandelions; all living things deserve a place on this planet. But. . . just as we would never manage our own backyards to favor starlings over chickadees, or dandelions over wildflowers, neither should we manage our lakes and rivers to favor bass over alewives. There is substantial evidence to indicate that the St. Croix watershed can produce both commodities--millions of alewives *and* trophy smallmouth bass fishing—and will be all the stronger, ecologically *and* economically, when it does. We should let it, and the first step is to restore the entire watershed as an alewife nursery. What's good for the alewives is good for the St. Croix ecosystem—including its human members.

In short, this bass-heavy plan proposed by the ad hoc group is hardly fit to *wrap* fish, let alone manage them, and the sooner we discard it and start obeying the Clean Water Act, the better.

Thank you,

Kerry Hardy
Rockland, Maine

To: International Joint Commission

Re: Proposed Alewife fishery, St. Croix watershed

Members of the Commission:

In considering the proposal to introduce alewives in the St. Croix watershed, you guys have listened to all sides – folks involved with ocean fisheries, Native American guides, and people who use the inland waters. You have heard opinions, but you have never proven that alewives have been inland. You have seemingly not thought about the river before dams were built. In 1980 the Canadians dynamited a natural barrier to the sea which, left alone, would have put a stop to any alewife migration. The Americans had nothing to say about it. Even so, as you move upstream through Woodland Falls and Grand Falls, few if any alewives would make it upstream due to the height of the falls. Historically, on all other rivers in Maine, towns gave permits to harvest alewives. It's odd that no permit was ever issued above Calais, Maine.

In one breath, you people talk history. In another breath, you want to allow many more alewives than would be possible if there weren't dams. That is not history.

Along with the ocean entities, you have the marine biologists at your sides pushing and telling you what they want you to hear. In fifty years of being on this watershed, I have never seen one of them on the lakes and rivers, only at meetings. Why don't you use an inland fisheries biologists? A number of them have spent their lives studying the inland waters.

Your biologists say it was something other than alewives that ruined all other fisheries – landlocked salmon, white perch, and smallmouth bass – on Spednic Lake on the St. Croix in the 1980s. We as guides came before you and spoke truthfully, supported by several inland waters biologists who agreed with what we saw. We hoped you would listen. On the Machias River chain since alewives have been introduced, Third Machias Lake and Fourth Machias Lake are complete disasters. Fishing is so bad that guides don't go there with parties anymore. Off the Penobscot River since dams were removed, Herman Pond is a disaster. Nobody fishes it anymore. In playing with the St. Croix, do you realize the consequences if West Grand Lake and the hatchery are ruined by allowing alewives through the Grand Lake Stream dam? The hatchery has produced landlocked salmon that are stocked all over the world, West Grand Lake being one of the five natural lakes to have native landlocked salmon.

I have been at your meetings, and it is very evident that the ocean entities would like to set seines or nets and take as many alewives as they can for lobster bait, cat food, fertilizer, and feed for ground fish. I will tell you this: with the history of the ocean and commercial licenses, there will never be enough. On the ocean everything caught is sold. Nothing is put back. On inland waters we work hard and release fish to sustain the fisheries. We ask for nothing except to be left alone. If ocean interests can't manage the ocean fishery, how could they possibly sustain an inland fishery.

The economic effects of the situation you are getting ready to cause will hurt many more folks than they will help. Introducing alewives might, help a few people who are out of work on the ocean, but you will add large numbers to the welfare rolls among people who depend on the inland waters. Without the people who come to enjoy the inland fishery, stores can't make a living. Guides, sporting camps and the people they hire will all suffer or go under. Washington County's economy will lose. People, most from in-state, have camps on the lakes that are very valuable because of the inland fishery. If the fishery goes, their property won't be worth two cents. The woods are about gone. Are you ready to remove the remaining attraction?

With the support of some sporting camp owners and guides, I'm sure if this progresses, it will go to litigation. And the Passamaquoddy Tribe threatened litigation at the Princeton meeting. We don't want anything. It's others who want something -- change and possible destruction of something that works, and the associated costs, all for an uncertain outcome. We just want to be left alone.

If you people cause an economic disaster, is the IJC going to bail us out?

Sporting Camp owner
Master Maine Guide

Lance Wheaton

HOUSE OF REPRESENTATIVES
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Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Good evening Commissioners and members of the International Joint Commission St. Croix Watershed Board. Thank you for the opportunity to testify on the proposed Adaptive Management Plan for alewives in the St. Croix. My name is Leila Percy, and I am the House Chair of the Maine Legislature's Marine Resources Committee.

In February, my co-chair, Senator Dennis Damon, and I drafted a letter to the IJC urging it to act to reopen the St. Croix River to alewives. At that time, we feared that without action from the IJC, alewives would not be able to return to their ancestral spawning habitat above the Grand Falls dam for the 2010 spawning season. Unfortunately, this is in fact what happened, and alewives were once again able to access only about 1% of available habitat in the St. Croix River.

I believe the time has come for the IJC to act decisively to open the St. Croix to alewives. The St. Croix is an international waterbody between the US and Canada, and thus comes under the jurisdiction of the IJC, not the Maine Legislature. The alewives in this river will serve as forage fish for many species throughout the Gulf of Maine and the Bay of Fundy. Thus, they are truly an international resource.

I don't need to tell the IJC that Gulf of Maine ground fisheries are hurting, as are the thousands of people who depend on them for a living. You all know that. Science from the Penobscot East Resource Center links the decline in ground fisheries in the Gulf of Maine to declines in alewife populations. That is one reason why people all over Maine are working to restore alewives. Alewives are also a critical source of bait for Maine's lobster industry, which employs about 6,000 harvesters and is worth hundreds of millions of dollars annually to the state. Lobstermen can no longer depend as heavily on Atlantic herring for bait due both to declines in catch limits and declines in actual landings, so Maine lobstermen need alewives more than ever.

We need the IJC to recognize that the St. Croix alewives are a regional and international resource of great importance. Maine's Department of Marine Resources estimates the St. Croix could produce as many alewives as the Penobscot and Kennebec rivers combined – more than 20 million fish! It makes no sense to sacrifice this resource due to perceptions about negative alewife interactions with smallmouth bass. Indeed, the only systematic study of alewives and smallmouth bass in the St. Croix region, by Theo Willis of the University of Southern Maine, shows that smallmouth bass actually do better in lakes where anadromous are present. This is consistent with other information throughout Maine and beyond that alewives and smallmouth bass coexist happily. There is no reason they would not in the St. Croix if the IJC acts to open the river.

Unfortunately, I believe the Adaptive Management Plan falls far short of what is needed to restore a thriving St. Croix alewife run. The plan needlessly slows down the pace at which alewives can reestablish themselves in the river, limits them to only a third of their historic range, and could potentially never allow a greater number of fish than six per acre, far short of what is typical in Maine waters.

And now to talk about the politics of this issue:
The legislative history is clear – no true consensus has been achieved after years of debate. The battles fought in the halls of Augusta have been based on emotion and politics, not on science. As a member of the legislature since 2003 I have witnessed more attention focused on whether people are going to be reelected than what is good for the fisheries of Maine, both commercial and recreational. I believe that you, the IJC, has the power the correct the wrong of our doing in the Legislature and should do so since the watershed of the St. Croix River is the shared responsibility of the US and Canada.

We need more from the IJC to restore what should be the largest alewife run in the United States. The IJC should act to allow free access to alewives above Grand Falls beginning in 2011. Once alewives are fully reestablished in this part of the St. Croix, the IJC should also reopen Spednic Lake and carefully study the lake's ecology as alewives gradually begin to spawn there as well. This is the type of decisive action that is needed to help the Gulf of Maine and Bay of Fundy ecosystems and the significant industries that depend on them.

Thank you very much for the opportunity to speak to you this evening. Please act now.

Alewives

Full Name:
Linda Pankewicz
City:
Raymond
State / Province:
Maine

Subject: Support free access for native alewives in the St. Croix River!

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Linda Pankewicz

Support free access for native alewives in the St. Croix River!

Full Name:
Lois Winter
City:
Portland
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

I have a Masters Degree in Wildlife Conservation from the University of Maine and I have spent most of the last 30 years of my professional career as a conservation biologist working in Maine, actively engaged in habitat protection, habitat restoration and environmental education activities. In recent years, I led, supported and directed tax dollars to support river restoration projects in coastal Maine -- including a number of costly, complex, time-consuming yet vital alewife restoration projects. In case any of your constituents need a reminder, I have attached a fact sheet on alewives that I was directly involved in writing back in 2004, with active engagement and biological/technical support from staff at Maine Rivers, Maine Dept. of Marine Resources and U.S. Fish and Wildlife Service. Pleas feel free to share with others.

I have been dismayed at the grossly misguided policies that the State of Maine has been allowed to impose since 1995 by unilaterally blocking alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the St. Croix alewife run has plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. Closing the St. Croix fishway, which was initially installed at taxpayer expense, has effectively countered much of the good work done on the St. Croix itself and elsewhere throughout the Gulf of Maine Watershed to restore alewives!

The downeast Maine fishing guides who have made the common error of confusing cause and effect with correlation -- along with biologically uneducated Maine legislators -- have imposed a great injustice by blocking alewife passage on the St. Croix River; their actions have directly impaired the ecological health of the St. Croix River and the entire Gulf of Maine watershed. Recent scientific studies (including comprehensive literature review and downeast data collection) confirm that alewives and smallmouth bass coexist happily throughout Maine, the rest of the U.S. East Coast, and Canada. Alewives can and will coexist with bass in the St. Croix too. In addition, alewives funnel the tremendous biological productivity of the Gulf of Maine into our inland waters, providing food for bigger fish, furbearing mammals, fish-eating birds and a host of other species that depend on the abundance provided by alewives. Alewives also provide food for the struggling groundfish stocks in the Gulf of Maine and serve as an important source of bait for Maine’s lobster industry.

It's way overdue that we stop pandering to the misperceptions of Maine's downeast fishing guides and uninformed legislatures. In the end, it will do everyone a favor -- including the downeast fishing guides and Maine legislators -- if we stand up to their collective misinformation, remove the barriers to alewife passage on the St. Croix and restore ecological health to the watershed.

I appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is far too limited to allow a successful restoration effort. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Lois Winter

ALL ABOUT MAINE ALEWIVES...

What are alewives?

Alewives are anadromous (sea-run) fish that spend the majority of their life at sea but return to freshwater to spawn. Alewives have co-evolved and co-existed with other native fish and wildlife in Maine's streams, rivers, ponds and lakes for thousands of years. Alewives are members of the herring family; their close cousins are shad and blueback herring. Alewives have slender bodies, and they normally grow to 10 – 11" in length, and weigh about half a pound. Repeat spawners can be as large as 14" and weigh a pound or more. Alewives are grayish green on their back, and silvery on their sides and belly. They've got a single black spot just behind their eye, and their tails are forked.

Were alewives originally present in our lakes?

The bad news is that many Mainers have never seen an alewife run because Maine's historically thriving alewife population has plummeted during the last two centuries. Dams, pollution and overfishing have taken their toll. Southern Maine's Alewife Brook, for example, no longer has alewives.

But historians and scientists tell us that prior to Europeans settling this region, there was probably not a stream flowing out of a lake or pond anywhere in the Gulf of Maine that didn't have an annual alewife migration, unless it was blocked by impassable waterfalls. One early historian said, "There can have been hardly an accessible pond in the whole State they did not visit." Of all the migratory fish that came up Maine's rivers, alewives were the most abundant. One history of Gardiner and Pittston, written in 1852, relates that "alewives were so plentiful there at the time the country was settled, that bears, and later swine, fed on them in the water. They were crowded ashore by the thousands."

Native Americans and European settlers depended on the bounty brought to inland waters by spring migrations. When one river town built a dam and blocked the fish from their spawning habitat, one early chronicler wrote that the inhabitants of the next town were outraged. "It was difficult to persuade the aggrieved people to forbear using violence to open a passage for ye fish… the cry of the poor every year for want of the fish…is enough to move the bowels of compassion in any man that hath not an heart of stone." In 1809, the selectmen in Benton ordered a mill dam to be torn down because it blocked huge runs of alewives and shad on the Sebasticook River.

Produced by:
Maine Dept. of Inland Fisheries and Wildlife, Augusta
http://www.state.me.us/ifw
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http://www.state.me.us/dmr
Maine Rivers, Augusta
http://www.mainerivers.org
U.S. Fish and Wildlife Service Gulf of Maine Program, Falmouth
http://gulfofmaine.fws.gov

Photo credits to:
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U.S. Fish and Wildlife Service
NOAA -- Fisheries

June, 2004

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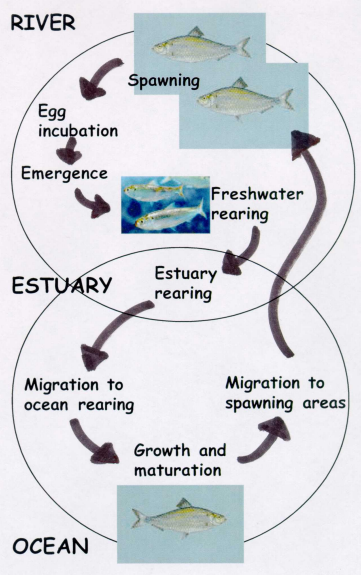
What is the alewife's life cycle?



