NOTICE OF AGENCY RULE-MAKING ADOPTION

AGENCY: Department of Marine Resources

RULE TITLE OR SUBJECT: Chapter 40 Smelt Regulations

CONCISE SUMMARY:

This rule uses recent data to manage smelt populations in three sections on the coast: (Zone 1) from the New Hampshire border to Owl's Head in Rockland, (Zone 2) East of the Owl's Head to Naskeag Point in Brooklin, and (Zone 3) East of Naskeag Point to the head of tide on the St. Croix River.

The first zone (Zone 1) is to be managed the most conservatively because smelt populations have declined precipitously in southern and mid-coast Maine. No taking of smelts would be allowed in this area during the spawning season March 15 to June 30. During the remainder of the year (July 1 to March 14) fishing for smelt will be allowed using hook-and-line only without any limit on take.

The second zone (Zone 2) would be managed conservatively based on data showing that some spawning runs are experiencing decline. Further, the overall abundance of smelt in this zone is low as demonstrated by DMR and other local surveys. In contrast, some local information shows that certain runs are still very productive. Management for this zone would allow for some take of smelts during the spawning season (March 15 to June 30), but a 1 quart limit per person per day possession limit would be imposed along with weekly closure days on Tuesdays and Wednesdays. During the remainder of the year (July 1 to March 14) fishing for smelt will be allowed using hook-and-line only without any limit on take.

In the third zone (Zone 3), Department surveys and local data collection have shown that most runs are stable and some are increasing. No limit on take would be imposed during non-spawning seasons and commercial fishing gear targeting smelt would be allowed in certain areas. Any person fishing commercially must possess a Commercial Pelagic Fishing License. A 2 quart per person per day possession limit would remain in place during the spawning season (March 15 to June 30). Recreational fishing gear is limited to hook-and-line or dip net only. In this zone, there is no change in regulation from the regulations in place from December 21, 2009 to present.

Based upon public comment received, proposed rules were revised in Zone One (1) to allow hook-and-line fishing July 1 to March 14 rather than allowing fishing only through the ice, and removed the limit on take. The originally proposed rule had suggested a 4 quart daily limit for the winter fishery. The comments received requested a one year delay on this part of the rule. DMR has complied with this request and allowed a one-year delay on the 4 quart daily possession limit for hook-and-line fishing during July 1 to March 14. Beginning December 1, 2015, the 4 quart daily possession limit will be in place. In Zone Two (2), the weekly closure days during the spawning season (March 15 to June 30) were revised from Tuesday/Saturday to Tuesday/Wednesday. For the period July 1 to March 14, the limit on take was removed to be consistent with the revisions for Zone 1. In Zone Three (3) the definition of the eastern extent geographic range was revised from the Campobello-Lubec Bridge to coastal waters extending to the US/Canada border so that the St. Croix River was included based upon public comment.

THIS RULE WILL____WILL NOT__X__HAVE A FISCAL IMPACT ON MUNICIPALITIES.

STATUTORY AUTHORITY: 12 M.R.S. §6171

EFFECTIVE DATE: March 9, 2015

AGENCY CONTACT PERSONS: Claire Enterline (207) 624-6341
AGENCY NAME: Department of Marine Resources
ADDRESS: 172 State House Station, Augusta, Maine 04333-0172
WEB SITE: http://www.maine.gov/dmr/rulemaking/
E-MAIL: dmr.rulemaking@maine.gov
TELEPHONE: (207) 624-6550
FAX: (207) 624-6024
TTY: (711) Maine Relay

DEPARTMENT OF MARINE RESOURCES

Chapter 40 - Smelt Regulations

40.12 Taking of smelts from the coastal waters of Maine

A. Definitions

1. Smelt Management "Zone One (1)" includes all coastal waters West of Owl's Head Lighthouse to the boundary of the State's coastal waters to the New Hampshire border.

2. Smelt Management "Zone Two (2)" includes all coastal waters East of the Owl's Head Lighthouse including all coastal waters of the Penobscot River extending to Naskeag Point, including Deer Isle and Stonington.

3. Smelt Management "Zone Three (3)" includes all coastal waters East of Naskeag Point to the US/Canada Border.

~~A.~~ B. Statewide Restrictions

1. It shall be unlawful to fish for or take smelts from the coastal waters by any means other than a dip net or by hook and line as defined by 12 M.R.S. §6001 13-C and (20).

2. During the period March 15 to June 30, both days inclusive, it shall be illegal to take or possess more than 2 quarts per day of smelts from the coastal waters of the State unless otherwise restricted in Chapter 40.12(C) and (D). ~~Possession of over 2 quarts per day of smelts during this period on any coastal river, brook, or stream shall be prima facie evidence that the smelts were taken in violation of this regulation.~~

3. It shall be unlawful to stand in the water of any coastal river, brook, or stream while fishing for smelts.

C. Smelt Management Zone Restrictions

1. Zone One (1)-New Hampshire border to Owl's Head Light

a. It shall be unlawful to fish for, take or possess smelts in Zone One (1) from March 15 to June 30.

b. When fishing for smelts in Zone One (1) during the period of July 1 to March 14, it shall be unlawful to fish for or take smelts from the coastal waters of Zone One (1) by any means other than by hook and line. Beginning December 1, 2015, during the period of July 1 to March 14, it shall be unlawful to fish for, take, or possess more than 4 quarts of smelts per day, both days inclusive.

2. Zone Two (2)-Owl's Head Light to Naskeag Point

a. It shall be unlawful to fish for, take, or possess more than 1 quart of smelts per day in Zone Two (2) from March 15 to June 30 and it shall be unlawful to fish for or take smelts on Tuesday and Wednesday in Zone Two (2).

b. When fishing for smelts in Zone Two (2) during the period of July 1 to March 14, it shall be unlawful to fish for or take smelts from the coastal waters of Zone Two (2) by any means other than by hook and line. Beginning December 1, 2015, during the period of July 1 to March 14, it shall be unlawful to fish for, take, or possess more than 4 quarts of smelts per day, both days inclusive.

3. Zone Three (3)-Naskeag Point to the Canadian border

(a). It shall be unlawful to fish for, take or possess more than 2 quarts of smelts per day in Zone Three (3) during the period March 15 to June 30, both days inclusive.

(b). When fishing for smelts in Zone Three (3) during the period of July 1 to March 14, both days inclusive, there shall be no limit on take.

~~B.~~ D. Exceptions

1. Any wholesale seafood or retail seafood dealer licensed pursuant to 12 M.R.S. §6851 or §6852; bait dealer licensed pursuant to 12 M.R.S. §7172; or grocery, restaurant or fish store may possess more than 2 quarts per day in his/her place of business.

2. Taking of smelts in Washington County

   (a) January 1 through April 1, both days inclusive, without any limit on quantity, the use of gill nets and bag nets in addition to dip net or hook and line are allowed in the following tidal waters:
   East Machias River in the Town of East Machias following the town line;
   Pleasant River in the Towns of Columbia Falls, Addison, and Harrington within 44° 31.18'N, 67° 47.60' W (end of Ripley Neck) to 44° 29.92'N, 67° 44.64'W (end of Cape Split)
   Narraguagus River in the Towns of Milbridge and Cherryfield within 44° 31.23'N, 67° 51.63'W (Long Point) to 44° 31.61'N, 67° 51.46'W (Fickett Point).

   (b) January 1 through April 10, both days inclusive, without any limit on quantity, the use of gill nets and bag nets in addition to dip net or hook and line are allowed in the following tidal waters: Town of Steuben;
   Indian River in the towns of Addison, Jonesport, and Jonesboro within 44° 29.87'N, 67° 42.74'W (the end point of Moose Neck), and 44° 31.60'N, 67° 38.34'W (end of Hopkins Point);
   Harrington River and Mill River in the towns of Harrington and Milbridge within 44° 32.51'N, 67° 49.09'W (end of Ray Point) and 44° 32.67'N, 67° 48.23'W (end of Town Landing Road);
   Chandler River in the town of Jonesboro within 44° 37.85'N, 67° 32.61'W (end of Look Point) and 44° 38.40'N, 67° 32.62'W (end of Deep Hole Point).

   Outside these dates and coordinates the restrictions in the rest of Chapter 40.12~~(A)~~ apply.

Basis Statement

Chapter 40 Smelt Regulations

The principal reason for this rulemaking is to protect the state's reduced rainbow smelt population from further decline. Rainbow smelt populations have been contracting in range over the last century. Historically, populations were found from Chesapeake Bay to Labrador, but the current southern extent of the range is likely Buzzards Bay, Massachusetts. This range contraction has occurred rapidly, in less than 100 years with a pronounced population reduction in the past 20 years.

Since 2006, the Department of Marine Resources has performed multiple studies to document the current status of anadromous smelt in Maine and determine reasons for the population decline. Department surveys have shown that Maine smelt populations have become reduced in many portions of the state. Comparing the number and strength of spawning runs currently to that of the late 1970's, the DMR has found that many runs have declined while others are extirpated (no longer in existence). Data collected during spawning and creel surveys have also shown that length at age has declined compared to historical records in upper Casco Bay and the Kennebec River. This is biological evidence of a stressed population and may translate to reduced fecundity, lower spawning success, and less juvenile production.

Department surveys have found evidence of population decline in many portions of the state. In 2005-2009, DMR and Marine Patrol documented all current spawning sites in Maine. Comparing the current strength of runs to data collected by DMR in the early 1970's and in 1984 from DMR and USFWS, the DMR found that in the area from Kittery to Penobscot Bay, 11% of runs are currently declining. In the Downeast region, only 2% of runs are declining. Of the sites that have historically supported smelt runs, only 38% of the sites west of Penobscot Bay were documented to currently support spawning runs, while 61% of sites Downeast still support runs.

Other surveys in Maine have also documented declines in smelt abundance. Annual juvenile abundance surveys in the Kennebec River and Merrymeeting Bay have found that the Catch-per-Unit-Effort (CPUE) of rainbow smelt has been below the series average since 2005, and has been above the 25% quartile only one time since 2008. Also on the Kennebec River and Merrymeeting Bay, winter creel surveys targeting recreational smelt fishing have found that the number of smelt caught by recreational fishers during 2009-2014 is on average lower than during 1979-1982. In 2014, the lowest catches on record were reported.

Spring fyke net surveys targeting spawning smelt have found that runs west of Penobscot Bay have highly variable CPUEs from year to year, indicating unstable populations, while runs surveyed Downeast have consistent CPUEs. Other biological parameters, like age distributions and sex ratios, show that runs Downeast are more stable because they are composed of larger age distributions and low sex ratios, while runs in Penobscot Bay and west have truncated age distributions (few older smelt), and females are more limited.

Additionally, Department studies have documented threats to successful smelt spawning including poor water quality associated with non-point source pollution, as well as head-of-tide dams, and undersized or hanging road crossing culverts that block upstream migrations. Because of these documented population declines and evidence of biologically stressed populations, the Department is utilizing management measures that will sustain and restore this species.

This rule uses recent data to manage smelt populations in three sections on the coast: (Zone 1) from the New Hampshire border to Owl's Head in Rockland, (Zone 2) East of the Owl's Head to Naskeag Point in Brooklin, and (Zone 3) East of Naskeag Point to the US/Canada Border.

The first zone (Zone 1) is to be managed the most conservatively because smelt populations have declined precipitously in southern and mid-coast Maine. No taking of smelts would be allowed in this area during the spawning season March 15 to June 30. During the remainder of the year (July 1 to March 14) fishing for smelt will be allowed using hook-and-line only without any limit on take. Beginning December 1, 2015, during the period of July 1 to March 14, it shall be unlawful to fish for, take, or possess more than 4 quarts of smelts per day both days inclusive, and the method of take will be limited to hook and line.

The second zone (Zone 2) would be managed conservatively based on data showing that some spawning runs are experiencing decline. Further, the overall abundance of smelt in this zone is low as demonstrated by DMR and other local surveys. In contrast, some local information shows that certain runs are still very productive. Management for this zone would allow for some take of smelts during the spawning season (March 15 to June 30), but a 1 quart limit per person per day possession limit would be imposed along with weekly closure days on Tuesdays and Wednesdays. During the remainder of the year (July 1 to March 14) fishing for smelt will be allowed using hook-and-line only without any limit on take. Beginning December 1, 2015, during the period of July 1 to March 14, it shall be unlawful to fish for, take, or possess more than 4 quarts of smelts per day both days inclusive, and the method of take will be limited to hook and line.

In the third zone (Zone 3), Department surveys and local data collection have shown that most runs are stable and some are increasing. No limit on take would be imposed during non-spawning seasons and commercial fishing gear targeting smelt would be allowed in certain areas. Any person fishing commercially must possess a Commercial Pelagic Fishing License. A 2 quart per person per day possession limit would remain in place during the spawning season (March 15 to June 30). Recreational fishing gear is limited to hook-and-line or dip net only. In this zone, there is no change in regulation from the regulations in place from December 21, 2009 to present.

Based upon public comment received, proposed rules were revised in Zone One (1) to allow hook-and-line fishing July 1 to March 14 rather than allowing fishing only through the ice, and removed the limit on take. The originally proposed rule had suggested a 4 quart daily limit for the winter fishery. The comments received requested a one year delay on this part of the rule. DMR has complied with this request and allowed a one-year delay on the 4 quart daily possession limit for hook-and-line fishing during July 1 to March 14. Beginning December 1, 2015, the 4 quart daily possession limit will be in place. In Zone Two (2), the weekly closure days during the spawning season (March 15 to June 30) were revised from Tuesday/Saturday to Tuesday/Wednesday based upon public comment. For the period July 1 to March 14, the limit on take was removed in Zone Two (2) to be consistent with the revisions for Zone 1, however, the 4 quart daily possession limit will be in effect after December 1, 2015. In Zone Three (3) the definition of the eastern extent geographic range was revised from the Campobello-Lubec Bridge to coastal waters extending to the US/Canada border so that the St. Croix River was included based upon public comment.