Every May and June, adult alewives, guided by their sense of smell, migrate upstream from the ocean to rivers, streams, ponds and lakes to spawn. Spawning occurs in ponds and lakes or the quiet backwaters of rivers and streams. Some males return to freshwater when they are three years old. Females usually return when they are four or five years old. One female alewife can produce somewhere between 60,000 to 100,000 eggs, but only a few eggs survive to the juvenile stage, and sometimes only as few as three juveniles survive to adulthood. Although some adults die after spawning, the majority of adults make their way back to the ocean shortly after spawning – and many return the following spring to spawn again. During their downstream migration, adult alewives feed primarily on zooplankton. Once hatched, juvenile alewives remain in freshwater lakes and ponds where they also feed on zooplankton. Juvenile alewives grow anywhere between one to six inches, depending on the productivity of the lake. From mid-July through October, juveniles migrate downstream to the ocean where they grow to adulthood.


zooplankton (magnified 30-35X)

Do alewives affect water quality?

Maine Dept. of Environmental Protection (DEP) studies in more than a dozen Maine lakes with natural or reintroduced runs of alewives have not shown water quality decline that can be attributed to alewives, according to Barry Mower, a fisheries biologist and water quality specialist. It is well-substantiated that the major factor causing algae blooms in our lakes is the introduction of phosphorus. There are many sources of phosphorus in our lakes -- and most are directly linked to residential development.

When adult alewives migrate into a freshwater pond or lake, there is an influx of phosphorus to the lake. However, the majority of the spawning alewives return to the ocean, taking phosphorus with them. Additionally, young alewives that grow in freshwater ponds and lakes incorporate phosphorus from lakes into their bodies. That phosphorus is removed when the young migrate to the ocean.


Damariscotta Lake

Water quality studies were coordinated by Maine DEP in the 1970s on Little Pond in Damariscotta, additional studies were coordinated by Maine DEP, Maine Dept. of Marine Resources (DMR) and Maine Dept. of Inland Fisheries and Wildlife (DIFW) on Lake George in Canaan in the 1990s, and supplementary water quality studies have been conducted in half a dozen other Maine lakes and ponds with restored alewives. All of the studies have found that when alewives

are restored, there is either no change or a minor net ***decrease*** in total lake phosphorus. In fact, data from Maine points to good water quality on lakes with healthy alewife populations. To name only a few, those lakes include Nequasset Lake in Woolwich, Damariscotta Lake in Nobleboro and Jefferson, Alamoosook Lake in East Orland, and Gardiner Lake in East Machias. A little further afield in southeastern Massachusetts, the Assawompsett Ponds host the largest alewife population in New England (two million adult alewives this past spring). Most of the ponds in this complex have served as public water supplies since about 1900, and water quality and quantity in the ponds is outstanding, even though the ponds are generally very shallow. And, it must be added, the area surrounding these ponds is undeveloped.

Are alewives important for recreational or commercial fishing?

Alewives are an integral part of marine and freshwater food chains. Both adult and juvenile alewives are small and are therefore eaten by many other species of native, introduced, commercially and recreationally important fish. In freshwater, alewives are food for large- and smallmouth bass, brown trout and other salmonids. In the estuaries and the ocean, striped bass, cod and haddock feed on alewives, and the recovery of these economically valuable fish depends in part, on restored populations of alewives. In addition, lobstermen depend on alewives; they are the traditional spring bait for lobsters.


smallmouth bass


Atlantic cod

The ten-year study conducted by Maine Dept. of Marine Resources, Maine Dept. of Inland Fisheries and Wildlife and Maine Dept. of Environmental Protection on Lake George in Canaan showed that alewife stocking at the rate of six fish/acre had no detrimental effects on freshwater fish such as smallmouth bass, brown trout, chain pickerel and white perch in terms of size or abundance. Young-of-the year smelt actually grew better in the presence of alewives! A similar study is currently underway in the St. Croix River watershed. Many other lakes in Maine, such as Sabattus Pond and Damariscotta Lake have thriving alewives that co-exist with healthy populations of other fish. The Assawompsett Pond complex in southeastern Massachusetts, which hosts the largest alewife population in New England, offers great fishing. According to local fisherman, the ponds support exceptionally robust populations of largemouth and smallmouth bass, crappie, white perch, yellow perch, walleye, pickerel, pike, catfish, suckers, and a variety of baitfish.

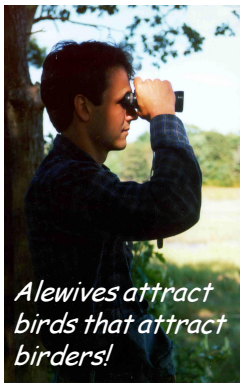
How do alewives benefit lakes, rivers, and the ocean?

While alewives present a spectacular migration every spring that's lovely for people to watch, alewives perform other vital functions in the larger ecosystem. For example, in the spring, when alewives move up our rivers, that's *precisely* the same time juvenile salmon smolts are moving downriver. If you were a sharp-eyed osprey in a riverside tree, what would you go for? One of the zillions of alewives you see down there, or the few salmon smolt hidden by alewives? Alewives provide cover for those salmon. In the same way, healthy populations of alewives also provide cover for upstream migrating adult salmon that could be preyed on by eagles or osprey, and for young salmon in the estuaries and open ocean that might be captured by seals.


Atlantic salmon

The important message is that alewives tie our ocean, rivers and lakes together, providing vital nutrients and forage needed to make healthy watersheds. Imagine huge schools of alewives that swim in the Gulf of Maine, as far as 120 miles out. Then the adults move, in huge waves, back inshore and up into freshwater.

Once they have spawned, adults migrate back downstream, followed later in the summer and fall by the juveniles. Between and within those various habitats, *everything* eats alewives: striped bass, bluefish, weakfish, tuna, cod, haddock, halibut, American eel, rainbow trout, brown trout, landlocked salmon, smallmouth bass, largemouth bass, pickerel, pike, white and yellow perch, seabirds, bald eagle, osprey, great blue heron, gulls, terns, cormorants, seals, whales, otter, mink, fox, raccoon, skunk, weasel, fisher, and turtles.


Alewives attract birds that attract birders!

Alewives have been central to the web of life in Maine for millenia. If we give alewives a chance by helping restore them to their ancestral spawning grounds, alewives will once again play an important role in bringing our rivers, lakes, estuaries and oceans back to life. In return, we will be treated to exuberance and bounty in Maine's watersheds, in a way that none of us have fully experienced in our lifetimes.

Native Alewives on the St. Croix

Full Name:
Lucy Hull
City:
Arrowsic
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

Beginning in 1995, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River, as you know. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. While I appreciate that the IJC has made restoration of alewives a high priority, I believe that the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are both a regional and international resource. It is of great concern that their numbers have plummeted in recent decades, since they are an integral part of the food chain. People all over Maine and in other states are working hard to restore these fish. But on the St. Croix, Maine blocks these fish on purpose. This is based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Lucy Hull

Restore alewife populations in the St.Croix River!

Full Name:
Lydia Garvey Public Health Nurse
City:
Clinton
State / Province:
OK

It is vital for ecocsyetm balance/ecology, our economy, health & sanity. Restore the river, get it wild again!
Your attention to this most urgent matter would be much appreciated by all present & future generations of all species.

Support free access for native alewives in the St. Croix River

Full Name:
Lynn Joanne Atkins
City:
Pembroke
State / Province:
Massachusetts

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. This is not acceptable.

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Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Lynn Joanne Atkins

Subject: Support free access for native alewives in the St. Croix River!

Full Name:
Lynne Lewis
City:
Portland
State / Province:
ME

Dear Colonel Feir and Director Appleby:

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I am an environmental economist currently working on estimating the economic value of alewife recovery. The potential is huge.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

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Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Lynne Lewis
Professor of Economics, Bates College

Alewives

Full Name:
Mariana Tupper
City:
Yarmouth
State / Province:
Maine

I am writing in support of efforts to protect and advance the vitality of native Alewives fishes in Maine's streams and rivers.

In May of 2000, the Maine Times published a poem by me entitled "Alewives". I had recently learned what an important species is the Alewife: a baseline population that supports the more popular fishes such as Salmon. In fact, I learned (from a biologist) that the Alewife can be thought of as the "peasant", and the Salmon the "royalty, in the world of fish populations. They each play roles that are important to the other.

Please do all you can to support Alewives in Maine. You may see, in my poem (below) how awe-inspiring these fishes are! Thank you.

ALEWIVES my Mariana Stockly Tupper

I am afraid of fish.
I am afraid to look at them,
to watch them struggling upstream
in the spring where the ladder begins.
Within yards of its commencement
the first dead ones begin to float down,
their eyes as blank as buttons,
their bodies floating on the surface
of the stream like leaves.
Everywhere I look there are miraculously more--
some fish already half-way to the top,
others just daring to begin.
With surging strength they fight the current
of the maze, hug its concrete, wriggle upwards
with a motion that appears stationary in the ripples
until, suddenly, they round the next bend
and slip into an eddy.
I should have come hungry to witness this,
arrived sweaty and sleepless
as I imagine them to be.
Ospreys hover overhead.
Crowds tremble on the banks,

wondering why no one thought to bring a net
--to help, or to feast?
In the pond above the ladder,
the survivors are swimming in slow circles,
catching their breath.

--MST.
(Inspired by the annual migration at Damariscotta Mills.)

Ocean Health and the St Croix

Full Name:
Mark Doughty
City:
Orrs Island
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. I appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan seems too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely
Mark

New Brunswick Salmon Council
P.O. Box 533, Fredericton, NB E3B 5A6

Conseil du Saumon Nouveau Brunswick
C.P 533, Fredericton, NB, E5B 5A6

August 3, 2010

Colonel Philip T. Feir
U.S. Co-Chair
International St. Croix Watershed Board
New England District
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Canadian Co-Chair
International St. Croix Watershed Board
45 Alderney Drive
Dartmouth, NS
B2Y 2N6

Dear Mr. Appleby and Colonel Feir,

Thank you for this opportunity to provide my comments on behalf of the New Brunswick Salmon Council (NBSC) regarding the recent draft of the "*Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick*". In case you may not be aware, the NBSC is a volunteer-based, non-profit organization and serves as the regional council of the Atlantic Salmon Federation (ASF) here in New Brunswick. Our group is comprised of, and represents, 28 individual conservation and angling groups in this province. We work very closely with federal and provincial government agencies, First Nations communities as well as other non-governmental organizations in the interest of protecting our native fish species and the waterways they inhabit. In addition to the NBSC being a key signatory to last year's petition, a number of our individual affiliates also participated in lending their support to this very important initiative to restore passage for native anadromous alewives in the St. Croix River system.

While I commend the IJC for taking this issue seriously by supporting the development of an adaptive management plan, the NBSC stands firmly in support of ASF's concerns that the plan is fundamentally flawed in the following ways:

- The plan places severe limits on the scope and pace of alewife population recovery in the St. Croix watershed, not to mention the range of habitat that would be accessible by alewives. The rate of controlled increase from year to year appears to be arbitrary and not fundamentally tied to scientific reasoning. We also object to long-term agreements that would prevent alewives from accessing habitat above Spednic as this only allows alewives to reach about 30% of their ancestral habitat.

- The plan placeshigher priority on smallmouth bass (a non-native species) than on anadromous alewives (a native species) by tying the restoration decision-making process directly to smallmouth bass population fluctuations that are natural and unrelated to the presence of alewives. The NBSC firmly believes that a dangerous precedent would be set in holding the recovery of a native species hostage to a non-native species in this manner and is simply unacceptable.

- The plan simply does not allow the St. Croix River system to function properly from an ecological point-of-view. Anadromous alewives bring marine derived nutrient from the ocean to rivers and ecosystems that depend upon this enrichment. They become forage for predators of the air, land and water throughout the watershed. Their spawn and

biological materials become fertilizer for the system. In a few short months after spawning, massive numbers of juveniles migrate out of the system becoming an important part of the food web in the ocean. The NBSC is of the opinion that alewives form an important foundation for the recovery of other species in our rivers, estuaries and oceans, including Atlantic salmon. We also firmly believe that healthy populations of alewives and the now entrenched smallmouth bass are not mutually exclusive – but rather they are complementary.

Here in New Brunswick, conservationists, commercial fishermen and anglers embrace the presence of native anadromous alewives, or "gaspereau" as we commonly refer to them because of the critical ecological function they play in our rivers, estuarine and marine environments. Imposing blockages to the passage of fish migration is detrimental to the natural workings of our ecosystems resulting in dramatic loss of native fish species, loss of biodiversity and the starvation of rivers of critical nutrients.

When the gates of the Petitcodiac River causeway opened on April 14th, 2010, after having choked that system off for 42 years, we celebrated with hopes that this once majestic river system will once again flourish with populations of many diadromous fish species, including alewives, American shad, striped bass and Atlantic salmon. Indeed, less than 3 weeks after the gates opened and the Petitcodiac rushed toward the Bay of Fundy, schools of alewives made their way into the river in numbers not seen above the causeway in nearly half a century. Again, we celebrated the significance of their arrival and that nature has already begun laying the foundation for the recovery of all native species in the Petitcodiac.

In my other role as President of the Miramichi Salmon Association, I welcome the annual return of native sea-run alewives to the Miramichi River which is widely recognized as North America's most productive river for wild Atlantic salmon. Simply put, the Miramichi would not be one of the most productive Atlantic salmon rivers in the world without the presence of all the other native species playing their important roles in maintaining and nurturing this ecosystem, including alewives.