In accordance with 5 M.R.S. §8052, sub-§5-A a statement of the impact on small business has been prepared. Information is available upon request from the DMR Commissioner's office, State House station #21, Augusta, Maine 04333-0021, telephone (207) 624-6553.

Summary of Comments

Chapter 40 Smelt Regulations

Public hearings were held in Brunswick on November 17, 2014 and in Ellsworth on November 18, 2014. Notice of this proposed rulemaking was given on October 29, 2014 on the following: the DMR website, the DMR rulemaking interested parties e-mail list, the DMR Advisory Council via e-mail, the Secretary of State's proposed rulemaking website, five daily newspapers, and via postcard to all Maine licensed pelagic license holders.

Summarized comments and responses:

The section below includes excerpts from comments and gives responses where a response is required (bolded sections in comment). The full comments are available in the next section.

1. **Dwayne Shaw, Franklin representing the Downeast Salmon Federation; comment received by email:** "Comment 1: Saturday fishing should be allowed in order to make it possible for families - especially children - to participate. **If deemed necessary, DMR should close a weekday rather than a weekend.** Convenience for Marine Patrol, by aligning smelt fishing days with elver fishing days, should not take precedence over maintaining this culturally important fishery.

   Comment 2: The Zone 3 fishing regs., as proposed, are appropriate. It will be important to continue to closely monitor the resource and our organization is interested in expanding our partnership with DMR to continue to build a clear understanding of the resource - including habitat quality and fishing pressure. We feel that habitat restoration can make a very important improvement in the overall populations coast wide and in Zone 3.

   Comment 3: The Zone 3 eastern boundary should terminate at the head of tide on the St. Croix R, not the Campobello Bridge.

   Comment 4: **The eastern line of Zone 2 may be more appropriately set to place the Bagaduce R in Zone 3.** There appears to be sufficient evidence to determine that the Bagaduce R smelt fishery is stable enough to warrant inclusion in to Zone 3 - or at least to be managed with more liberal regulations than other areas in Zone 2.

   Comment 5: The three zone approach to managing the fishery is a biologically appropriate scale to conduct management and recovery strategies."

   DMR Response:
   Comment 1: Because the recreational smelt fishery is highly valued as an important part of the cultural heritage in Maine, DMR has revisited the closed days initially proposed (Tuesday and Saturday) for Zone 2. These have been revised to weekly closures on Tuesday and Wednesday, March 15 through June 30 (both days inclusive) in Zone 2 so that weekend fishing may occur.

   Comment 3: The proposed regulation defined Zone 3 ending at the Lubec-Campbello Island bridge, but because smelt travel the St. Croix river as part of their spawning run, the river should also be included. The regulation has been revised so that Zone 3 is defined as "all coastal waters East of Naskeag Point to the US/Canada Border".

   Comment 4: While some spawning runs in tributaries to the Bagaduce River are currently very productive as confirmed by DMR and DSF site visits in spring of 2014 (specifically Winslow Stream), other runs have limited or no production based on DMR 2014 visits and local information (Smelt Brook, mainstem Bagaduce winter fishery). DMR will continue working with local citizens and groups to collect more information about these runs to document population trends and will revisit the zone assignments if and when additional information shows that the runs are increasing.

2. ***THE FOLLOWING COMMENTS (SUMMARIZED) ARE GIVEN A SINGLE RESPONSE AS EACH ADDRESSES THE SAME CONCERNS REGARDING MANAGEMENT OF THE KENNEBEC AND MERRYMEETING BAY RECREATIONAL FISHING OPERATIONS.***

James Worthing, Smelt Camp Owner, Randolph; comment received via e-mail: "I'm writing to opposed the proposed smelt regulation for this year for the following reasons. **Dredging in the Kennebec River last winter. The new bridge in Richmond being build last winter. DMR closed the taking smels in brooks, streams and jigging last spring and you never gave a chance to see if that helped.... There are other factors also some people say. Catfish...** I was also told they are going to **start dredging this month (December) in the Kennebec River** and someone also said that they have been dredging this summer also."

Cynthia Peaslee, Farmingdale; comment receive via e-mail: "In regards to the proposed limit of 4 qts. per day on smelting, I believe that this I not right. ... I feel that the **dredging in the Kennebec and building of the Richmond bridge had some factors to the poor smelting facts**. ... I also think that **channel catfish, sturgeon and the alewives have a big part in the reason the smelt is down. I feel you should hold off a year or so to see what this year brings**. You have already put a stop to taking smelt on brooks and streams and have not even taking time to see if this helped or not. Maine I thought was a recreation state. ...."

Sharon James, Peter James, George James, James Eddy Smelt Camp Owners, Dresden; comment received via e-mail: "On behalf of James Eddy Smelt Camps, I am writing to oppose the Chapter 40 Smelt Regulations that is being proposed. At James Eddy over the past couple of years, we have noticed an **increasing amount of carp, catfish and perch. As the number of these types of fish have increased, the amount of smelt being caught has significantly decreased.** It is also our belief that **scallop dredging and the building of a new bridge** over the Kennebec River are also contributing factors to the lower smelt catch. ... Because of this, we are asking if this ruling can be put off for a year ..."

James Arsenault, Smelt Camp Owner, Dresden, comment received via e-mail: "... Ensuring through this new limit that you will go home with no more than that no matter how the fish bite, will further stress these commercial operator' business as people opt not to travel hundreds of miles, spending hundreds of dollars for "just" a gallon of smelts. ..."

Steve Leighton, Smelt Camp Owner, Bowdoinham, comment received via e-mail: "There was a lot of **dredging at the mouth of the Kennebec River** and this could affect the Abagadasset River in Merrymeeting Bay where the smelts were running. There are also a lot of **carp, cat fish and pike which are eating a great number of smelt.** If you could hold off putting a limit on smelt fishing there for one more year ...."

Victoria Saxon, Randolph; comment received via e-mail: "...There has been few or no environmental studies done to support this proposal, other than anecdotal claims of fish population decline. ... the low fish yields in the past few years are more due to the **dredging on the Kennebec when the smelts were running, and a new bridge being built in Bath** that drove the fish out. There are, as you know, a **great many Carp and Catfish and Pike** who enjoy eating great numbers of Smelts as well ...Please take the time to consider that the Smelt fishing has a cottage industry attached to it, and by limiting the size of the catch, the businesses that currently depend on this could be financially devastated. ..."

Bonny Saxon, Randolph; comment received via e-mail: "... I think that the **dredging and the bridge being built in Bath** has more to do with any decline in Smelt numbers. There are also larger populations of **Carp, Catfish & Pike which feast on great numbers of Smelts as well**.... Please take the time to consider what a fish limit would do to the cottage industries attached to it. ...I think we need to leave the current regulations in place for this year and perform a study that will confirm what the actual causes are for the reduced numbers. ...."

Rep. Jeffrey Pierce, Dresden; comment received at Brunswick public hearing: "... put a stay on this rule for a one-year period ... There was **extensive dredging in Bath** and as we all know it was during the smelt run ...We have **catfish and in the spring they are sucking on the eggs**. ..."

Kevin Lemar, Dresden; comment received at Brunswick public hearing: "... different species of fish showing up in these rivers in the past few years. ... **I do believe that is part of this problem with these catfish**. ...As far as last year goes, with regard to the **dredging, if you are a trout fishermen if you make too much noise they scatter in the brook and they disappear**. ... As far as shrimping, **those guys**

catch smelts while shrimping. I know a guy who would come in with six to eight hundred pounds of smelts to sell on the seafood market off a shrimp dragger. ..."

Rep. Jeff Hanley, Pittston; comment received at Brunswick public hearing: "I want to make sure they are not knee-jerk reacting. I know the last year we had a bad season. ... **Last year, there was a lot of dredging in the River and with construction of the bridge in Dresden** which in my mind would certainly affect the flow of the Kennebec. ... I know they are **dredging the Royal River this year and I don't know if there are smelt camps down there.** But if they do, maybe you can check to see if they have a problem this winter with the smelts. ..."

DMR Response: *The low abundance of adult smelt in the Kennebec in the winter of 2013-2014 follows 6 years of low juvenile abundance leading to a reduced adult population, however, dredging in the lower Kennebec River and the construction of the Richmond bridge may have had some effect on smelt movement during the winter of 2013-2014. The 4-quart possession limit will not be implemented for the winter of 2014-2015, however will become effective December 1, 2015.*

The DMR will continue to conduct creel sampling (angler interviews and biological information collection) and catch card surveys in the coming years and expand data collection to include log books to collect more detailed information about daily catches and abundance of invasive species.

Invasive species like white catfish, carp, and pike are present in the lower Kennebec River and Merrymeeting Bay and may be negatively impacting smelt populations. At this time, the DMR does not have information about the impact of these species on native fishes other than anecdotal reports. The DMR will work with community members and recreational fishers to collect more data about the timing and occurrence of these species. The downward trend in smelt populations, however, is not confined to the Kennebec and Merrymeeting Bay or other areas where invasive species have been documented, but appears to be wide-spread along the southern and mid-coast of Maine.

3. **John Melquist, Sr., South Thomaston; comment received via e-mail:** "I hope that some consideration will be given to **allowing some chance for us to go pole smelting in the fall in zone 1.** In your impact statement you say that the only fishing that will be effected is the spring spawning closure, but this is not true. ... I do not think that there are anywhere near the number of fisherman this time of year that there used to be, at least not here in the mid-coast, but I know the few that do fish would like to be able to continue."

   DMR Response: *The proposed rule has been revised to allow hook-and-line fishing in Zone One (1). This change was made because the extraction rate from hook-and-line fishing thought to be low based on one study conducted in the late 1970s and because non-spawning populations are composed of male and female smelt equally, while spawning populations at the head-of-tide are composed of primarily males (data from published DMR studies). Therefore, extraction of the few spawning females on the spawning grounds can significantly reduce the broadcast eggs and reproductive success.*

4. **David Trahan, Executive Director of the Sportsman's Alliance of Maine; comment received via e-mail:** "... It appears in the rule that the "fishing day" is not defined. **Many smelt fisherman would likely believe the fishing day was a 24 hour period from 12:00 am to 11:59:pm. Many fishermen start fishing before midnight and will likely believe the southern mid-coast limit, (zone 1) is 4 quarts and if they catch it before midnight, they can then can catch another 4 quart limit after midnight.** As written they would be in violation of this proposed rule. I could see a serious enforcement problem and real confusion for fishermen. I believe some clarity on this issue is desperately needed."

   DMR Response: *The daily limits for each Zone are meant to be daily possession limits. A day as enforced by Marine Patrol will be 12:00am to 11:59pm. If a person is in possession of more than their daily limit within the same day, they will be issued a citation.*

5. **Bailey Bowden, Penobscot; additional comment received via e-mail:** "... In my opinion, DMR is trying to manage the rainbow smelt resource with a lack of scientific data that would support some parts of this proposal and in some cases, DMR is not protecting the resource enough based on the available data....

"NOAA – Northeast Fisheries Science Center (NFSC)
...According to Mr. Rory Saunders at NFSC, **NOAA has only looked for smelts for the past two years** and NOAA does not survey below Fort Point Light located in Stockton Springs. The lack of publically available smelt data from NFSC indicates there has been no long term year over year data collected on the Penobscot River. **This also implies that DMR has not requested any smelt data from NFSC in the recent past. It is unfortunate that DMR has not formed a partnership with NFSC to document the Penobscot River smelt population.**

"Maine / New Hampshire Inshore Trawl Survey :
... The upper 1/3 of Penobscot Bay has been under studied. ... **when the year over year trawl survey data is compared, it is apparent that the smelt population of the proposed zone 2 has been very consistent with the proposed zone 3.** The most recent data, the spring 2013 trawl survey, indicated the largest catch in the state was in the proposed zone 2. It is clear that the proposed zone 1 area results show a severe decline in the smelt population.

"Tannery Brook Fryke Net Survey:
...While the Tannery Brook survey results may be interesting when considering smelt recovery in former industrial sites that have been physically altered, **it does not accurately represent the smelt population of the Penobscot River.** ...

"Bagaduce River Surveys:
DMR can only identify 3 active smelt runs and lists another 3 brooks as historical – status unknown. The active runs were last documented by Marine Patrol in 2005 and 2007. The historical runs were last observed 35 years ago in 1979. At the Public Hearing, Claire Enterline announced that she had recently received survey data for the Bagaduce that was taken in 2009 and this data was not available on line. ....Near the end of the 2014 spring smelt run, Claire Enterline came to Penobscot to observe 2 active runs and 1 historical run. The Downeast Salmon Federation (DSF) generously provided a biologist to document smelt runs in the Bagaduce River. **We were able to document 2 brooks that have smelt runs that DMR has no knowledge of.** This was confirmed by testimony given by Dwayne Shaw, the President of the DSF, at the Public Hearing on November 18, 2014. I am confident that several more runs could be documented but we ran out of time. **It is obvious that the Department has no current data on the Bagaduce River smelt runs nor does the Department have accurate knowledge of which brooks may contain active smelt runs**.

"Winter Fishery Studies:
The winter fishery catch per unit effort (CPUE) is based on creel surveys that were performed primarily on the Kennebec River at the commercial smelt tent rentals. ... **The results from volunteer comment cards are anecdotal and cannot be verified.** ...**Commercial smelt tent rental businesses have a DMR issued license to operate. Why are these operators exempt from the landings rules? ...**

"Spring CPUE surveys:
The spring CPUE is based on the fryke net survey data**. No comparison can be made between the fryke net survey and the impact of the dip net fishery.** ... **It is my opinion that DMR believes the dip net fishery has a greater effect on population than the hook and line fishery.** This seems to be based on a tag and recapture experiment that was conducted on the Kennebec River in the 1970's. It was determined that the winter fishery was responsible for 5% of smelt deaths. ...

"Regional Conservation Plan for Anadromous Rainbow Smelt in the U.S. Gulf of Maine :
... This Plan makes **no reference to closures or bag limits in Section 3-2 *State Management Recommendation* of the report**. ...The preface speaks to possible expansion – not closure. There has been an extreme shift in policy between the writing of this document in 2012 and the spring of 2014.

"Elver Fishery :
Smelt eggs may be damaged by elver harvesters walking in the brook to tend fryke nets. Fryke nets capture spawn that will be left high and dry when the tide goes out. These eggs may have attached to the bottom if the nets did not strain them from the water column. ...

"Winter Recreational Hook and Line Fishery :

The winter fishery is allowed to fish for 2 or 3 months with no individual bag limits. Jimmy Worthing told me the record catch for his business on the Kennebec River was 2 men caught 35 gallons of smelts in 6 hours! ...

"Spring Smelt Dip Net Fishery :
...Smelt eggs may be damaged by walking in the brook and scraping the bottom with a net. Walking in the brook is already illegal and is a matter of enforcement and education. ...**It doesn't matter when a fish is harvested – any harvested fish will not reproduce.** ...

"...Ever increasing residential and commercial development is having an adverse effect on **water quality** ... How a smelt reacts to **urban lighting** is unknown and probably would only play a small role in habitat selection but I believe it has some effect on spawning runs. ... **hanging culverts** that create a waterfall. ... Industrial over board discharges and Municipal **waste water treatment** facility outflows spew tens of thousands of gallons of polluted water into Maine's waterways daily. ... Maine's cold water species seem to be in decline while **warmer water** species, more often caught south of the gulf of Maine, are becoming more common. ...

"Bycatch from Commercial Fisheries :
... it is impossible to determine the total impact of these fisheries. ... Without knowledge of the locations where this data was collected, it is difficult for me to glean any meaningful results other than the total pounds **of smelt being harvested as bycatch, from the shrimp fishery**, is in decline. It would be interesting to learn if this is a regional event i.e. areas south of the Penobscot River versus Downeast Maine.... While these (mackerel, herring, whiting, squid fisheries) fisheries report little or no bycatch of smelts, the cumulative effect from all 5 small net fisheries cannot be dismissed.

"Predation:
... These numbers imply the Bagaduce River must contain a considerable amount of forage fish for this number of **seals** to survive. The Bagaduce River is home to **many cormorants and loon and mergansers. ... Green crabs** cannot be ignored either – especially the effects of their recent population boom. ...

"Kennebec River:
It appears that the **bulk of all smelt studies in Maine have focused on the Kennebec River. ...** Dam removal is a new phenomena and scientist have no idea what the after affects may be.

"Lack of Local Input:
I am very disappointed that the Department did not invite any municipal-ities to collect smelt population data before such drastic measures were taken in 2014. When the alewife population was in question, municipalities were given the opportunity to provide biological and population data. Citizen science could be an effective source of information for the Department. **By not including concerned citizens, DMR has lost the opportunity to gather observations made by folks that are experts in their local area.**

I have been told by my father and grandfather that the **smelt population is cyclical and has a 6 or 7 year cycle. DMR's continuous fryke net population data barely covers one of these cycles. DMR should be considering their information as one data set not 7 individual data sets. I have noticed that the smelt runs in Winslow Stream and Mill Creek have been outstanding for the past three years...**

My Recommendations:
DMR data indicates the eastern side of Penobscot Bay to hold as many smelts as the proposed Zone 3. Marine Patrol needs a precise point to denote areas or zones. I propose that Zone 2 should start at Owl's Head and end at Dyce's Head in Castine. This would include the Bagaduce River and Deer Isle / Stonington in the proposed Zone 3.
The daily bag limit between March 15 and June 30 should be 2 quarts for the proposed Zone 2 and 3.
The daily bag limit for the " through the ice" fishery should be 4 quarts, except during March 15 through June 30, in the proposed Zones 2 and 3.
Harvesting smelts should be allowed 7 days a week. Any week day closure for conservation purposes should apply to both the winter and spring fisheries.
People who wish to possess more than 4 quarts daily may purchase a pelagic fishing license. The number of pelagic licenses should not be capped. This would be similar to the shellfish harvester license where a person is able to possess an unlimited amount of product but is not required to sell the product.
The commercial smelt fishery Downeast should be allowed to continue with proper landings reports filed annually.

The license fee for smelt tent operators, charter boats and salt water guides should be substantially increased. The Kennebec River smelts have been studied almost exclusively - without the commercial operations chipping in to pay for this work. The license fee for wharves, docks and piers should remain at $1.
The commercial smelt tent rental operators should be required to fill out landings reports – just like everyone else.
Elver fryke nets should be banned from narrow brooks and streams.
The seal population of the Bagaduce River needs to be addressed. Perhaps some First Nation members would like to harvest a few for traditional use.
I strongly object to the proposed Saturday conservation closure. This is a recreational fishery that is passed on from generation to generation. School aged children only have Friday and Saturday nights to stay up late. These children are the future stewards of our resources and environment. If a conservation closure is deemed necessary, please make the closure occur on back to back week nights.
DMR needs to admit that it lacks enough Staff to effectively study the smelt population along the entire coast and ask for assistance from municipalities and NGO's.

DMR Response:
NOAA – Northeast Fisheries Science Center (NFSC)
The NOAA office has been conducting trawl surveys in Penobscot Bay since 2011 and other studies in the Bay, including fyke net and seine studies, since 2010. DMR and NOAA have worked closely together throughout these surveys. DMR has the most recent smelt data from these surveys and is currently helping NOAA with ageing collected smelt samples. While NOAA has presented preliminary smelt information at a smelt workshop and salmon forums in the past, they are currently compiling all summary data in written reports. NOAA and DMR have met several times within the past year to discuss survey results and potential surveys for 2015 including citizen monitoring.

Maine / New Hampshire Inshore Trawl Survey
Because smelt are highly migratory within bays (documented using hydroacoustic tagging), the nearshore trawl data likely captures the overall trend of the smelt population within Penobscot Bay even if it does not trawl every section of the Bay.

The trends in catches do show that Zone 2 has had declining numbers since 2008 (see Table below), and has only had higher annual catches compared to Zone 3 in only 2005 and 2007. The statement that Zone 2 had higher catch than Zone 3 in the spring of 2013 is correct, but it is misleading and not reflective of the overall trend.

	Proposed Zone 1			Proposed Zone 2			Proposed Zone 3		
Year	Fall	Spring	Total	Fall	Spring	Total	Fall	Spring	Total
2000	2,355		2,355	734		734	1,278		1,278
2001	459	919	1,378	1,718	0	1,718	2,524	5	2,530
2002	1,719	28	1,747	237	27	265	745	11	756
2003	6	50	56	883	5	887	2,116	51	2,168
2004	2,417	730	3,146	198	25	223	1,175	21	1,196
2005	1,228	89	1,317	1,972	38	2,010	514	168	683
2006	2,310	1,155	3,464	33	44	76	1,374	71	1,445
2007	2,898	3,446	6,344	1,031	45	1,076	835	16	851
2008	2,565	3,870	6,435	24	85	109	739	65	805
2009	1,000	205	1,205	264	33	297	952	54	1,007
2010	2,595	526	3,120	482	21	503	782	26	808
2011	39	474	514	172	24	196	2,126	53	2,179
2012	11	268	280	500	32	532	3,303	61	3,365
2013	5	3	8	256	56	312	538	15	553
All Years	**19,607**	**11,764**	**31,371**	**8,504**	**434**	**8,939**	**19,003**	**620**	**19,623**

Tannery Brook Fryke Net Survey
The Tannery Brook survey site was chosen to represent a small, urban watershed, one that could show how development within the stream buffer can negatively affect water quality. With this fact, we specifically

do not base our entire understanding of the Penobscot Bay smelt runs on this site, nor was the decision to regulate Zone 2 conservatively based wholly on this site. When developing the proposed regulations for Zone 2, we considered all other available data sources including recent information showing that some brooks did well last year, as well as survey data from the trawl surveys which showed low abundances in this area, as well as information from other local anglers who described low catches during winter fishing in recent years.

Bagaduce River Surveys
During the public hearing, the question was asked "What is the most recent data you have for the Bagaduce River?" The response was "I believe it was 2009, I did not look at the data before I came tonight, I sent you (Mr. Bowden) the data in the spring and that was what was performed. I did visit the brooks last spring in 2014 and updated the DMR databases and that it what we use. The online version has not been updated." The biologist at the public hearing had not looked at the data prior to the public hearing and misspoke about the 2009 data, but did confirm that the data given to Mr. Bowden in the spring of 2014 was the current data up to that point. DMR did update the data after 2014 site visits made by both DMR and by DSF, who has given their data to DMR for consideration. We used these surveys and information from our own site visits when considering the rule. While some spawning runs in tributaries to the Bagaduce River are currently very productive as confirmed by DMR and DSF site visits in spring of 2014 (specifically Winslow Stream), other runs have limited or no production based on DMR 2014 visits and local information (Smelt Brook, mainstem Bagaduce winter fishery). DMR will continue working with local citizens and groups to collect more information about these runs to document population trends and will revisit the zone assignments if and when additional information shows that the runs are increasing.

Winter Fishery Studies
The winter fishery catch per unit effort (CPUE) is based on creel surveys. The information collected from the catch cards can and has been compared to the creel survey CPUEs. This analysis has shown that the CPUE trends are comparable between the catch cards and the creel surveys (e.g. when the CPUE is higher in a given year than the previous, both survey methods show this trend).

The recreational smelt camps on the Kennebec River and Merrymeeting Bay are not commercial fishing operations and thus obtain a recreational operator's license. This is the same as any charter boat captain or other recreational fishing operation. They do not report but must allow DMR personnel to conduct surveys.

Spring CPUE surveys
The fyke net surveys show the population trend of a run and are representative of the spawning population that will be subject to dip netting on the spawning grounds.

The extraction rate from hook-and-line fishing is thought to be low based on one study conducted in the late 1970s and because non-spawning populations are composed of male and female smelt equally, while spawning populations at the head-of-tide are composed of primarily males (data from published DMR studies). Therefore, extraction of the few spawning females on the spawning grounds can significantly reduce the broadcast eggs and reproductive success.

Regional Conservation Plan for Anadromous Rainbow Smelt in the U.S. Gulf of Maine
The following text is from the Rainbow Smelt Conservation Plan, page 74-75 under the section "Assessing causes for local decline":

"Some smelt populations in Maine have declined or become extirpated, while others remain strong. In some cases, local declines can be attributed to historical overfishing; however, habitat degradation, access problems, and current fishing practices may also be impacting smelt populations in the state....Future work should include an effort to quantify fishing mortality due to both the recreational winter and spring fishery. ***In locations where there is evidence of stressed smelt runs, management action should be considered to limit mortality during spawning runs****....Commercial fishing for smelt is allowed in only six tidal rivers in the state, all in Washington County: the East Machias, Pleasant, and Narraguagus rivers from January 1 through April 10, without any limit on quantity; and the Indian, Harrington, and Chandler rivers with no limit on quantity or time period. ... If over time there is evidence of smelt population decline in this region or evidence that the commercial fishery may be contributing to a high mortality, management actions should address the fishing effort possibly by limiting take or further gear restrictions."*

Elver Fishery
Although elver harvesters may walk in the water when tending fyke nets, no walking in the stream is allowed when dip netting for elvers. While not eliminating disturbance to smelt egg beds, the rule does provide some protection for smelt eggs. The number of licenses for elver fyke nets is lower than the

number of the licenses for dip netting. We do see smelt eggs on fyke nets and in 2014 asked Marine Patrol to start noting this during their visits.

Winter Recreational Hook and Line Fishery
Please see the response under "Winter Fishery Studies" above.

Spring Smelt Dip Net Fishery
Please see the response under "Winter Fishery Studies" above.
In a 2006-2012 study the DMR studied the impacts of water quality, development, and passage obstructions on smelt populations and found each to have a significant negative impact on spawning populations.

Bycatch from Commercial Fisheries
The shrimp fishery was closed in 2014 and 2015, so no bycatch of smelt will be occurring in that fishery. It is currently unknown if the fishery will be open in 2016. Smelt bycatch in other small mesh fisheries continues to be evaluated annually to determine if any bycatch is occurring. Dealer reports are also queried to determine whether smelt are sold that were not reported on landings reports.

Predation
Seals, comorants, and most shorebirds are protected species. DMR agrees that the green crab populations are having a negative impact on native species and in 2013 began working with partners on an aggressive plan to reduce green crab numbers using trapping and harvesting.