Looking forward, I urge the IJC to seriously consider and address these concerns with the Adaptive Management Plan in the interest of restoring a fundamental native species to this important watershed of the outer Bay of Fundy. It will be to the benefit of not only the river, but also to the commercial and recreational fisheries throughout the system and the people who depend upon them for their livelihoods.

Yours in conservation,

Mark Hambrook,
President, New Brunswick Salmon Council

Letter from the U.S. Fish and Wildlife Service

Full Name:
Marvin E. Moriarty
City:
Hadley
State / Province:
Massachusetts

Please see attached letter from the U.S. Department of the Interior, Fish and Wildlife Service.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 Westgate Center Drive
Hadley, MA 01035-9589

In Reply Refer To:
FWS/Region 5/ES

JUL 19 2010

Philip T. Feir
Colonel, U.S. Army
St. Croix Int'l Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. Feir:

The U.S. Fish and Wildlife Service (Service) appreciates the opportunity to review the Proposal for Discussion, an adaptive plan for managing alewife in the St. Croix River Watershed, Maine, and New Brunswick, dated April 23, 2010. Since 1995, the Service has supported the restoration of native diadromous fish, including alewife, blueback herring, and American eel, to the watershed. Restoring these species to historic habitat in the Gulf of Maine is a priority for the Service. Providing unrestricted free passage of alewife to the St. Croix River watershed will contribute significantly toward this goal.

In response to the December 4, 2009, request by the International Joint Commission (IJC), the Service agreed to participate on the Fisheries Steering Committee (FSC) for the St. Croix River, along with other Federal, State, and Provincial fisheries management agencies. The FSC was charged with drafting a science-based adaptive management plan for the restoration of diadromous alewives to a portion of the St. Croix watershed. We appreciate the leadership of the IJC and the participating agencies to draft a plan that adopts a collaborative effort with multiple partners. As a contributor to the plan, we are aware of the hard work and thought that went into the plan, and of the plan's strengths and weaknesses.

We provide the following comments for your consideration.

General

The plan presents a systematic approach toward providing fish passage to only one-third of the St. Croix watershed while maintaining the smallmouth bass fishery at current or higher levels. The plan also presents a precautionary approach to managing alewife in order to maintain the economically important sport fishery for smallmouth bass while constraining alewife restoration.

Once the fishways are open, it is expected to take decades for the alewife run to recover to even a portion of what the run was prior to the closure of the fishways in 1995. To contribute most significantly to our alewife restoration goals, the entire run should be passed throughout the watershed in perpetuity beginning in Spring 2011.

We concur that collecting and monitoring data at strategic locations is critical to providing information on the ecology of the alewife restoration, and to direct adaptive management of fisheries throughout the watershed.

There are several specific issues related to this as noted:

1. The IJC charged the FSC to use the best available science to develop a plan to restore the sea-run alewife population to the St. Croix watershed while maintaining the smallmouth bass fishery. However, prior to the review of such science, the scope of the plan was restricted to the habitat area located downstream of the West Grand and Vanceboro fishways. In order to be a comprehensive watershed plan, and based on the best available science as presented in the plan and elsewhere, we recommend the plan provide for unrestricted alewife passage throughout the watershed with monitoring to inform and guide adaptive management decisions.

2. Monitoring data should be collected to provide information on the ecology of the alewife recovery and smallmouth bass populations to adaptively manage fisheries throughout the watershed. Specifically, we recommend annual fish counts and biological data collection at Milltown and Grand Falls. At Vanceboro, a decisionmaking process to monitor and pass alewife based on ecological balances, while monitoring all variables that affect small bass populations, is appropriate. Concurrently, any research needs related to West Grand Lake hatchery concerns and alewife restoration should be identified and addressed in the plan as well.

3. The adaptive management portion of the plan on page 18 should be developed to provide a more detailed and specific process that includes measureable criteria to evaluate and adapt the plan on an annual basis; develop alternatives to the process that is currently in this plan; identify the needs for additional alewife-bass interaction monitoring, such as the benefits of alewives on smallmouth bass growth; identify participants in the small interagency group identified in the plan; and list specific timelines for each of these tasks.

We encourage and support the ongoing work to restore native diadromous fish to the St. Croix River watershed and will continue to provide technical assistance and support to reach this goal.

Sincerely,

Anthony D. Léger

Marvin E. Moriarty
Acting Regional Director

Identical letter sent to:

Bill Appleby

cc: Hugh Akagi, Passamaquoddy St. Croix Schoodic Band Chief
Richard Doyle, Passamaquoddy at Pleasant Point Tribal Governor
John Dieffenbacher-Krall Maine Indian Tribal-State Commission Commissioner
Patricia Kurkul, NOAA Northeast Region Regional Administrator
George Lapointe, MDMR Commissioner
Roland Martin, MIFW Commissioner
William Nicholas, Passamaquoddy at Indian Township Tribal Governor
Greg Stevens, Fisheries and Oceans Canada, Resource Manager Senior Advisor
Hon. Wally Stiles, New Brunswick Dept of Natural Resources Minister
D.J. Monette, External Affairs Native American Liaison

TOWN OF VASSALBORO
MAINE

P.O. BOX 129
NORTH VASSALBORO, MAINE 04962
TEL. (207) 872-2826
FAX (207) 872-5414

August 5, 2010

Barbara Blumeris
US Army Corps of Engineers
696 Virginia Road
Concord, MA 01742

Dear Ms. Blumeris;

At the request of the Alewife Harvesters of Maine, I write this letter to you in support of the alewife fisheries program that was re-introduced to Webber Pond, in Vassalboro, Maine in the last three years. All indications are that the pond has become healthier with an increase in water quality. If the turnout of bass fishermen for local tournaments at Webber Pond is any indication, the fish population seems to be thriving in their new improved living environment! The bass fishermen, in turn, improve our local economy when they come to town for the fishing experience.

The Maine Department of Marine Resources (DMR) carefully oversees our Alewife Fisheries Program. They monitor the number of alewife that enters the pond daily during the season, and harvest of excess alewife is not permitted until DMR gives us the okay to do so. The Town has contracted with a very responsible harvester, who abides by the established rules. He understands that the established rules prevent over fishing and provide sustainability for the industry. The town does receive a portion of the proceeds from the sale of the harvested alewives, the amounts of which range from about $800 this year to as much as $3,500 in previous years, depending on the harvest. Over the last two years since I have been in office, the alewife revenue has been reserved into a fund and will likely be reinvested back into improvements to the harvest site.

Because of the improvements to the pond health and the stimulation to our local economy as a result of the improvements, I am hopeful that the alewife fisheries program will continue for many years to come. I will appreciate your support of the continued alewife fisheries program as well.

Sincerely,

Mary S. Sabins

Mary S. Sabins
Town Manager

Maine Environmental Priorities Coalition



Protecting Maine People and Promoting Prosperity for Today and Future Generations.

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

July 23, 2010

Dear Colonel Feir and Director Appleby:

I am writing on behalf of Maine's Environmental Priorities Coalition, a partnership of 24 environmental, conservation, and public health organizations in Maine with a combined membership of over 100,000 people. Our goal is to protect Maine people and promote prosperity for today and future generations.

Thank you for this opportunity to share our thoughts and concerns regarding the proposed document, "An Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick."

We are pleased that the International Joint Commission (IJC) and its International St. Croix River Watershed Board have determined that alewife restoration in the St. Croix basin should be a high priority. We agree that the St. Croix River is a remarkably significant waterway and note that this river has the potential to be the most productive river for alewives in Maine, and perhaps on the whole eastern seaboard. Maine ranks in the top six states nationally in terms of total pounds and dollar value of commercial fish and shellfish landed. Protecting our land, rivers, and oceans is essential for Maine's fishing economy.

While we greatly appreciate the approach taken in drafting "An Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick" and fully recognize the value and challenges of this collaborative approach, the St. Croix Fisheries Steering Committee's draft Adaptive Management Plan falls far short of its potential. We are concerned that this plan will not be able to achieve the ecological and economic benefits associated with a healthy population of this keystone species in the St. Croix River. The draft plan only allows alewives to return to about 30% of their ancestral habitat. We are concerned that it largely ignores the full ecological and economic importance of alewives in the Gulf of Maine.

This plan implies that the IJC will wait to open up the Grand Falls flowage to alewives

until the Maine Legislature acts to reverse the 1995 legislation blocking alewives there. We believe, however, that the IJC is the appropriate body under the Boundary Waters Treaty to govern fish passage in the St. Croix and has the authority to open up the river to alewives. We urge the IJC to use this authority sooner rather than later, so that we do not lose another alewife run in 2011.

Sincerely,

Maureen Drouin
Environmental Priorities Coalition

ATLANTIC SALMON FEDERATION
P.O. Box 5200
St. Andrews, NB
Canada E5B 3S8
Hon. Michael A. Meighen
Chairman, ASF (Canada)

August 6, 2010

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Re: An Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick

Dear Colonel Feir and Director Appleby:

By way of introduction, I am the Canadian Chair of the Board of Directors of the Atlantic Salmon Federation, one of the organizations that petitioned the International Joint Commission in 2009 to re-open the St. Croix to alewives/gaspereau.

I am also a member of the Senate of Canada, having served there for the past two decades, including a period of time on the Fisheries Committee.

I have a home in St. Andrews, New Brunswick on Passamaquoddy Bay near the mouth of the St. Croix River. I am very familiar with the St. Croix River watershed and am quite concerned about the ecological health of the St. Croix River, Passamaquoddy Bay, the Outer Bay of Fundy, and the Gulf of Maine. I believe that healthy populations of sea-run fish are important resources for this region, both ecologically and economically. Rebuilding the St. Croix's alewife run is the foundation for a healthy river, bay, and gulf.

The St. Croix is a marvelous river with tremendous historic and cultural significance and a unique natural and environmental heritage. In fact, the St. Croix was designated a Heritage River by the Minister of Canadian Heritage in 1991. This places it among an elite group of the most historic and beautiful rivers in Canada. Preventing alewives from accessing their native habitat throughout the watershed degrades both the ecological integrity and the great heritage of this internationally significant river, and is a major blight on its Canadian Heritage River status.

I have followed the alewife issue on the St. Croix River for 15 years and I hope that the International Joint Commission will take decisive action to reverse the closure of the fishways and allow the native alewife to access its ancestral habitat throughout the St. Croix River basin.

Unfortunately, by limiting alewives ability to access only about 30% of their historic habitat, your draft plan falls short of this goal. Furthermore, the adaptive management system outlined in your draft plan clearly indicates that the alewife restoration could be further limited by declines in smallmouth bass populations regardless of the cause of any such declines.

This would imply that the non-native smallmouth bass takes precedence over the native alewife. I have grave concerns over the precedent that this would establish and am very worried about what this would mean for future fisheries conflicts in other boundary waters, particularly within the Great Lakes. The International Joint Commission must tread carefully here, both in terms of what is best for the St. Croix but also in terms of future decisions across the lakes and rivers shared by Canada and the United States.

The draft plan for the St. Croix imposes arbitrary limits on the size and scope of alewife restoration and does so not because of any reasonable level of scientific uncertainty, but simply as a means to appease those who believe that alewives and smallmouth bass cannot co-exist. Smallmouth bass and sea-run alewives co-occur in scores of lakes across Maine and New Brunswick and there is not one shred of scientific evidence to support the proposition that alewives have negatively impacted smallmouth bass. In fact, the information that we do have demonstrates that the two species do well together, and in all likelihood that alewives actually enhance smallmouth bass populations.

We also know that rebuilding populations of alewives is crucial to our efforts to restore Atlantic salmon runs in our rivers and healthy populations of groundfish in the Gulf of Maine. In fact, healthy populations of alewives and other sea-run fish are a key component to the overall health of our fragile riverine, estuarine and marine ecosystems and all of the fish and wildlife communities that depend on them. Limiting and restricting alewife restoration in the St. Croix would severely impact the health of the entire ecological system, from headwaters to the Gulf of Maine. This is the paramount issue before the IJC and I trust that your decision will reflect these important considerations.

Sincerely,

Michael A. Meighen, Q.C.

Support free access for native alewives in the St. Croix River!

Full Name:
Michael Haskell
City:
Scarborough
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Michael Haskell

Stronger Management Plan for Alewives in the St Croix

Full Name:
Michelle Russell
City:
Waterville
State / Province:
Maine

I am writing to express my support for a stronger management plan to restore the alewives in the St Croix river. The current management proposal is not strong enough to ensure the necessary restoration of this important species. It is of utmost importance to protect valuable keystone species, and I urge you to take stronger measures to protect the alewives.

Thank you.

Support free access for native alewives in the St. Croix River!

Full Name:
Molly Masterton
City:
Windham
State / Province:
ME

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

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Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Molly Masterton

HOUSE OF REPRESENTATIVES

2 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0002
(207) 287-1400
TTY: (207) 287-4469

Nancy E. Smith
259 Tillson Road
Monmouth, ME 04259
Residence: (207) 933-2707
Fax: (207) 933-2707

Philip T. Feir
Colonel, U. S. Army
U. S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Good evening Colonel Feir, Director Appleby, Members of the St. Croix Board, and Commissioners. My name is Nancy Smith, and I am the House Chair of the Maine Legislature's Committee on Business, Research, and Economic Development. I am also a farmer and a licensed forester.