Kennebec River
The DMR considers six data sources when determining trends and population health of smelt populations: the state-wide near-shore trawl survey, the state-wide presence/absence surveys, the regional standardized spring fyke net surveys, commercial landings, the Kennebec and Merrymeeting Bay winter creel surveys, and the Kennebec and Merrymeeting Bay juvenile abundance survey. Only the last two are focused on the Kennebec River system.

In regards to the impact of dam removal, the removal of the Edwards Dam on the Kennebec River increased the amount of available habitat for rainbow smelt. The amount of discharge was not altered by dam removal, but may have changed the location of eddies and flow patterns. Coincidently, the amount of rainfall and discharge increased regionally in the 1970's and has continued to increase since this time. This trend is well documented (See Hydroclimatic flood trends in the northeastern United States and linkages with large-scale atmospheric circulation patterns, *Armstrong, et. al. 2014, Hydrological Sciences Journal), and coincides with sharp decreases in the abundance of many diadromous fishes including rainbow smelt and river herring.*

Lack of Local Input
The DMR has solicited citizen participation in the presence/absence surveys since 2008 when biologists worked with both Marine Patrol and local citizens to gather information about local runs. In 2012, the presence/absence survey materials were posted on maine.gov/dmr/smelt and have been publicly available. At the request of a Penobscot town resident, a DMR biologist visited three sites in Penobscot with a local resident and updated the DMR database based on the site visits and also recent DSF surveys in the area. The DMR is committed working with local citizens and municipalities to gather data.

Regarding the 6-7 year population cycle, we have also documented this cycle in our long term state and regional data sets (beach seine survey 1992-present, trawl survey 2000-present, NH creel survey, MA trawl survey). We were expecting to see a high in the population based on the 6-7 year cycle during 2012-2014, but this has not occurred.

The DMR recognizes that some streams continue to support strong smelt spawning runs, including Winslow Stream and Mill Creek in Penobscot, however other streams no longer support spawning in this area including Smelt Brook. This was confirmed by a DMR site visit in 2014 with the same local resident. The proposed rule balances the fact that some runs are doing well in Zone 2 while others are declining or no longer support spawning by allowing some spring dip net fishing.

Response to Recommendations
The delineation line between Zone 2 and Zone 3 will remain at Naskeag Point in Brooklin. Marine Patrol has confirmed this is an enforceable geographic point. The responses to the points above express the scientific reasoning for maintaining this point. The daily limit for spring fishing in Zone 2 will remain a 1 quart limit per person with weekly closures on Tuesday s and Wednesday s. The originally proposed weekly closure (Tuesday/Saturday) was revised to allow for families to dip net on the weekends.

Any person wishing to harvest commercially must obtain a commercial fishing license but must adhere to the daily limits imposed to each zone.

DMR will continue its current survey efforts and will expand its collaborations with local citizens and groups. The DMR is limited in staff and welcomes citizen science efforts that collect data comparable to our surveys. For this reason, we have posted the presence/absence survey materials were posted on maine.gov/dmr/smelt. DSF adopted these methods in collaboration with the DMR when it performed surveys in 2014.

Individual Comments in Favor:

Dennis Bolduc, Oakland; comment received via e-mail: "I am writing today in support of Maine's Department of Marine Resources' proposed smelt regulation changes for 2015. I represent no one but myself, as I am an avid fisherman and recreational smelter. I fully understood the Department's position and subsequent closure of all smelting last year from New Hampshire to the Penobscot river and bay. I thought it was very prudent of the Department to do so. But, after witnessing first hand and hearing of, decent to great, smelt runs the further north one traveled, I really am now in favor of the new 3 sections / areas the Department has proposed for Maine's coastline which will allow increased smelt opportunities the further north one travels to go smelting. I think all the proposed smelt limits are very fair under the current situation of Maine's declining smelt runs. After receiving all the information from last year's smelt runs along Maine's coastline, I think DMR's smelt proposal for 2015 is very fair for both smelt fishermen and the conservation of our declining smelt populations. And I would like to thank DMR for coming up with such a proposal that satisfies all interested parties."

Cordell Gross, Penobscot; comment received at Ellsworth public hearing: "I don't have any type of information or dates or years or anything else but I started fishing on the (Bagaduce) River when I was in high school which was a few days ago. And at that time if you could catch through the ice through those little smelt tents, a couple or three quarts well then you have really have done something. At the same time, there were three or four brooks that my friend and I fished with a net and then all of a sudden, the smelts in the River—and I'm going to guess this was about 30 years ago—disappeared. There were three guys in Brooksville who fished through the ice all winter long and if you could get a dozen smelts all winter then you had accomplished something. Then at some point, probably 15-18 years ago, on the Baguduce River they closed Camp Stream which is one of the major spawning places. There were nights down at Camp Stream when I was in high school you could get a five gallon bucket in just no time. So then all of a sudden, they disappeared. I suppose it wasn't all of a sudden they disappeared. Those three guys they tried and tried every winter and couldn't do anything. So they closed Camp Stream and Cove Brook. Then after a while all of a sudden the River was full of them and above Bass Head there they were catching a lot of them. And you find them in on the flats and in places that you would never used to find them. Then after a while they opened up the brooks again and the smelts are disappearing. Where they spawn, these people getting up into the brooks and kicking the gravel and even these eel fishermen. I mean if you are going to let people in the brook and kick that mess off where they lay the eggs...it sounds quite simple to me. I guess it isn't. I'm no biologist. I just thought that somebody, sometime ought to bring that up. There is a direct correlation to me when that all happened and why it happened. Now I don't know anything about any other areas around because we were pretty much confined to the Bagaduce River. And now last year, I went twice and never saw a fish above Bass Head. I don't know if that makes sense to anyone but me but thank you for listening."

Bill Hutchins, Penobscot; comment received at Ellsworth public hearing: "I choose to go so smelt fishing and recreational lobster fishing. I love it. We have caught alewives and have been smelt fishing for a lot of years. The guy I used to work for, Junior Hamlin, he was from the upper Bagaduce River and he was one of the original founders of catching smelts the old fashioned way. That's where I got my interest. He used to work for me. So we made some tents and went down and started doing it and it has actually been pretty good fishing over the years. But last year I went, I didn't see many fish at all and kind of lost interest in it because there was no fish to see. You sit there for eight hours and look down the whole and don't see anything except a couple of shrimp—you might see a flounder go by—but there really wasn't much of anything. So I don't know how many times we fished last winter—probably a half a dozen times—but every time you went you didn't see any so I just have kind of given up. This spring there was a pretty good run down by the sand pile by the brook. There's usually a couple of runs. So they are still there but it has changed. That's why they call it fishing. I think the idea of re-opening is great and everybody wants the opportunity to do it. A lot of the younger generation haven't acquired the fever yet. I don't know if they will. Everybody is all involved with texting and computers. We like to do it the old fashioned way by burning some wood and chopping a hole through the ice. I think it is kind of a family tradition to do it. I think the 4 quart limit is more than fair. You don't need 35 gallons. I think the best fishing I've ever got was a couple of years ago when I caught 5 gallons the first time I went out. I went out early. I think it was the first of January through four inches of ice. Cut a hole right through and there they was. Christ, they bit like piranhas. It's just a lot of fun when they are biting you can't pull them out quick enough. But then when you get them home, what do you do with them? I give them away and took some over to the nursing home. They freeze excellent. They are a good winter

meal. A lot of the older folks at the nursing home they used to eat them growing up and no one does anymore. We do it for just recreation. We enjoy it. It's cheap.

I'd say that 4 quarts is a good fair limit. That's plenty for any individual to give them a chance to catch some. I wouldn't think it would hurt—I have a catch report that I have to make out for lobster fishing—I wouldn't object to if I could make 4 quarts to making out a catch report. That wouldn't offend me at all. I know it is kind of a pain but it will give you some actual data you know. I know when I started having to fill out for lobstering I thought it was kind of a pain but really it's not. It's a good accurate record and only takes a minute to do. You put in the tide, the time and the dates so it gives you an accurate reading of what we do. I'm not a big brook fisherman in the spring. I have gone over the years and I have caught my limit and I see a lot of people coming around the brook even though you aren't supposed to be. There's a lot of people drinking and it's an outing. People are ready for spring and go down there floundering around. I think it does affect a lot of the eggs. I'm not against the eel fishermen but it's kind of the same thing. They are just trudging around the brook. With the enforcement part of it, you just don't have enough people out there to force people to do that. It's more of an educational thing with the public and not the enforcement part of it. You would have to have a warden in every brook and you just can't do it. I wouldn't expect them to. So I think it is an education learning curve for everybody who wants to do it. I do think if you had local information like catch report it would help. It would give you some information. I don't think most people would mind doing it. So I think that is pretty much it. I think that it is good that you opened it up again."

Dwayne Shaw, Franklin representing the Downeast Salmon Federation; comment received at Ellsworth public hearing: "We have worked very closely with the DMR looking at the smelt runs over the last few years and our own we conducted some smelt presence/absence surveys this past year. We really intended to look at the open areas in Stonington to the east and we were quickly encouraged to look at the Bagaduce. We weren't intending to but in working with Bailey and Colin as well, we went down to the Bagaduce and made some observations. And in fact, Bailey's testimony was extraordinary. And it is really the case that there are smelt spawning places that the DMR has not been able to get to for whatever reason over many years. A lot of these runs are going undocumented and the time series is scant at best up and down the whole coast as we know. We need more work done and I think the citizen science approach is the best way to do it. Like these catch cards that we talked about but also the presence/absence on the spawning ground when the fish are there and then to look at the habitat issues that we know exist in each location sometimes are quite different and sometimes can change quite dramatically. So there should be a real effort by DMR to coordinate citizens into this effort in order to get better data in order to make better management decisions.

And with the proposed rules here, I really haven't had a chance to think about them and study them but we will be sending some comments in. I very much appreciate that the zones we are most focused on in the proposed rule here makes the most sense and stick with it. However, increase the amount of research that is being done cooperatively with citizens I think to keep a close handle to what is going on in these areas like the Bagaduce where people are interested. Perhaps this zone (3) could be extended down further into the Bagaduce as well. Beyond that, I don't have any real comment about the specifics of this at this point other than this suggestion that Saturdays are non-fishing days. Because this fishery at this point in time it is what I call a heritage fishery. It is recreational but it is tied to the heritage of the coast to close the kids off from fishing on Saturdays when that is really the only opportunity it is to go out and do this with their families. It is probably the wrong day to close. So I would like you to consider and strongly recommend that Saturday evening not be a closed time and that if you have to have another closed day it be one of the weekdays. And that enables people to get their kids out there and these are the future stewards and future citizen scientists who are going to take care of this stuff. I'm concerned that Saturday was chosen for the convenience of the enforcement and I don't think that is the best way to do management. Of course, the enforcement of the smelt fishery is already so limited that there isn't a whole lot of impact on the whole thing. So if it was to align that with the elver fishing, if that was the reason it was done doesn't make good management sense to me."

Dwayne Shaw, additional comments received via e-mail: "I notice the proposed smelt regs define zone 3 ending at lubec Campbello bridge. Shouldn't it read to head of tide at St Croix R in order to include Cobscook and Passamaquoddy Bay?"

"Comment 1: Saturday fishing should be allowed in order to make it possible for families - especially children - to participate. If deemed necessary, DMR should close a weekday rather than a weekend. Convenience for Marine Patrol, by aligning smelt fishing days with elver fishing days, should not take precedence over maintaining this culturally important fishery.

Comment 2: The Zone 3 fishing regs., as proposed, are appropriate. It will be important to continue to closely monitor the resource and our organization is interested in expanding our partnership with DMR to continue to build a clear understanding of the resource - including habitat quality and fishing pressure. We feel that habitat restoration can make a very important improvement in the overall populations coast wide and in Zone 3.

Comment 3: The Zone 3 eastern boundary should terminate at the head of tide on the St. Croix R, not the Campobello Bridge.

Comment 4: The eastern line of Zone 2 may be more appropriately set to place the Bagaduce R in Zone 3. There appears to be sufficient evidence to determine that the Bagaduce R smelt fishery is stable enough to warrant inclusion in to Zone 3 - or at least to be managed with more liberal regulations than other areas in Zone 2.

Comment 5: The three zone approach to managing the fishery is a biologically appropriate scale to conduct management and recovery strategies."

Ed Tooley, Camden; comment received via e-mail: "Thank you for the opportunity to comment on proposed smelt regs. I would like to see the one gallon limit per person for smelts taking on ice. I think that this would benefit the sport fishermen and camp owners that rely on this for their livelihood. I would also agree to no dip netting."

Individual Comments in Opposition:

James Worthing, Smelt Camp Owner, Randolph; comment received at Brunswick public hearing: "I would like to see this held off for the next year but we probably won't be able to and see what it brings. I believe the dredging had a lot to do with it. But it ain't just the smelts. Everything else is going downhill too in this state. Deer hunting, cod, shrimp. I would like to see this held off for this year and see how this winter goes and see what happens. That's about it."

James Worthing, Smelt Camp Owner, Randolph; additional comment received via e-mail: "I'm writing to opposed the proposed smelt regulation for this year for the following reasons. Dredging in the Kennebec River last winter. The new bridge in Richmond being build last winter. DMR closed the taking smels in brooks, streams and jigging last spring and you never gave a chance to see if that helped. There are other factors also some people say. Catfish. I myself think the alewives have the most effect started with 20.000 and now 840,000. They eat the same food as smelts and I believe alewives will eat eggs. Even a vegetarian will eat a piece of meat if it is starving. But nothing will change because the Commissioner said 'It's all about politics.' ...I almost forgot to mention that the last few years mummy chubs and tommy cod have not been caught as many with last year as the worst. I was also told they are going to start dredging this month (December) in the Kennebec River and someone also said that they have been dredging this summer also."

Cynthia Peaslee, Farmingdale; comment receive via e-mail: "In regards to the proposed limit of 4 qts. per day on smelting, I believe that this I not right. As smelting is a very short season depending on the weather and ice conditions. I feel that the dredging in the Kennebec and building of the Richmond bridge had some factors to the poor smelting facts. There are a lot of people who travel a long way to come smelting. If you put this limit into effect is will hurt all of the smelt camps operations. This is only a three month season if that and brings a lot of income and business to stores, restaurants, hotel and motels. I also think that channel catfish, sturgeon and the alewives have a big part in the reason the smelt is down. I feel you should hold off a year or so to see what this year brings. You have already put a stop to taking smelt on brooks and streams and have not even taking time to see if this helped or not. Maine I thought was a recreation state. You keep cutting out the fishing the state will be nothing. People enjoy going smelting and can't wait for that time of year even kids like to go. So please take a year or so before you put a limit to see what this year brings."

Sharon James, Peter James, George James, James Eddy Smelt Camp Owners, Dresden; comment received via e-mail: "On behalf of James Eddy Smelt Camps, I am writing to oppose the Chapter 40 Smelt Regulations that is being proposed. At James Eddy over the past couple of years, we have noticed an increasing amount of carp, catfish and perch. As the number of these types of fish have increased, the amount of smelt being caught has significantly decreased. It is also our belief that scallop dredging and the building of a new bridge over the Kennebec River are also contributing factors to the lower smelt catch.

The new bridge will be completed in early December, and this year's scallop season has been shortened. Because of this, we are asking if this ruling can be put off for a year to see if these two things have any impact on how many smelt are caught this season, and also to see if some kind of plan can be created to look at the increase in carp, catfish and perch."

James Arsenault, Smelt Camp Owner, Dresden, comment received via e-mail: "In regards to the new rulings on smelt management, I wish to add a comment or two. I note in reading through the summary that the allowance of the 4 quart per day limit through the ice in the southernmost zone is based on the department's surveys showing the through ice take is very low. I personally know two commercial smelt camp operators, and both have been brutally honest with prospective customers who call inquiring about the smelt runs. The lack of smelts has hurt their business, and many out of state as well as local customers have chosen not to fish when they learn of the poor smelt runs.

Virtually none of their customers who choose to try fishing have been catching even up to the new 4 quart per person daily limit as it is. Ensuring through this new limit that you will go home with no more than that no matter how the fish bite, will further stress these commercial operator' business as people opt not to travel hundreds of miles, spending hundreds of dollars for "just" a gallon of smelts. Just as it's said 9/10ths of the law is possession, 9/10ths of sales is perception.

If I thought this part of the new rule would be a real conservation move, I would support it. Based on the DMR's own admissions of the already low through the ice take and having firsthand knowledge of actual average individual landings, I see this as only having the effect of another roadblock to local business with little to no true conservation gain."

Steve Leighton, Smelt Camp Owner, Bowdoinham, comment received via e-mail: "I'm writing to oppose the proposed smelt regulations for this year for the following reasons: There was a lot of dredging at the mouth of the Kennebec River and this could affect the Abagadasset River in Merrymeeting Bay where the smelts were running. There are also a lot of carp, cat fish and pike which are eating a great number of smelt.

If you could hold off putting a limit on smelt fishing there for one more year I would appreciate it as last few year's smelting wasn't good. Please take the time to see if the dredging was the cause for last year's poor season."

Victoria Saxon, Randolph; comment received via e-mail: "I am a long-time resident of Randolph, and I am writing to express my concern about recent discussion and the pending decision to the limiting of smelt fishing for the 2014-2015 season. There has been few or no environmental studies done to support this proposal, other than anecdotal claims of fish population decline.

Factors that are being shared by the department include that the water is too warm for the fish to effectively reproduce and that the population will suffer from an open fishing season. However, I believe the reason for the low fish yields in the past few years are more due to the dredging on the Kennebec when the smelts were running, and a new bridge being built in Bath that drove the fish out. There are, as you know, a great many Carp and Catfish and Pike who enjoy eating great numbers of Smelts as well. I don't believe that overfishing is a major factor to the fewer numbers in the last few years.

Please take the time to consider that the Smelt fishing has a cottage industry attached to it, and by limiting the size of the catch, the businesses that currently depend on this could be financially devastated. It only takes a season for the small bait shops and the Smelt fishing entrepreneurs to lose so much money that they can't maintain their equipment, facilities and can't hire seasonal help. Once this decline begins, it will be almost impossible to stop.

I believe that we should leave the Smelt fishing limits as they are now and take the time to do a study to find the real cause of the supposed decline in fish numbers. This may also help with coming up with ideas on what to do about the Carp, Catfish and Pike that have a known significant effect on the Smelt population. I would be more than happy to assist you in any way possible with surveys or any study that may be implemented."

Bonny Saxon, Randolph; comment received via e-mail: "I am writing to oppose the proposed Smelt regulations (or fish limits) for the 2014-2015 fishing season. I understand that the rational for this decision is due to the lower fish yields in the last few years, with the current 'no catch limit' being the cause. I think that the dredging and the bridge being built in Bath has more to do with any decline in Smelt numbers. There are also larger populations of Carp, Catfish & Pike which feast on great numbers of Smelts as well.

Please take the time to consider what a fish limit would do to the cottage industries attached to it. The small bait shops and the Smelt camp owners would be unable to make enough money to maintain their equipment and certainly unable to pay for the seasonal help that currently enjoy employment. Once a decline like this starts, it will be almost impossible to stop.

Mainer's are the kind of people that once you put a limit on what they are going to do, they'll not do it. It's ok for a fisherman to catch a gallon if that's what comes his way, but the minute you tell him that he's only allowed a gallon, all hell breaks loose. This mentality will also hit the bottom line hard. Currently there are no published studies confirming that overfishing is a major cause of any Smelt population decline. I think we need to leave the current regulations in place for this year and perform a study that will confirm what the actual causes are for the reduced numbers. We may even find a way to deal with the nuisance fish that **are** a significant source of smelt decline. I would be delighted to assist you in any way with surveys or studies needed to help support the health and prosperity of the Smelt population."

Rep. Jeffrey Pierce, Dresden; comment received at Brunswick public hearing: "I agree with Jimmy Worthing that we should put a stay on this rule for a one-year period. Last year you state that it was the worst year ever. There were some factors going on in the Kennebec River that might help bring this to light. There was extensive

dredging in Bath and as we all know it was during the smelt run. That would be like putting you in a room where they are cutting concrete dry without a mask. You're not going to go through that dust cloud. So the fish had a hard time coming up through that water just like you were getting a runoff. The other thing was we built that bridge across the river and if you look when they were driving those cofferdams-those steel pilings-they are digging in and pounding. The fish don't have an ear bone. They have an otolith. And all that vibration sent down through the river was a tremendous driver. If you ever put a metal pipe down into a pond, you can see how it drives fish. I think that contributes greatly to what has happened in the Kennebec system. And we have noticed that they do a lot of dredging when the smelts are running in Bath. We might want to look at the time of the dredging. It's really a shame that every time there's a problem that is not caused by the fishermen, they are the first ones that the pain is taken out on. These smelt camps are a vital part of Maine's history and river history. It would be a shame to see them closed up because people are going to come and spend money at these smelt camps if they aren't going to be able to catch fish. There's four tides a day and with four quarts, if you go out with a family and the kids are catching fish, it will be 'Whoa, whoa, whoa son. We are at our four quart limit.' Let's not overreact like we have done in some other fisheries like sturgeon. And now it turns out that isn't even an endangered species. We have carp in the river. We have catfish and in the spring they are sucking on the eggs. Maybe we ought to be looking at extraditing them and capturing them to help it out. Because they are a big driver with what is going on with some of the species in the River."

"One of the things if you could suspend or postpone this rule for a year, maybe you could have a caveat that every week the commercial camps can give you a sub-sample of fish so you can age and sex them through scales or fin clippings. That might be a good way to get some population dynamics on it and then we can see what is going on and see whether it is—because I don't believe that this is an overfished species. There is no over-fishing that is occurring. There are other things going on and it's always a shame to take it out on the fishermen first. I want to reiterate that. But that might be a good thing to maybe require them to give you five or six fish every week from the commercial camps."

Kevin Lemar, Dresden; comment received at Brunswick public hearing: "I believe in what Jeff says as different species of fish showing up in these rivers in the past few years. I have sucker fished now for I'm going to say 40 years and I used to fish the Androscoggin, the Kennebec and all of them. Then every year as I fished these new fish got more popularized and got bigger and bigger. As I still fished, the suckers started going away. I started catching ten times as many catfish or whatever you call them. Like Jeff said, I do believe that is part of this problem with these catfish. They will eat anything and everything. These smelts are spawning and if there are 10,000 catfish that weigh 6-8 pounds and they eat 50-60 of these smelts every day then how many of these smelts can survive. If these fish, which aren't even a native species here—I'm told they were brought here from Illinois—when I found out what they were. I talked to Peter Burke from Inland Fisheries and he didn't believe me that I was catching them. So I went and pulled two out of my traps and brought them right into Inland Fisheries in plastic bags and said 'Here you go. There they are.' His face hit the ground and he asked where they came from. And I said they are in the Kennebec River tributaries and every river there is and they are bigger than that and I catch hundreds of them every time I hook a net. And he did not believe me. And that should tell me that the State don't really know what is going on in these rivers as far as what is actually eating the other fish. And smelts are a delicacy. When they compete with any fish in the world, they will eat them. Any bird in the world, they will eat them. So the way I see it, if you got all of these catfish in the river and they are invasive species and they are not helping the smelts out because they are basically over-populating these rivers. It's only in the Kennebec and the tributaries as I far as I know. I don't know if it is south of us. But a lot of rivers south of us they basically go right through them. With the Kennebec and all of these water sediments kicking around, with catfish that is all they live on. They thrive on that. When I was on the Androscoggin and I started catching them—I want to say like 12 years ago—now I'll catch two suckers and I'll catch 500 catfish. So I think that has a lot to do with it. These smelts are a delicacy and the catfish are going to eat millions and millions of them. I think that could be part of the problem. I don't think it is overfished.

Overall, my grandfather had smelt camps when I was a kid and I always caught fish. All of a sudden over the years, I've stayed sucker fishing and stuff and these certain things just don't add up when these fish just disappears. Someone like me, I'm the basic person who the DMR should come and see to find out why something like this is showing up. Because I'm there. I do it in the spring when the fish are doing their thing and I see it happening. Years ago, I caught a crappie in the Kennebec River and I took it to the local warden and he asked where I got it and I said the Kennebec River. And he said there's none of them there and they don't live here. Well, there are here now. They are in ponds everywhere that goes into the Kennebec. They take these catfish and they open up the dams to have better spawning grounds for the smelts. Where do you think the catfish are going? Same place. They are going to follow that food right up through the channel and they are going to go into your trout habitats. If there is no dam involved, the catfish are going there. Eventually, they are going to wind up in all of your trout tributaries and they will wipe them out too. When they started showing up, everything went downhill. I caught smelts before and when you open up catfish, they got suckers and whatever else they can eat.

As far as last year goes, with regard to the dredging, if you are a trout fishermen if you make too much noise they scatter in the brook and they disappear. So if you are down there at the bottom of the river and making noise and

crap, then those fish aren't going to be there. Same way fishing at Jimmy's, if you catch a fish and make a lot of noise then the fish disappear. The vibration through the ice just scatters them. If the river ain't clean, then the fish ain't coming. They are going to go in the opposite direction. That's all there is to it. They might not even spawn. They might just back off and disappear. As far as shrimping, those guys catch smelts while shrimping. I know a guy who would come in with six to eight hundred pounds of smelts to sell on the seafood market off a shrimp dragger. And the State said at one of the meetings that it wasn't true and that shrimp draggers weren't bringing them into the fish markets. And I had a friend on the shrimp dragger and they were bringing in 5, 6 or 700 hundred pounds of smelts every time they come in when they were dragging for shrimp. But the State said that was not true and that they had no record. I don't know if the State did not want to get involved or did not want to pursue it or not. If I had called him he probably would have been here. Jimmy had to remind me today that the meeting was here."

"I was in the Sheepscot River about two weeks ago around daylight. One of my friends he lobster fishes and he was telling me that there was a guy down there a day before jigging smelts. Which I said you got to be a little nuts at this time of the year. So I was standing there and a guy comes down the bank and he is standing there and he is jigging it one behind the other. This is right around daylight. You could get on the pier and look down with the light and you could see the smelts just swimming around in the water...So is that something that the State is missing that they are coming in earlier? And if you go to check it out and you realize there are no smelts, maybe it was because they came up earlier than what your statistics are telling you.

Rep. Jeff Hanley, Pittston; comment received at Brunswick public hearing: "I'm here to find out what evidence the board might have about closing or restricting the fisheries this season. I want to make sure they are not knee-jerk reacting. I know the last year we had a bad season. I see you are not going to close ice fishing portion of it but you are going to be restricting the dipping portion of it. And I just want to know what the science is behind that because I don't see how that level of participation would affect the fisheries. I am here to learn but I also wanted to speak to say that nothing drastic is done. Last year, there was a lot of dredging in the River and with construction of the bridge in Dresden which in my mind would certainly affect the flow of the Kennebec. Both of those activities have already ceased so what is the harm in waiting one more year to see if they were the real cause for the slowdown for that portion of the River. Thank you for listening to me."