I know what it means to earn a living from the land in Maine and how hard Maine small business owners have to work to earn a living. I also believe that the cornerstone of Maine's economy is its natural resources, including its fisheries. I support restoration of alewives to the St. Croix River because alewives are a natural resource that belongs to all the people of Maine. The proposed Adaptive Management Plan for alewives does not reflect this, and the IJC should revise the plan to allow free access to the River.

I live in Monmouth, Maine; near the Kennebec River. I have seen how restored alewife populations in that river have helped local guides and lobstermen. Alewives have more than just a local impact, though. They are forage for groundfish in the Gulf of Maine, and restoring populations of these fish is a cornerstone of Maine's future prosperity.

According to NOAA Fisheries, commercial fishing had an economic impact worth more than $1 billion in 2008 and provided almost 20,000 jobs. That is a significant component of Maine's economy. It is also a big part of Maine's food security. As a farmer, I believe it is important to support the industries that provide Maine citizens with healthy, locally produced food.

In closing, I ask the IJC to recognize the critical statewide and regional economic importance of alewives and the St. Croix alewife run specifically. The St. Croix run is potentially the largest in Maine, and not allowing that run to reach its full potential hurts our State's economy. Therefore, I urge the IJC to revise its plan and allow free access of

alewives to the St. Croix. Doing so will benefit the whole state's economy; not doing so will harm it.

Sincerely,

Nancy E Smith

Representative Nancy E. Smith
Chair, Committee on Business, Research, and Economic Development.

Col. Philip T. "Tom" Feir
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA, USA 01742-2751

Bill Appleby
Director, MSC Operations - Atlantic
Environment Canada
MSC Operations - ATL
45 Alderney Drive
Dartmouth, NS B2Y 2N6

August 16, 2010

Dear Colonel Feir and Director Appleby:

We are sending these additional comments on behalf of the Atlantic Salmon Federation, Maine Rivers, and the Natural Resources Council of Maine. We also incorporate by reference our comments submitted to you in a letter dated July 12, 2010. Thank you for holding the hearing in Princeton on August 4 and for the opportunity to provide these additional comments.

One of the issues that repeatedly came up at the August 4 hearing was the historical presence of alewives above the Grand Falls Dam. Despite the unsubstantiated claims at the hearing, all of the available evidence indicates alewives were clearly present above Grand Falls historically. Lewis Flagg wrote a report for Maine's Department of Marine Resources that conclusively addresses this issue. This 2007 report, entitled: "Historical and Current Distribution and Abundance of the Anadromous Alewife (*Alosa pseudoharengus)* in the St Croix River" is available publicly at: http://www.maine.gov/dmr/searunfish/reports/stcroixalewifeflagg07.pdf and was cited in the IJC's proposed Adaptive Management Plan.

However, this issue received so much attention at the August 4 hearing that we believe it is important to quote Mr. Flagg's conclusions here in full:

Summary and Conclusions

> Therefore, I conclude that anadromous alewives historically ascended above Salmon Falls and Grand Falls based on the following evidence:

1. There is not enough habitat below Salmon Falls and Grand falls to produce the historically large runs of alewives that were commercially exploited in the lower river. (See Table 1.)

2. Historical reports link the decline of alewives, shad, and salmon to the construction of dams at Salmon Falls and other sites on the lower river. If alewives never ascended the river above Salmon Falls, why did the alewife run decline dramatically coincident with dam construction on the lower river? I conclude that alewives did ascend the river above Salmon Falls and the decline in abundance of alewives, along with salmon and shad, was directly related to loss of access to upriver spawning and nursery habitat

3. Since 1990 and 1995, when alewives were denied access to habitat above Grand Falls and Woodland respectively, adult returns declined dramatically from 2,600,000 adults to 900 and has shown no appreciable recovery up to the present. The habitat below Grand falls (Milltown and Woodland flowages) is producing a run of only about 12,000 adult alewives or approximately the number projected by DMR's low range estimate in Table 1 for the river below Woodland.

4. Archeological findings at the Mud Lake Stream site provide evidence of alewife above head of tide on the St Croix 4000 years ago. This was long before any fish passage modifications may have been made at Salmon Falls by European colonists. The Mud Lake site is 65 miles upstream of head of tide and the same distance from Meddybemps Lake and more than 65 miles upstream of the Devil's Head site in the St Croix estuary, other known sites of alewife bones. These sites are much more than a ½ day travel maximum between where food was harvested and where it was consumed by native Americans. Therefore, I conclude that the alewives at the Mud Lake stream site were caught in Mud Lake stream or the immediate vicinity and therefore successfully passed upstream above Salmon Falls and Grand Falls.

Mr. Flagg's conclusion that the Mud Lake Stream archeological site is evidence of the historical presence of alewives above Grand Falls is supported by Dr. Arthur Speiss, the Senior Archeologist with the Maine Historic Preservation Commission. Dr. Speiss' letter to Mr. Flagg is attached to Mr. Flagg's report as Attachment B. We encourage both you and the Commissioners to review Mr. Flagg's report and Dr. Speiss' letter. Incorrect assertions by restoration opponents that the fish were not historically present above Grand Falls cannot stand in light of this credible evidence.

Another issue that came up repeatedly at the August 4 hearing was the potential use of core sampling for marine derived nutrients to test for the historical presence of alewives above the Grand Falls Dam. Lewis Flagg's report makes such sampling unnecessary. However, we note that if the IJC or others were to perform such sampling, the results are unlikely to be conclusive. As Dr. John Lichter of Bowdoin College states in his August 12 letter to the IJC, there is a very good possibility that core sampling would yield ambiguous results and that interpreting the results would be difficult.[1]

[1] John Lichter. August 12, 2010 letter to Colonel Philip T. Feir. P. 3.

The opponents of alewife restoration presented incorrect information at the hearing implying alewives are a threat to native fish species, particularly rainbow smelt. However, as Fred Kircheis, a biologist with Maine's Inland Fisheries and Wildlife Department for 25 years, stated in his August 13 letter to the IJC, Maine's 11-year study of Lake George in central Maine showed that rainbow smelt grew faster in the presence of anadromous alewives than without them. Mr. Kircheis also refutes the idea that alewives are a threat to smallmouth bass or any other species of fish:

> Resident fishes in Lake George included a wide assemblage of native Maine fish species and the introduced smallmouth bass, *Micropterus dolomieu.* This study (Kircheis, et. al 2004) clearly showed that there was no scientific basis for suspecting that alewives had any survival, reproductive, or growth impact upon smallmouth bass. Nor did the study identify any negative impacts on any of the other resident fishes of Lake George. On the contrary, young-of-the-year rainbow smelt, *Osmerus mordax*, exhibited faster growth in the presence of anadromous alewives than in the absence of alewives. Chain pickerel, *Esox niger*, also showed better growth in the presence of alewives. The white perch (*Morone americana*) population fluctuated in abundance regardless of the presence of alewives.[2]

We agree with the National Oceanic and Fisheries Administration's National Marine Fisheries Service (NMFS) that the Adaptive Management Plan is technically flawed. As NMFS states in its letter, the proposed level of monitoring is insufficient to determine whether declines in smallmouth bass populations are attributable to alewife reintroduction or other factors, such as water management, predation, or intra-specific competition. Thus, it is possible that the plan will slow alewife reintroduction dramatically due to drops in the population of smallmouth bass that are totally unrelated to alewives. This is unacceptable.[3]

Fundamentally, the concept of dramatically limiting alewives in the St. Croix based entirely on the perception – not evidence – that they may have somehow harmed other fish species in the St. Croix River is wholly unacceptable. This adaptive management plan is unnecessary. NMFS states in its comments on the plan:

> NMFS fully supports accelerated and unimpeded recovery of river herring through complete, safe and timely passage at all anthropogenic barriers in the St. Croix watershed. We believe that securing passage prior to the 2011 run is an essential first step to recovery of this depleted species. The most efficient way to achieve that is for the IJC to re-open its orders of approval to allow free access of river herring to all historically accessible areas of the basin subject to IJC jurisdiction. We urge the IJC to take this action as soon as possible.[4]

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[2] Fred Kircheis. August 13 letter to Philip T. Feir and Bill Appleby. P. 1

[3] Patricia Kurkul. NOAA Regional Administrator. July 26, 2010 letter to Philip T. Feir. P. 2.

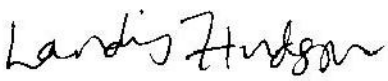
[4] Ibid., P. 4.

We agree and urge the IJC to act accordingly.

Sincerely,

Nick Bennett
Staff Scientist
Natural Resources Council of Maine

John Burrows
Maine Coordinator
Atlantic Salmon Federation



Landis Hudson
Executive Director
Maine Rivers

Colonel Philip T. Feir
United States Army
U.S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Mr. Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Drive
Dartmouth, NS, Canada B2Y 2N6

Dear Colonel Feir and Director Appleby:

Thank you for providing the opportunity to offer comments regarding the proposal you are considering that would allow the introduction of alewives into the St. Croix River drainage above Grand Falls dam.

The Maine Professional Guides Association (MPGA) has been involved with this controversial issue for nearly a decade. We have thoroughly reviewed the anecdotal information as well as the science that is being used both to support and oppose this introduction.

The MPGA is a statewide organization established to represent the best interests of working guides and to help ensure the future success of the guiding industry in the State of Maine. Our future success is dependent on healthy eco-systems and abundant populations of fish and wildlife. In general, we are supportive of restoring fish populations to their native habitat. We strongly believe, however, that every situation is different and that prior to the introduction of any species, the potential negative consequences must be given adequate consideration. It is critical to understand what is taking place in an existing eco-system before introducing a species that could dramatically change it.

After much discussion and thoughtful consideration, the MPGA has concluded that there remain too many unanswered questions about the potential impact of sea run alewives above Grand Falls dam. Therefore, at this point in time, we strongly oppose the introduction of alewives into those waters.

Certainly there are those who believe that opening the fishway at Grand falls to the passage of alewives will simply restore an historic alewife run. The issue is far more complex than that!

Prior to the construction of dams and fishways, it is highly unlikely that significant numbers of alewives ever got beyond Salmon Falls (in Milltown), let alone Grand Falls. A tiny number of fossilized "herring" bones in the Spednik Lake area do not constitute conclusive evidence of a substantial run of alewives. We don't even know for certain that the bones were from alewives.

Even if alewives were able to reach the waters above Salmon Falls and Grand Falls prior to the construction of dams, the habitat they entered would have been dramatically different from what exists there today. Woodland Flowage did not exist. Grand Falls Flowage did not exist. What is now Spednik Lake was three small ponds on the river. In short, thousands of acres of quality spawning habitat have been added to the equation.

Prior to 1965, it had been at least 140 years since alewives had access to the watershed. From 1825 through 1869 (44 years), there was no fish passage through a tidewater dam at Calais. For the next 50 years, upriver fish passage was extremely limited because of a series of dams with inadequate fish passage facilities. In 1926, the fishway in the dam at Woodland was removed completely, and no fish were able to get beyond that point for another 40 years until the existing fishway was installed there in 1965.

The state began stocking smallmouth bass in the St. Croix watershed about 1870. Those bass were introduced, became established and developed into a phenomenal sport fishery with little if any competition from alewives.

In 1965, new fishways were installed at Woodland, Grand Falls and Vanceboro, and alewives were able to migrate into the upper St. Croix watershed. In 1967, alewives were observed passing through the new fishway at the dam in Vanceboro and into Spednik Lake. By the mid-80s, the alewife run on the St. Croix had increased to more than two million spawning adults. This huge influx of alewives coincided with the collapse of the world-class bass fishery at Spednik. Concerned fishery biologists, using scuba gear, tried to determine the cause of this tragedy. They observed large schools of young bass in the lake shortly after the bass had spawned. They also observed massive schools of young alewives. As the weeks went by, the bass fry gradually disappeared, and huge numbers of alewives remained. The biologists were convinced, based on their ongoing observations, that the high concentration of alewives played a major role in destroying this bass fishery – a fishery that only a few years earlier had been described in Field and Stream Magazine as the "best smallmouth bass fishing in the world".

Environmentalists have long argued that there is no scientific data to support the conclusion that alewives destroyed this fishery. Unfortunately, although the evidence strongly implicates alewives, the evidence is circumstantial. With a crisis on their hands, biologists felt it was more important to try to restore the fishery and save the sporting camps than to use the lake as a science project. They convinced the Canadians to close the fishway to migrating alewives, implemented a catch-and-release regulation on bass and began stocking the lake with bass from Meddybemps and Baskahegan Lakes. As a result, when the fishery at Spednik began to recover, there was no scientific data to prove that restricting alewives made a difference. The involved fishery biologists, however,

had little doubt. The argument that fluctuating water levels, and not alewives, caused the collapse in this world-class bass fishery doesn't make a lot of sense either, given that fluctuating water levels were an annual occurrence at Spednik long before the alewives arrived.

To further complicate matters, landlocked alewives have recently become established in the upper St. Croix. There have been no studies to determine how plentiful the landlocked alewives have become, or what impact they will have on the bass, the smelts and the landlocked salmon. There have been no studies to determine how the landlocked alewives will interact with sea-run alewives or at what point the combined reproductive capabilities of these fish might totally dominate the watershed.