"I know they are dredging the Royal River this year and I don't know if there are smelt camps down there. But if they do, maybe you can check to see if they have a problem this winter with the smelts. And there is something else that should probably be checked on. Down at the Wiscasset landing, all the eelgrass is dead and it smells. It's dying, muddy and black. And I don't know if they are taking a lot of rockweed and green crab if that is what is doing that. But it's something. But it is the first that I have ever seen of it and they said that in Waldoboro with the eelgrass, it's just dead."

Linda Paul, Pittston; comment received via regular mail: "Very sorry to hear that you are proposing this new regulation for the Kennebec River near Gardiner, ME. I have fished with Jim Worthing for years and he always follows the rules. You never find dead smelts on the ice and he is very conscientious about his business. Last year was a year when there was a lot of dredging going on and you just do not look at all of the variables or the big picture. The smelts usually will not deviate much from where they want to go to lay their eggs unless there happens to be a man-made obstacle such as last year. You base all of your science on the fact that they did not come. Even at this time of year if you go down to Wiscasset Boat Landing you can see the smelt In Eastern River and the Kennebec they are here. People spend a lot of money to go smelting. With rental of camps, gas to drive here, hotels to rent a room or motels and restaurants. Why don't you look at the whole picture? You could at least give it one more winter to see if things go back naturally. Worst case scenario if not then you could cut back to your 4 qt.rule. It is truly sad that fishing has come down to the fact that commercial fisherman have now taken over and do not want recreational guys on the water at all. They want us to pay $12 lb for codfish and they only want the big ships out there that take everything. The little guys get kicked again but the little guys pay your salaries. Please reconsider. It is not fair to take a person's livelihood. The river is also home to the alewives who made an impressive appearance this year. Never saw so many. Usually when they come the smelt come as well but give them a chance. The 4 qt limit per day per person is unrealistic. Even on party boat that go out it is an aggregate with crew included in the count. Since Worthing is the Captain of the ship of the smelt camps) you should count in an aggregate.

How many smelt camps does it take to catch the amount of smelts that you allow the netters to take. You also have to factor in how may smelts are eaten by carp which eat everything good in the river and people don't like to eat them as well as cat fish and pike. When your scientists check out the sturgeon you should go along and see what else is in the nets. This is a sad day. Thank you for allowing me to express my point of view. I hold two women's world records and my husband and I have fished together for 47 years so I do know something about fishing and fish habits."

Russ Burns, Middleborough, Massachusetts; comment received via regular mail: "This email in regards to the Chapter 40 Smelt Regulation. I am writing in opposition to the proposed regulation. I would like to mention a few things that I believe have had an effect on the smelt stocks that have resulted in low numbers of smelt being caught the last couple of years. One being the dredging that has taken place in the Kennebec River and the construction of the Dresden Bridge. I think that now all that disturbance in the water way has been pretty much completed it is possible that the smelt may start to come back. I think it would be fair to the Smelt Camps that the Chapter 40 Regulation of the 4 quart limit, be put off at least until next year and see if there is any change in the amount of fish being caught during this smelt season. There may be other reasons that the smelt are not there.

How about the Alewife? The Great Lakes fell prey to this species. I think that is something that should also be investigated. I live in Massachusetts and travel to the Augusta area no less than 5 times a year to fish for smelt. But the Chapter 40 Regulation could curtail those trips and have somewhat of an effect on the bottom line of the Motor Lodge that I stay at, but that is just me. There are many others that make the same journey to the Smelt Camps along the Kennebec. On behalf of all the smelt fishermen who visit your wonderful state, future generations and all concerned we beseech you to do everything within your power to stop this egregious action."

John Melquist, Sr., South Thomaston; comment received via e-mail: "I hope that some consideration will be given to allowing some chance for us to go pole smelting in the fall in zone 1. In your impact statement you say that the only fishing that will be effected is the spring spawning closure, but this is not true. Some of us have been fishing with poles in the fall for many years(I am 71 and have been doing it for at least 60 years) and would like to be able to continue even it is for a small limit such as 1 or 2 quarts. I have taken my children over the years and would like to continue the tradition with my grandsons and granddaughters. I do not think that there are anywhere near the number of fisherman this time of year that there used to be, at least not here in the mid-coast, but I know the few that do fish would like to be able to continue."

Individual Comments Neither for Nor Against:

David Trahan, Executive Director of the Sportsman's Alliance of Maine; comment received via e-mail: "As Executive Director of the Sportsman's Alliance of Maine I would like to offer a few comments on the proposed rule, Chapter 40, Smelt Regulations. As written, I believe the rule could cause great confusion among the smelt fishing public. It appears in the rule that the "fishing day" is not defined. Many smelt fisherman would likely believe the fishing day was a 24 hour period from 12:00 am to 11:59:pm. Many fishermen start fishing before midnight and will likely believe the southern mid-coast limit, (zone 1) is 4 quarts and if they catch it before midnight, they can then can catch another 4 quart limit after midnight. As written they would be in violation of this proposed rule. I could see a serious enforcement problem and real confusion for fishermen. I believe some clarity on this issue is desperately needed."

Bailey Bowden, Penobscot; additional comment received via e-mail: "My name is Bailey Bowden and I am from Penobscot which borders the Bagaduce and Penobscot Rivers. I am a direct descendant of the original English settlers of Penobscot that arrived in 1751. Much of my smelt harvesting knowledge comes from family lore passed down through the generations. Until March 2014, I had continuously fished for rainbow smelt in the Bagaduce River for 40 years. I have taken part in the winter fishery but I have not had a smelt tent since 1980 at Winslow Cove mainly due to unsafe ice conditions. I have enjoyed the spring fishery in Penobscot, Brooksville, Blue Hill, Sedgewick, Surry, Brooklin, Deer Isle, Orland, Bucksport, Orrington, Prospect and Frankfort. When the price of gasoline exploded about 10 years ago, I stopped actively harvesting the spring runs outside the Bagaduce River.

In my opinion, DMR is trying to manage the rainbow smelt resource with a lack of scientific data that would support some parts of this proposal and in some cases, DMR is not protecting the resource enough based on the available data.

Scientific data, collection and analysis :

NOAA – Northeast Fisheries Science Center (NFSC)

I am still waiting for the unreleased observations of the Penobscot River smelt population that were made by NFSC located in Orono. According to Mr. Rory Saunders at NFSC, NOAA has only looked for smelts for the past two years and NOAA does not survey below Fort Point Light located in Stockton Springs.

The lack of publically available smelt data from NFSC indicates there has been no long term year over year data collected on the Penobscot River. This also implies that DMR has not requested any smelt data from NFSC in the recent past.

It is unfortunate that DMR has not formed a partnership with NFSC to document the Penobscot River smelt population.

Maine / New Hampshire Inshore Trawl Survey :

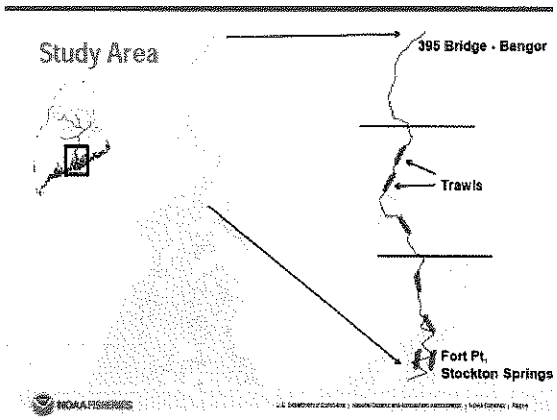
I have received detailed maps / data from DMR that require a correction from my oral testimony given at the Public Hearing in Ellsworth on November 18, 2014. However, my point remains the same. There is a severe lack of scientific data from the upper Penobscot Bay area to base any sound management decision on.

I previously stated that only 2 trawls tows have been performed north of Cape Rosier and that 11 miles of the upper Penobscot Bay area are severely under studied. According to the latest data I have received, there have been 8 tows performed in this area. However, 6 of these tows are only 1 ½ miles north of Cape Rosier. This leaves about 9 ½ miles of river that has little trawl survey data (the distance between the trawl surveys and Fort Point Light).

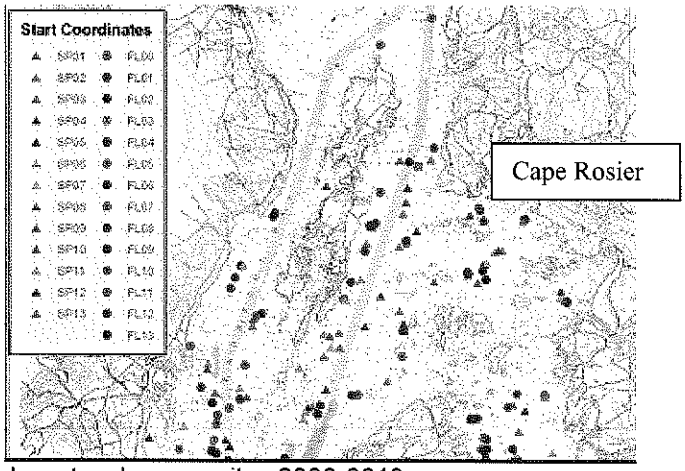
These trawl survey dates are listed below where the spring tows are denoted by (S) and the fall tows by (F):

F 2000 (2 tows) and S01, F01, S02, S06, F06 and F07 have one tow each.

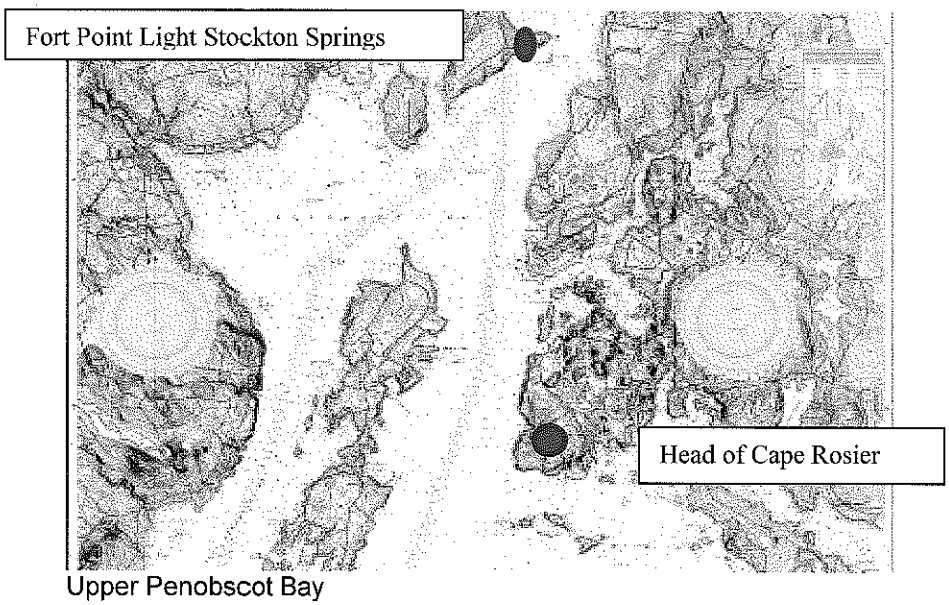
Only 2 tows have been performed north of Isleboro (F 2000). These tows captured good numbers of whiting, winter flounder, lobster, herring, alewife and rainbow smelt. The Penobscot and Bagaduce Rivers both drain into this section of Upper Penobscot Bay. This area is where the estuarine environment merges with the ocean which creates an ideal environment for alewives and smelts. This area is also much shallower than the other 6 trawl survey sites. The 2 tows north of Isleboro were in 40 to 60 feet of water. The other 6, closer to Cape Rosier, were in 90 to 150 feet of water.



Range of NOAA survey



DMR inshore trawl survey sites 2000-2013



Upper Penobscot Bay

The upper 1/3 of Penobscot Bay has been under studied. As of December 31, 2013 there have been 27 statewide trawl surveys performed along the Maine coast and the upper Penobscot Bay has been surveyed 8 times. I understand that the same area cannot be surveyed each year, other than established control tow sites, but the latest trawl survey data for the upper Penobscot Bay area is now 7 years old.

Finally, when the year over year trawl survey data is compared, it is apparent that the smelt population of the proposed zone 2 has been very consistent with the proposed zone 3. The most recent data, the spring 2013 trawl survey, indicated the largest catch in the state was in the proposed zone 2. It is clear that the proposed zone 1 area results show a severe decline in the smelt population.

Tannery Brook Fryke Net Survey:

A lot of merit is being given to this survey and it represents the bulk of DMR's efforts on the Penobscot River. Between 2007 and 2010, this brook has had a giant parking lot built next to it and had a complete bridge replacement with new abutments and decking – all of this is within the spawning habitat of this brook. Tons of rip rap were added to the shoreline to create the parking lot. Comparing google earth images from 2006 and 2010, it is obvious that the streambed has been altered. What was a forked streambed with pools and riffles is now a straight trench to the low water line. It is not a big surprise to see the population drop in the years following this heavy construction.

The source of this brook is Silver Lake which is the water supply for the City of Bucksport and the Verso Paper Company mill. The water rights are owned by Verso Paper. Heavy demand could impact the flow rate of this brook during the spawning season.

The name Tannery Brook should raise a red flag. It is possible that chemicals are still leeching into the stream that could negatively affect smelt egg survival.

While the Tannery Brook survey results may be interesting when considering smelt recovery in former industrial sites that have been physically altered, it does not accurately represent the smelt population of the Penobscot River.

The Kennedy Brook lies 2 miles upstream of the Tannery Brook ,and the Verso Paper plant, and is well known to DMR to have an incredible smelt run that occurs ho night and day.

Tannery Brook in August 2013 (left) and in April 2006 (right)

Bagaduce River Surveys:

DMR can only identify 3 active smelt runs and lists another 3 brooks as historical – status unknown. The active runs were last documented by Marine Patrol in 2005 and 2007. The historical runs were last observed 35 years ago in 1979. At the Public Hearing, Claire Enterline announced that she had recently received survey data for the Bagaduce that was taken in 2009 and this data was not available on line. DMR should be embarrassed that it took nearly 6 years for this data to reach the leading smelt biologist.

Near the end of the 2014 spring smelt run, Claire Enterline came to Penobscot to observe 2 active runs and 1 historical run. The Downeast Salmon Federation (DSF) generously provided a biologist to document smelt runs in the Bagaduce River. We were able to document 2 brooks that have smelt runs that DMR has no knowledge of. This was confirmed by testimony given by Dwayne Shaw, the President of the DSF, at the Public Hearing on November 18, 2014. I am confident that several more runs could be documented but we ran out of time.

It is obvious that the Department has no current data on the Bagaduce River smelt runs nor does the Department have accurate knowledge of which brooks may contain active smelt runs.

Winter Fishery Studies:

The winter fishery catch per unit effort (CPUE) is based on creel surveys that were performed primarily on the Kennebec River at the commercial smelt tent rentals. The observations made by DMR Staff, during visits to these operations, are valuable scientific information. The results from volunteer comment

cards are anecdotal and cannot be verified. The Survey Cards for the Kennebec businesses have only been available for the last 6 years.

Commercial smelt tent rental businesses have a DMR issued license to operate. Why are these operators exempt from the landings rules? I was shocked to learn that the license fee for an operator's license is $1 when a green crab license fee is $10.

Spring CPUE surveys:

The spring CPUE is based on the fryke net survey data. No comparison can be made between the fryke net survey and the impact of the dip net fishery. A fryke net is far more effective than using a dip net and flashlight.

It is my opinion that DMR believes the dip net fishery has a greater effect on population than the hook and line fishery. This seems to be based on a tag and recapture experiment that was conducted on the Kennebec River in the 1970's. It was determined that the winter fishery was responsible for 5% of smelt deaths.

I wonder how many tags were returned from the spring fishery and why this information was not included in the report. I also wonder if there have been mark and recapture experiments designed to determine the range or catch rates of the spring run in Maine.

Regional Conservation Plan for Anadromous Rainbow Smelt in the U.S. Gulf of Maine :

This document was prepared in part by Maine DMR in 2012. This Plan makes no reference to closures or bag limits in Section 3-2 *State Management Recommendation* of the report. The Maine recommendation is copied below.

Recommendations

With continued population monitoring and threat assessment in collaboration with fisheries managers, university scientists, recreational and commercial fishermen, and interested citizens, the rainbow smelt populations in Maine could be maintained or possibly expanded. To this end, the ME DMR has begun to implement restoration efforts, including a stocking project in North Haven and assessment of culvert replacements that would provide access to historical habitat. Future work in the state of Maine to protect this species of concern should include:

1) Continuing monitoring of smelt populations through fyke net sampling, creel surveys, the inshore trawl survey, and the juvenile abundance survey
2) Developing a mark-recapture study to estimate the current extraction rate of recreational ice fishing on the Kennebec River and Merrymeeting Bay and other rivers and embayments that support recreational ice fishing
3) Restoring stream connectivity and access to historical spawning grounds with monitoring to assess pre- and post-construction conditions and smelt populations
4) Assessing threats to smelt habitat and evaluating connections between degraded habitat and local smelt population decline
5) Stocking rainbow smelt larvae marked with oxytetracycline into historical smelt spawning streams that maintain good habitat, while maintaining the genetic structure as identified by this project and annually monitoring stocking success.

The preface speaks to possible expansion – not closure. There has been an extreme shift in policy between the writing of this document in 2012 and the spring of 2014.

Human Impact on the Smelt Population :

Elver Fishery :

Smelt eggs may be damaged by elver harvesters walking in the brook to tend fryke nets. Fryke nets capture spawn that will be left high and dry when the tide goes out. These eggs may have attached to the bottom if the nets did not strain them from the water column. Fryke nets do not belong in narrow brooks and streams. I consider the elver dip net fishery to be of little impact on the smelt population.

As there is very little long term year over year population data on the smelt population, it is difficult to compare the effects of the elver fishery on smelt populations. When the DMR Juvenile Abundance Survey of the lower Kennebec River is compared to the Historical Maine Elver Landings Report there seems to be a correlation between the elver price per pound and juvenile abundance. In years following a high price for elvers, and an increased effort in the elver fishery, the smelt population seems to decline. When the elver price drops, the smelt population seems to increase. From 1999 to 2002, the price of elvers dropped to $30 per pound. The Kennebec survey indicates a dramatic increase in the juvenile smelt population from 2000 to 2004. The elver price increased in 2004 and has continued to rise. The Kennebec River study shows a steady decline in the smelt population from 2006 to the present. Is the result from comparing 10 years of DMR data merely a coincidence ?

DMR should be responding conservatively by banning fryke nets from small brooks and streams.

Winter Recreational Hook and Line Fishery :

The winter fishery is allowed to fish for 2 or 3 months with no individual bag limits. Jimmy Worthing told me the record catch for his business on the Kennebec River was 2 men caught 35 gallons of smelts in 6 hours! In 2014 there were 228 licensed commercial smelt tents for rent on the Kennebec River.

Spring Smelt Dip Net Fishery :

Smelt eggs may be damaged by walking in the brook and scraping the bottom with a net. Walking in the brook is already illegal and is a matter of enforcement and education. Marine Patrol Officers visit most smelt brooks , in this area, frequently during elver season.

According to the *Regional Conservation Plan for Anadromous Rainbow Smelt in the U.S. Gulf of Maine* " While there is a limit of 2 quarts of smelt per person per day in this spring fishery, the contribution to mortality is unknown."

It doesn't matter when a fish is harvested – any harvested fish will not reproduce. So which is worse, the dip net fishery harvesting 2 quarts per day for 2 or 3 weeks or the smelt tents harvesting with no bag limit for 2 or 3 months ?

Enviromental Pollution :

Ever increasing residential and commercial development is having an adverse effect on water quality – especially in regions that are south of the Penobscot River. Residential development has led to increased nutrient loading of coastal waterways due to the conversion of tree / shrub areas to grassy lawns. Commercial development has increased the square footage of impervious surfaces that collect water, oils and anti-freeze.

Light Pollution :

It has been my experience that smelts swim away from light. Maine's urban coastal communities have more large neon signs than 10 years ago. The human eye can detect the nighttime glow of an urban area quite easily. How a smelt reacts to urban lighting is unknown and probably would only play a small role in habitat selection but I believe it has some effect on spawning runs.

Habitat Alteration / Degradation :

DMR has done a great job of late working with DOT to reduce the amount of habitat alteration done during road construction. The best example would be over hanging culverts that create a waterfall. Incorrect culvert sizing is another issue. However, many waterways have been altered in this way and corrective measures are taking place too slowly or not at all. The population increase of Southern Maine during the past decade has required more highway improvement projects to keep pace with the amount of increased traffic than in Eastern Maine.

Industrial over board discharges and Municipal waste water treatment facility outflows spew tens of thousands of gallons of polluted water into Maine's waterways daily. No one will ever know the full extent of this pollution as accidental discharges are largely self- reported.

Rising Ocean Temperatures :

Maine's cold water species seem to be in decline while warmer water species, more often caught south of the gulf of Maine, are becoming more common. I do not know what effect this is having on the smelt population but I do know that fish are very picky about the temperature of their surroundings. I believe that the temperatures in the area east of Isleboro and Vinal Haven are increasing at a much slower rate than the western side of the Penobcot River. I believe there is an eddy created by the effects of the Penobscot River, the predominant east to west flow and the Eggomoggin Reach that keeps this area cool.

Bycatch from Commercial Fisheries :

According to the *Regional Conservation Plan for Anadromous Rainbow Smelt in the U.S. Gulf of Maine* there are 5 small mesh commercial fisheries that may have an impact on smelt population. This report states " incidental catch (bycatch) is not required to be reported ". Therefore it is impossible to determine the total impact of these fisheries. The opening and closing statements for the summary paragraph of this section of the report seems to confirm this ... " If these data are representative of smelt bycatch in these fisheries " and

"To fully understand the effect of small-mesh fisheries on smelt populations, more work is necessary to ensure that the observer and VTR programs are accurately capturing the extent of smelt bycatch."

Shrimp Fishery

The Nordmore grate, a finfish excluder device, is reported as being "extremely effective in limiting bycatch" due to observations of a 4 – 8% reduction in catch. Referring to a reduction rate of less than 10% as effective is laughable.

Without knowledge of the locations where this data was collected, it is difficult for me to glean any meaningful results other than the total pounds of smelt being harvested as bycatch, from the shrimp fishery, is in decline. It would be interesting to learn if this is a regional event i.e. areas south of the Penobscot River versus Downeast Maine.

Vessel trips that included an observer did collect legitimate scientific data. The Vessel Trip Reports (VTR), completed by the boat Captain, only record anecdotal observations. Asking the fox for an inventory of the henhouse is an open invitation to misinformation.

Mackeral, Herring, Whiting and Squid Fisheries :

While these fisheries report little or no bycatch of smelts, the cumulative effect from all 5 small net fisheries cannot be dismissed.

Predation:

I have no state wide data on predators that might feast on smelts but I do have data that was taken by NOAA in 2001 regarding the seal population of the Bagaduce River. Dr. James Gilbert at UMaine provided the following observations from the 2001 survey. 2 seal ledges were observed that were approximately 2 miles apart in Southern Bay. One ledge held 54 seals while the second held 171 seals. That is a total of 225 seals in a small area of a short river. The huge number of seals must have a negative impact on the smelt and alewife populations. These numbers imply the Bagaduce River must contain a considerable amount of forage fish for this number of seals to survive.

The Bagaduce River is home to many cormorants and loon and mergansers. These fish eating birds can consume great quantities of fish during the spawning season and when the newly hatched smelts enter the estuary.

Green crabs cannot be ignored either – especially the effects of their recent population boom. Green crabs will feed on the same species that a smelt will forage on. Green crabs are capable of capturing small fish like a newly hatched smelt. Green crabs also destroy eel grass beds which provide food and shelter for all life stages of smelt.

Fortunately, the portion of the Bagaduce River that lies above the North Brooksville / Penobscot bridge was not heavily invaded by the green crab and the eel grass beds still remain.

Kennebec River:

It appears that the bulk of all smelt studies in Maine have focused on the Kennebec River. This is unfortunate as now there are no studies to serve as a baseline for other river systems.

The removal of the Edward's Dam in Augusta has had an effect on the river that I believe the Department is not taking seriously. While the overall flow rate of the river remains the same, the current, eddies and the head of tide have all changed. Who knows what pollution or organisms were washed downstream with the silt – when the dam was breached.

One of the commercial smelt tent operators stated, at the informational meeting in Hallowell, that prior to the dam removal - floating objects would go down river on an outgoing tide and return on the incoming tide. After the dam removal - floating objects go down river regardless of tide cycle.

The smelts may never return to Dresden, Randolph or Bowdoinham. Someone should scour the history books and determine where the smelts wintered before the Edward's Dam was constructed.

I discussed this theory with Rory Saunders at NFSC. Mr. Saunders stated that the once world famous salmon pools near Bangor / Brewer have not held Atlantic salmon ever since the dam was removed on the Penobscot River. The pools and the salmon still exist but the fish do not hold there anymore.

Dam removal is a new phenomena and scientist have no idea what the after affects may be.

Bagaduce River Environment:

The communities that border the Bagaduce River have been very sensitive to any development along the shoreline of the River and its tributaries. This is especially true of commercial or industrial

development. This can be easily confirmed by reading the Zoning Ordinances for these Towns. The increase of residential development, along the shores of the River, led to a loss of forested and shrubby growth but most brooks and streams remain in a wooded condition.

The Bagaduce River Watershed does not receive the amount of polluted runoff that the more urban southern Maine does primarily due to the lack of impervious surfaces (pavement). Heavy metal concentrations should be at back-ground levels.

The largest polluters of the Bagaduce River in the recent past have been the Town of Castine and the State of Maine. Castine has a waste water treatment facility and the former Penobscot Nursing Home (recently under State receiver-ship) has an over board discharge. What pollutants Maine Maritime Academy has tossed overboard is unknown but it is well known locally that this practice does occur.

Lack of Local Input:

I am very disappointed that the Department did not invite any municipal-ities to collect smelt population data before such drastic measures were taken in 2014. When the alewife population was in question, municipalities were given the opportunity to provide biological and population data. Citizen science could be an effective source of information for the Department. By not including concerned citizens, DMR has lost the opportunity to gather observations made by folks that are experts in their local area.

Family Lore and Personal Observations:

I have been told by my father and grandfather that the smelt population is cyclical and has a 6 or 7 year cycle. DMR's continuous fryke net population data barely covers one of these cycles. DMR should be considering their information as one data set not 7 individual data sets.

I have noticed that the smelt runs in Winslow Stream and Mill Creek have been outstanding for the past three years. I expected to see a decline in the run but this has not happened.