As stated earlier, the MPGA is strongly opposed to the introduction of alewives into the St. Croix above Grand Falls until concerns about the impacts to the multi-million dollar sport fishery in those waters have been addressed. Furthermore, we believe that this issue should be resolved at the state level through the combined efforts of Maine's fishery managers, the Passamaquoddy Tribe, guides and other stakeholders. While it is true that the St. Croix River is shared equally by Maine and New Brunswick, almost all of the alewife spawning habitat above Grand Falls, with the exception of Spednik Lake (which is not part of the proposal), lies completely within the jurisdiction of the State of Maine or the Passamaquoddy Tribe.

Maine statute currently prohibits allowing alewives to pass through the fishway at Grand Falls dam. If the State of Maine would be willing to submit legislation replacing the current restriction with statutory language containing terms and conditions similar to those contained in the proposal you are now considering, the MPGA would be willing to reconsider our position.

Thank you for your consideration.

Respectfully submitted,

Norman E. Trask

Norman E. Trask
Legislative Liaison
Maine Professional Guides Association

CC: MPGA Board of Directors

Maine Lobstermen's Association comments to allow full alewife passage on St. Croix

Full Name:
Patrice McCarron
City:
Kennebunk
State / Province:
Maine

Please accept the attached comments from the Maine Lobstermen's Assocation with regard to the Adaptive Management Plan for Alewifes on the St. Croix.

The MLA strongly urges the IJC to modify the proposed managemt plan for St. Croix River alewife to allow for unrestricted alewife access to their historic habitat throughout the St. Croix watershed.

Thank you.

MAINE
Lobstermen's Association, Inc.
21 Western Avenue, Suite 1 • Kennebunk, ME 04043
Phone: 207-967-4555 • Fax: 866-407-3770
www.mainelobstermen.org

Philip T Feir
Colonel, US Army
US Co-Chair
International St. Croix River Watershed Board
696 Virginia Rd
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Dr
Dartmouth, NS B2Y 2N6

August 12, 2010

Dear Colonel Feir and Director Appleby:

The Maine Lobstermen's Association (MLA) urges the International Joint Commission (IJC) to modify the proposed Adaptive Management Plan for St. Croix River Alewife to allow for unrestricted alewife access to their historic habitat throughout the St. Croix watershed.

For many years, the MLA has registered its concern that the alewife passage on the St. Croix River remains closed. Unfortunately, the Maine Legislature blocked alewife passage on the St. Croix in 1995 due to concerns that some fishing guides had about alewife impacts on smallmouth bass populations. We do not believe those concerns were supported by good science.

As a result of the Maine Legislature's decision, alewife numbers on the St. Croix plummeted from more than 2 million fish to about 50,000 fish today. The Maine Department of Marine Resources believes the river could support more than 20 million alewives with full restoration. The St. Croix is potentially the most productive alewife river in Maine, nearly as productive as both the Kennebec and Penobscot rivers combined.

Alewives are a valuable bait source for the Maine lobster industry. In the foreseeable future, they will only grow more valuable, due to the severe cuts in allowable catch of Atlantic herring in the northeast. Alewives have traditionally been used as a source of lobster bait. Restoring alewives to the St. Croix will be good for the local economy.

In March 2009, the MLA joined 51 groups in the US and Canada, to sign on to a petition to the IJC asking that the St. Croix River be reopened to alewives. The St. Croix should be the most productive river in the State of Maine for alewives. The state of Maine is working hard to restore alewives and blocking passage on the most productive river makes no sense, and ultimately limits an excellent source of bait for Maine lobstermen.

In this era of declining allowances for the catch of Atlantic herring, Maine lobstermen would greatly benefit from opening this alewife passage as it would provide an alternative bait supply. Restoring alewives to the St. Croix is very important to the Maine lobster industry.

Thank you for the opportunity to comment on this important issue.

Sincerely,

Patrice McCarron
Executive Director

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

JUL 26 2010

Colonel Philip T. Feir
U.S. Army
U.S. Co-Chair
International St. Croix River Watershed Board
696 Virginia Road
Concord, MA 01742-2751

Dear Colonel Feir:

Thank you for your letter from June 9, 2010 conveying the recent draft of the Adaptive Management Plan for Managing Alewife in the St. Croix River Watershed, Maine and New Brunswick (the plan). For the reasons explained below, we request that the IJC utilize its authority to prevent further declines and to facilitate recovery of depleted river herring by requiring free and open access for these species in the St. Croix River.

NOAA's National Marine Fisheries Service (NMFS) recognizes the importance of this watershed to alewife and blueback herring (collectively, referred to as "river herring"), which recently numbered in the millions. In the past, we have expressed concern over fishway closures and the decline of river herring in the St. Croix River Watershed. River herring populations are in decline throughout the northeast range between New Brunswick and Florida (ASMFC 2009), and are presently listed by NMFS as a species of concern. Now is clearly the time to advance river herring recovery in this very important, international waterway.

We understand and appreciate that balancing river herring recovery and smallmouth bass interests is a complicated issue. The steps that were taken to prevent river herring access to historical habitat were taken due to concern over their potential impact on non-native, introduced smallmouth bass. While we recognize the economic and social importance of Maine's smallmouth bass fishery, we believe that a priority must be placed on recovery of the native river herring - commercially and ecologically important species in their own right. We also believe that a restored and healthy river herring population and a vibrant smallmouth bass fishery are not mutually exclusive.

River herring are important to the connectivity of freshwater, estuarine and marine ecosystems. These fish play many important roles in food webs, particularly since they provide forage for a number of other commercially and recreationally important species such as Atlantic cod, bluefish, and striped bass (Collette and Klien-MacPhee 2002) as well as in shaping lake zooplankton community structure (Post et al. 2008). A diverse zooplankton community impacts the structure and function of lake ecosystems and re-

establishment of a native species can influence overall lake productivity and resilience to abiotic stressors.

We understand that the IJC is advancing the plan in the interest of seeking a compromise to move beyond the situation that was initiated in 1995 when the Maine State Legislature closed fishways at the Grand Falls and Woodland Dams on the St. Croix River. We remain concerned that the endorsement of this plan by the IJC will not, by itself, lead to the implementation of recovery of river herring in the St. Croix watershed. Many other actions would be required, including commitments of resources by a variety of agencies and stakeholders as well as action by the Maine State Legislature. While we were supportive of the effort to attempt to draft an adaptive management plan, in our view this plan would significantly decrease the potential for river herring recovery or, at a minimum, result in significant delays without assurance that alewife target population levels would be achieved. This is assuming that the plan as written would be implemented, without any further weakening, through the Maine State Legislature which may be unlikely given the history on this issue.

Our clear preference is to advance river herring recovery without constraints imposed by smallmouth bass populations, as would occur under the plan as drafted. We do, however, support the efforts of the IJC and the International St. Croix River Watershed Board to find a way forward in a timely fashion. The decline in river herring returns has been dramatic and drastic, and we believe that it is essential that passage be restored prior to the 2011 run. This action would be most efficiently and effectively achieved by the IJC exercising its authority to require free and open access to river herring in the St. Croix. Recent studies indicate that river herring and smallmouth bass can co-exist in the St. Croix River and we would support collaborative monitoring and evaluation to improve our understanding of interactions as river herring recovery continues.

In recognition of the unique circumstances in this case and the request from the IJC for comments on the plan, we offer the following observations. This should not be taken as an endorsement of this plan or to set any precedent in any other circumstances that the needs of native sea-run species should be compromised for other species.

Specific Comments on the Draft Management Plan:
Technical Issues:
We are concerned that the proposed monitoring level is insufficient to properly attribute any reduction in year class strength of smallmouth bass to rebounding alewife populations. A myriad of factors could contribute to smallmouth bass year class failure (including precipitation patterns, water management, and intra-specific competition). None of these other factors would be specifically evaluated. It appears that the working assumption is that any smallmouth bass year class failure will be attributable to alewives if the year class failure cannot be attributed to broad scale environmental factors. Constraining alewife recovery remains a concern because alewife abundance will not be allowed to increase even if they are not the cause of the smallmouth bass year class failure. This is an inappropriate placement of the burden of proof.

Accumulating scientific evidence shows that recovered populations of native river herring can and do co-exist with high-quality smallmouth bass fisheries. The stated purpose of the plan is to restore the sea-run alewife while maintaining the basin's smallmouth bass fishery at current or higher levels. Under the plan, recovery thresholds for river herring are based directly on a population metric of smallmouth bass. As such, the initial target of six alewife per acre would result in an expected population of about 145,000 in the accessible part of the basin. Depending on smallmouth bass year-class strength, alewife could be held at this level, which represents only 3.3% of the recovery goal of 4.45 million. For reference, the Strategic Plan for the Restoration of Diadromous Fishes to the Penobscot River prepared by the Maine Department of Marine Resources and the Department of Inland Fisheries and Wildlife uses a production estimate for alewives of 235 fish per acre, which is composed of an escapement target of 35 fish per acre and a commercial harvest of 200 fish per acre. We disagree with constraining alewife recovery by using a smallmouth bass recruitment index that is dependent upon many factors independent of alewife abundance. Our preference is for accelerated and unimpeded recovery of river herring, principally alewife in this portion of the species coastal distribution, through complete, safe and timely passage at all anthropogenic barriers in the St. Croix watershed.

In reviewing and assisting with the development of the plan, we believe that additional emphasis on both upstream and downstream passage efficiency is needed. There are currently no credible estimates of either upstream or downstream fish passage efficiency at any of the fishways in the St. Croix River. These data are critical to assessing progress toward the goals of the plan. NMFS encourages the IJC, other natural resource agencies involved in the St Croix watershed, and the dam owners to begin the necessary assessments. NMFS encourages the IJC to add in the following implementation task to table 8: "Evaluate upstream and downstream fish passage effectiveness for alewives at the Milltown and Grand Falls fishways." NMFS is prepared to assist the IJC and other natural resource agencies in this endeavor.

Policy Issues:

Concerns over negative impacts of alewives on smallmouth bass, regardless of whether these concerns are supported by the science, have lead to the policies and practices currently in place which have resulted in a precipitous decline of alewives. The St. Croix river herring population is two orders of magnitude less than it was just twenty years ago, having been reduced from 2.6 million in 1988 to only 12,000 in 2008 at the Milltown fishway (IJC 2008; Flagg 2006). Conservation efforts to reverse the restrictive policies and restore alewife failed. In response to conservation interests to restore herring populations, the IJC requested the inter-agency St. Croix Fisheries Steering Committee propose an adaptive management plan for restoring alewives to the St. Croix watershed. Implementation of the plan would lead to some rebuilding of river herring populations in the St. Croix watershed through time, and that is certainly an important step forward. However, there are several troubling aspects to the plan that we cannot support. Rather than basing river herring recovery thresholds on a single metric related to a non-native species, NMFS prefers a more modern and integrated ecosystem approach. The plan's ceiling on river herring populations is directly related to population metrics of

smallmouth bass. Thus, we have serious concerns that a single non-native species is driving the management regime in the St. Croix watershed. This imbalance is evident since river herring are important to a variety of state and federally managed resources, including Atlantic salmon, American lobster, as well as those species mentioned earlier (State of Maine 2006; Collette and Klien-MacPhee 2002).

NMFS cannot support agreements that would maintain fish passage barriers to historic spawning and rearing habitat for native sea-run species. Spednic Lake and West Grand Lake and areas upstream of those lakes are not being considered for free access by native sea-run fish such as river herring. These areas represent tens of thousands of acres of suitable spawning and rearing habitat for river herring. In order for NMFS to fully support the plan, the plan must include specific timelines for re-opening historic habitat in the watershed. NMFS encourages the IJC to re-draft the plan with a timeline for implementing this goal. NMFS will provide staff and expertise necessary to assist the IJC in this endeavor.

Despite reservations noted, there are many aspects of the plan that are a positive step toward science-based management in the St. Croix watershed. NMFS strongly supports the IJC in its efforts to facilitate open dialog regarding fishery management in the St Croix watershed. The development and ultimate implementation of a plan are important components of that increased information exchange and dialog. To enhance the already ongoing dialog, NMFS encourages the IJC to commit to re-visiting whatever plan is adopted annually with major re-evaluations of the underlying assumptions and over-arching goals every five years. A primary tenet of adaptive management is taking new information into all aspects of decision making as it becomes available. Implementing this type of formal re-evaluation would greatly enhance the credibility of any management actions that are ultimately taken. NMFS will provide staff and expertise necessary to assist the IJC in this endeavor.

Conclusions:
NMFS fully supports accelerated and unimpeded recovery of river herring through complete, safe and timely passage at all anthropogenic barriers in the St. Croix watershed. We believe that securing passage prior to the 2011 run is an essential first step to recovery of this depleted species. The most efficient way to achieve that is for the IJC to re-open its orders of approval to allow free access of river herring to all historically accessible areas of the basin subject to IJC jurisdiction. We urge the IJC to take this action as soon as possible.

We thank you very much for advancing fisheries management in the St. Croix watershed. Some elements of the plan (as drafted) are positive steps forward if approached as a short-term plan – that is for the next 2-3 years. Implementing this plan has the potential to increase alewife 10-fold which is an important gain over the present situation. However, significant areas of concern remain. NMFS cannot support the following implementation tasks: block Spednic fishways; block West Grand fishways. Further, NMFS recommends development of more progressive timetables for addressing the entire watershed. In addition, we also note that many more steps must be taken if this

plan were to move forward including: changes to the plan in light of public comments submitted; changes to Maine State legislation that currently limits alewife passage to only about 2% of its historic habitat in the St Croix; and the commitment of fiscal and personnel resources by a variety of agencies and stakeholders. Given the uncertainty and the likely time delays with this path forward, we are recommending that the IJC utilize its authority to secure river herring passage at this time.

We suggest that the St. Croix Fisheries Steering Committee be reconvened on a regular basis to review and discuss available information on progress with river herring recovery and the distribution and abundance of other species in the St. Croix watershed, including smallmouth bass. We thank you for your commitment to the successful resolution of these issues. We look forward to an open discussion of these issues at the public meeting on August 4, 2010.

Sincerely,

for Patricia A. Kurkul
Regional Administrator

CC
William Nicholas, Governor, Indian Township Tribal Government
Richard Doyle, Governor, Pleasant Point Tribal Government
George Lapointe, Maine Department of Marine Resources
Roland Martin, Maine Department of Inland Fisheries and Wildlife
Marvin Moriarty, US Fish and Wildlife Service
Bill Appleby, Environment Canada
John Dieffenbecker-Krall, Maine Indian Tribal-State Commission
Robert Reynolds, International Joint Commission

Citations

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St.Croix alewives

Full Name:
Paul Laney
City:
Grand lake stream
State / Province:
maine

dear sirs, I am writting in regard to the adaptive managment plan for alewives in the st.croix. I sit on the board of directors for the Maine Professional Guides Association, a member of the Grand lake stream guides association, and owner and operator of Laneys guide service in Grand lake stream. I make my living on the st.croix watershed. I am in strong opposition to the managment plan for several reasons.
One there is no real proof that alewives historically existed above Grand falls. There was suppose to be isotope studys done to prove this but those in favor of alewives chose not to. They would receive the truth on the issue which is what they do not want. So buy you allowing alewives passage above grand fall's you would be illegally introducing a species to several pristine lakes. there are state laws against this.
Next, the plan is well put togeather and has good intentions, But it has huge flaws. The plan allows for a certain number of alewives to enter the river and a certain number to go to Big lake, a certain number to the flowage, ect. I am sorry but these fish do not read road signs or take gps readings. they are going to go where the flow is which is on the east branch. Your studys then will show they have not had an impact on big lake so you will keep pumping more in. Maybe this was a over sight by those who made the plan, Maybe it was there intent. either way it is not going to work.
Lastly, My wife and I are both registered Maine Guides, It is our life long dream together to own and operate a sporting camp in Maine. At the present time we are looking at a set of camps on big lake, One of the deciding factors for us will be if alewives are allowed access to the lake. If they are the huge investment of a set of camps will become to much of a risk for us to move forward. Because the folks who have come to the camps for the past 50 years, come to catch smallmouth bass. If the alewives wipe them out just like they did in spednick lake the clients will no longer come. Please don't crush our life long dream and allow these non native fish access above grand falls. thank you
Paul Laney

Paul Laney
laneyplott@aol.com
www.laneysguideservice.com

St Croix Alewives

Full Name:
Rip Cunningham
City:
Yarmouth
State / Province:
ME

I have been involved in fisheries management for almost 25 years at both the state and federal level. Restoration of the historic alewife runs in the St. Croix river system will help improve the health of not only that river but also the Gulf of Maine and the Bay of Fundy.

Alewives form an important part of the forage base that sustains populations of marine fish as well as a variety of birds and mammals. The only opposition to their restoration is the alleged impact on one species of freshwater fish . All the available science indicate a restored run of alewives will only enhance the population of of smallmouth bass, a species that my understanding leads me to believe was not native to the St. Croix river system.

In any case, I urge you to support the restoration of alewife runs in the St. Croix river system.

Alewife Passage on the St. Croix River

Full Name:
Rob Stenger
City:
St. George
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Rob Stenger

Alewives in the St. Criox

Full Name:
Rob Struba, MD, PhD, MPH
City:
Belfast
State / Province:
Maine

My family and I support efforts to assure a niche for alewives in the St. Croix River. A decrease in the number of stable environments is a concern for almost all species (metazoans, at least), and is especially critical for those groups with cornerstone status. We hope our legislators, scientists, naturalists, administrators and others involved in these important decisions on policy will do their best to do the right thing here. Thanks!

Comments in support of alewife restoration on the St. Croix from the Maine Lobster Advisory Council

Full Name:
Robert S. Baines
City:
South Thomaston
State / Province:
ME

September 16, 2010

Dear Colonel Feir and Director Appleby:

I am writing to inform you of a unanimous vote by the Maine Lobster Advisory Council (LAC) at our September 15th meeting in support of the restoration of alewives throughout the St. Croix River. Please use the authority of the International Joint Commission (IJC) to take immediate action to allow passage of these fish throughout their historic range, including above Grand Falls.

The LAC was created by Maine statute to provide advice to the Commissioner of the Department of Marine Resources (DMR) on matters of importance to the lobster industry. At our September meeting the LAC requested that Mr. Patrick Keliher, the Director of the Bureau of Sea Run Fisheries and Habitat at the Maine DMR bring the Council up-to-date on the State's efforts to comply with Amendment 2 to the Interstate Fishery Management Plan for Shad and River Herring. We also discussed the current situation on the St. Croix, and the challenges that exist there to achieving fish passage for all anadromous species. While we are aware of the arguments in opposition, there is no scientific evidence to support the claims of future negative impacts on the smallmouth bass population that may arise. Further, we fundamentally believe that restoration of a native species should not be delayed by concerns about impacts on an introduced species.

The interest of the lobster industry in this issue is two-fold. First, we support actions that strengthen and support the ecological integrity of the Gulf of Maine, upon which our fishery depends. Alewives are a critical component of the ecology of freshwater, estuarine, and marine environments. Alewives tie our ocean, rivers and lakes together, providing vital nutrients and forage needed to ensure healthy watersheds. Between and within those various habitats, a huge number of species depend on alewives. For this reason alone, their restoration should be of prime importance to all who care about the marine environment.

As you are likely aware, alewives also serve as an important supplementary source of lobster bait in the spring. With recent reductions in the allowable catch of Atlantic herring, it has become even more critical for the industry to work proactively toward ensuring a variety of accessible, affordable, and safe sources of bait. It is our strong preference to use sources of bait that are local, and they must be sustainable.
Our fishery has used alewives for over a hundred years. With the habitat that it offers, at full restoration the St. Croix would be the most important run in the state. It would play a central role in supporting Maine's $250 million lobster industry, and the countless coastal communities which rely upon this fishery.

The issue of alewives in the St. Croix has been taken up by the Maine Legislature on several occasions, but for political reasons cannot be brought to appropriate resolution. For this reason, we are appealing to the IJC to use its authority to address this issue and restore alewives to this watershed.

Sincerely,
Robert S. Baines
Chair, Maine Lobster Advisory Council

TEL: 207-624-6550
FAX: 207-624-6024

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
LOBSTER ADVISORY COUNCIL
STATE HOUSE STATION #21
AUGUSTA ME 04333-0021

Philip T. Feir
Colonel, US Army
US Co-Chair
International St. Croix River Watershed Board
696 Virginia Rd
Concord, MA 01742-2751

Bill Appleby
Director, MSC Operations-Atlantic
Canadian Co-Chair
International St. Croix River Watershed Board
45 Alderney Dr
Dartmouth, NS B2Y 2N6

September 16, 2010

Dear Colonel Feir and Director Appleby:

I am writing to inform you of a unanimous vote by the Maine Lobster Advisory Council (LAC) at our September 15th meeting in support of the restoration of alewives throughout the St. Croix River. Please use the authority of the International Joint Commission (IJC) to take immediate action to allow passage of these fish throughout their historic range, including above Grand Falls.

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Sincerely,

Robert S. Baines

Robert S. Baines
Chair, Maine Lobster Advisory Council

OromoctoWatershed
PROTECTION AND ENHANCEMENT OF THE OROMOCTO RIVER

August 11, 2010

Colonel Philip T. Feir
U.S. Army
U.S. Co-Chair,
International St. Croix River Watershed Board,
696 Virginia Road,
Concord, MA 01742-2751

Dear Colonel Feir:

As President of the Oromocto Watershed Association here in New Brunswick, I have a keen interest in matters pertaining to native sea-run alewives (or "gaspereau" as we commonly refer to them in NB) because our river is blessed to have very healthy annual runs which we embrace as fundamentally important to all aspects of our watershed, including biological functioning, commercial fisheries as well as recreational fisheries.

I was pleased to submit the following observations to the meeting held in Princeton, Maine, that were read on my behalf by Geoff Giffin, the NB Regional Director of the Atlantic Salmon Federation. Please consider this letter as part of the collective comments that groups and individuals are submitting in response to the Adaptive Management Plan.

Our watershed is 2,500 square kilometres in geographical area and is a major sub-watershed of the St. John River. It is located between the main stem of the St. John River and the St. Croix. The Oromocto system has a great population of native, sea-run alewives that is estimated to be around 4 million adults returning annually to spawn in our tributaries and headwater systems. The Oromocto has two major branches with large lakes at their highest source and is alive with fish, wildlife and outdoors enthusiasts.

1- There is a commercial fishery of alewives which last year harvested around 3 million fish. Our Watershed Association is working with DFO to have quotas placed on this fishery in the order of 33% capture rate of the migration to insure the species survives and has the ability to be the food foundation for the many species of our watershed.

2- The alewife migration starts in mid April and lasts till the second week in June. There are six weeks in the middle of this migration which is peak.

3- The Bald Eagle count goes from approximately 12 to 50 during this migration. The majority of the eagles are immature. There are a number of feasting stations along the river where 25 eagles can be seen at one time. The adult alewives are easily caught and furnish a much needed food supply to help sustain the eagle population.

4- The same can be said of the Black Bear in the more remote locations of the Oromocto River.

5- Sea gulls gather in the hundreds to take their share.

6- We have one of the highest concentrations of Ospreys in Atlantic Canada. NOTE- The large number of predators in our watershed is directly related to the vast numbers of returning alewives.

7- The local community comes alive as a tourist attraction; hundreds of visitors come to net dip the Gaspereau; hundreds more come to watch the migration pass through the rapids along the river, still more come to photograph and watch nature in action.

NOTE- OBSERVATIONS ON OTHER FISH SPECIES IN THE RIVER

8- We have noticed that Trout and Salmon Parr flourish and fatten up during the migration of alewives. They feed on the eggs and feed on the fry as they migrate back to the ocean. When the alewives are in abundance the other species in the river become healthier and greater in abundance.

9- Although American Eel numbers are down greatly in rivers along the Atlantic seaboard, in some areas as much as 90 %, this is not the case in the Oromocto River system. The commercial eel fishery has remained very stable in the Oromocto River with catches varying only slightly over the years. The eels feed heavily on the sea ward migration of baby alewives. This migration starts around August first and goes until September. Tens of millions of alewife fry form long ribbons of schools. This creates another opportunity for a feeding frenzy to pretty near all the rest of the species in the river. The American eel schools up in fast water pools just below rapids and small falls to feed. I have personally witnessed up to 400 eels twisting and turning feasting on fry.

10 -The Smallmouth Bass entered our watershed in 1975 and has had a dramatic effect on our Watershed. The larger streams have been taken over by Smallmouth Bass. The smaller streams have not. We have seen species shift in territory. The two main branches of the Oromocto River have large quantity of bass in all sizes. What we have noticed - When gaspereau are running in the spring the bass are in their greatest abundance in the fast water streams. Many of the larger bass leave the faster water as the season progresses but not the small ones. These small bass approximately 6 to 7 inches are in every little riplet one can find. We have witnessed the feeding frenzy of these small bass on the alewife fry. This usually takes place in the last hours of day light and is exciting to watch. There is no question that alewife fry are the main food source to the very young smallmouth bass in a big way.

11- The smallmouth bass recreational fishery is excellent in the Oromocto system. We have interviewed bass fishermen who have told us there are more smallmouth bass in the Oromocto River than anywhere else in the province. Bass fishers have told us the fish are bigger and healthier in the Oromocto Watershed.

12- Our watershed is still pristine and very healthy. We strongly believe that without alewives in our watershed as a foundation nutrient supplier and food source we could not boast the great abundance of predator wild life and great recreational fishery.

13- We believe the contribution of native sea-run alewives to our watershed is fundamental to its health and welfare and that the same can be said of other rivers along the eastern seaboard. We can only imagine the nutrition's and food source the alewife is supplying to its predators in the ocean.

14- OUR RECOMENDATION ON ALEWIVES FOR THE ST. CROIX:

Bring back the alewives to your river and you will enhance all wildlife in your system, including the health and vitality of the smallmouth bass, and you will be glad you did - so just do it.

Thank you,

Robin Hanson
President
Oromocto River Watershed Association Inc.

Alewives in the St. Croix

Full Name:
Roger W. Hannemann
City:
Camden
State / Province:
ME

Subject: Support free access for native alewives in the St. Croix River!

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Roger W. Hannemann

Alewife Adaptive Mgt. Plan

Full Name:
Ron Brokaw
City:
Lyndonville
State / Province:
Vermont

I retired in April, 2006 completing a 35-yr career as a Downeast fishery biologist with the Maine Dept. of Inland Fish and Wildlife. For the last 25 years, as the Reg. C regional fishery biologist, my area of management responsibility included West Grand Lake, Big Lake, and Grand Falls Flowage. Accordingly, I learned a great deal about the fisheries and fish populations of these important waters.