I have also noticed that the end of the smelt run is now over lapping with the start of the alewife run. I first observed this in 2012. In the 70's and 80's , spring arrived gradually where today spring arrives like turning on a switch.

The peak of the spawning run usually coincides with the spring freshet – the time when spring rains and melting snow pack combine to bring a small brook to its flood stage. The increased water depth and high flow rate makes it very difficult to dip net any smelts. When the freshet and astronomical high tides occur together, it becomes impossible to reach the actual streambed. The dip net harvest of smelts during the peak of the spawning run is very small for the trib-utaries of the Bagaduce River.

Most of the spawning activity takes place underground on the Bagaduce River tributaries. Many interpretations of the Native American word "Penobscot" mean rocky place. Most of the smelt brooks that I know of turn to a rock pile above the high water mark. Smelts and their eggs are well protected from a dip net in this type of habitat.

Conclusions:

DMR does not have enough continuous year over year, data to fully understand the population dynamics of the rainbow smelt.

DMR does not have a sufficient amount of data on the Penobscot River or the upper Penobscot Bay to effectively manage the fishery in this area.

Any attempt to manage the Penobscot River or upper Penobscot Bay smelt fishery will be based on best guess – not valid science.

The recent discovery of the 2009 presence/absence survey for the Bagaduce River implies that DMR cannot properly keep track of its own data nor analyze the data in a timely manner.

The DMR inshore trawl survey indicates the smelt population of the eastern half of the proposed zone 2 to be consistent with the proposed zone 3.

The spring 2013 DMR inshore trawl survey indicates the largest catch of smelts occurred in the eastern portion of the proposed zone 2.

The DMR inshore survey and fryke net surveys indicate a severe population crash in southern Maine – the proposed Zone 1.

The upper Penobscot Bay and the lower Penobscot River areas have had no study by DMR since 2000.

There has been no biological smelt data collected by DMR within the Baga-duce River.

Any presence / absence surveys for the Bagaduce River are outdated.

DMR cannot identify the active smelt runs of the Bagaduce River.

DMR missed the opportunity to collect local smelt data through the use of Citizen Science.

My Recommendations:

DMR data does indicate a perilously low volume of smelts in the proposed Zone 1. Given these low numbers, the proposed Zone 1 area should be closed to all smelt harvesting.

DMR data indicates the eastern side of Penobscot Bay to hold as many smelts as the proposed Zone 3. Marine Patrol needs a precise point to denote areas or zones. I propose that Zone 2 should start at

Owl's Head and end at Dyce's Head in Castine. This would include the Bagaduce River and Deer Isle / Stonington in the proposed Zone 3.

The daily bag limit between March 15 and June 30 should be 2 quarts for the proposed Zone 2 and 3.

The daily bag limit for the " through the ice" fishery should be 4 quarts, except during March 15 through June 30, in the proposed Zones 2 and 3.

Harvesting smelts should be allowed 7 days a week. Any week day closure for conservation purposes should apply to both the winter and spring fisheries.

People who wish to possess more than 4 quarts daily may purchase a pelagic fishing license. The number of pelagic licenses should not be capped. This would be similar to the shellfish harvester license where a person is able to possess an unlimited amount of product but is not required to sell the product.

The commercial smelt fishery Downeast should be allowed to continue with proper landings reports filed annually.

The license fee for smelt tent operators, charter boats and salt water guides should be substantially increased. The Kennebec River smelts have been studied almost exclusively - without the commercial operations chipping in to pay for this work. The license fee for wharves, docks and piers should remain at $1.

The commercial smelt tent rental operators should be required to fill out landings reports – just like everyone else.

Elver fryke nets should be banned from narrow brooks and streams.

The seal population of the Bagaduce River needs to be addressed. Perhaps some First Nation members would like to harvest a few for traditional use.

I strongly object to the proposed Saturday conservation closure. This is a recreational fishery that is passed on from generation to generation. School aged children only have Friday and Saturday nights to stay up late. These children are the future stewards of our resources and environment. If a conservation closure is deemed necessary, please make the closure occur on back to back week nights.

DMR needs to admit that it lacks enough Staff to effectively study the smelt population along the entire coast and ask for assistance from municipalities and NGO's.

I thank you for the opportunity to express my opinions, observations and recommendations."

Rulemaking statement of impact on small business
5 M.R.S. §8052, sub-§5-A and §8053, sub-§3, ¶F, and
Executive Order 20 FY 11/12, August 24, 2011 (replaces EO's 09, 13 & 14)

Agency: Department of Marine Resources

Chapter Number and Title of Rule: Chapter 40 Smelt Regulations

1. An identification of the types and an estimate of the number of the small businesses subject to the proposed rule; and EO20 1.A. The impact of the proposed rule on job growth or creation:

Recreational harvesters of smelt are only required to hold a recreational fishing license that has no reporting requirement. Thus, the number of recreational fishers directing their effort to smelt is unknown and the amount of smelt taken is unknown. Department surveys conducted on the Kennebec River and Merrymeeting Bay only capture a portion of the statewide effort and only show trends in population sizes. These surveys do not gather information about angler effort. The number of commercial harvesters of smelt is not easily available as fishers directing their effort on smelt obtain a Pelagic License that allows directed catch of numerous species and license holders may or may not chose to fish smelt. In 2013, there were 104 commercial Pelagic fishing licenses with crew, and 111 commercial Pelagic single fishing licenses issued. In 2013, four dealers reported commercial smelt landings.

2. The projected reporting, record-keeping and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record; and EO20 1.C. The cost to the public in terms of time and money required to comply with the rule and EO20 1.B. The burden imposed by any fees included in the rule:

There are no reporting, record-keeping or other administrative duties associated with the rulemaking.

3. A brief statement of the probable impact on affected small businesses; and EO20 1.D. The extent to which other laws and regulations already address the subject matter of the rule:

The regulations would only impact recreational harvesters of smelt. No commercial fishers will be impacted as no commercial fishing for smelt is currently allowed between Kittery and Stonington.

An exception to this rule allows smelt ice fishing camp operations to operate without limit on season.

4. A description of any less intrusive or less costly, reasonable alternative methods of achieving the purposes of the proposed rule; and EO20 1.E. The relevant Federal standards, if any and the specific need for Maine's rules to differ from them if such a need exists:

No less intrusive or less costly alternative is available. Factors contributing to the smelt overall decline include spawning habitat degradation, dams and blocked, perched or undersized culverts, fishing and water quality. According to the recent published surveys and information from NMFS, there has been a population decline during the past 15-20 years in Massachusetts Bay. Department data dating back through the 1970's indicates the decline is advancing northerly through Maine and NH. Recent surveys found that in the area from Kittery to Penobscot Bay, 11% of runs are currently declining while in the Downeast region only 2% of runs are declining. Of the sites that historically supported smelt runs, only 38% of the sites west of Penobscot Bay were documented to currently support spawning runs while 61% of sites Downeast still support runs.

5. Indicate where a copy of the statement of impact on small business pursuant to section 8052, subsection 5-A may be obtained:

Information is available upon request from the DMR Commissioner's Office, State House Station # 21, Augusta, Maine 04333-0021, telephone (207) 624-6553.

Rule-Making Fact Sheet

(5 M.R.S.A., §8057-A)

AGENCY: Department of Marine Resources

NAME, ADDRESS, PHONE NUMBER OF AGENCY CONTACT PERSON:
Kevin Rousseau, Department of Marine Resources, 21 State House Station, Augusta, Maine 04333-0021
Telephone: (207) 624-6573; E-mail: kevin.rousseau@maine.gov, web address:
http://www.maine.gov/dmr/rulemaking/

CHAPTER NUMBER AND RULE: Chapter 40 Smelt Regulations

STATUTORY AUTHORITY: 12 M.R.S. §6171

DATE AND PLACE OF PUBLIC HEARINGS:
November 17, 2014, 6:00 PM, Brunswick Town Hall, 85 Union Street, Room 206, Brunswick
November 18, 2014, 6:00 PM, Ellsworth City Hall Auditorium, One City Hall Plaza, Ellsworth

COMMENT DEADLINE: December 1, 2014

PRINCIPAL REASON OR PURPOSE FOR PROPOSING THIS RULE: The principal reason for this rulemaking is to protect the state's reduced rainbow smelt population from further decline. Rainbow smelt populations have been contracting in range over the last century. Historically, populations were found from Chesapeake Bay to Labrador, but the current southern extent of the range is likely Buzzards Bay, Massachusetts. This range contraction has occurred rapidly, in less than 100 years.

Since 2006, the Department of Marine Resources has performed multiple studies to document the current status of anadromous smelt in Maine and determine reasons for the population decline. Department surveys have shown that Maine smelt populations have become reduced in many portions of the state. Comparing the number and strength of spawning runs currently to that of the late 1970's, the DMR has found that many runs have declined while others are extirpated (no longer in existence). Data collected during spawning and creel surveys have also shown that length at age has declined compared to historical records in upper Casco Bay and the Kennebec River. This is biological evidence of a stressed population and may translate to reduced fecundity, lower spawning success, and less juvenile production.

Department surveys have found evidence of population decline in many portions of the state. In 2005-2009, DMR and Marine Patrol documented all current spawning sites in Maine. Comparing the current strength of runs to data collected by DMR in the early 1970's and in 1984 from DMR and USFWS, the DMR found that in the area from Kittery to Penobscot Bay, 11% of runs are currently declining. In the Downeast region, only 2% of runs are declining. Of the sites that have historically supported smelt runs, only 38% of the sites west of Penobscot Bay were documented to currently support spawning runs, while 61% of sites Downeast still support runs.

Other surveys in Maine have also documented declines in smelt abundance. Annual juvenile abundance surveys in the Kennebec River and Merrymeeting Bay have found that the Catch-per-Unit-Effort (CPUE) of rainbow smelt has been below the series average since 2005, and has been above the 25% quartile only one time since 2008. Also on the Kennebec River and Merrymeeting Bay, winter creel surveys targeting recreational smelt fishing have found that the number of smelt caught by recreational fishers during 2009-2014 is on average lower than during 1979-1982. In 2014, the lowest catches on record were reported.

Spring fyke net surveys targeting spawning smelt have found that runs west of Penobscot Bay have highly variable CPUEs from year to year, indicating unstable populations, while runs surveyed Downeast have consistent CPUEs. Other biological parameters, like age distributions and sex ratios, show that runs Downeast are more stable because they are composed of larger age distributions and low sex ratios, while runs in Penobscot Bay and west have truncated age distributions (few older smelt), and females are more limited.

Additionally, Department studies have documented threats to successful smelt spawning including poor water quality associated with non-point source pollution, as well as head-of-tide dams, and undersized or hanging road crossing culverts that block upstream migrations. Because of these documented population declines and evidence of biologically stressed populations, the Department is utilizing management measures that will sustain and restore this species.

ANALYSIS AND EXPECTED OPERATION OF THE RULE:
This rule uses recent data to manage smelt populations in three sections on the coast: (Zone 1) from the New Hampshire border to Owl's Head in Rockland, (Zone 2) East of the Owl's Head to Naskeag Point in Brooklin, and (Zone 3) East of Naskeag Point to the head of tide on the St. Croix River.

The first zone (Zone 1) is to be managed the most conservatively because smelt populations have declined precipitously in southern and mid-coast Maine. No taking of smelts would be allowed in this area during the spawning season March 15 to June 30. During the remainder of the year (July 1 to March 14) fishing for smelt will be allowed using hook-and-line only without any limit on take.

The second zone (Zone 2) would be managed conservatively based on data showing that some spawning runs are experiencing decline. Further, the overall abundance of smelt in this zone is low as demonstrated by DMR and other local surveys. In contrast, some local information shows that certain runs are still very productive. Management for this zone would allow for some take of smelts during the spawning season (March 15 to June 30), but a 1 quart limit per person per day possession limit would be imposed along with weekly closure days on Tuesdays and Wednesdays. During the remainder of the year (July 1 to March 14) fishing for smelt will be allowed using hook-and-line only without any limit on take.

In the third zone (Zone 3), Department surveys and local data collection have shown that most runs are stable and some are increasing. No limit on take would be imposed during non-spawning seasons and commercial fishing gear targeting smelt would be allowed in certain areas. Any person fishing commercially must possess a Commercial Pelagic Fishing License. A 2 quart per person per day possession limit would remain in place during the spawning season (March 15 to June 30). Recreational fishing gear is limited to hook-and-line or dip net only. In this zone, there is no change in regulation from the regulations in place from December 21, 2009 to present.

Based upon public comment received, proposed rules were revised in Zone One (1) to allow hook-and-line fishing July 1 to March 14 rather than allowing fishing only through the ice, and removed the limit on take. The originally proposed rule had suggested a 4 quart daily limit for the winter fishery. The comments received requested a one year delay on this part of the rule. DMR has complied with this request and allowed a one-year delay on the 4 quart daily possession limit for hook-and-line fishing during July 1 to March 14. Beginning December 1, 2015, the 4 quart daily possession limit will be in place.In Zone Two (2), the weekly closure days during the spawning season (March 15 to June 30) were revised from Tuesday/Saturday to Tuesday/Wednesday based upon public comment. For the period July 1 to March 14, the limit on take was removed to be consistent with the revisions for Zone 1. In Zone Three (3) the definition of the eastern extent geographic range was revised from the Campobello-Lubec Bridge to coastal waters extending to the US/Canada border so that the St. Croix River was included based upon public comment.

FISCAL IMPACT OF THE RULE:
Enforcement of these proposed amendments would not require additional activity in this Agency. Existing enforcement personnel will monitor compliance during their routine patrols.