I wish to commend the authors of the plan on a job well done. I am generally satisfied with the "go slow, proceed with caution" approach in building up alewife abundance. I remain convinced that a sufficient body of biological information exists which strongly suggests this approach is more prudent than an aggressive, full speed ahead one. The plan gives adequate and proper consideration to the high value smallmouth bass sport fisheries. Clearly, this species is number one in Big Lake and the Flowage in terms of value to the local economy. Non-residents and locals spend considerable dollars each year in pursuit of smallmouths. Historically, the fisheries have been good enough to be not only of statewide significance, but also of significance throughout New England. Every effort should be made to maintain this noteworthy attribute , and I believe the plan poses an acceptably low risk level to these outstanding fisheries. However, the potential for substantial adverse impacts on recruitment of young of the year smallmouths will still exist down the road when and if alewife abundance greatly increases. Based on the findings at Spednic, large numbers of alewives entering the Flowage and Big Lake for several consecutive springs could threaten survival of young of the year bass. Here's the scary scenario....keep in mind that these two waters already support quite a few landlocked alewives through an illegal up-drainage introduction....hordes of young of the year anadromous alewives outcompete young of the year smallmouths for critically important plankton forage causing large scale mortalities. Under such a scenario, the fishery for 10-14 inch bass could nosedive within 3-5 years. Of course, the key to preventing such an undesirable outcome is to insure that alewife abundance is not permitted to reach such a threatening level. Unfortunately, no one knows what this level is. The annual monitoring of relative abundance of fall-sampled young of the year smallmouth should help prevent such an unwanted occurrence.

My primary objection to the plan is that nary a word is devoted to potential adverse impacts on the Big Lake smelt population. Granted, the concern over potential harm to the Big Lake smallmouth population easily eclipses concern over the tiny smelt. However, this forage fish is the key to fishing quality for landlocked salmon. In years when smelt were relatively abundant, the salmon fishery was reasonably good for nicely shaped 16-18 inch fish. At such times, a not inconsequential percentage of angler use during May and June was comprised of SALMON anglers. Working under cool, windy, cloudy conditions, quite a few guides would switch their clients over from smallmouths to salmon. Although clearly of secondary importance vis a vis bass, the salmon fishery was enjoyed by hundreds of anglers in the spring. When it was good, guides had a good alternative to offer bass anglers...when it was poor, they could not.

Thus, smelt is another species of importance in Big Lake. And relative abundance of juvenile smelt is frequently impacted by relative abundance of juvenile anadromous alewives. On numerous Downeast waters in addition to Big Lake, I noted over the years that there seemed to be a correlation between relative alewife abundance and smelt abundance.....in years of heavy alewive runs which produced lots of juveniles, declines in smelt abundance were noted within a year or two. Such declines were observed in decreased salmon growth and condition. The Big Lake smelt population is already "under the gun" via substantial competition from landlocked alewives. Adding to this mix greatly increased numbers of juvenile anadromous alewives in the years ahead will only add to the pressure on smelt thereby facilitating a further decline in the salmon fishery. Sadly, this is the outcome I foresee under the plan.

The plan, with its focus on alewife and smallmouth, unfortunately overlooks the important alewife vs. smelt consideration. I admit that there is no feasible way to estimate smelt density in Big Lake as there is for young of the year smallmouth, and I have no possibly ameliorative action to suggest. Suffice it to say that my concern over the future fate of the Big Lake salmon fishery is yet another biologically based reason for the plan to proceed slowly . An occasional nod into the welfare of Big Lake smelt as well as smallmouth would be greatly appreciated. I urge the authors to maintain their proposed measured pace , and to firmly resist likely future calls to "speed things up" from alewife advocates. There's a lot at stake here....numerous alewife advocates from away don't realize this.....but the authors do. Stay with the conservative approach, and with some luck, the Big Lake and Grand Falls Flowage sport fisheries for smallmouth bass will remain a destination for thousands of anglers.

Alewives

Full Name:
Russell DuPree
City:
Freeport
State / Province:
Maine

Dear Sirs,
It is my hope that you will recommend an immediate and full restoration of unlimited alewife migration in the St. Croix River. Giving the importance of the alewife to a robust marine ecosystem, I see no long term advantage in the protection in the St Croix of an introduced species, the small-mouthed bass, serving only a limited commercial interest, that of the sports fishery.

Subject: Support free access for native alewives in the St. Croix River!

Full Name:
Sarah Wolpow
City:
Brunswick
State / Province:
ME

Dear Colonel Feir and Director Appleby:

I just got back from a canoe trip with my family down the St. Croix. It saddened me to know that the health of this lovely and important ecosystem is at stake.

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Sarah Wolpow

St. Croix River Draft Adaptive Management Plan

Full Name:
Sean Mahoney
City:
Portland
State / Province:
Maine

Attached please find the comments that were filed by Conservation Law Foundation today.

CONSERVATION LAW FOUNDATION

July 29, 2010

Bill Appleby
Director, MSC Operations - Atlantic
Environment Canada
MSC Operations - ATL
45 Alderney Drive
Dartmouth, NS B2Y 2N6

Col. Philip T. "Tom" Feir
(U.S. Co-Chair)
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA, USA 01742-2751

Re: St. Croix River Draft Adaptive Management Plan

Dear Colonel Feir and Director Appleby:

The Conservation Law Foundation (CLF) supports efforts by the International Joint Commission (IJC) and its International St. Croix River Watershed Board to restore alewife populations in the St. Croix River watershed. While the Fisheries Steering Committee's draft Adaptive Management Plan demonstrates a commitment to restoring alewife populations, the plan as written is seriously flawed. The draft plan not only unnecessarily limits restoration efforts, but also clearly favors a non-native fish species, namely smallmouth bass, over an ecologically as well as economically valuable indigenous species. Worse, these precautionary measures are being taken merely to appease private interests, without any scientific evidence that the presence of alewives in the watershed has any effect on bass reproductive rates. Moreover, it is our view that the original decision by the State of Maine to effectively eliminate alewives from the St. Croix River watershed violates the Clean Water Act.

The draft plan unnecessarily limits long-term alewife restoration

Fisheries biologists for the plan estimate that the minimum number of spawning alewives required to reach a stable population in the watershed is around 4.44 million fish. Under the current plan, the alewife population will be allowed to grow unchecked in one third of their

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www.clf.org

62 Summer Street, Boston, MA 02110-1016 Phone: 617-350-0990 Fax: 617-350-4030
27 North Main Street, Concord, NH 03301- 4930 Phone: 603-225-3060 Fax: 603-225-3059
55 Dorrance Street, Providence, RI 02903-2221 Phone: 401-351-1102 Fax: 401-351-1130
15 East State Street, Suite 4, Montpelier, VT 05602 Phone: 802-223-5992 Fax: 802-223-0060

original habit to around 146,316 fish (6 alewife/acre). After this point, the plan proposes to restrict population growth to a maximum of 50% increase per year, assuming no negative changes to juvenile smallmouth bass populations are detected or suspected. Were this restriction removed, alewife would be able to naturally rebuild to a population of over 2 million fish within 10 years; with this restriction, it will take over at least twice as long to rebuild the population to this size.

Further delay of a restoration effort for this species is not only harmful for the ecosystem, which has already experienced two decades of decreasing alewife populations, but also completely unnecessary. A 2006 study, cited by the plan, on St. Croix alewife and smallmouth bass populations found no negative effects of alewives on St. Croix smallmouth bass populations below Spednic Lake.[1] Moreover, the poor quality of smallmouth bass angling in Spednic Lake in the 1980s could never be proven to be directly linked to alewife spawning. Maine is near the northern limit of the range of smallmouth bass, and the species is not native to the St. Croix River watershed. While one can understand the tendency of a legislative body to be swayed by well-funded lobbying efforts that push a different, unsupported version of science, it is disconcerting that the ICJ would be subject to the same failing. The role of the ICJ is to act in the best interest of the waterway and not to make concessions to private recreational fishing interests.

Statutory requirements to restore and maintain alewife populations in the St. Croix River Watershed

Under Maine and federal law, an existing use of a water body must be maintained and protected. Specifically, under Maine's anti-degradation policy aquatic, estuarine and marine life present in a water body before November 28, 1975 are protected "existing in-stream water uses." 38 M.R.S.A. §464(4)(F)(1). Similarly, under the Clean Water Act, a designated use may not be removed if, "[i]t is an existing use as defined in section 464, subsection 4, paragraph F, subparagraph (1), unless another designated use is adopted requiring more stringent criteria. . ." 38 M.R.S.A. §464(2-A)(B)(1). Were Maine allowed to remove a designated use, which they were not in respect to alewives, the Clean Water Act requires that the State of Maine conduct a use attainability analysis prior to enacting any changes of designated uses resulting in less stringent water quality criteria. 38 M.R.S.A. §464(2-A)(A)(2). The actions by the Maine legislature in 1995 and 2008 to effectively remove this species from the St. Croix without a use attainability analysis from the St. Croix watershed run afoul of both of these provisions. This is particularly the case where Maine law specifically states that even the lowest water quality classification for fresh surface waters includes "additional protection for the growth of indigenous fish." 38 M.R.S.A. §465(4)(B). The prohibition laws, which promote smallmouth bass, a non-native species, at the expense of alewives, an ecologically important indigenous species, are counter to the clear language and intent of Maine and federal law.

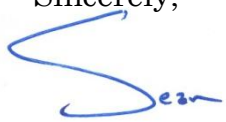
[1] Maine Rivers. 2006. Two reports on alewives in the St. Croix River: St. Croix River alewife-smallmouth bass interaction study. Hallowell, ME. 66 pp.

Recommendations

We reiterate our support for the IJC and the Board in their efforts to begin alewife restoration in the St. Croix watershed. The Fisheries Steering Committee's draft Adaptive Management Plan is a start at reversing ill-advised and unsupported decisions to effectively prohibit a key anadromous species from its native habitat. However, this plan is out of step with successful efforts to return and restore anadromous species to their native habitats in Maine rivers, from the Presumpscot to the Kennebec to the Penobscot. The plan as written is not scientifically defensible nor does it provide the degree of restoration required under state and federal law; a Management Plan that only conditionally restores alewives access to one-third of their native habit is legally insufficient. Moreover, there is no scientifically defensible reason for selecting smallmouth bass juvenile recruitment rates as the determining factor in alewife spawning limits. We recognize the difficulty the IJC faces in diplomatically resolving multi-use conflicts along the St. Croix River; however, the plan as written is not a viable solution. Continuing to directly link bass and alewife populations only furthers the myth that the two species cannot coexist. While a future management plan may choose to monitor the impact of alewife reintroduction on smallmouth bass populations, alewife reintroduction should not directly linked to the vitality of bass populations.

CLF encourages the ICJ, the Board, and the Fisheries Steering Committee in their efforts to restore alewives to their native habitat in the St. Croix River Watershed and looks forward to providing additional support and recommendations.

Sincerely,



Sean Mahoney
Vice President and Director
Conservation Law Foundation

Support free access for native alewives in the St. Croix River!

Full Name:
Sharon L. Peralta
City:
Springvale
State / Province:
ME

Dear Colonel Feir and Director Appleby:

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Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Sharon L. Peralta

St. Croix International Waterway Commission

August 12, 2010

To: IJC International St. Croix River Watershed Board
Fr: St. Croix International Waterway Commission
Re: Comment on draft St. Croix alewife adaptive management plan

---

We are responding to the Board's call (http://www.ijc.org/rel/st-croix-alewife/sites/default/files/st_croix_amp.pdf) for comments by August 16 on the proposed St. Croix alewife adaptive management plan for the central portion of the St. Croix watershed in Maine and New Brunswick.

The St. Croix International Waterway Commission has closely followed St. Croix fisheries issues for over two decades and well appreciates the complexities involved.

We have assisted the state and province with bass stocking and surveys, raised funds to buy freshwater fisheries research equipment and services for the state, and conducted angler surveys and fish habitat inventories.

We have monitored the St. Croix's anadromous fish runs (Atlantic salmon and alewife) at Milltown since 1991, providing the data to all interests. For many years, we also sponsored and delivered a St. Croix salmon restoration program, with funding we raised ourselves.

During these decades, we have worked with agencies and others on both sides of the border to assemble and distribute information on St. Croix alewives and smallmouth bass. In 2005, we also actively supported and helped to fund research into the interaction of alewives and smallmouth bass in St. Croix and nearby waters, and into the genetic origins of the freshwater alewives that appeared in the St. Croix in the mid-1990s. This year, we provided technical assistance to the working group that developed the draft management plan now under review.

It is with this perspective that we offer the following comments.

First, we thank the International Joint Commission, its St. Croix Board and the drafters of the plan for rising to the challenge of preparing a straightforward document for consideration. This has been long overdue.

While no plan will be perfect in this situation, we believe that the one offered is a positive step toward the long-term co-management of two very important St. Croix fish species.

We were pleased that the IJC offered the opportunity for open discussion on the draft plan at its August 4 annual St. Croix watershed public meeting. However we were disappointed that only one of the 27 speakers directly addressed the actual content of the plan, most of the others instead presenting their views on the species involved.

We were also disappointed by the clear differences expressed regarding background information and encourage the IJC and the fisheries agencies to address these quickly, so that all parties will have a common basis for discussion.

P.O. Box 610, Calais, ME 04619 USA P.O. Box 2 (190 Milltown Blvd.) St. Stephen, NB E3L 2W9 Canada
Telephone: (506) 466-7550 Fax: (506) 466-7551 Email: staff@stcroix.org

Most notable were disparate views about whether alewives were native to the St. Croix system above Grand Falls prior to the construction of the dams and fishways. While some of the available literature was reviewed in a report prepared for Maine's Atlantic Salmon Commission (Flagg, Lewis N. 2007. Historical and current distribution and abundance of the anadromous alewife (*Alosa pseudoherengus*) in the St. Croix River), questions remain.

A number of speakers expressed the view that an analysis of stable isotopes from sediment cores taken from pre-dam lake areas could indicate whether alewives had occupied these waters historically. We understand that such studies would *not* provide the information needed – being indiscriminate among marine species (the results could be attributed to salmon, shad, alewives, eels or other diadromous fish) and often indeterminate. We suggest that all parties be given clear information on what stable isotope analysis can, and can't, show before funds are invested in such work.

We suggest that a physical survey of the original Grand Falls, now a dry river bed except generally during the spring freshet, could help to answer the question of whether this feature was an historic barrier to alewives. This survey could be undertaken by engineers and fish passage experts, with the results made available to all parties.

We suggest that the view by some that the falls at Milltown were blasted to give alewives access to the river also be addressed by providing a short, factual summary of dam engineering at this site from 1881 to present.

Using young-of-the-year smallmouth bass indices as the criteria for success of that species helps to address the concerns raised by Spednic Lake fishing interests in the 1980s, which led to the current management debate. We understand that agency personnel and angling interests agree that this is an appropriate measure. We appreciate that additional bass studies, replicating work conducted periodically over the last twenty years, will be undertaken as warranted.

We recognize that the most appropriate measure of alewife success is the Milltown fishway count, which can be compared to records going back to 1981. We believe it will be useful to monitor alewife passage at Grand Falls periodically to evaluate fish passage efficiency and alewife distribution within the system.

We suggest that Tables 1 and 3 be updated to reflect the most recent findings on potential alewife spawning habitat, and Table 1 be updated for documented bass presence.

We recommend two additions to the plan:

The proposed plan measures the number of alewives entering the system but not their distribution. It is highly likely that the fish would occupy some parts of the watershed in greater numbers than others, and this could – for example at the base of the Vanceboro dam – lead to large numbers of alewives collecting at locations where there is no place to spawn. This is a critical management consideration that should to be assessed at regular intervals, including in the first 5-10 years of any plan when the issue should be defined. This might be addressed by radio tagging studies or in part by an alewife counting fence on the east branch above Grand Falls Flowage.

We also believe that there is an unsurpassed opportunity for complementary, independent research into the ecosystem effects of a major anadromous fisheries program such as this. Should the plan move forward, the committee tasked with its delivery should be asked to, strategically and opportunistically, involve researchers from the University of Maine, the University of New Brunswick and other institutions in biological, chemical and inter-specific studies that can

contribute to a broader understanding of the ecology of marine-freshwater interactions, including those involving other freshwater fish species.

The plan's Implementation section clearly states that alewife passage at the two lowermost Maine fishways and long-term agreements by both countries' fisheries agencies to deliver the specified monitoring, research and management are advance requirements. We believe that multi-year funding commitments are equally important and should be addressed in the on-going discussions on this plan.

We hope that these comments are useful and look forward to following this process as the plan moves through review and potential implementation. Please call on the St. Croix International Waterway Commission to assist you in any way that we can.

Kenneth E. Gordon
Maine Co-Chair

Donald E. Doherty
New Brunswick Co-Chair

Please allow passage of alewives on the St. Croix

Full Name:
Stacie Haines
City:
Augusta
State / Province:
ME

Dear Colonel Feir and Director Appleby:

On the St. Croix River Maine blocks the passage of alewives based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Stacie Haines

Alewife Restoration in the St. Croix River

Full Name:
Stephen R. Gephard
City:
Old Lyme
State / Province:
CT

I am a fisheries biologist in Connecticut who specializes in diadromous fish. I have extensive experience with alewife and the restoration of alewife to lakes and watersheds. I have a familiarity with the St. Croix River, having visited it repeatedly, canoed it, fished it, visited its fishways, and followed its progress via reports and data submissions. I believe that the Atlantic Ocean and the rivers that flow into it, especially in New England, are in great ecological trouble due to many factors but the decimation of anadromous fish runs are a major factor. I believe that the fate of all anadromous fish stocks and important commercial marine fish stocks (e.g. cod) are linked and the demise of one hastens the demise of the other. When restoring runs of anadromous fish, most communities have adopted the philosophy of "think Globally, act Locally". Every small run that is restored contributes a little bit to the Global picture (out in the ocean). However, the St. Croix system is an international resource when it comes to alewife and I believe has an obligation to do its very significant part to support that global view. This system has the capacity to produce very significant numbers of alewives and deliver them into a very crucial area- the inner Bay of Fundy, the Gulf of Maine, and the Atlantic Ocean adjacent to some of the richest marine fish habitat in the world. The reasons for not supporting an alewife run are untenable. You have a native species (alewife) that is listed by NOAA as a species of concern and its stocks are dwindling. You have a non-native species (smallmouth bass) than is non-migratory and capable of having ups and downs but highly unlikely ever to disappear from the system but superstitious anglers feel that the alewife is somehow harming the bass. There is no good science to back the claim and some science suggests the claim is bogus. If the claim was true, we could argue about priorities-- smallmouth bass for a small local group or alewives for local groups as well as groups in the Gulf of Maine and Atlantic Ocean. But why have that discussion? There is no scientific basis that the alewives even harm the bass. In Connecticut, the anglers love it when we restore alewives to bass ponds because they claim the bass just grow bigger. The lakes on the St. Croix have low productivity. What do the bass eat? I can't imagine that millions of young-of-year alewives do not benefit the bass in Maine as they do in Connecticut. Experience shows us that the longer that an anadromous fish run is gone, the harder it is to restore it. I think time is critical and alewives must be restored to the St. Croix as soon as possible. If political compromises are inevitable, restore passage at St. Stephen, reestablish a run to the lower river, study it, and preserve a critical mass of genetic resources that can be used as the foundation for future restoration. Do not let this stay vacant for years for I fear that in years to come, everyone will realize that the river is a shadow of its former self and an inexpensive (and perhaps doomed) restoration program will be promoted. The rest of world will shake its head and wonder why you let this wonderful natural resource wink out on your watch.

LONG LAKE CAMPS

P.O. BOX 817
239 LONG LAKE CAMP ROAD
PRINCETON, MAINE 04668
207-796-2051

ALEWIFE PUBLIC HEARING
PRINCETON ELEMENTARY SCHOOL
AUGUST 4, 2010
PRINCETON, MAINE 04668

TO WHOM IT MAY CONCERN:

My name is Steve Whitman and I am a master Maine guide and owner of Long Lake Camps in Princeton, Maine. We have been a sporting lodge since the mid 1940's and are located on the Big Lake-Grand Falls Flowage water system. I have been fishing and guiding on these and neighboring waters since 1971 which is nearly 40 years. Thus, I am very familiar with the fishing quality and the resource that we are blessed with here.

I find it hard to believe that we are here tonight to discuss the possible introduction of alewives to our waters.

The introduction of a foreign species is in direct violation of the state law that we as guides are supposed to help promote in our daily work. This law is a good one, since the introduction of a foreign species can be devastating to the fishery and health of a water system.

We have worked hard for many years to protect our waters by promoting catch and release, slot limits, and other regulations to assure that our fishery remains strong

and vibrant. We are very fortunate to have some of the best bass fishing in the northeast if not the entire country. This has been proven time and again through the size of the bass and the numbers caught during a typical day on the water. This is a fact and can not be disputed by anyone.

Now, we are entertaining the idea of up setting the balance of the eco system and destroying a very valuable resource. My camp and others are dependent upon the fishing to stay in business and have guests come to enjoy what our area has to offer. Without this resource the area will economically suffer and will no longer exist. Jobs will be lost, property values destroyed, and most importantly the outdoor experience that thousands of people have enjoyed throughout the past many decades will be gone.

Prior to Long lake camps, I was the president and owner of a Civil Engineering firm which conducted numerous environmental studies and water quality analysis on various projects that included lakes and ponds. During the process of designing a treatment facility or proposing a change to the eco system we were required to conduct pilot studies and tests on a small scale in a laboratory to determine the possible effects that the proposed activity may have on the environment.

With the introduction of alewives, this "pilot study" has already been done and the results are indisputable. In fact, a **full scale** lake experiment was conducted and it was devastating. I am talking about Spednic lake which I have fished for the past 40 years in which I personally witnessed the complete destruction of the fishery because of alewives. Once known as the "Wonder Lake" Spednik Lake became a dead lake. The bass fishery had been destroyed. Stopping alewife introduction and with The lake being closed to taking of bass since 1986 , only now do

we see some improvement of the fishery nearly 25 years later !!

We must look and learn to what happened at Spednic Lake and heed the warning that it has given us and not introduce a foreign species such as alewives to any water body.

We have something special here to offer sportsman which is rarely found anywhere else. We need to protect this resource and not go backwards with a proposal such as this.

I can only speak for myself, but I will do everything in my power including legal action to prevent this intrusion. If our fishery is destroyed damages will be sought since all parties have prior knowledge to the ramifications of such an act. We as sportsman, property owners, and businessman, must fight to preserve this valuable resource for generations to come.

Sincerely,

Steve Whitman
Owner-Master Maine Guide
Long Lake Camps
Princeton, Maine 04668

This document was read and inserted into the minutes of the above public meeting on August 4, 2010 at the Princeton Elementary school, Princeton, Maine

_____

Public Hearing Officer

Support free access for native alewives in the St. Croix River!

Full Name:
Susan Lauchlan
City:
Waldo
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

Alewives and smallmouth bass coexist happily throughout Maine, the rest of the US East Coast, and Canada. They can and will do so in the St. Croix.

Please act now and allow free access for alewives to the St. Croix River starting in 2011.

Sincerely,

Susan Lauchlan

alewive restoration

Full Name:
Theresa Neill
City:
Ogunquit
State / Province:
ME

Please help these native Mainers return home; we can try to undo the mistakes of the past that have ruined so much of our beautiful state. Invasives should no longer be favored over natives in any of Maine's official policies.

Support free access for native alewives in the St. Croix River!

Full Name:
Thomas Dean
City:
Blue Hill
State / Province:
Maine

Dear Colonel Feir and Director Appleby:

As you know, Maine has unilaterally blocked alewives from the vast majority of the St. Croix River since 1995. As a result of this misguided policy, the run plunged from more than 2 million fish in the 1980s to only a few thousand fish in 2008. We appreciate that the IJC has made restoration of alewives a high priority, but the proposed Adaptive Management Plan is too limited to allow a successful restoration effort.

Alewives are a regional and international resource, and their numbers have plummeted in recent decades. People all over Maine and in other states are working hard to restore these fish. But, on the St. Croix, Maine blocks these fish on purpose based on the misperception that they will harm smallmouth bass, a non-native species. The IJC's proposed plan will continue to block alewives from 70% of their ancestral habitat and severely limits the pace at which alewives can repopulate the remaining 30%. It will limit the pace of restoration even more if smallmouth bass reproduction is low, even if it is low for reasons having nothing to do with alewives. This is not acceptable.

Alewives have countless benefits. They are food for the struggling groundfish stocks in the Gulf of Maine and countless other species of mammals and birds. They are also prized bait for Maine's lobster industry, which is facing drastic reductions in available bait from other sources.

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Sincerely,

Thomas Dean

Draft Adaptive Management Plan -- Restore The River Herring

Full Name:
Vera Francis
City:
Sipayik (Pleasant Point)
State / Province:
Maine

August 6, 2010

Dear Board Members:

I am writing to support the restoration of the river herring to its full historic range in the St. Croix River. The river herring's ancestral habitat and breeding ground is also known as the Schoodic River. As a life-long resident of Pleasant Point and a member of the Passamaquoddy Tribe – I know firsthand about the significance of the marine run fisheries is to the Passamaquoddy marine and fisher culture. I am also an educator focused on ecological teaching and learning. Protecting our land, bays, and rivers for our descendants – which have long sustained us and has generously fed the world – is an implicit aspect of Passamaquoddy culture and life-ways.

Additionally, it is important to note that the Passamaquoddy communities and their territory exist on both sides of the St. Croix River Watershed. I would respectfully urge that the International Joint Commission (IJC) confer with its respective governments as to its constitutional mandate in protecting Passamaquoddy interests and fisheries before acquiescing to state authority and amending by default any treaty.

Misapprehending the need to include the smallmouth bass in the Draft Adaptive Management Plan (AMP) is problematic because its very inclusion overshadows the importance of the river herring's restoration. The association being made by the AMP between the smallmouth bass (important to inland anglers) and the alewives (a historic and migratory species) is misleading and short sighted. There's no doubt as to the importance of growing the ground fish stock in the Eastern Gulf of Maine – the alewives are vital to that effort.

I am disappointed that the AMP has not taken a stronger position on the restoration of the river herring to its full historic range.

Yours truly,

Vera Francis

119 Thunder Road
Wabanaki Place
Passamaquoddy Bay Region

Subject: Support free access for native alewives in the St. Croix River!

Full Name:
William Houston
City:
Kingfield
State / Province:
Maine

Subject: Support free access for native alewives in the St. Croix River!

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Sincerely,

Bill Houston